The relationship between occupational stress, job satisfaction, organisational commitment and job performance within three technical universities in Ghana

By

MARTIN KWASI ABIEMO

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SUPERVISOR: DR M L BEZUIDENHOUT

CO-SUPERVISOR: DR A M FURTAK

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DECLARATION

I, Martin Kwasi Abiemo, student number 61959979, declare that this dissertation entitled, **The relationship between occupational stress, job satisfaction, organisational commitment and job performance within three technical universities in Ghana**, is my own work. All the sources that I have used or have quoted have been acknowledged by means of complete references. The work has not, in part or whole, been previously submitted for any other degree or examination at this or any other university.

I further declare that ethical clearance to conduct the research was obtained from the Department of Human Resource Management at the University of South Africa. I also declare that the study was carried out in strict accordance with University of South Africa (Unisa)'s policy on research ethics, and that I conducted the research with the highest integrity, considering Unisa's policy for copyright infringement and plagiarism. In addition, permission was obtained from participating technical universities to conduct the research.

Martin Kwasi Abiemo
20/02/2024

DEDICATION

To my lovely wife, Mrs Elizabeth Dogbah-Abiemo, and my children, Matilda, Bervelyn and Hisglory.

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ABSTRACT

THE RELATIONSHIP BETWEEN OCCUPATIONAL STRESS, JOB SATISFACTION, ORGANISATIONAL COMMITMENT AND JOB PERFORMANCE WITHIN THREE TECHNICAL UNIVERSITIES IN GHANA

By

Martin Kwasi Abiemo

(Student number: 61959979)

SUPERVISOR: **Dr Magdalena L. Bezuidenhout**
CO-SUPERVISOR: **Dr Aleksandra M. Furtak**
DEPARTMENT: **Human Resource Management**
DEGREE: **MCom (Business Management)**

This research, the first of its kind, focused on the relationship between occupational stress (OS), job satisfaction (JS), organisational commitment (OC), and job performance (JP) at three Ghanaian technical universities, addressing a gap in the existing research on these concepts in the context of technical universities in developing countries. Following a positivist, quantitative approach with a convenience sampling technique, data from 317 academics were collected via a cross-sectional survey. The findings support a significant negative influence of OS on JP, JS and OC, while JS positively predicted OC and JP. OC also positively predicted JP. Further, JS and OC emerged as mediators (including a joint mediating role) in predicting JP from OS. The study also found that gender and educational level did not significantly affect OS, JS, OC and JP. However, younger academics (under 45) exhibited greater OC, while lecturers experienced more stress than their counterparts in other academic ranks. This study is limited by its cross-sectional design, which limits the ability to infer causality. However, the findings of the study provide valuable insights into and information about the practical implications of academics' OS, JS, OC and JP at three Ghanaian technical universities.

KEY TERMS

Occupational stress; job satisfaction; organisational commitment; job performance; technical universities; academics; demographic factors; mediating effects; Ghana; PLS-SEM.

OPSOMMING

DIE VERHOUDING TUSSEN BEROEPSTRES, WERKSBEVREDIGING, ORGANISASIEVERBINTENIS EN WERKSPRESTASIE BY DRIE TEGNIESE UNIVERSITEITE IN GHANA

Deur

Martin Kwasi Abiemo

(Studentenommer: 61959979)

TOESIGHOUER:	**Dr Magdalena L. Bezuidenhout**
MEDETOESIGHOUER:	**Dr Aleksandra M. Furtak**
DEPARTEMENT:	**Menslikehulpbronbestuur**
GRAAD:	**MCom (Sakebestuur)**

Hierdie navorsing is enig in sy soort en het op die verhouding tussen beroepstres (BS), werksbevrediging (WB), organisasieverbintenis (OV) en werksprestasie (WP) by drie tegniese universiteite in Ghana gefokus. Die navorsing het gepoog om ’n gaping in bestaande navorsing oor hierdie konsepte binne die konteks van tegniese universiteite in ontwikkelende lande te probeer oorbrug. ’n Positivistiese, kwantitatiewe benadering met ’n gerieflikheidsteekproefnemingstegniek is gevolg om data van 317 akademici met behulp van ’n deursnee-opname te versamel. Die bevindinge ondersteun ’n beduidend negatiewe invloed van BS op WP, WB en OV onderwyl BW ’n positiewe voorspeller van OV en WP is. OV het ook WP positief voorspel. Verder het WB en OV na vore gekom as bemiddelaars (insluitend ’n gesamentlike bemiddelaarsrol) in die voorspelling van WP vanaf BS. Die studie het ook gevind dat geslag en opvoedkundige vlakke nie ’n beduidende invloed op BS, WB, OV en WP uitoefen nie. Jonger akademici (onder 45) het egter groter OV getoon, onderwyl dosente meer stres as hul eweknieë uit ander akademiese geledere ervaar. Hierdie studie word deur sy deursnee-ontwerp beperk aangesien dit die vermoë om oorsaaklikheid af te lei, beperk. Die studie se bevindinge bied egter waardevolle insigte in en inligting oor die praktiese implikasies van akademici se BS, WB, OV en WP by drie tegniese universiteite in Ghana.

SLEUTELTERME

Beroepstres, werkbevrediging, organisasieverbintenis, werkprestasie, tegniese universiteite, demografiese faktore, bemiddelingseffekte, Ghana, PLS-SEM.

UNISA university of south africa

OKUCASHUNIWE

UBUDLELWANE PHAKATHI KWENGCINDEZI YOMSEBENZI, UKWANELISEKA NGOMSEBENZI, UKUZIBOPHELELA KWESIKHUNGO KANYE NENDLELA YOKUSEBENZA EMANYUVESI EZOBUCHWEPHESHE AMATHATHU ASE-GHANA

Kubhale u-

Martin Kwasi Abiemo

(Inombolo Yomfundi: 61959979)

INDUNA: **UDkt Magdalena L. Bezuidenhout**

INDUNA: **UDkt Aleksandra M. Furtak**

UMNYANGO: **Ukuphathwa Kwezindaba Zabasebenzi**

I-DEGREE: **I-MCom (Kwezokuphathwa Kwezamabhizinisi)**

Lolu cwaningo, olokuqala ngqa, ukubheka ubudlelwaneni obuphakathi kwengcindezi yomsebenzi (OS), ukwaneliseka ngomsebenzi (JS), ukuzibophezela kwesikhungo (OC), kanye nendlela yokusebenza (JP) emanyuvesi ezobuchwepheshe amathathu ase-Ghana, lokhu kwenziwele ukubheka igebe elikhona ocwaningweni oselwenziwe ngalokhu ikakhulu kumanyuvesi asemazweni asathuthuka. Ngokulandela indlela eqondile, lapha sisebenzise ucwaningo lwamanani nohlelo lokuthatha amasampula, idatha esiyiqoqe kwabayizifundiswa abangama-317 kusetshenziswa inhlolovo ngokwezigaba ezahlukene. Imiphumela ivumelana nokuthi kunomthelela ongemuhle odalwa yiNgcindezi Yomsebenzi eNdleleni Yokusebenza, Nokwaneliseka Ngomsebenzi kanye Nokuzibophezela Kwesikhungo. Ukuzibophezela Kwesikhungo kuveza umthelela omuhle mayelana Nendlela Yokusebenza. Ngaphezu kwalokho, Ukwaneliseka Ngomsebenzi kanye Nokuzibophezela Kwesikhungo kuvela njengesixazululo (kuhlanganise nephuzu lokuxazulula ngokuhlanganyela) mayelana Nendlela Yokusebenza uma sibuka Ingcindezi Yomsebenzi. Ucwaningo luphinde lwathola ukuthi izinga lobulili nezemfundo alinamthelela omkhulu mayelana neNgcindezi Yomsebenzi, Ukwaneliseka Ngomsebenzi, Ukuzibophezela Kwesikhungo kanye Nendlela Yokusebenza. Kodwa-ke, izifundiswa ezisencane (ezingaphansi kwama-45) zibonise lukhulu ngoKuzibophezela Kwesikhungo, kanti othisha bona banengcindezi enkulu kunozakwabo abakwezinye izikhundla

kwezemfundo. Ukuqoqa ulwazi eqoqweni labantu kulolu cwaningo kudale umkhawulo othile, owenze ukuba ingazeki imbangela yalokhu. Nakuba kunjalo, imiphumela yalolu cwaningo ihlinzeke ngemininingwane ebalulekile kanye nolwazi mayelana nemithelela okuyiyo Ngengcindezi Yomsebenzi, Ukwaneliseka Ngomsebenzi, Ukuzibophezela Kwesikhungo kanye Nendlela Yokusebenza kwezifundiswa emanyuvesi ezobuchwepheshe amathathu ase-Ghana.

AMAGAMA AMQOKA

Ingcindezi yomsebenzi; ukwaneliseka ngomsebenzi; ukuzibophezela kwesikhungo; indlela yokusebenza; amanyuvesi ezobuchwepheshe; izifundiswa; imithelela yokuhlaliswa kwabantu; izindlela zokuxazulula; e-Ghana; i-PLS-SEM.

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LIST OF ABBREVIATIONS

AC	Affective commitment
AMO	Ability-Motivation-Opportunity
AVE	Average variance extracted
BCa	Bias corrected and accelerated
CB-SEM	Covariance-based structural equation modelling
CC	Continuance commitment
CI	Confidence interval
ERG	Existence relatedness-growth
ERI	Effort-reward imbalance
HE	Higher education
HEI	Higher education institution
HR	Human resources
HRM	Human resource management
JCM	Job Characteristics Model
JD-R	Job Demands-Resources
JP	Job performance
JPR	Research performance dimension of job performance
JPS	Service performance dimension of job performance
JPT	Teaching performance dimension of job performance
JS	Job satisfaction
JSS	Job Satisfaction Scale
NC	Normative commitment
OC	Organisational commitment
OCA	Affective dimension of organisational commitment
OCC	Continuance dimension of organisational commitment
OCN	Normative dimension of organisational commitment
OS	Occupational stress
P-E	Person-environment
PLS-SEM	Partial least squares structural equation modelling
SEM	Structural equation modelling
SPSS	Statistical Package for the Social Sciences
SRMR	Standardised root mean squared residual
VIF	Variance inflation factor

WLC	Work-life conflict

CHAPTER 1: SCIENTIFIC OVERVIEW OF THE RESEARCH

1.1 INTRODUCTION

This research focused on the relationship between occupational stress (OS), job satisfaction (JS), organisational commitment (OC) and job performance (JP) at three technical universities within a Ghanaian context. A need for this research arose due to limited existing research on these concepts in technical universities, especially within a developing world context. This chapter first outlines the study's background and motivation, and the problem statement. Secondly, the study's theoretical and empirical research objectives are stated, and the research questions, hypotheses and potential value add (contribution) are discussed. Thirdly, this chapter discusses the overarching theoretical foundation and research process. The chapter concludes by discussing the organisation of the dissertation (chapter layout), and, finally, the chapter is summarised.

1.2 BACKGROUND AND MOTIVATION TO THE STUDY

Several factors inspire how a research topic is selected. In quantitative research, the researcher is tasked with developing a rigorous and systematic approach to gathering and analysing data (Creswell & Creswell, 2018). This approach often requires the identification of a specific research gap and a strong theoretical framework informed by previous and current research trends (Creswell & Creswell, 2018; Saunders et al., 2019). Therefore, in this section, I will first highlight the importance of managing OS, JS, OC and JP; thereafter, I offer an evaluation of the relevant literature and research, describe the development of my own motivation for this study, thereby providing a rationale for it, and then describe the study context.

1.2.1 The importance of managing occupational stress, job satisfaction, organisational commitment and job performance

Due to rising workloads, uncertain employment prospects and the accelerated pace of modern living, OS is increasingly becoming one of the significant challenges experienced by workers (Yozgat et al., 2013). For academics in university settings, stress is acknowledged as an essential element of their professional life, and emerging research shows that it may be rising in intensity (Adebiyi, 2013; Mate-Siakwa, 2014; Salami, 2011; Slišković & Seršić, 2011). Reddy and Anuradha (2013) emphasise that educators consider stress inevitable. Long hours, little pay, unclear roles, subpar

classroom facilities, a lack of social recognition, a toxic work environment, and strained relationships with co-workers all contribute to an already stressful situation (Reddy & Anuradha, 2013). Academics in technical university settings are no exception to this phenomenon.

Academics' JS is critical because it contributes to the quality of education, helps to achieve high professional engagement and paves the way for producing quality graduates (Amarasena et al., 2015; Mustapha & Zakaria, 2013). Similarly, academics' JS catalyses positive outcomes for students and higher education institutions (HEIs) (Aduma et al., 2022; Amiruddin et al., 2021). The significance of JS is especially apparent when considering the negative consequences of OS, for instance, increased absenteeism and workplace accidents (Szromek & Wolniak, 2020).

From the standpoint of the normative and affective methods proposed by commitment theory, it is stated that the nature of university activities necessitates committed staff, since devoted employees, particularly academics, are simple to retain even though they may not always be satisfied employees (Segbenya et al., 2019). Thus, OC is crucial in fostering a stable and productive workforce. Maintaining an ongoing cycle of excellence in teaching and research at an HEI depends on prioritising the retention of recruited and trained employees. Therefore, the sustained success and quality contributions of any academic institution are contingent upon the presence of well-qualified and deeply committed academics (Meyer et al., 2002; Segbenya et al., 2019).

Furthermore, academics' JP is integral to higher education, involving key roles in teaching, research and community engagement (Johnsrud & Rosser, 2002). This performance is vital for delivering high-quality education and advancing scholarly knowledge. In other words, superior JP leads to enhanced student learning experiences and research advancements, ultimately contributing to the prestige and success of the institution (Amiruddin et al., 2021).

1.2.2 Research on occupational stress, job satisfaction, organisational commitment and job performance

Over the years, researchers from diverse disciplines have considered the concepts of OS, JS, OC and JP across various professions/careers. These concepts have been a focal point for many institutions, primarily due to their impact on organisational outcomes, including employees' turnover intentions, absenteeism, organisational

citizenship behaviour, overall performance and job effectiveness (Abdallah & Alhassan, 2021; Akah et al., 2022; Akosah & Akosah, 2022; Dhurup et al., 2016; Kipkebut, 2010; Kumasey et al., 2017; Park et al., 2017; Shen & Slater, 2021; Tekingündüz et al., 2017; Tolentino, 2013; Vujičić et al., 2015; Yucel & Bektas, 2012; Zhang et al., 2017). Extensive research has been conducted on the concepts of OS, JS, OC and JP because it is argued that the significance of the concepts in relation to each other manifest differently in various work environments (Akah et al., 2022; Narainsamy & Van Der Westhuizen, 2013). Thus, research into understanding the links between these concepts cannot be underestimated (Akah et al., 2022; Narainsamy & Van Der Westhuizen, 2013).

For instance, Chen et al. (2006) found no significant correlation between job stress and JP of employees working in accounting capacities in the USA and Taiwan, whereas Nabirye (2010) and Akah et al. (2022) recorded significant negative relationships between these two concepts among hospital nurses in Kampala City, Uganda and lecturers at two Nigerian universities. Similarly, Chaudhry (2012) indicates diverse correlations between OS and JS. Chaudhry's (2012) study found no significant relationship between JS and overall OS, an inverse relationship between OS and overall JS in faculty members of private universities and no relationship between OS and overall JS in faculty members of public universities. This research suggests that the relationship between OS, JS, OC and JP varies across professions and work environments. While some studies found significant links others found insignificant links between these concepts (Akah et al., 2022; Chaudhry, 2012; Chen et al., 2006; Nabirye, 2010; Saadeh & Suifan, 2020; Wu et al., 2021). However, no study in Ghana, a context of a developing economy and country, addressed the interaction of OS, JS, OC and JP, specifically amongst academics in a technical university setting. According to De Lourdes Machado et al. (2011), academic staff members play a crucial role in attaining the goals of HEIs and are a critical resource within them. Additionally, a lot of students' learning and achievement are influenced by academics' performance. Consequently, the effectiveness of HEIs depends greatly on the satisfaction and commitment of academics (De Lourdes Machado et al., 2011). Therefore, research that addresses the interaction of these concepts may be of considerable use in designing organisational interventions to address problem areas.

1.2.3 My personal motivation for this study

The personal motivation for this study stems from the fact that the researcher is an employee of one of the technical universities in Ghana. The researcher has worked with academics as a teaching assistant and technician for over ten years. Through interactions with the academics, it became evident that some issues relating to stress, satisfaction, commitment and performance affected their work experience. For instance, the work of academics demands that, apart from their usual lecturing, student assessment and supervision of project works, they are also expected to do research and publish this research in order to be considered for promotion. In addition, some of the academics take up part-time appointments in other tertiary education institutions to earn extra income to meet their growing needs. Also, the institutes that used to be polytechnics have been converted into technical universities, which has brought new requirements in terms of staff qualifications. For example, a PhD or other academic degree alone does not make one an adequate professor or instructor; thus, possessing relevant work or industry experience is essential (National Council for Tertiary Education, 2014). This requirement motivates many academics to enrol for higher degrees and gain professional qualifications or industrial experience.

Furthermore, there are limited resources within the technical university setting in Ghana to augment research and publication, which slows the progress of academics in promotion. All these compounding factors could signal stress and potentially affect academics' OS, JS, OC and JP. Thus, academics within a technical university setting in Ghana, a developing economy, present an interesting and unique context for studying the relationships between OS, JS, OC and JP. On this premise, the researcher became inspired to undertake this research study.

Therefore, the rationale for this study is to investigate how the concepts of OS, JS, OC and JP manifest in terms of their interrelationships and how the human resource (HR) departments of the technical universities in Ghana could effectively motivate academics to fulfil their duties. The potential relationship(s) may play an important role in enhancing the total commitment and performance of academics at the technical universities in Ghana.

1.2.4 Study context

Technical universities are institutions of higher learning (technological universities) that focus on the application of technology to various fields of learning (Ministry of Education, 2014). In general, unlike traditional universities, technical universities in Ghana provide education and training by offering vocationally oriented programmes that are career-focused for the world of work through strong links with industry and business. These universities primarily serve urban communities and are critical nodes in the network of vocational and technical education in the country, equipping students with practical skills and knowledge pertinent to various industry sectors (Ansah & Kissi, 2013; Atatsi et al., 2021; Botchoey, 2015).

According to Dr Prempeh, the Minister of Education in Ghana, the goal of technical universities is "to orchestrate, in a planned way, a better alignment of the mission of higher educational institutions to industry demands and expectations" (Kale-Dery, 2017, p.1). They prioritise practical research endeavours, such as industry- and market-driven cooperative research initiatives, and their staff are highly qualified and infused with academic and commercial expertise (National Council for Tertiary Education, 2014). The Ministry of Education (2014) cites the need for technical university faculty to have academic and professional credentials as a defining feature of such institutions. By providing employees with the chance to develop their existing skills and acquire new ones, technical universities assist Ghana's workforce in becoming more qualified and competitive on a global scale.

At the time of the study, approximately eight technical universities were distributed across Ghana's regions, including prominent cities like Accra, Kumasi, Ho, Sunyani, Takoradi and Koforidua. These universities house a diverse range of students with enrolment numbers ranging from the low thousands to upwards of twenty thousand. Collectively, they engage over one hundred thousand students, highlighting their significant contribution to Ghana's higher education sector (Korsah, 2013). The faculty within these technical universities constitutes a substantial proportion of the nation's academic workforce, and many were included in this research study (Atatsi et al., 2021; Bartrop-Sackey et al., 2022). The selection of universities in this study represents a broad array of institutions within the sector, inclusive of those with high student populations and those renowned for specific technical specialisations. This

selection, therefore, offers a representative depiction of Ghana's technical universities, enabling a nuanced understanding and interpretation of the study findings.

1.3 STATEMENT OF THE PROBLEM

Preliminary evidence suggests that diverse relationships exist between OS, JS, OC and JP (Adebayo, 2022; Aduma et al., 2022; Dhurup et al., 2016; Kipkebut, 2010; Kumasey et al., 2017; Otache & Inekwe, 2022; Park et al., 2017; Sonna & Nkechi, 2021; Tekingündüz et al., 2017; Tolentino, 2013; Vujičić et al., 2015; Yucel & Bektas, 2012; Zhang et al., 2017). Scholars have not yet empirically examined the relationship between OS, JS, OC and JP in a technical university environment in an emerging economy like Ghana. There would therefore appear to be a lack of studies on these concepts within the context of Ghanaian technical universities. Thus, theoretical models do not adequately explain the relationship between OS, JS, OC and JP in a technical university setting in Ghana. Consequently, there is a theoretical need to examine the relationship between OS, JS, OC and JP in the context of Ghanaian technical universities.

Furthermore, academics are vital to the success of HEIs. Academics' satisfaction and commitment affect the students' learning and success which, in turn, determines the success of HEIs (Anees et al., 2021; De Lourdes Machado et al., 2011; Otache & Inekwe, 2022). By contrast, academics' performance may suffer if they are under stress, disgruntled or uncommitted. This will have detrimental effects on both the students and the technical universities. As a result, the goal of these technical universities (i.e. to provide education and training by offering programmes that are vocationally oriented and career focused for the world of work, through strong links with industry and business) will not be accomplished.

Reviewing the literature on OS, JS, OC and JP has highlighted the following research concerns:

- Theoretical models have failed to explain the relationship between OS, JS, OC and JP in one single study. This suggests that there is still a lot to learn about this field.
- The practical relationship between OS, JS, OC and JP in a technical university context in Ghana has not yet been examined. In light of this, this study intends

to advance earlier research on OS, JS, OC and JP by examining the relationships between these variables in three particular technical universities.

The next section discusses the research questions and objectives for the current study.

1.4 RESEARCH QUESTIONS

Based on the preceding sections, this research aims to provide answers to the following sets of questions.

1.4.1 Research questions relating to the literature review

The research questions relating to the literature review are as follows:

Research question 1: How are the four concepts, OS, JS, OC and JP, conceptualised and explained by theoretical models in the literature?

Research question 2: Does a theoretical relationship exist between OS, JS, OC and JP?

Sub-question 2.1: What is the theoretical relationship between OS and JP?
Sub-question 2.2: What is the theoretical relationship between OS and JS?
Sub-question 2.3: What is the theoretical relationship between OS and OC?
Sub-question 2.4: What is the theoretical relationship between JS and JP?
Sub-question 2.5: What is the theoretical relationship between JS and OC?
Sub-question 2.6: What is the theoretical relationship between OC and JP?

1.4.2 Research questions relating to the empirical study

In light of the above discussion, the following research questions were formulated in terms of the empirical study:

Research question 1: What is the statistical nature of the relationships between OS, JS, OC and JP in a sample of academics who are permanently employed within a Ghanaian technical university setting?

Research question 2: What are the differences that exist between OS, JS, OC and JP and the demographic variables (age, gender, educational level, job level and years of service)?

1.4.3 Research question integrating the theoretical and empirical study

Guided by the empirical findings of this study, what recommendations can be derived for human resource management (HRM) practice and further research on OS, JS, OC and JP in the field of HRM?

1.5 RESEARCH OBJECTIVES

The research aim outlines the study's overall objective, whereas the specific objectives are established in light of both the literature review and the empirical study. A research hypothesis is also created to accomplish the goals of the research study. In line with the research questions above, the following sets of objectives are derived.

1.5.1 General objective of the research

The main goal of this study was to determine the relationship between the OS, JS, OC and JP of academics who have been permanently employed at three technical universities in Ghana. The second objective was to determine whether individuals from different age, gender, educational level, job level and years of service groups differ with regard to these concepts.

1.5.2 Specific objectives of the research

This study specifically aimed to achieve two categories of objectives. The specific objectives in terms of the literature review included the following:

Literature review objective 1: To explore and conceptualise the four concepts of OS, JS, OC and JP from a theoretical perspective.

Literature review objective 2: To conceptualise the relationship between OS, JS, OC and JP in terms of explanatory theoretical models.

Sub-objective 2.1: To theorise the relationship between OS and JP.
Sub-objective 2.2: To theorise the relationship between OS and JS.
Sub-objective 2.3: To theorise the relationship between OS and OC.
Sub-objective 2.4: To theorise the relationship between JS and JP.
Sub-objective 2.5: To theorise the relationship between JS and OC.
Sub-objective 2.6: To theorise the relationship between OC and JP.

The specific objectives of the research in terms of the empirical study were as follows:

Empirical objective 1: To investigate the statistical nature of the relationships between OS, JS, OC and JP in a sample of academics permanently employed in a Ghanaian technical university setting.

Empirical objective 2: To investigate whether significant differences exist in OS, JS, OC and JP in terms of the demographic variables (age, gender, educational level, job level and years of service).

In terms of the integration of the research findings, the specific objective was to make recommendations for HRM practice and further research on OS, JS, OC and JP in the field of HRM, based on the empirical findings of the study.

The next section discusses the overarching theoretical foundation of the study.

1.6 OVERARCHING THEORETICAL FOUNDATION

A theoretical foundation is essential in research as it provides a structured framework that guides the study's design, data collection, and interpretation of results (Bititci et al., 2018; Linares & Muñoz, 2011). It helps to ensure that the research is grounded in established knowledge and offers a lens through which new findings can be understood and contextualised (Creswell, 2014). A robust theoretical foundation also aids in identifying gaps in the existing literature, forming hypotheses, and drawing meaningful conclusions that contribute to the broader field of study (Creswell, 2014; Savin-Baden & Major, 2023).

This study is underpinned by the theory of organisational behaviour (Gomathy et al., 2022; Robbins & Judge, 2019). This theory assumes that both individual and group behaviour are critical to creating more stable and effective organisations. It elucidates how various factors in the work environment influence individual and group dynamics, and subsequently, organisational effectiveness (Robbins & Judge, 2019). According to this theory, stressors in the workplace can diminish JS and weaken OC, leading to reduced JP (Jex & Britt, 2014). Thus, the study employs this theory to delineate the paths through which OS affects JP, focusing on the mediating roles of JS and OC in addition to the effects of biographical variables on OS, JS, OC, and JP. This theoretical approach allows for a detailed analysis of how OS, JS, and OC interact to predict JP in technical universities in Ghana. The application of this theory helps to integrate

disparate findings into a coherent structure, thereby enhancing the understanding of how behavioural factors interplay to influence JP (Colquitt et al., 2022).

To explore OS in this study, the Job Demands-Resources (JD-R) model (Demerouti et al., 2001) serves as the principal theoretical framework due to its flexibility and applicability across various occupational settings. This versatility is particularly relevant to academia's diverse roles and contexts. The JD-R model emphasizes the relationship between job demands and resources, aligning with the study's objective to understand the intricate dynamics of OS in a holistic manner. Additionally, the Person-Environment fit theory (French et al., 1974) and the Effort-Reward Imbalance model (Siegrist, 1996; Siegrist et al., 2004) were considered, although the JD-R model was ultimately chosen for its comprehensive applicability.

For JS, Herzberg's motivator-hygiene theory (Herzberg, 1966) is adopted as the primary theoretical framework. This theory posits that job JS and job dissatisfaction are distinct dimensions influenced by different factors, making it highly relevant for examining the variables affecting JS in the academic context (Ramgoolam, 2020). Other theories considered include Maslow's hierarchy of needs (Maslow, 1943) and Alderfer's existence relatedness-growth theory (Alderfer, 1969). However, Herzberg's theory provides a more targeted perspective on JS, particularly in its application to OS, OC, and JP.

To explore OC, Meyer and Allen's (1991) three-component model is employed due to its ability to measure different forms of commitment, which is important given the diverse reasons for commitment among academics in three technical universities (Aldhuwaihi, 2013). This model offers a comprehensive understanding of OC by considering affective, continuance, and normative commitment. The study also reviews social exchange theory (Blau, 1964) and attitudinal and multidimensional approaches (Meyer & Allen, 1991) to provide a thorough exploration of OC.

For assessing JP, the study employs Campbell's model of JP (Campbell, 1990) and the Job Characteristics Model (JCM) by Hackman and Oldham (1975, 1980). Campbell's model provides a multi-component perspective on job performance, while the JCM focuses on job attributes that influence performance outcomes. Additionally,

Moeller's (2009) three-dimensional perspective on JP, which includes teaching, service, and research, is integrated to address the multifaceted nature of academic roles. These models collectively offer a comprehensive framework for understanding JP in the context of technical universities.

1.7 CENTRAL HYPOTHESIS

To empirically test the relationship between OS, JS, OC and JP, a central hypothesis was developed. Research hypotheses propose that there is a relationship between variables, and they enable this relationship to be tested (Saunders et al., 2019). The central hypothesis of this study was as follows:

There is a statistically significant relationship between OS, JS, OC and JP among academics who are permanently employed in a Ghanaian technical university setting. Also, significant differences do exist in terms of OS, JS, OC and JP and the demographic variables (age, gender, educational level, job level and years of service) among academics who are permanently appointed at three technical universities in Ghana.

The research hypotheses for this study will be discussed in more detail in Chapter 6.

1.8 POTENTIAL VALUE ADD

This study aimed to add value on a theoretical, empirical and practical level.

1.8.1 Potential value add on a theoretical level

The relationship between OS, JS, OC and JP in a technical university environment within the Ghanaian context has not previously been explored by scholars in a single study, hence this work adds to the body of knowledge in this area. It further draws attention to the demographic factors that influence OS, JS, OC and JP.

1.8.2 Potential value add on an empirical level

This research provides empirical data on OS, JS, OC and JP within technical universities in Ghana, a specific context that has not been extensively studied. This helps deepen our understanding of these phenomena in this context and is beneficial for comparative studies in different cultural or institutional settings. Further, given that this study also offers empirical insights into the relationships between these four variables, it provides data on whether, how and to what extent these factors influence each other, helping to clarify and refine existing theoretical models.

1.8.3 Potential value add on a practical level

The management of technical universities in Ghana and other stakeholders, such as the government of Ghana, are also expected to benefit from the new knowledge attained by this study, particularly in comprehending the effects of escalating job demands on academics, leading to an intensified workload. Thus, the study's overall findings may be beneficial to the government of technical institutions and other HEIs in general. The existence of satisfied, efficient, self-motivated and committed academics is of great importance in every university environment. According to Bezuidenhout and Cilliers (2011), a university's ability to recruit and retain top talent is a key factor in establishing its reputation for excellence in research and scholarly output. Staff retention is crucial for academic institutions due to the scarcity of trained and experienced academics.

In addition, higher education faculty also play a crucial part in national development and advancement as the backbone of the educational system (Hesampour et al., 2017). Considering that human resources is a key resource in any university, proactive measures should be employed to determine where operations may be improved and efficiency could be increased (Khalatbari et al., 2013) in a technical university setting. The findings of this study have the potential to facilitate the establishment of a framework to inform human resources (HR) managers about how to effectively manage academics' job performance in technical universities in the Ghanaian context.

More importantly, the research could benefit HRM practitioners by informing them about the relationships between the concepts among academics from the viewpoint of a Ghanaian technical university. This, in turn, could enhance HRM practices in HEIs.

1.9 DEFINITION OF KEY TERMS

Occupational Stress (OS): According to French et al. (1974), OS is the inherent attributes of a job that present a potential risk or danger to the well-being of an individual. In addition, Houtman et al. (2007) opine that occupational or work-related stress arises when workers encounter job demands or pressures that seem beyond their skills or knowledge, thus pushing their coping abilities to the limit. In this study, academics' OS is characterised by mental or emotional tension caused by challenging or unfavourable work conditions (Chaturvedi & Joshi, 2017; Moe et al., 2018).

Job Satisfaction (JS): According to Spector (1997), JS is an evaluative state where employees perceive what they like and dislike about their jobs. Furthermore, in the view of Abu-Shamaa et al. (2015), JS is the way the employee develops a perception about their job and the degree to which employees like their jobs. For the purposes of this study, JS is a positive emotional state derived from assessing one's employment or job experiences (Locke, 1976).

Organisational Commitment (OC): This refers to people's affective reactions to their employing organisation as a whole (Stride et al., 2008). It may be seen as an emotional response to a positive appraisal of the work environment (Testa, 2001). Meyer and Allen (1991) describe OC as "the emotional attachment to, identification with, and involvement in, the organisation" (p. 67). In the context of this study, OC is the psychological bond academics feel towards their technical universities coupled with their willingness to contribute to achieving the technical universities' objectives.

Job Performance (JP): It generally refers to whether a person performs their job well or not; that is, the way in which employees carry out their work (Balouch & Hassan, 2014). According to Motowidlo (2003), JP can be described as the combined value that an organisation foresees from an individual's specific actions carried out within a specified time frame. Dar et al. (2011) view JP as an activity in which an individual is able to accomplish the task assigned to them successfully, subject to the normal constraints of the reasonable utilisation of the available resources. In this study, academics JP includes their teaching performance, service performance and research performance in the technical universities (Moeller, 2009).

1.10 RESEARCH PROCESS

The research process consisted of two phases. Firstly, it comprised a literature review which conceptualised all the variables (phase 1 – refer to Chapters 2, 3, 4 and 5) and, secondly, an empirical study aimed at operationalising the variables (phase 2 – refer to Chapters 6, 7 and 8). Figure 1.1 on the next page depicts a flow diagram of the research process (literature review and empirical study).

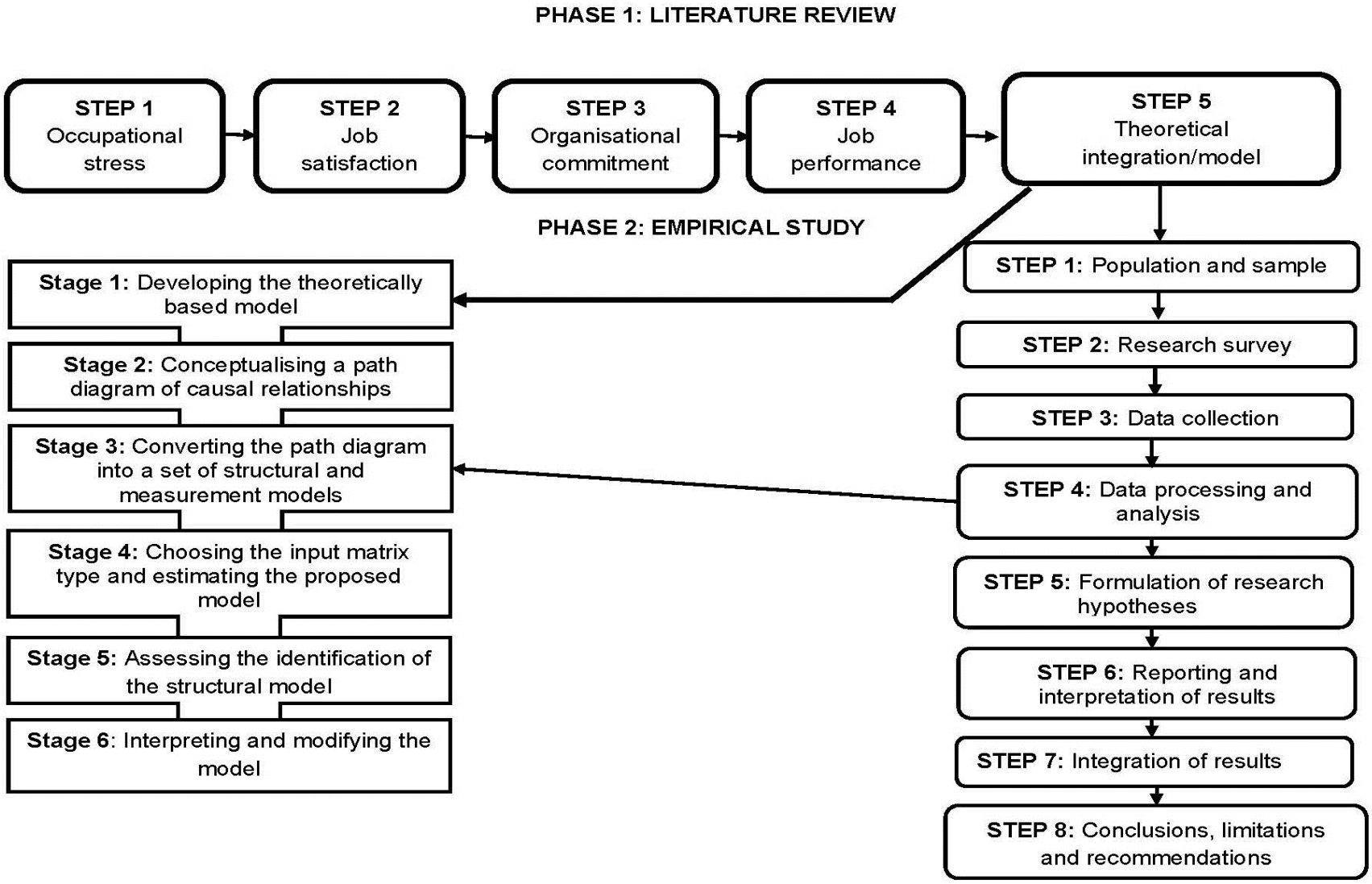

Figure 1.1: Flow diagram of the research process (adapted from Ledimo, 2012, p. 24)

1.10.1 Phase 1: Literature review

The initial stage of the research process comprised a literature review that focused on gaining a theoretical overview of the concepts of OS, JS, OC and JP. It also included a theoretical integration of the four concepts.

Step 1: OS was conceptualised from a theoretical perspective (see Chapter 2).

Step 2: JS was conceptualised from a theoretical perspective (see Chapter 3).

Step 3: OC was conceptualised from a theoretical perspective (see Chapter 4).

Step 4: JP was conceptualised from a theoretical perspective (see Chapter 5).

Step 5: A theoretical integration of OS, JS, OC and JP was presented (see Chapter 5).

1.10.2 Phase 2: Empirical study

The empirical study is presented in Chapters 6, 7 and 8 and comprised the following seven steps:

Step 1: Population and sample

The sample is described, and the population is defined (see Chapter 6).

Step 2: Research survey

The measuring instruments used to measure the independent variable (OC) and the three dependent variables (JS, OC and JP) are discussed (see Chapter 6).

Step 3: Data collection

Details of the survey design in terms of the questionnaires administered and how they were distributed to participants are provided in Chapter 6.

Step 4: Data processing and analysis

The data was processed and analysed using the Statistical Package for Social Sciences (SPSS version 28) and SmartPLS 4. The analysis comprised three phases. Phase 1 included descriptive statistical analysis which comprised the following:

- Demographic variables
- Construct and item description – frequency tables, means, standard deviations, skewness and kurtosis (Diedericks, 2017)

Phase 2 included confirmatory composite analysis (i.e. measurement model assessment):

- Reliability – Cronbach's alpha and composite reliability score (Ringle et al., 2022)
- Validity – convergent validity and discriminant validity (Ringle et al., 2022).

Phase 3 focused on the following:

- Pearson correlational analysis
- Inferential statistics (structural model analysis and tests for significant mean differences)
- Mediation analysis to determine the indirect effects of OS on JP through JS and OC to provide a holistic understanding of their interconnections.

A detailed discussion of each phase is provided in Chapter 6.

Step 5: Formulation of research hypotheses

Research hypotheses were developed and empirically tested from the central hypothesis (see Chapter 6).

Step 6: Reporting and interpretation of results

The study findings were presented in a methodical fashion using tables and figures that included the necessary statistical data. In-depth descriptions and analyses of the results were provided as part of the interpretation process (see Chapter 7).

Step 7: Integration of results

The results of the actual research were incorporated with those from the literature review. The goal of this step was to form a thorough understanding of the study results (see Chapter 7).

Step 8: Conclusions, limitations, and recommendations

The final step (which was the last phase in this empirical investigation) draws connections between the study findings and the existing literature. Implications of the shortcomings of the study were highlighted. Finally, suggestions for future research were offered, all of which were based on the findings of this particular investigation (see Chapter 8).

1.11 ETHICAL CONSIDERATIONS

The study protocol complied with the university's guidelines for conducting ethical research (UNISA, 2014) and its ethical guidelines were observed throughout the study process. Ethical approval was granted by UNISA (see Appendix G) and permission to undertake the study was given by the three selected technical universities. Anonymity was ensured by removing personal identifiers. Participation was voluntary, and informed consent was obtained from each participant prior to taking part in the research. In addition, the purpose of the research and the research proceedings were explained to the participants. This helped reduce the risk of anxiety and further ensured that the possible risk of discomfort was minimised. Finally, the principle of beneficence was applied; i.e. that the benefit to be derived from the research should outweigh any possible potential harm or risk (Abbott & McKinney, 2013; Gravetter & Forzano, 2018; UNISA, 2014).

More details regarding the ethical protocols followed will be provided in Chapter 6.

1.12 CHAPTER LAYOUT

This study consists of the following eight chapters:

Chapter 1: Scientific overview of the research

This chapter introduces the research, outlining the background, motivation and context. It defines the problem statement, research questions, objectives and hypotheses, and presents the overarching theoretical foundation of the study, research process and ethical considerations.

Chapter 2: Occupational stress

Chapter 2 delves into the concept of OS, providing definitions, theoretical frameworks and models. It also discusses the antecedents, implications and demographic factors influencing OS among academics.

Chapter 3: Job satisfaction

In this chapter the concept of JS, including its definitions, dimensions and theoretical underpinnings, is discussed and the consequences of JS and its relation to demographic factors examined.

Chapter 4: Organisational commitment

This chapter focuses on OC, defining it and discussing its importance in higher education. Various theoretical approaches and models of OC are examined, along with its antecedents, consequences and demographic influences.

Chapter 5: Job performance

JP and its dimensions are presented in this chapter, as well as various models and theories related to JP, its antecedents, consequences and the interplay with demographic factors. It also covers the theoretical integration of OS, JS, OC, and JP.

Chapter 6: Research design and methodology

Chapter 6 details the research methodology, including the design, approach, strategy, and hypothesis formulation. It also covers the population and sample, data collection methods and ethical considerations as well as the statistical analysis techniques used.

Chapter 7: Results and discussion

This chapter presents the research findings, including demographic profiles, descriptive statistics, and the assessment of the measurement and structural models. In addition, the implications of these findings in relation to the research hypotheses are discussed.

Chapter 8: Conclusion, limitations and recommendations

The final chapter summarises the research conclusions. It acknowledges the limitations of the study and makes recommendations for HRM, participating institutions and future research.

1.13 CHAPTER SUMMARY

In this chapter, the background and motivation to the study, statement of the problem, research objectives, research questions, central hypothesis, potential value add (contribution), overarching theoretical foundation as well as the research process were discussed. The motivation for the study arose from the limited existing research on the concepts of OS, JS, OC and JP in technical universities, especially in a developing world context like Ghana. The purpose of this study was to critically assess and examine the relationship between OS, JS, OC and JP using a reliable research approach to be able to make recommendations to HEIs in Ghana in terms of how the negative consequences of OS can be minimised, if not eradicated, as well as

enhancing JS, OC and JP. In the following chapter, a literature review on occupational stress will be provided.

CHAPTER 2: OCCUPATIONAL STRESS

2.1 INTRODUCTION

OS is related to the work environment (Akinyele et al., 2014), and some of the adverse effects that have been associated with OS include job dissatisfaction, employee turnover and health problems (Cooper & Cartwright, 1994; Selye, 1974). Within the broader scope of OS, academic stress is a specific area of concern, as it pertains to the unique pressures experienced by individuals working in educational settings such as lecturers and researchers (Misra & McKean, 2000). Academic stress has been a long-standing affliction in higher education (HE) (Zawawi & Jye, 2012), owing to the high academic demands and professional expectations placed on faculty and students (Dube et al., 2018; Kiani et al., 2017).

The phenomenon of OS among academics is alarmingly prevalent and academics are experiencing higher levels of strain than other occupational groups (Akinyele et al., 2014). This chapter contains a literature review on OS. The review comprises definitions of stress and OS, an overview of OS among academics, and theories or models of OS. Finally, the chapter discusses the literature on the influence of demographic factors such as age, gender, marital status, educational level, job level, years of service and race on OS.

2.2 DEFINITION OF STRESS AND OCCUPATIONAL STRESS

Although stress is considered an inevitable fact of life (Aksoylu, 2019; Ismail et al., 2021; Okuhara et al., 2021), it is an ambiguous word with little agreed-on scientific definition (Quick et al., 1997). Anand (2019) and Lamberts (2011) postulate that the concept of stress has been defined in various ways, however, there is no single agreed definition (Heylen, 2018). Nonetheless, the most popular understanding in defining stress is based on a stimulus-response perspective (Anand, 2019). From the stimulus perspective, stress is characterised by a force acting upon the individual, while the response perspective considers stress as an individual's reaction to stressful conditions (Anand, 2019). In line with this definition, the 'father' of stress research, Hans Selye, defined stress as "an adaptive syndrome or non-specific response to demands placed upon the human body, which either stimulate or threaten the individual" (Selye, 1956, p. 38).

Abbasi et al. (2019) characterise stress as a cognitive, physical, or emotional tension or burden, viewing it as either a situation or a factor leading to sustained concern. In other words, stress is a condition characterised by mental or emotional tension, often triggered by challenging or unfavourable situations (Moe et al., 2018). To Chaturvedi and Joshi (2017), stress manifests when the demands imposed upon a person surpass their capacity to manage them effectively. It happens when there is a mismatch between one's working environment demands and one's capacity to carry out and satisfy such demands (Abbasi et al., 2019).

Stress occurs within personal domains and transcends into the world of work (Heylen, 2018). OS refers to stress involving work (Chaturvedi & Joshi, 2017). Thus, stress emanates from the interaction between the employee and his/her working environment (Zakrizevska & Bulatova, 2015). According to the National Institute for Occupational Safety and Health (NIOSH, 2008), OS manifests as adverse physical and emotional reactions that occur when there is a discrepancy between the demands of the job and the worker's abilities, resources or needs. To support this definition, Blaug et al. (2007) explain that work-related stress occurs when there is a mismatch between the demands of the job, and the resources and capabilities of the individual worker to meet those demands. According to French et al. (1974), OS is the inherent attributes of a job that present a potential risk or danger to the well-being of an individual. In addition, Houtman et al. (2007) opine that occupational or work-related stress arises when workers encounter job demands or pressures that seem beyond their skills or knowledge, thus pushing their coping abilities to the limit.

Stress can be positive or negative as illustrated in Figure 2.1 (Adeoti et al., 2018; Darabi et al., 2017; Muhonen et al., 2024; Uzhenyu, 2019). Positive stress is termed eustress, while negative stress is characterised as distress (Selye, 1976). Eustress is regarded as healthy, motivating, and gives the feeling of fulfilment (Darabi et al., 2017; Selye, 1976; Uzhenyu, 2019) and acts as a beneficial resource, assisting individuals when they undertake demanding tasks (Heylen, 2018). On the other hand, distress is a negative form of stress associated with negative emotions and outcomes (Sibisi, 2012). Thus, Uzhenyu (2019) suggests that universities need to cultivate work settings that promote positive stress or eustress among academic staff.

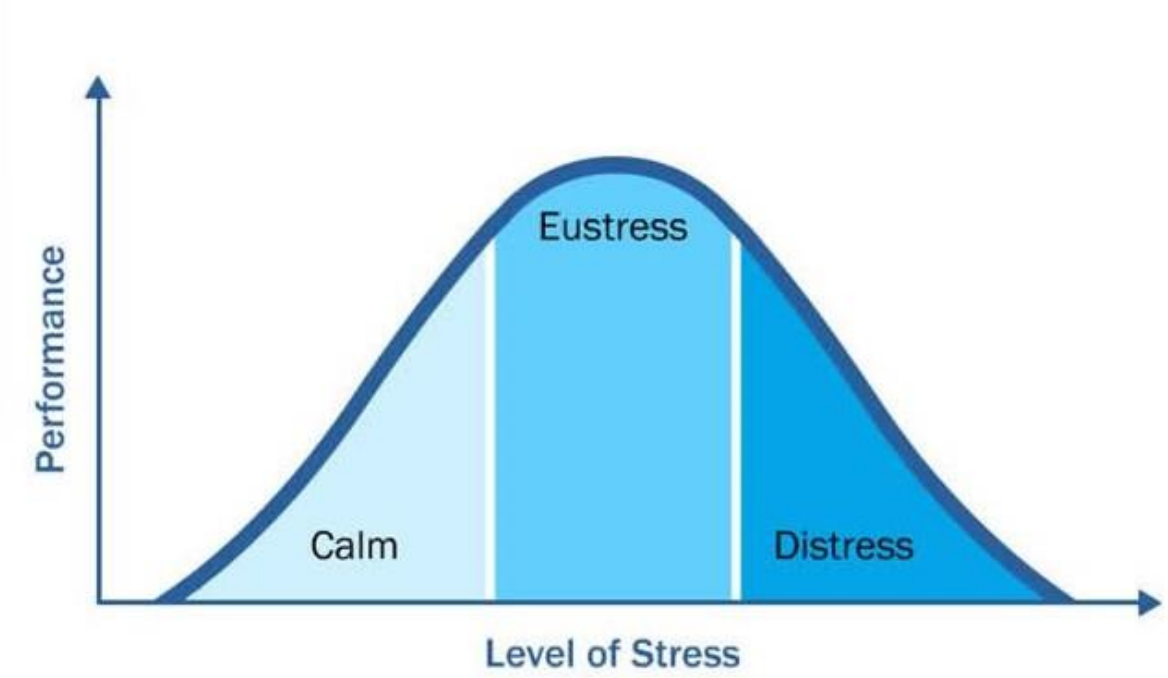

Figure 2.1: Inverted-U stress curve (White, 2023)

2.3 OVERVIEW OF OCCUPATIONAL STRESS AMONG ACADEMICS

Teaching at the university level is a high-stress occupation (Pinho et al., 2024; Simons et al., 2019) and this phenomenon is alarmingly widespread and increasing in universities around the globe (Musi, 2015). Kusi et al. (2014) explain that the multiple roles assigned to academic staff within universities cause them to experience stress. Apart from lecturing, scholarship, and administrative duties, lecturers work as counsellors, examination officers, postgraduate supervisors, departmental heads, directors and deans, and in many other positions of responsibility. These roles increase their stress levels (Kusi et al., 2014).

Similarly, Atindanbila (2011) and El-Sayed et al. (2014) attributed the prevalence of OS among academics to poor working conditions, such as large class sizes, work overload, inadequate resources and the increased enrolment of students with no expansion of university facilities. Other stressors among academics in HEIs are work-life imbalance, work relationships, job security (Tytherleigh et al., 2005), professional distress (Simons et al., 2019), administrative issues, and research and career development (Akinmayowa & Kadiri, 2014). Furthermore, Uzhenyu (2019) identified a shortage of resources and high expectations as causes of work stress among academics in Zimbabwe. According to Horta et al. (2019), the demand for academics

obtaining external funds and taking on extensive administrative duties elevates stress levels and reduces their allegiance to the institution.

Prolonged OS could manifest itself physically, emotionally and psychologically in the lives of affected employees (Aderibigbe & Mjoli, 2019), including academics (Barkhuizen & Rothmann, 2008). Masuku and Muchemwa (2015) believe that academics who experience protracted OS have high levels of psychological ill-health, leading to sleep loss and muscular tension/aches and pains. Furthermore, high levels of work-related stress can lead to organisational problems, such as low productivity, increased absenteeism, low turnover and burnout (Bezuidenhout & Cilliers, 2010; Lee et al., 2022; Oginyi et al., 2016; Steyn & Kamper, 2006). This results in organisations incurring costs in the form of ill-health due to employee work-related stress (Masuku & Muchemwa, 2015).

2.4 OCCUPATIONAL STRESS THEORIES AND MODELS

Several theories and models of OS have been proposed in the literature. Some of these theories and models include person-environment (P-E) fit theory (French et al., 1974), the job characteristics model (Hackman & Oldham, 1976), the diathesis-stress model (Bebbington, 1987), the job demands-resources (JD-R) model (Demerouti et al., 2001) and the effort-reward imbalance (ERI) model (Siegrist, 1996; Siegrist et al., 2004). For the purposes of this study, P-E theory, the job demands-resources model and the ERI model will be discussed. These models are frequently utilised in OS research because they provide an in-depth and holistic perspective, capturing the interaction between individual and environmental factors to predict stress outcomes (Bakker & Demerouti, 2017; Edwards & Van Harrison, 1993).

2.4.1 Person-environment fit theory

The main premise of P-E fit theory is that stress arises not from the person or environment separately but through their fit or congruence with one another. This simple yet powerful notion is reflected in numerous theories of stress and well-being, for example Caplan (1983, 1987), Caplan and Van Harrison (1993), French et al. (1982) and French et al. (1974). P-E fit is the degree to which individual characteristics harmonise with those of their environment (Mayer & Dale, 2010). In P–E theory, stress results neither from the person nor the environment but from the degree of fit between the two (Musi, 2015; Tshabalala, 2011). According to P-E fit theory, OS is the result

of a discrepancy between what the individual desires and what the job supplies (Buunk et al., 2013). Thus, a person starts to feel stress in a job where his/her aptitude, skills, abilities and resources are not aligned to the needs of their job. According to Clark-Murphy (2010), P-E theory suggests that individuals should be compatible with their environments for optimal productivity.

An incompatibility with the work environment can result in misfit (Tshabalala, 2011). There are two dimensions of misfit, namely, subjective and objective misfit. The former refers to the discrepancy between people's views of themselves and their view of the environment. Conversely, the latter relates to the discrepancy between how the person functions and the objective characteristics of the work environment (Tshabalala, 2011). In short, subjective fit (F_S) refers to the employees' perceptions of the person and the environment, whereas objective fit (F_O) refers to assessments that are, in theory, free of subjective bias and error. P-E fit theory is illustrated in Figure 2.2.

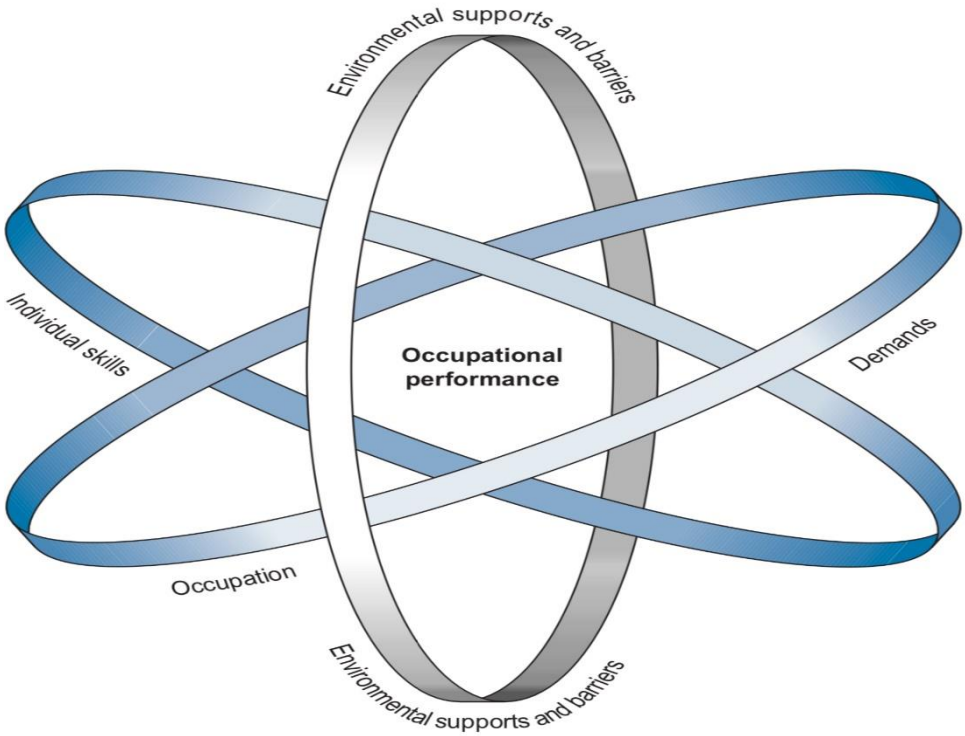

Figure 2.2: Person-environment-fit (Law et al., 1996)

Research by Janse van Rensburg et al. (2017) has shown that a better P–E fit was associated with a higher level of flourishing but lower level of intention to leave among academic employees of South African technology universities. Recently, emerging

research has confirmed that P-E fit in terms of person-organisation (P-O) fit and person-vocation (P-V) fit is significantly related to academics' turnover intentions and the attainment of a sustainable work–life balance (Ahmad Saufi et al., 2023).

2.4.2 Job demands-resources model

The JD-R model (Demerouti et al., 2001) proposes that employee well-being is influenced by the interplay of job demands and job resources (Bakker & Demerouti, 2017; Demerouti et al., 2001; Demerouti & Bakker, 2011; Malik et al., 2019). Job demands encompass the physical, environmental and organisational elements that necessitate ongoing physical and mental exertion. Conversely, job resources refer to the personal or communal attributes of the profession that facilitate the attainment of occupational objectives, mitigate the strains of job requisites and promote individual development. JD-R theory posits that OS can be associated with the difference in job demands and resources (Gill, 2007). Thus, academic' OS occurs when demands are high, and the universities expect academics to deliver high-quality results with low levels of resources.

According to the JD-R model, high job demands and low job resources can result in negative individual and organisational outcomes, while low job demands and high job resources can lead to positive outcomes. For instance, high job demands and limited resources can result in emotional exhaustion and depersonalisation, which are key components of burnout (Bakker et al., 2003). Furthermore, employees' job satisfaction may suffer when they face excessive demands and lack adequate resources (Bakker et al., 2004). Burnout and low job satisfaction can lead to reduced productivity at the organisational level (Bakker et al., 2003). As turnover intentions increase, organisations may face higher employee turnover rates, which can be costly and disruptive (Bakker & Demerouti, 2007).

In contexts where job demands are reasonable and are coupled with adequate resources, employees tend to exhibit greater work engagement and positive outcomes (Bakker & Demerouti, 2008; Bakker et al., 2007; Ibrahim, 2020). In addition, adequate resources and manageable demands contribute to increased job satisfaction (Bakker et al., 2004). As a result, engaged and satisfied employees are more likely to be productive, consequently contributing positively to the organisation (Bakker et al., 2007; Cao et al., 2020; Ibrahim, 2020). A workplace characterised by engaged,

satisfied and productive employees ultimately leads to improved overall organisational performance (Schaufeli et al., 2009)

Viewed through the lens of the JD-R model, Mudrak et al. (2018) found that among academics in the Czech Republic, job resources played a central role in fostering work engagement and JS. On the other hand, job demands were primarily associated with OS, largely due to work–family conflict. Similarly, Rothmann and Jordaan (2006) discovered that job demands, such as overload, affected the dedication of academics when organisational support was low to moderate.

In summary, the JD-R model serves as a framework to explain the range of negative and positive individual and organisational outcomes associated with different job demands and resources combinations. High job demands coupled with limited resources can lead to negative outcomes such as burnout, decreased JS, increased turnover intention, reduced productivity, and decreased employee engagement. On the other hand, low job demands, and abundant resources can result in positive outcomes like work engagement, higher job satisfaction, reduced stress, increased productivity, lower employee turnover and enhanced organisational performance. The full JD-R model is portrayed in Figure 2.3.

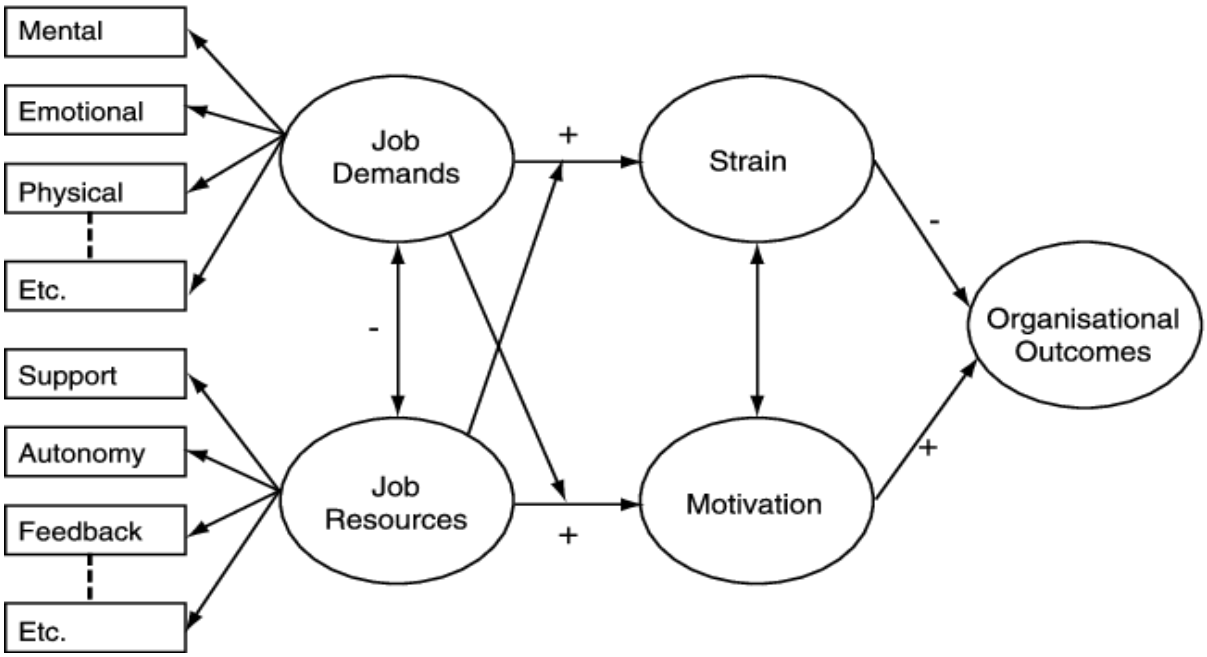

Figure 2.3: The JD-R model (Bakker et al., 2007)

In exploring OS in this research, the JD-R model served as the principal theoretical framework. The rationale behind the adoption of the JD-R model in this study stems

from its flexibility, enabling its application across various occupational settings. This versatility is particularly applicable to academia's diverse roles and contextual variations. Furthermore, the emphasis of the JD-R model on the relationship between job demands and resources resonates with the study objective of understanding the intricate dynamics of OS in a holistic manner, rather than in isolation. Moreover, this model is often used in studies (e.g. Abdelmoteleb, 2019; Uzhenyu, 2019) that aim to examine a holistic picture of OS and its effects. Given these considerations, the JD-R model emerged as the most appropriate and insightful framework for examining OS in this academic context.

2.4.3 Effort-reward imbalance model

The ERI model characterises OS as a lack of fairness in the reciprocity between efforts and reward (Notelaers et al., 2019; Siegrist, 1996; Siegrist et al., 2004). In other words, according to this model, when the amount of effort required and expended exceeds the occupational rewards attained, the individual will experience stress and may suffer health problems (Sadien, 2010). Therefore, the model is linked to social reciprocity and embodies distributive justice in the workplace (Siegrist et al., 2004). From this model, 'effort' pertains to the challenges and responsibilities encountered by an employee, while 'reward' encompasses the financial remuneration, appreciation and career prospects (or job security) that an employee expects in return, not only from the employer but from society as a whole (Notelaers et al., 2019; Siegrist, 1996). Figure 2.4 depicts the ERI model.

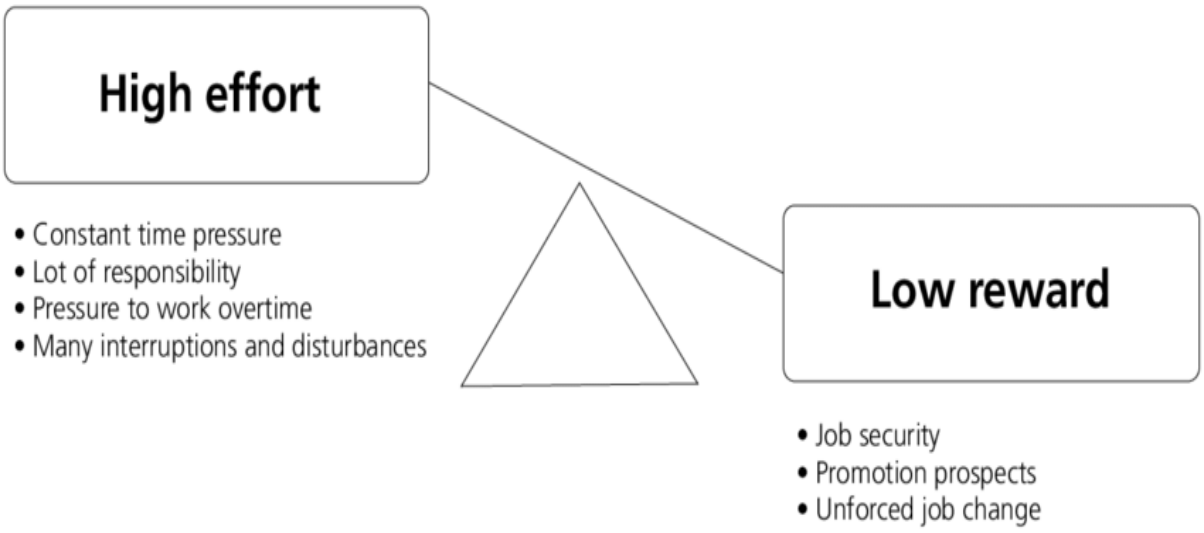

Figure 2.4: The ERI model (Gilbert-Ouimet et al., 2011)

The ERI model has been instrumental in predicting academic professionals' well-being and work-life dynamics, especially in university settings. Kinman's (2016) research applied the ERI model of job stress to analyse UK academics' well-being, concluding that those who perceived their work as more demanding and identified greater rewards were typically associated with poorer well-being. Mainly, esteem/support and financial/status rewards were crucial in safeguarding these academics from the detrimental effects of work-related effort.

In a subsequent study, Kinman (2019) delved deeper into the mental and physical health of academic employees in UK universities. The results indicated that factors such as higher work efforts, coupled with decreased rewards in terms of esteem and security, had a marked negative influence on mental health. Additionally, physical health appeared to be notably influenced by increased extrinsic work efforts and diminished security rewards. As an aspect of the model, overcommitment stood out as an independent risk determinant for both mental and physical health outcomes.

Expanding on the implications of the ERI model, Kinman and Jones (2008) sought to understand work-life conflict (WLC) among university employees. They discovered that job-related efforts, rewards and, notably, over-commitment were paramount in determining WLC. The research brought to light significant interactions between effort and reward and, to an extent, a three-way interaction involving effort, reward and over-commitment. The significance of perceived schedule flexibility and work-life integration was also underscored, with the model explaining an impressive 66% of the variance in WLC.

Lastly, Keser et al.'s (2019) study, which applied the Turkish short version of the ERI questionnaire, emphasised the correlation between ERI and depressive symptoms among staff and faculty in an academic setting. Their findings highlighted a considerable risk associated with high work stress.

These studies underscore the ERI model's pivotal role in the academic environment. They collectively paint a comprehensive picture of the challenges faced by academic professionals, emphasising the need for tailored interventions and policies that cater to their unique work-life dynamics and well-being.

2.5 ANTECEDENTS AND PREDICTORS OF OCCUPATIONAL STRESS

Several factors have been identified as precursors of OS, including factors that trigger or positively influence OS and those that negatively predict OS. For instance, Abbasi et al. (2019) reported that extra-work overload and imbalance of personal and professional work were leading factors that contributed to OS among female teachers, while emotional labour was found to positively influence OS in a food service industry (Jung & Yoon, 2014). Receiving feedback only on subpar performance combined with limited opportunities for ongoing professional development led to OS among nurses in Ghana (Kaburi et al., 2019). Other positive predictors are work–family conflict (Hamid et al., 2019), role ambiguity (Hamid et al., 2019; Rizwan et al., 2013), role overload and role conflict (Karimi et al., 2014; Rizwan et al., 2013).

Literature has also shown that some factors have a negative influence on OS. For example, resilience training was found to negatively influence OS among female police officers in India (Chitra & Karunanidhi, 2021). Thus, resilience training helps in reducing OS. Also, promotion/development opportunities, social support and good working conditions were reported to negatively predict OS among university teachers in countries as diverse as Pakistan and Finland (Malik et al., 2017).

Some demographic factors were also reported to be antecedents of OS in the literature. These will be discussed in section 2.7.

2.6 IMPLICATIONS OF OCCUPATIONAL STRESS FOR THE INDIVIDUAL, THE UNIVERSITY AND HUMAN RESOURCES PRACTITIONERS

Literature suggests that OS has implications for the individual academic, the university and HR practitioners. According to Aksoylu (2019), OS can bring important results for employees and managers. Like other professionals, academics may experience physical, emotional, and psychological effects from long-term workplace stress (Aderibigbe & Mjoli, 2019; Sakarji et al., 2024). High levels of stress may have serious emotional, psychological and physical implications if they are not well regulated (Essel & Owusu, 2017; Jain & Singhai, 2018).

In terms of diminished productivity, increased employee turnover and other intangibles, stressed faculty members financially burden universities. Students, research and publications might suffer if academics are under increased stress (Akinyele et al., 2014). Moderate stress levels are thought to inspire creativity and

motivate effort, but high stress levels are thought to impede creativity and dissipate effort (Akinyele et al., 2014; Steenkamp & Roberts, 2020).

Mosadeghrad (2014) argues that in order to retain workers, HR managers need to be more aware of the risk factors, causes and impacts of OS. As a result, he proposed that managers should implement policies and techniques that increase employee satisfaction with policies, work conditions, remuneration and advancement in order to minimise and lessen these workplace stressors. Lastly, employers, recognising that certain degrees of job stress are unavoidable, should promote their workers' psychological well-being to assist them to handle stress better (Darabi et al., 2017; Springer et al., 2023).

2.7 DEMOGRAPHIC FACTORS AND OCCUPATIONAL STRESS

Literature suggests that demographic factors may or may not influence levels of OS. Thus, depending on certain demographic factors, significant differences may exist in the level of OS (Engle, 2012). Consequently, the focus of this section is in line with the objective of this study, which sought to understand the influence of the demographic factors of age, gender, education level, job level and years of service on OS.

2.7.1 Age

In terms of the influence of age on the level of OS, a study by Mahmood and Yadav (2017) among working professionals found a statistically significant difference between age groups pertaining to levels of OS. These authors explain that the senior group (50–60 years) was found to be most stressed followed by the junior group (20–30 years). The least OS was found to among the 40–50 age group. In contrast, Barkhuizen and Rothmann (2008) and Akinmayowa and Kadiri (2014) found no age differences in academic staff's OS level in a South African and a Nigerian HEI, respectively.

2.7.2 Gender

Check and Okwo (2012) reported that, as perceived by teachers in Cameroon, gender did not significantly influence stress. Barkhuizen and Rothmann (2008) and Atindanbila (2011) found no significant differences in OS between male and female academics in South Africa and Ghana, respectively. Contrary to the these findings, a study by Mahmood and Yadav (2017) of working professionals, and studies by Simons et al. (2019) and Zábrodská et al. (2018) of academics, found a significant difference

in OS between males and females. These authors reported that females experienced more OS compared to their male counterparts. Additionally, a systematic review conducted by Watts and Robertson (2011) indicated that female teaching staff reported higher levels of emotional exhaustion.

Social role theory has been used to explain why females experience more stress than males (Rawski et al., 2014). The main tenet of social role theory is that men and women differ in their behaviours and characteristics – not because they are inherently different, but because they are expected to adapt to and fulfil different social roles (Eagly & Wood, 2012).

2.7.3 Educational level

A study by Mahmood and Yadav (2017) among working professionals found a statistically significant difference between educational qualification groups on levels of OS. They also reported that people with professional degrees are most stressed while graduates have the lowest OS levels. However, educational qualification did not significantly influence stress perception among teachers in Cameroon (Check & Okwo, 2012) or among nurses in Iran (Faraji et al., 2019).

2.7.4 Job level (rank)

Research conducted by Barkhuizen and Rothmann (2008) on OS in academic staff in South African HEIs reported that academic rank had a significant impact on the level of OS. These authors explain that associate or assistant professors encounter greater job demands than junior lecturers and lecturers. Winter et al. (2000) agree that associate professors are more likely to experience role overload than academics employed at lower ranks. This is because higher job positions often come with increased responsibilities and job demands, which can lead to stress (de Lange et al., 2003). Contrary to Barkhuizen and Rothmann (2008) and Winter et al. (2000), the findings of Akinmayowa and Kadiri (2014) indicate that significant differences do not exist in the level of stress among academics in a Nigerian university based on their academic rank. These contradictory findings may be attributed to the fact that higher job positions can both mitigate and contribute to OS, depending on the specific circumstances and the context (de Lange et al., 2003; Lazarus & Folkman, 1984; Maslach et al., 2001).

2.7.5 Years of service (working experience)

A study by Mahmood and Yadav (2017) among working professionals found a statistically significant difference between working experience groups on levels of OS. They further reported that those with work experience of 30+ years have the maximum levels of OS while those with 20–30 years of experience face minimum stress levels. Engle (2012) concurs with these findings, finding that the stress levels of lecturers vary based on their tenure, in that educators with more than 30 years of service experience the highest stress, followed by those with 8–20 years' experience. This implies that the more working experience or years of service, the higher the stress level experienced, as employees with more experience may face different stressors such as increased administrative and leadership responsibilities (Gillespie et al., 2001; Gmelch & Ezeh, 2022; Gmelch et al., 1986). However, the findings of Akinmayowa and Kadiri (2014) indicate that a significant difference did not exist in the level of stress among academics in a Nigerian university based on teaching experience.

2.8 CHAPTER SUMMARY

In this chapter, stress and OS were defined, an overview of OS among academics was given and relevant OS theories or models were discussed. This chapter concluded with a discussion on the role of demographic factors in relation to OS.

This chapter partly realises the first specific objective of the study, which is to conceptualise OS, JS, OC and JP from a theoretical perspective. A literature review on JS is presented in the following chapter.

CHAPTER 3: JOB SATISFACTION

3.1 INTRODUCTION

The current environment of continuous dynamic change has caused organisations to come to the realisation that their most important asset is their employees. When employees are satisfied and driven, organisations are more likely to be successful. HRM practice emphasises the importance of JS (Ray & Ray, 2011) due to its relevance to the physical and mental well-being of employees (Mustapha & Zakaria, 2013). It is further believed that JS will not be achieved until and unless the employees are given importance (Khan et al., 2016). Similarly, academics' JS is critical because it contributes to the quality of education, results in high professional engagement and paves the way for producing quality graduates (Amarasena et al., 2015; Mustapha & Zakaria, 2013). The significance of JS is especially apparent due to the many negative consequences of job dissatisfaction, for instance increased absenteeism and workplace accidents (Szromek & Wolniak, 2020). It is, thus, in the interest of every university to ensure that its greatest and core asset (i.e. the academics) is satisfied.

This chapter explores the literature related to JS and covers the definitions, theories, dimensions, antecedents, and consequences of JS. It also presents an overview of JS among academics. Demographic factors and other factors that influence JS are also discussed. This chapter covers step 2 of phase 1 of the research process, as highlighted in Figure 1.1.

3.2 DEFINITIONS OF JOB SATISFACTION

JS has been conceptualised as both a global and a multidimensional concept (Ray & Ray, 2011; Rothmann, 2008). The extent of one's JS is viewed on a worldwide scale, encompassing such diverse elements as the employee's salary, supervision, corporate policy and the nature of the work (Rothmann, 2008).

JS emerges as a complex and extensively studied concept, characterised by a variety of perspectives that complement one another (Anari, 2012). It is acknowledged as an intricate phenomenon with a range of definitions (Ramlutchman, 2018). Locke (1976) describes JS as a positive emotional state derived from assessing one's employment or job experiences. According to Spector (1997), JS is an evaluative state where employees perceive what they like and dislike about their jobs. Spector (1997) posits that this evaluation stems from the individual's viewpoint on the extent to which their

job fulfils what they deem to be significant. Furthermore, in the view of Abu-Shamaa et al. (2015), JS is the way the employee develops a perception about their job and the degree to which employees like their jobs. Moreover, JS is viewed as the affective orientation that an employee has towards his/her work (Hoboubi et al., 2016). Ray and Ray (2011) describe JS as an employee's overall affective state resulting from an approval of all aspects of his/her job. According to Arian et al. (2018), JS can be viewed as an individual's emotional response or attitude towards their work life. Conversely, job dissatisfaction highlights issues related to an employee's work environment or their personal standing within the organisation. Thus, JS is a constellation of employees' feelings in relation to various intrinsic or extrinsic job elements (Chipunza & Malo, 2017).

For the purposes of this study, academics' JS is characterised as an academic employee's assessment of the extent to which their work enables them to meet their essential needs. In other words, in accordance with the viewpoints of Musi (2015) and Tentama et al. (2020), academics' JS is shaped by how effectively an academic employee perceives their job as meeting their prioritised requirements.

3.3 JOB SATISFACTION AMONG ACADEMICS

Academics' JS is one of the most significant variables in organisational behaviour (Musi, 2015). It is an essential motivation for the advancement of HE systems towards achieving efficiency and effectiveness in the processes of learning and education (Dave & Raval, 2015; Szromek & Wolniak, 2020).

Varying levels of JS have been reported among academics (Saner & Eyüpoğlu, 2012). Specifically, in Sri Lanka and India respectively, Amarasena et al. (2015) and Singh et al. (2024) indicate academics were generally quite satisfied with their jobs. However, in Zimbabwe, few academics were reported to be satisfied with their jobs (Nyanga et al., 2012). This is because, according to Ohide and Mbogo (2017), academics' JS has varying façades and depends on erratic factors. For instance, whereas an academic may be satisfied with their pay, they may be unhappy about their relationships with their co-workers or their working conditions. This phenomenon highlights the need for university managers to understand the needs of academics through a constant appraisal system and by observing their behaviour (Musi, 2015; Szromek & Wolniak, 2020). Academics may express JS through both positive and negative behaviours

(Musi, 2015). According to the literature, academics prefer job assignments that align with their own interests and provide them significant autonomy in task selection and decision-making; they also want a feeling of accomplishment, which is assisted by supervisor feedback (Saner & Eyüpoğlu, 2012). When academics' needs are satisfied, they are more likely to perform at a high level, therefore attaining university objectives. Consequently, only fulfilled and motivated academics can generate inventive and problem-solving minds in educational institutions (Haile, 2020).

3.4 CONCEPTUALISATION OF JOB SATISFACTION

A number of theories and models of JS have been proposed in the literature owing to the diverse understandings and multiple facets of JS. This variety has led to a knowledge gap among practitioners regarding the determinants of JS and precise methods for its measurement (Kola, 2018; Saari & Judge, 2004). Some of these well-known theories and models are Maslow's hierarchy of needs (Maslow, 1943), Alderfer's existence relatedness-growth (ERG) theory (Alderfer, 1969), Herzberg's motivator-hygiene theory (Herzberg, 1966), the job characteristics model (Hackman & Oldham, 1976), and the dispositional approach (Judge & Hulin, 1993; Staw & Ross, 1985). For the purposes of this study, Maslow's hierarchy of needs, Alderfer's ERG theory and Herzberg's motivator-hygiene theory will be discussed, as they are mainly applied in the area of JS (Aldhuwaihi, 2013; Khan et al., 2021).

3.4.1 Maslow's hierarchy of needs theory

One of the first theories to describe behaviour as being directed toward the satisfaction of human needs was the hierarchy of needs theory by Abraham Maslow (Addai, 2013). His theory forms a theoretical foundation for many needs-based approaches to JS and motivation, focusing on both fundamental and advanced-level needs (Ramgoolam, 2020; Sahito & Vaisanen, 2017).

The assumption of this theory is that everyone has basic needs that, if not addressed, would drive them to seek solutions. Maslow also argued that some needs must be addressed before others may serve as driving factors (Makgalo, 2020). Thus, a need must be unfulfilled in order to be motivating, whereupon people will engage in a cycle of behaviours aimed at meeting those needs until they reach the pinnacle of the needs hierarchy (Aldhuwaihi, 2013; Makgalo, 2020).

The five levels, listed in order from the most basic to the most advanced, are physiological, safety, love and belonging, esteem and self-actualisation needs. Physiological needs are the most basic needs required for survival such as food, water, shelter and sleep. Satisfying physiological needs is crucial for human survival and well-being. Employees are healthier, more alert and more focused when their physiological needs are satisfied at work. When these demands are not addressed, workers may experience stress, weariness and reduced productivity. Hence, organisations must consider workers' fundamental physiological needs to promote well-being and JS (Addis et al., 2018; Koufie, 2018; Makgalo, 2020; Meemano, 2020; Munro, 2015).

Safety needs are concerned with security, stability and protection from harm. Examples of safety needs include financial security, job security and physical safety. Meeting safety needs is essential for achieving a sense of stability and security, which can help to reduce employees' anxiety and stress and promote well-being (Makgalo, 2020; Meemano, 2020; Nyagucha, 2017; Ramona, 2017).

Love and belonging needs involve the desire for social interaction, affection and a sense of belonging. Examples of love and belonging needs include friendships, romantic relationships and a sense of community. Meeting love and belonging needs is important for developing and maintaining positive and supportive relationships with others, which can help to reduce stress and promote well-being. Employees require companionship, teamwork and healthy interactions at work and, thus, meeting workers' love and belonging needs at work boosts engagement, motivation and productivity. When these needs are not satisfied, workers may feel lonely, unsupported and uninspired, which may lower performance and JS (Makgalo, 2020; Meemano, 2020; Morales-Sánchez & Pasamar, 2019).

Esteem needs are related to self-esteem, confidence and respect from others. Examples of esteem needs include recognition, achievement and a sense of accomplishment. Meeting esteem needs is therefore important for developing a positive self-concept and a sense of accomplishment, which can help to promote well-being and reduce stress. Self-esteem or self-respect, according to Maslow, is a higher need. Feelings of self-confidence and competence are also part of this self-esteem requirement. Employees who have a strong sense of commitment to their organisation

experience higher work engagement and JS, and are less inclined to contemplate leaving (Bray, 2016; Kinyili, 2015; Makgalo, 2020; Meemano, 2020).

The highest need category is self-actualisation which is related to personal growth and self-fulfilment. Examples of self-actualisation needs include creativity, personal development and the realisation of one's full potential. Attaining self-actualisation is important for achieving a sense of purpose and fulfilment in life, which can help to promote well-being and reduce stress. If self-actualisation needs are unmet, employees may feel unfulfilled and unsatisfied, and may struggle to discover significance and direction in their lives (Makgalo, 2020; Meemano, 2020; Muindi, 2011; Nyagucha, 2017).

Figure 3.1 illustrates Maslow's hierarchy of needs, focusing on its relationship to the organisational context.

Figure 3.1: Maslow's hierarchy of needs (Cherrington, 1994)

Although Maslow's hierarchy of needs is one of the most cited models, it is not without limitations. Spector (1997) postulates that the model does not have sufficient empirical support. In addition, it does not consider the cognitive processes of the individual.

According to Newstrom and Davis (2002), there is no clear definition or conceptual understanding of self-actualisation, and this makes it difficult to measure. These authors further postulate that research has not supported the presence of all five needs as being unique. In addition, evidence exists that unless the two lower-order needs are satisfied, employees will not be greatly concerned with the higher-order needs (Newstrom & Davis, 2002).

3.4.2 Alderfer's existence relatedness growth theory

Maslow's (1943) hierarchy of needs was condensed by Alderfer (1969) into three essential human needs: existence, relatedness and growth (ERG). No change was made to Maslow's (1943) hierarchical framework, but the number of levels was lowered from five to three, and the intermediate layers were overlapped (Ramgoolam, 2020). When it comes to the ERG theory, there is a continuum between the different levels of needs, in other words even if a lower-level need is not fully met (i.e. unmet lower need), an individual can still experience and pursue higher-level needs simultaneously (Ramgoolam, 2020; Thangaswamy & Thiagaraj, 2017).

Maslow's (1943) physiological and safety requirements are combined under Alderfer's (1969) existence needs category. Food, housing and a safe workplace are examples of these necessities. The relatedness category is based on Maslow's (1943) social needs level, which focuses on the need to sustain interpersonal connections and interact with other people. Motivation that is derived from outside oneself is also included in this group of relatedness needs. Maslow's (1943) self-actualisation and esteem levels are combined in the area of growth needs, with self-improvement and intrinsic motivation being two requirements that may be met via achievement (Chirchir, 2016; Ramgoolam, 2020).

The frustration-regression concept, as depicted in Figure 3.2 makes, according to Alderfer, the order among these needs more complicated (Addai, 2013; Halkos & Bousinakis, 2010; Ramgoolam, 2020). Therefore, if a high-order need is not met, a regression to a lower-order need that has previously been met will occur. For instance, an academic who is not recognised for his or her contribution to decision-making may not fulfil his or her need for self-esteem. Then, this higher-order desire may return to a lower-order need, and they may refocus their energies on their remuneration.

The satisfaction/progression principle builds on the premise that when an individual's needs at one level are fulfilled, they naturally progress and move to the next level of needs (Arnolds & Boshoff, 2002; Caulton, 2012). This principle can be explained by considering the sequential nature of needs fulfilment. For instance, once existence needs pertaining to basic physiological and safety requirements are met, an individual is motivated to satisfy their relatedness needs, which revolve around interpersonal relationships and social interactions. Subsequently, once relatedness needs are fulfilled, the individual's focus shifts to addressing their growth needs, which centre on personal development and self-actualisation. This progression embodies a forward momentum, where the fulfilment of needs propels individuals toward higher tiers of motivation and aspiration (Wanous & Zwany, 1977; Yang et al., 2011).

The ERG theory acknowledges that individuals are unique and that their needs are influenced by a variety of factors. Because humans need to fulfil many motivators at once, an organisation focusing on satisfying just one need would struggle to inspire its staff (Sabbagha, 2016). Alderfer's (1969) ERG theory proposes that a person's ability to meet their basic needs improves as they move up the hierarchy. The road to fulfilment of an employee's needs may be obstructed but, if it is, the employee will revert to more fulfilled wants. Consequently, ERG theory offers not only a new category of needs, but also their linkages, development and regression in the satisfaction of those needs (Brown & Sargeant, 2007; Chirchir, 2016; Ramgoolam, 2020). ERG theory has, however, been criticised for its lack of research on the causal relationship between need satisfaction and JP. Additionally, the theory has been questioned for overlooking the influence of individual personality differences on the relationship between need satisfaction and JP (Pantouvakis et al., 2023; Wang et al., 2021). Furthermore, there are limitations in applying ERG theory to the study of human motivation in the workplace, as it primarily focuses on increasing morale and productivity (Arnolds & Boshoff, 2002; Egbuta & Omojola, 2022; Pantouvakis et al., 2023). Finally, Wanous and Zwany (1977) argue that Alderfer's theory might not closely align with real-world scenarios and could have limited practical relevance in day-to-day personnel management, as a person's actions may not solely hinge on the satisfaction of needs. Figure 3.2 illustrates ERG theory.

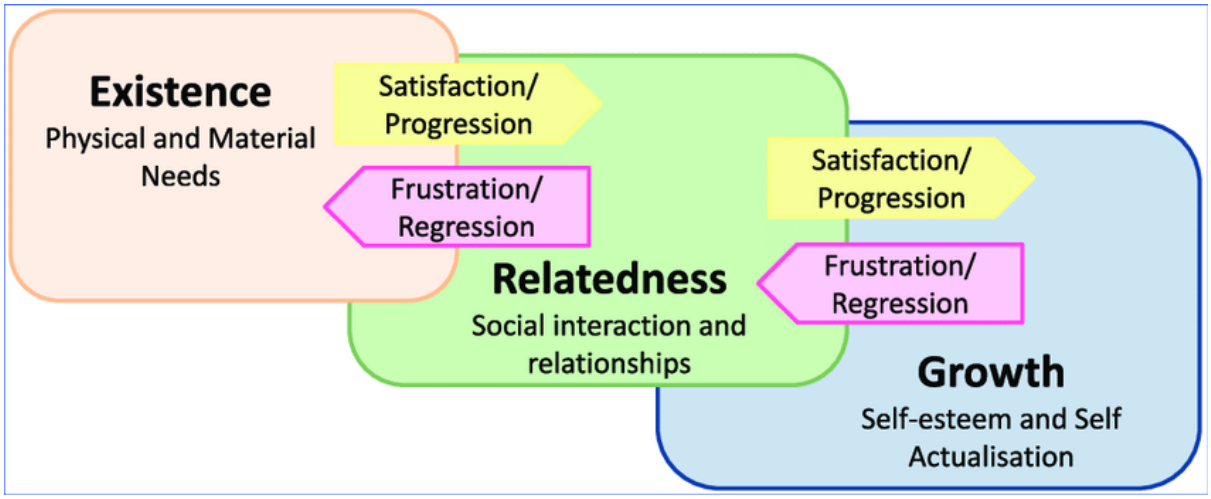

Figure 3.2: ERG theory (adapted from Johnstone et al., 2013)

3.4.3 Herzberg's motivator-hygiene theory

Herzberg's (1966) two-factor theory, which builds upon Maslow's (1943) theory, is widely regarded as a significant contribution to understanding JS. According to this theory, JS and job dissatisfaction are distinct dimensions (Ramgoolam, 2020). Studies on academics' JS are deeply rooted in this theory (Haile, 2020) as it emphasises that JS and job dissatisfaction do not exist as opposite ends of the same spectrum. This indicates that the factors influencing JS are not necessarily the same as those influencing job dissatisfaction. As a result, a lack of the characteristics that increase JS does not inherently translate to job dissatisfaction, and vice versa (Haile, 2020; Kola, 2018; Ramgoolam, 2020).

In this theory, the distinction between intrinsic and extrinsic factors, or motivation and hygiene, is the key focus (Barrett, 1980; Gangai & Agrawal, 2015; Ramgoolam, 2020). Motivational elements are intrinsic to the profession (e.g. academic profession), whereas hygienic aspects are extrinsic. Hygiene factors consist of elements that, if missing or not properly addressed, lead to dissatisfaction. In essence, these factors help to reduce job dissatisfaction and typically include external elements such as company policies, working conditions, supervision, interpersonal relations and salary. The primary purpose of hygiene factors is to prevent the emergence of dissatisfaction. Simply put, their adequate presence alone in the workplace does not actively motivate employees; rather, it neutralises the potential sources of dissatisfaction (Liu & Sukru, 2018; Ramgoolam, 2020).

Conversely, motivation factors are deeply rooted in the intrinsic nature of the job itself and are directly related to the tasks and responsibilities an individual engages in. The presence of these factors can notably enhance JS and motivation, and include facets such as achievement, the inherent nature of the work itself, recognition, responsibility, as well as opportunities for advancement and personal growth. Closely aligned with an individual's innate drive for professional success and personal development, motivation factors play a pivotal role in inspiring and fostering growth in the workplace. Thus, motivation-related variables contribute substantially to increasing and improving work satisfaction (Liu & Sukru, 2018; Ramgoolam, 2020).

This theory has, however, been subject to limitations and criticism. One notable criticism is that the theory tends to oversimplify the complex nature of JS by categorising factors as either motivators or hygiene factors (Juariyah & Saktian, 2018; Ogunnaike et al., 2017). This oversimplification can overlook the nuanced interaction of various factors that contribute to JS. Another limitation is that the theory does not account for individual differences in the way in which certain factors are perceived as motivators or hygiene factors (Arka'a, 2018). In other words, the theory does not acknowledge that the significance of factors can vary based on individual perspectives and needs. Additionally, Tuch and Hornbæk (2015) argue that the theory does not adequately address the role of intrinsic motivation in JS. Figure 3.3 depicts Herzberg's motivation-hygiene theory.

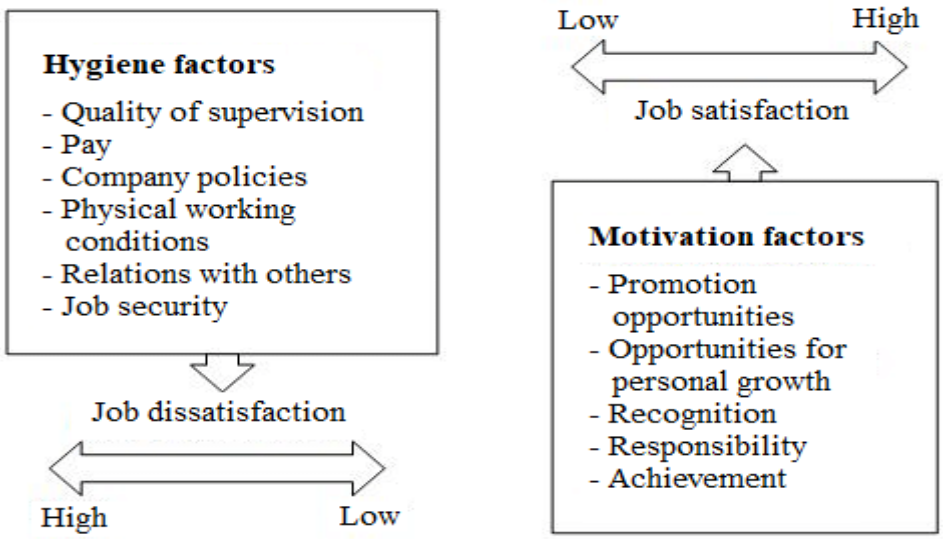

Figure 3.3: Herzberg's motivation-hygiene theory (Hrdličková et al., 2019)

Herzberg's motivator-hygiene theory was adopted as part of the theoretical framework for this study owing to its applicability and alignment with the indicators chosen in this study to gauge JS. Specifically, statements (refer to the JS scale in Appendix A) such as "*I find real enjoyment in my job*" and "*Most days I am enthusiastic about my job*", inherently align with Herzberg's motivators. Additionally, the statement "*I feel fairly satisfied with my job*" is a broad indicator that can be associated with both motivators and the absence of significant hygiene factors. Thus, these indicators emphasise the intrinsic rewards and personal growth aspects associated with a job, which are central tenets of Herzberg's theory. Unlike other theoretical frameworks, such as Maslow's hierarchy of needs or Alderfer's ERG theory, which address broader human needs, Herzberg's theory offers a more targeted perspective on JS. This specifically makes it the most suitable and precise lens through which we can understand JS in relation to OS, OC and JP.

3.5 FEATURES AND DIMENSIONS OF JOB SATISFACTION

JS consists of various features and dimensions (see section 3.2). The foundational work in this field can be attributed to authors like Locke, Spector and Luthans. Locke (1976) laid the groundwork by identifying four pivotal features of JS: expectancies, needs, values and need-value conflicts. For Locke (1976), "expectancies" denote an individual's perception of success in meeting an employer's objectives. He elaborated that while needs are intrinsic, stemming from both physiological and psychological origins, values are learnt and shaped by personal desires. These values, as defined by Locke, are what individuals "consciously or subconsciously desire, want or seek" (Locke, 1976, p. 1304). Locke termed the clash between an inherent need and a pursued value as a need-value conflict. All these aspects must be satisfied for total JS to occur (Lee, 2014; Ramgoolam, 2020).

Building on Locke's framework, Spector (1997) refined the understanding of JS by categorising its elements into intrinsic or extrinsic. Spector's (1997) nine-factor model delineated intrinsic satisfaction sources, such as promotion prospects and the nature of tasks, from extrinsic ones like remuneration, management approach and interpersonal relationships. Luthans (1998) subsequently introduced his conceptualisation of JS, highlighting dimensions such as remuneration, advancement opportunities and the impact of supervision and colleagues on employee attitudes.

The more contemporary literature on JS has added nuanced dimensions, demonstrating the concept's evolving nature. Lum et al. (1998) and Adzei and Atinga (2012), for instance, expanded the discourse by focusing on work satisfaction, remuneration, supervisory relationships, work life quality, employee involvement and the overall organisational climate. By juxtaposing these more recent dimensions with the foundational works of Locke, Spector and Luthans, it is evident that while core themes persist, new dimensions emerge, reflecting the dynamic nature of workplaces and employee perceptions (Kula, 2017; Ramgoolam, 2020; Sabbagha, 2016).

Furthermore, JS is engendered by several factors including salary, job security, opportunities to advance, management and company, supervisors and superiors (Suripah et al., 2021). Other factors are "the manager's concern for people, job design, remuneration (external and internal consistency), working conditions, social relationships, perceived long-range opportunities, perceived opportunities elsewhere, levels of aspiration and need achievement, gender, salary of the work, and stress at work" (Szromek & Wolniak, 2020, p. 10). According to Gormley (2003), variables influencing JS included professional freedom, role conflict, role ambiguity and leadership expectations, organisational climate, leadership behaviours, and organisational features.

Having delineated the multifaceted features and dimensions of JS as seminal authors and subsequent scholars posited, it is crucial to delve into empirical studies that considered factors that affect JS. The next section provides a discussion on the antecedents of JS.

3.6 RESEARCH ON JOB SATISFACTION

One of the notable undercurrents in JS research is the profound influence of organisational culture on employees' perceptions. Gordijn (2015) underscores this in the Dutch context, positing a direct positive relationship between organisational culture and JS. Delving deeper into this, Ariyo and Okwilagwe (2020) and Ali, Jan et al. (2014) resonate with this sentiment, shedding light on the positive ramifications of organisational culture and leadership dynamics on JS in academic and public sector contexts, respectively.

However, the determinants of JS extend beyond the broader organisational ethos. Alegre et al. (2016) suggest that individual interpersonal relationships, particularly a

sense of cooperation and identification with the organisation, have the potential to mitigate the negative effects of work-family imbalances. This interpersonal dimension is especially pertinent given that, as Addis et al. (2018) highlight, extrinsic factors like pay and training opportunities predominantly influence employees' JS in specific sectors like leather manufacturing in Ethiopia, while ethnic diversity casts a shadow on these positive influences.

A broader examination of academic contexts reveals diverse factors shaping JS. For instance, nature of work and supervision strongly influenced JS, while contingent rewards and operating conditions had least effect on JS (Singh et al., 2024). Chimanikire et al. (2007) highlight the impact of economic stressors such as insufficient wages and excessive workloads, which contribute to decreased JS in Zimbabwean HEIs. Yet, Amarasena et al. (2015), Pan et al. (2015) and Gollagari et al. (2024) underscore the significance of less tangible aspects, with organisational support, psychological capital, work autonomy and organisational justice, emerging as crucial contributors to academic JS across China, Sri Lanka and Ethiopia. Also, employee relationships and job analysis and design shaped JS of academic staff in Jordanian private universities (Al Serhan et al., 2024).

While these studies highlight various factors influencing JS, it is evident that contextual nuances, such as industry, region or specific organisational challenges, are of paramount importance. For instance, the unique professional challenges faced by optometrists in Ghana, as highlighted by Akuffo et al. (2021), or the sixfold factors identified by Arian et al. (2018) for nurse educators, cannot be universally applied. However, they offer insights into the multifaceted nature of JS determinants. Ghasemy et al. (2022) further enrich this discourse by exploring the influence of affective states, suggesting that emotions, too, play a pivotal role in academics' JS.

In synthesising these findings, it is evident that while there are overarching themes like organisational culture, the specificity of the context and profession introduces unique determinants of JS. This prompts a call for more holistic and cross-contextual studies to grasp the evolving dynamics of JS truly. Recognising this, this study on the relationship between OS, JS, OC and JP within three technical universities in Ghana becomes particularly salient. This research aims to fill the gap by providing a more holistic view within a distinct educational context, thereby contributing to the

burgeoning literature on cross-contextual studies. This underscores the importance of such studies in truly grasping the evolving dynamics of JS, with the hope that the insights derived from the Ghanaian technical university context will further illuminate our understanding of this intricate interplay.

3.7 CONSEQUENCES AND IMPLICATIONS OF JOB SATISFACTION

Monitoring JS is essential to the continuing growth of educational systems worldwide (Szromek & Wolniak, 2020). Hoboubi et al. (2016) assert that JS may protect workers from stressors and is a regulating factor for stress. Thus, literature has acknowledged several consequences of JS (Claudia, 2018; Deng et al., 2021; Ge et al., 2021; Ghafoor, 2014; Goswami & Dsilva, 2019; Guzmán et al., 2018; Hartika et al., 2023; Rather et al., 2022; T. Zhang et al., 2021).

Indeed, JS has been reported to be related to both employee and organisational outcomes. From a national survey by Zhang et al. (2021), JS was found to have a direct negative effect on the turnover intention of general practitioners in China. Likewise, Deng et al. (2021) and Ghafoor (2014) reported that JS negatively affected turnover intention among paediatricians in China and academic staff in Pakistani universities, respectively. A study by Goswami and Dsilva (2019) suggested that JS negatively influenced job stress and job impact in Mumbai's hospitality sector.

According to studies by Claudia (2018) and Ge et al. (2021), JS is positively correlated with the organisational citizenship behaviour of permanent lecturers at the University of Lambung Mangkurat, Banjarmasin, and self-rated health among healthcare workers, respectively. JS also positively affected academic motivation and organisational citizenship behaviour of lecturers in Malaysia and Japan (Ghasemy & Elwood, 2023). Ahmad and Raja (2021) found that the JS of Indian commercial bank employees significantly influenced their organisational commitment and business performance. By contrast, Guzmán et al. (2018) reported that the JS of non-academic professionals in HEIs in Chile was found to insignificantly affect organisational performance.

Drawing from the breadth of literature, it becomes evident that JS is not merely a personal metric; its impact extends far beyond, significantly influencing the organisation's overall health. The recurrent themes elucidate that satisfied employees are less likely to entertain the idea of leaving their jobs. This sentiment is seen across

diverse sectors, from general practitioners in China to academic staff in Pakistan. Additionally, the ripple effects of high JS manifest in reduced job stress and augmented organisational citizenship behaviours. Notably, this also bodes well for employee health and overall organisational commitment. However, it is pivotal to acknowledge that the implications of JS are not uniform across all sectors and demographic groups. For instance, non-academic professionals in Chile's higher education segment do not demonstrate a direct significant impact of JS on organisational performance. This points to the intricate nature of the JS–organisational outcome relationship.

In essence, organisations that do not prioritise the satisfaction of their workforce are treading on dangerous ground. Such entities are likely to face increased turnover and potential challenges with lower OC, compromised employee health, and potential performance-related issues. Addressing JS is, thus, not merely an HR exercise but a strategic imperative for ensuring sustainable growth.

The next section delves into the intricate relationship between demographic factors and JS, aiming to unpack whether and how individual characteristics influence an individual's level of JS.

3.8 DEMOGRAPHIC FACTORS AND JOB SATISFACTION

Among the multifaceted determinants of JS, demographic factors, such as age, gender and educational background, often emerge as significant influencers (Amarasena et al., 2015; Chirchir, 2016; Paul & Phua, 2011). Thus, the impact of age, gender, education level, job level and years of service on JS will be explored in this section. In accordance with the objectives of this study, recognising the interplay between demographic factors and JS can offer a richer, more holistic understanding of JS dynamics.

3.8.1 Age

Research findings across different regions and contexts appear varied in examining the relationship between age and JS. Much of the current review draws on studies from countries like Sri Lanka, South Africa, Singapore, Pakistan, Ghana and Kenya, rather than Western nations. The intentional emphasis on these regions is rooted in their sociocultural and economic environments, which often mirror Ghana's demographic and institutional nuances. These similarities in context can offer a more

accurate reflection and understanding of the intricate dynamics affecting JS in technical universities in Ghana.

For instance, Amarasena et al. (2015) reported that the JS of state university academics in Sri Lanka exhibited no significant variance based on their age. However, studies by Chirchir (2016), Malik (2011) and Paul and Phua (2011) revealed that age influenced the levels of JS among faculties in universities across South Africa, Singapore and Pakistan, respectively. Also, in Ghana and Kenya, the JS of academics in universities demonstrated significant differences based on age (Milledzi et al., 2017; Musi, 2015). Milledzi et al. (2017) further explain that academic staff in private universities, falling within the age groups of 30–34 years and 60 years and above, reported higher satisfaction than their counterparts in public universities within the same age groups. On the other hand, academic staff in public universities who were within the age groups of 35–39 years, 50–54 years and 55–59 years expressed greater satisfaction than their counterparts in private universities. Moreover, Musi (2015) found that academics above the age of 40 exhibited lower levels of JS.

3.8.2 Gender

Similarly to age, the influence of gender on JS yielded diverse findings. JS differed among general practitioners in China based on their gender, with females reporting higher levels of JS compared to their male counterparts (Zhang et al., 2021). Furthermore, more female than male employees (both academic and non-academic) at HEIs in Zimbabwe reported higher JS (Nyanga et al., 2012). Gender was also found moderating the effect of fringe benefit dimension of JS on OC (Ampomah & Mensah, 2023). In contrast, studies conducted by Amarasena et al. (2015) and Chirchir (2016) found no significant difference in JS based on gender among academics in Sri Lanka and teachers in Kenya, respectively. Similarly, studies by Paul and Phua (2011) and Milledzi et al. (2017) reported no significant differences in JS based on gender within academic communities in Singapore and Ghana, respectively. These studies attributed their findings to the likelihood that female academics share the same expectations as their male counterparts.

3.8.3 Educational level

Existing literature suggests an inconsistent effect of educational background or job qualification on JS. For example, Malik (2011) and Pham (2016) discovered that

educational background was related to the overall JS of university faculty members in Pakistan and New Zealand, respectively. Furthermore, a study by Damazo (2017) revealed a significant difference in police officers' JS at Tanzania Police School based on educational level. Damazo (2017) further explained that more educated police officers were less satisfied. However, Paul and Phua (2011) and Amarasena et al. (2015) reported insignificant differences in the JS of university academics in Singapore and Sri Lanka, respectively. Additionally, Yapa et al. (2014) found an insignificant influence of educational level on the JS of non-academic staff in universities in Sri Lanka.

3.8.4 Job level (rank)

An empirical study by Malik (2011) reported that job level or rank insignificantly influenced the JS of academics in Pakistan. However, contrary findings emerged in studies conducted by Amarasena et al. (2015), Milledzi et al. (2017), Paul and Phua (2011) and Toker (2011), which found that the JS of academics varied significantly based on their ranks in Ghana, Sri Lanka, Turkey and Singapore, respectively. According to Milledzi et al. (2017), senior lecturers exhibited the highest levels of JS among academics. Furthermore, Toker (2011) observed that professors reported higher levels of JS.

3.8.5 Years of service (working experience)

Empirical findings by Amarasena et al. (2015), Malik (2011) and Paul and Phua (2011) revealed that length of employment had no significant influence on the JS of academics' in Sri Lanka, Singapore and Pakistan, respectively. On the other hand, Chirchir (2016) and Musi (2015) found that working experience was related to the overall JS of university faculty members in Kenya and South Africa, respectively. Additionally, findings by Toker (2011) in Turkey confirmed that the JS of academics exhibited significant differences based on their length of service. Specifically, Toker (2011) noted that JS for individuals with working experience of 21 years and more was higher than those with working experience of one to five years, and six to ten years.

3.9 CHAPTER SUMMARY

This chapter defined JS and provided an overview of JS among academics. In addition, the conceptualisation of JS was discussed highlighting relevant JS theories, namely Maslow's hierarchy of needs, Alderfer's (1969) ERG theory and Herzberg's

(1966) two-factor theory. The consequences and implications of JS as well as previous research on JS were also discussed. The chapter concluded with a discussion of the role of demographic factors (age, gender, education level, job level and years of service) and its influence on JS.

This partly realises the first specific objective of the study which is to conceptualise OS, JS, OC and JP from a theoretical perspective. A literature review on OC is provided in the following chapter.

CHAPTER 4: ORGANISATIONAL COMMITMENT

4.1 INTRODUCTION

Throughout the 1990s, researchers focused on the importance of OC and dedicated considerable effort to the theoretical development of this concept (Meyer et al., 2002). Organisational development and human resource development practitioners are increasingly concerned with securing workers' affection and subsequent, demonstrable commitment to the organisation, as OC is considered an important step in attaining organisational goals (Koc, 2017; Lorch, 2019; Makgalo, 2020). While high OC can have positive effects on academics' JS, JP and retention, low OC can result in negative consequences for academics in certain situations. For instance, work-family conflict may arise from high OC among academics (Frone et al., 1992). When workers, even academics, are committed to their organisations, they may feel compelled to prioritise work over their personal life, which might clash with family duties. Thus, high OC among academics can contribute to work-family conflict by increasing the dedication and time devoted to work, and prioritising work responsibilities over family responsibilities, leading to spillover effects that impact family functioning and relationships (Bakker et al., 2014; Frone et al., 1992). This conflict may result in academics' JP suffering due to stress, burnout, reduced work engagement and dissatisfaction. Furthermore, low OC may result in negative consequences, such as higher turnover rates, decreased job satisfaction, reduced work engagement and increased burnout, all of which can have a negative impact on the overall functioning of academic institutions (Bakker et al., 2014; Johnsrud & Rosser, 2002; Maslach et al., 2001; Schaufeli et al., 2006).

This chapter explores the literature on OC, discussing definitions of OC and related theories/models. Approaches to and the dimensions and consequences of OC will also be reviewed. Demographic and other factors influencing OC will also be presented.

4.2 DEFINING ORGANISATIONAL COMMITMENT

OC refers to people's affective reactions to their employing organisation as a whole (Stride et al., 2008). It may be seen as an emotional response to a positive appraisal of the work environment (Testa, 2001). Meyer and Allen (1991) describe OC as "the emotional attachment to, identification with, and involvement in, the organisation" (p. 67). OC refers to a person's involvement with and willingness to engage in the

organisation in order to positively contribute to its aims, goals and well-being (Mowday et al., 2013). The importance of OC lies in the complex relationship between an organisation and the individual, as well as the extent to which commitment to an organisation promotes other positive work behaviours (e.g. citizenship behaviours, in-role JP, i.e. the core duties and responsibilities outlined in job descriptions) (Lambert et al., 2007).

According to Mensah and Adjei (2015), highly committed employees are more productive, loyal and willing to take on more responsibility. This in turn leads to the achievement of overall organisational objectives and goals, and eventually results in success. This means that workers with a strong connection to an organisation and a greater degree of commitment will be more motivated and inspired to accomplish the aims and goals of the organisation without seeking possibilities for personal benefit (Dhar, 2015). Thus, academics who have a sense of belonging to their institutions are more likely to comply with management's goals and go above and beyond their job descriptions, as opposed to those who are just there as a matter of contractual responsibility to the university (Jabaar, 2017).

In the context of this study, OC is the psychological bond academics feel towards their technical universities coupled with their willingness to contribute to achieving the technical universities' objectives. This conceptualisation aligns with Meyer and Allen's (1991) framework, which breaks OC down into three components. These are affective commitment (AC), normative commitment (NC) and continuance commitment (CC) (Allen & Meyer, 1990, 1996; Anari, 2012; Jaros, 2007). AC alludes to an employee's psychological connection, or identification with, and participation in the organisation. It also signifies favourable feelings of affiliation with, attachment to and active involvement in the employing institution (Meyer & Allen, 1984). CC pertains to understanding the costs related to employees leaving the organisation. In other words, CC is the degree to which workers feel committed to their organisation as a result of the costs they perceive are involved with leaving it (Anari, 2012; Meyer & Allen, 1984). Lastly, NC demonstrates a sense of desire to maintain the job and explains an employee's opinion of remaining within the organisation (Absar & Swain, 2010; Allen & Meyer, 1990; Anari, 2012; Jaros, 2007; Meyer & Allen, 1991).

4.3 ORGANISATIONAL COMMITMENT IN HIGHER EDUCATION INSTITUTIONS

Several studies (e.g. Abebe & Assemie, 2023; Absar & Swain, 2010; Afzal et al., 2023; Al-Refaei et al., 2023; Al-Refaei et al., 2021; Baltaru, 2024; Kokt & Palmer, 2019; Mabasa & Ngirande, 2015; Verma & Kaur, 2024) have considered the OC of academics in HEIs in different contexts, as university success is contingent on academics and their OC. According to Arnolds and Boshoff's (2004) study in South Africa, academics tend to exhibit professional commitment to their job, which sustains their performance intentions. These researchers further observed that academics exhibit low levels of OC and commitment to top management during the early stages of restructuring. Literature further suggests that faculty members choose to stay with a university due to the freedom they receive in choosing the course to teach, the research topic and how to plan for the day (Adriaenssens et al., 2006; Lim, 2014). Similarly, a transnational study by Wilkins et al. (2017) conducted in the United Kingdom, Malaysia and the United Arab Emirates demonstrated that staff were more motivated and committed at home campuses than at overseas branch campuses. Furthermore, according to Southcombe et al. (2015), academics develop AC owing to sufficient learning time and the opportunity to exchange ideas.

Universities inherently require committed staff. While committed employees, including academics, are more likely to be retained, they may not always be satisfied. This perspective stems from commitment theory's normative and affective approaches (Segbenya et al., 2019). Indeed, an emphasis on retaining recruited and trained employees is critical for maintaining a continual cycle of teaching and research excellence at HEIs. No academic institution can assure long-term viability and high-quality contributions without highly qualified and committed personnel. Given how difficult it is to replace academic employees' knowledge, abilities and experience, retaining academics should be a strategic goal. As a labour-intensive endeavour, HEIs rely on the commitment of their employees to achieve the best possible results (Nazir & Islam, 2017; Nguyen et al., 2021; Segbenya et al., 2019; Wilkins et al., 2017).

4.4 THEORETICAL APPROACHES AND MODELS OF ORGANISATIONAL COMMITMENT

OC has been extensively examined over the years and various theories, models and approaches have been used to explain this concept. These include social exchange theory (Blau, 1964) and the attitudinal (Meyer & Allen, 1991) and multidimensional approach (Meyer & Allen, 1991), which will be discussed in this section.

4.4.1 Social exchange theory

Social exchange theory highlights the interchange between people and organisations that is founded on the premise that employee commitment is a consequence of the exchange of contributions and encouragement between the individual and the organisation. Consequently, connections that provide more benefits than expenses will result in persistent mutual attractiveness and dedication to the organisation (Mabaso & Dlamini, 2018; Suls & Wheeler, 2013). Studies from the perspective of social exchange have shown that workers' commitment to organisations stems from their impressions of their employers' commitment to them via positive, advantageous behaviours aimed at the employees by the organisation, thereby building a high-quality exchange connection (Moshoeu, 2011; Muleya, 2017; Yahaya & Ebrahim, 2016). This establishes the obligation for workers to respond in constructive, mutually beneficial ways by delivering outstanding JP (Makgalo, 2020).

According to this theory, workers join organisations assuming they can use their knowledge and abilities to fulfil their personal and professional objectives and ambitions. Employees are more likely to be committed to their organisations if they have a positive view of the exchange interactions between them and their employers. Furthermore, an employee's commitment to an organisation may rise or fall depending on the employee's assessment of benefits and expenses. On the other hand, a reduction in OC is likely to emerge from a lack of remuneration for the employee's work (Akoto & Akoto, 2014; Che Nawi et al., 2016). Organisational commitment may be seen as a series of cumulative investments, which is in line with Becker's (1960) theory. Thus, if academics feel that their efforts are valued and institutions have a strong remuneration system based on job assessment, academics' motivation and commitment, and therefore their performance, will increase (Aldhuwaihi, 2013; Makgalo, 2020).

4.4.2 Attitudinal commitment approach

According to Mowday et al. (1982), OC is a strong feature in people's identification with and devotion to organisations. Meyer and Allen (1991) used the term "affective" commitment to describe this form of commitment. OC, according to this perspective, is the degree of identifying oneself with a certain firm (Mowday et al., 1979). Mowday et al. (1979) highlights the following three OC characteristics:

1. Strong conviction in and acceptance of the organisation's aims and ideals
2. Willingness to put up a significant amount of work on behalf of the organisation
3. Strong intent or wanting to stay with the organisation.

Attitudinal commitment may therefore be considered as how well employees feel their values and goals align with those of the organisation they work for (Nyathi, 2020). According to this approach, commitment, which measures an individual's mindset (Lesabe & Nkosi, 2007), is predicted by work experiences, personal qualities and job features. This approach suggests that OC yields enhanced performance, decreased absenteeism and decreased employee turnover (Makgalo, 2020; Mercurio, 2015).

4.4.3 Multidimensional approach

According to Suliman and Iles (2000), most contemporary approaches to OC characterise it as a multidimensional approach in which moral responsibility, emotional connection and perceived costs interact to develop OC. Allen and Meyer (1990) are recognised as pioneering the current trend of encouraging and supporting the multidimensional approach to OC. Meyer and Allen (1984) highlighted two fundamental components of OC: affective (AC) and continuance commitment (CC) (see section 4.2), subsequently also introducing a third component, called NC (see section 4.2) a few years later (Allen & Meyer, 1990, 1996). Meyer and Allen (1991) posit that employees exhibiting strong AC stay with an organisation out of desire; those with high CC tend to continue due to necessity and those with NC remain as they feel compelled to. A more comprehensive insight into an employee's OC can be attained by taking into account all three kinds of commitment (Meyer & Allen, 1991). O'Reilly and Chatman (1986) introduced a multidimensional framework that closely resembles Meyer and Allen's (1991) multidimensional conceptualisation of commitment, implying that OC is primarily attitudinal. They used three categories to classify commitment: compliance, identification and internalisation. Compliance refers to an individual's

strategic alignment of behaviour to gain specific benefits from the organisation. Identification is characterised as an individual's alignment with the organisation's appealing ideals and objectives, leading them to align their behaviour to sustain the connection, even if they personally do not fully endorse the values and goals. When an individual adjusts their behaviour to the values and objectives of the organisation, this is known as internalisation (Lim, 2014). While internalisation and identification share similarities, compliance does not fully represent an emotional connection with the organisation (Makgalo, 2020). Scholars have, however, embraced Meyer and Allen's (1984) framework for additional investigations in the field of OC. More than two decades after Meyer and Allen's three-dimensional theory was first published, it has emerged as the most widely used model of OC (Akoto & Akoto, 2014; Bashir & Gani, 2020; Makgalo, 2020).

Therefore, Meyer and Allen's (1991) three-component model of OC, as shown in Figure 4.1, was used in this study to explore OC in relation to OS, JS and JP. The decision to utilise this model is also attributed to its ability to measure different forms of commitment. This attribute holds great importance for this study, given that the sample is drawn from academics from three technical universities, each potentially nurturing diverse reasons for their commitment to their institutions (Aldhuwaihi, 2013).

Figure 4.1: A three-component model of OC (Rai, 2021, slide 6)

4.5 ANTECEDENTS OF ORGANISATIONAL COMMITMENT

Several antecedents of OC within the university setting have been reported in the literature. For instance, in a South African study by Mabaso and Dlamini (2018), total rewards, including performance management, remuneration, benefits, recognition, talent development and career opportunities, were found to significantly predict OC in HEIs. Moreover, emotional intelligence and work engagement positively influenced OC among lecturers at HEIs in Malaysia (Nagalingam et al., 2019).

In the Philippines, Gomez-Manongsong (2015) found that work values positively affect OC among administrative employees of one HEI. Disciplines taught and student-to-faculty ratio were also identified as predictors of OC among community college faculty members in Arkansas (Lorch, 2019). Furthermore, a survey in Russia by Lovakov (2016) showed that having a post at another HEI (i.e. simultaneous work in several HEIs) negatively affects AC. Thus, academics working at several HEIs showed lower-levels of AC towards their primary institution. Al-Refaei et al. (2021) reported a significant positive influence of training and development on OC among academics at Aden University in Yemen. Similarly, a study by Fako et al. (2018) observed that acceptance of new criteria for the assessment of academic staff, followed by perception of research opportunities are most important predictors of commitment of academic employees in Botswana. Lastly, Ami et al. (2015) found that financial rewards increased the CC but not the AC of academics in private tertiary institutions in Ghana.

4.6 CONSEQUENCES AND IMPLICATIONS OF ORGANISATIONAL COMMITMENT

The consequences of employee OC can manifest in either positive or negative forms, as highlighted by Muleya (2017). Organisations that are dedicated to their employees' growth, well-being and desire for actualisation tend to have highly committed employees. On the other hand, low employee commitment may result in undesirable outcomes such as absenteeism, job dissatisfaction, and employee turnover (Eslami & Gharakhani, 2012; Fortuin, 2017). These employees may struggle with a range of psychological and performance-related challenges such as fear of success, dread of failure and repeated underachievement of tasks, obligations and duties. These employees are also prone to have a pessimistic outlook and their demeanour may

discourage other employees from carrying out their responsibilities or obligations (Bagga, 2013; Muleya, 2017).

However, employees that contribute favourably to their organisations demonstrate increased productivity and reduced absence levels (Nazir & Islam, 2017; Ncube, 2018). Employees who exhibit higher commitment to their organisation put more effort into their jobs and invest more of their personal resources and time in it. Moreover, OC can increase staff productivity and efficiency by encouraging connection, exhibiting citizenship behaviour and fostering a shared sense of purpose. To make a significant impact on an organisation, they must have employees who are devoted to achieving organisational objectives (Bagga, 2013; Muleya, 2017).

4.7 DEMOGRAPHIC FACTORS AND ORGANISATIONAL COMMITMENT

Literature suggests that demographic factors may influence levels of OC. Thus, significant differences may exist in the level of OC based on demographic factors (Elkhdr & Kanbur, 2018; Timalsina et al., 2018). Consequently, in alignment with the objective of this study, this section focuses on the relationship between OC and the demographic factors of age, gender, education level, job level and years of service.

4.7.1 Age

The findings on the effect of age on OC are inconsistent. For instance, Timalsina et al. (2018) and Bashir and Gani (2020) found no significant difference in the OC of academics who teach in nursing colleges in Kathmandu Valley, Nepal, and among university teachers in India, based on age, respectively. In contrast, studies by Amangala (2013) and Affum-Osei et al. (2015) reported significant effects of age on the OC of salespersons in Nigeria and bankers in Ghana, respectively. Similarly, age of university lecturers in Libya (Elkhdr & Kanbur, 2018) and employees of the National Commission for the Fight Against Genocide in Rwanda (Gasengayire & Ngatuni, 2019) significantly correlated with OC. Evidence in these studies suggests that age is significantly positively related to OC, indicating that older employees were more committed than younger ones. A possible explanation for the positive relationship between age and OC is that older employees may face difficulties when seeking new job opportunities. For example, organisations could be more hesitant to hire them owing to their limited remaining working years, as highlighted by Gasengayire and Ngatuni (2019). Furthermore, Becker's (1960) side-bet theory suggests that as

employees age, the value of the investments they have made in the organisation increases, making the potential loss more significant if they were to leave. Consequently, older employees tend to cultivate stronger commitment to their organisations to secure their investments and navigate the potential challenges of finding alternative employment. Thus, age contributes significantly to the prediction of a high level of OC.

4.7.2 Gender

Research findings on the effect of gender on OC present a conflicting picture. Specifically, studies conducted by Elkhdr and Kanbur (2018) and Bashir and Gani (2020) found no significant differences in OC among university lecturers in Libya and India, respectively. In contrast, studies by Affum-Osei et al. (2015) and Gasengayire and Ngatuni (2019) reported significant effects of gender on the OC of bankers in Ghana and employees of the National Commission for the Fight Against Genocide in Rwanda, respectively. Similarly, Lorch (2019) discovered a significant difference in the OC of teaching staff from community colleges in Arkansas based on gender. According to Affum-Osei et al. (2015), male employees demonstrate higher commitment levels than their female counterparts. Furthermore, a study by Mabasa and Ngirande (2015) revealed that male academic staff exhibit higher levels of OC than their female counterparts in the South African HE sector.

4.7.3 Educational level

Empirical evidence on the effect of educational level on OC is mixed. Gasengayire and Ngatuni (2019) reported an insignificant effect on the level of education on the OC of employees of the National Commission for the Fight Against Genocide in Rwanda. Contrary to this, Iqbal et al. (2011) and Nifadkar and Dongre (2014) reported a negative relationship between education level and OC in Saudi Arabian universities and teachers of girls' colleges in India, respectively. Contrary to the findings of Iqbal et al. (2011) and Nifadkar and Dongre (2014), Affum-Osei et al. (2015) and Mensah and Adjei (2015) reported a significant positive effect of education level on OC among bankers and medical records personnel in Ghana, respectively. According to Affum-Osei et al. (2015), individuals possessing a qualification above a master's degree showed higher levels of commitment. Furthermore, Bashir and Gani (2020) and Kassaw and Golga (2019) revealed a significant difference in the OC of university teachers in India and academics in a higher educational setting in Ethiopia,

respectively, due to their level of education. These findings suggest that the level of education holds a significant relationship with the degree of OC among these specific professional groups.

4.7.4 Job level (rank)

The relationship between job level or position and OC has also received some attention, albeit not as extensive as the other biographical factors discussed above (BinBakr & Ahmed, 2015; Elkhdr & Kanbur, 2018; Karakaya, 2013; Timalsina et al., 2018). Prior studies showed significant differences in OC based on job rank or position. For instance, Elkhdr and Kanbur (2018) reported significant differences in the OC of lecturers working at Libyan universities based on the seniority of the lecturers. Similarly, Karakaya (2013) found significant differences in the AC and CC of academics in Turkey. According to Karakaya (2013), AC tends to be higher for professors than other job ranks. However, professors scored lower on CC. Furthermore, Timalsina et al. (2018) and BinBakr and Ahmed (2015) found a significant relationship between academic rank and OC among academics in Nepal and Saudi Arabia, respectively.

4.7.5 Years of service (working experience)

The effect of working experience on OC has been explored by several studies, yielding mixed outcomes. Iqbal et al. (2011), Austin-Hickey (2013) and Amangala (2013) reported a positive relationship between working experience and OC in Saudi Arabian universities, academic staff in community colleges in Florida and salespersons in Nigeria's soft drink industry, respectively. In contrast, Affum-Osei et al. (2015) reported a significant negative effect of years of service on OC among bankers in Ghana, where employees with fewer years of experience exhibited higher commitment levels. Furthermore, recent studies by Bashir and Gani (2020) and Gasengayire and Ngatuni (2019) revealed an insignificant difference in the OC of university teachers in India and employees of the National Commission for the Fight Against Genocide in Rwanda, respectively.

4.8 CHAPTER SUMMARY

In this chapter, OC was defined, an overview of OC among academics was given and pertinent OC theories or models were covered. This chapter concluded with a discussion of the role of demographic factors in relation to OC.

This partially satisfies the first specific objective of the study, which was to conceptualise OS, JS, OC and JP from a theoretical standpoint. In the chapter that follows, an overview of the literature on JP is offered.

CHAPTER 5: JOB PERFORMANCE

5.1 INTRODUCTION

JP has been a subject of global interest as it has important implications for both employees and organisations (Naidoo, 2016). Within the context of academia, JP is particularly relevant, as it encompasses a range of activities carried out by academic staff, such as teaching, research and community service (Johnsrud & Rosser, 2002). That is, academics' JP is an intriguing factor worthy of research as it is critical to the quality of education provided to students, the advancement of knowledge through research and the overall functioning of educational institutions (Amiruddin et al., 2021). Thus, the significance of academics' JP is paramount, given its enduring and extensive impact on the students' educational achievements and the broader implications for the nation (Akah et al., 2022).

This chapter begins by defining JP. This is followed with a conceptualisation of JP and a review of the consequences of JP. Demographic as well as other factors influencing JP will also be discussed. Finally, this chapter focuses on the integration of the four concepts: OS, JS, OC and JP. Thus, previous research findings on the relationships between these concepts will be examined. Accordingly, this chapter focuses on phase 1, step 4 of the research process, as shown in Figure 1.1.

5.2 DEFINING JOB PERFORMANCE

According to Campbell (1990), one of the seminal authors in the field, JP is a multifaceted construct involving the outcomes or activities that are relevant to the organisation's goals, influenced by actions within an individual's control. JP generally refers to whether a person performs their job well or not; that is, the way in which employees carry out their work (Balouch & Hassan, 2014). An employee's performance is determined during JP reviews. According to Motowidlo (2003), JP can be described as the combined value that an organisation foresees from an individual's specific actions carried out within a specified time frame. Dar et al. (2011) view JP as an activity in which an individual is able to accomplish the task assigned to them successfully, subject to the normal constraints of the reasonable utilisation of the available resources.

Performance is a multifaceted concept that includes various aspects, comprising behavioural and outcome dimensions (Sonnentag et al., 2008). The product or

outcome arising from an employee's actions is referred to as the result (Van Laethem et al., 2019) and signifies the culmination of an individual's endeavours (Sonnentag et al., 2008). The behavioural element includes the actions and strategies employees employ to achieve the desired objectives (Van Laethem et al., 2019). According to Campbell (1990), the behavioural element pertains to the actions undertaken by a person while engaged in work. The result components are key in measuring task performance, but the behavioural aspects are primarily represented in the measurement of contextual performance (Sekhar et al., 2018; Van Laethem et al., 2019).

Having outlined the broader concept of JP, it is crucial to delve deeper into its distinct dimensions. Thus, in the subsequent subsection, the focus will be on task, contextual, adaptive, teaching, service and research performance, shedding light on their unique characteristics.

5.2.1 Dimensions of job performance

According to Pradhan and Jena (2017), task performance, a facet of performance, comprises job-specific behaviours that include fundamental job responsibilities assigned as part of an employee's job description. On the other hand, contextual performance, according to Motowidlo (2003), manifests in different forms. These are interpersonal enhancement, personal initiative, adherence to workplace norms and positive organisational representation. Interpersonal enhancement includes employees influencing others by participating in performance-enhancing behaviour. One may, for example, support others with their job or help diffuse disputes among co-workers. This is likely to enhance the interpersonal environment, which in turn will likely increase overall work mood and motivation. Contextual performance is accomplished in this manner because the ultimate purpose of contextual behaviour is to increase organisational effectiveness and performance. Furthermore, such behaviour is likely to be emulated by others, which might lead to beneficial results in terms of organisational performance. Furthermore, such behaviours are likely to result in good group affect, team growth and togetherness, which should contribute to organisational performance (Dhliwayo, 2018). Personal initiative is where employees go beyond their official duties to suggest or implement new work methods, approaches or strategies that can benefit the organisation. This may include volunteering for additional duties or showing proactiveness in identifying and addressing potential

issues before they emerge. Adherence to workplace norms relates to employees conforming to norms and rules, even when they are not observed. This involves adhering to punctuality, maintaining workplace decorum and following established protocols and procedures, all of which contribute to smooth organisational functioning. In this final form (i.e. positive organisational representation), employees consistently project a favourable image of the organisation both internally and externally. This may involve speaking positively about the organisation, backing organisational changes and portraying an upbeat image, which can uplift the reputation of the organisation and foster trust among stakeholders (Kappagoda, 2018; Pradhan & Pradhan, 2015; Rubaca & Majid Khan, 2021).

Pradhan and Jena (2017) introduced adaptive performance as an additional dimension alongside Borman and Motowildo's (1997) task and contextual performance dimensions. Maintaining one's level of performance in the face of sudden and unforeseen changes requires a blend of abilities and habits referred to as adaptive performance (Calarco, 2016). As defined by Shoss et al. (2012), adaptive performance includes actions that involve the adjustment and use of skills in response to impending or existing change. Therefore, the traditional viewpoints on work performance have evolved, which previously centred on the quality of specific tasks within a given context. However, in order to comprehend the ever-evolving nature of employee performance in the modern workplace, the concept of adaptive performance has gained increased attention (Park & Park, 2019).

From the context of academics' performance, Moeller (2009) introduced a three-dimensional framework for JP. These dimensions include teaching performance, service performance and research performance. Thus, this current study adopted Moeller's (2009) three-dimensional JP framework to explore JP in relation to OS, JS and OC due to its relevance to the academic context.

Teaching performance within this framework entails evaluating indicators such as on-time delivery of graded tests and assignments. Service performance extends beyond the academic environment to include contributions to the community and participation in professional and academic organisations (Moeller, 2009). According to Moeller (2009), an academics' effectiveness in teaching and their contributions to service

obligations significantly influence performance assessments and professional advancement.

Research performance, the third dimension, includes achievements related to grants, publications and conference participation. University academics fulfil these obligations and aims via scientific publishing, which validates the advancement of knowledge in their respective fields. It seems natural that high levels of work-related stress may impact academics' efforts to publish because their publication records account for a significant portion of their overall JP (Moeller, 2009).

5.3 JOB PERFORMANCE OF ACADEMICS

Academics' JP includes a range of responsibilities, extending beyond teaching and research to include elements such as student guidance and development, academic leadership and professional services (Akah et al., 2022). Thus, recognising the comprehensive nature of academics' JP is crucial, due to its long-term impact on students' academic performance and a country's educational performance (Akah et al., 2022; García-Hernández et al., 2021).

Thus, the significance of academics' JP lies in its potential to drive positive outcomes for both students and HEIs (Aduma et al., 2022; Amiruddin et al., 2021). However, instances of poor JP among academics are not uncommon, often attributed to unfavourable working conditions (Aina & Adeleke, 2018; Osaat & Ekechukwu, 2017). Such unfavourable conditions might stem from inadequately equipped facilities such as classrooms, laboratories, libraries and offices, characterised by insufficient space and broken equipment (Gabrielli & Lund, 2020; Giauque et al., 2019). Other unfavourable situations that might contribute to poor JP include an excessive workload, large class sizes, constant strikes and restrictive institutional regulations (Akah et al., 2022).

To address these challenges, university administrators should actively strive to create a more conducive and productive working environment. This involves ensuring adequate physical space and resources and implementing strategies to manage and alleviate excessive workloads. Continuous professional development opportunities should enable academics to enhance their expertise and stay updated in their fields (Cao et al., 2020).

Timely and transparent communication channels are vital in facilitating a constructive feedback loop, enabling academics to adapt and refine their approaches. Recognising and rewarding academic contributions and excellence further motivates academics and reinforces a culture of achievement and growth within the institution (Akah et al., 2022; Cao et al., 2020; Nwosu et al., 2021).

Furthermore, academics need to develop their knowledge and skills in teaching and research and become competent in student guidance and development, academic leadership, professional services, and professional development. It is also important for academics to engage in continuous learning and professional development, which enhances their knowledge and skills and helps them become more competent in their roles. Such continuous learning and professional development, when integrated into academics' JP, helps them contribute more effectively to the education system and creates positive outcomes for students and universities (Akah et al., 2022; Cao et al., 2020; Nwosu et al., 2021).

5.4 CONCEPTUALISATION OF JOB PERFORMANCE

JP has been examined extensively over the years and a variety of theories, models and approaches have been used to explain this concept. These include Campbell's Model of Job Performance (Campbell, 1990), Motowidlo and Borman's Contextual Performance Model (Borman & Motowidlo, 1993), the Job Characteristics Model (JCM) (Hackman & Oldham, 1975, 1980) and the Ability-Motivation-Opportunity (AMO) Model (Appelbaum et al., 2000). This section provides an overview of each model.

5.4.1 Job Characteristics Model

The JCM proposed by Hackman and Oldham (1975), which was updated in 1980 (Hackman & Oldham, 1980), is a widely recognised framework for understanding how job design influences employee motivation, satisfaction and performance. Despite being developed in the 1960s, the JCM model is still relevant in today's workplace (Radley, 2018). The model emphasises five core job characteristics that can affect the psychological states of, and outcomes for, employees, and can also be applied to academic JP. The five core job characteristics in this model are the following:

1. ***Skill variety*** – the degree to which a job requires a range of different skills and abilities (Hackman & Oldham, 1975, 1976). For academics, skill variety may

include teaching diverse subjects, conducting interdisciplinary research and engaging in various service activities (Muleya, 2017; Yang & Hwang, 2014).

2. ***Task identity*** – the degree to which a job involves completing a whole, identifiable piece of work (Hackman & Oldham, 1976). Academics often have a high level of task identity, as they are responsible for designing and delivering courses, conducting research and publishing their work (Aamodt, 2009; Yang & Hwang, 2014).

3. ***Task significance*** – the extent to which one's work significantly influences the lives of others (Hackman & Oldham, 1976). Academic work can be highly significant, as it influences student learning, contributes to knowledge advancement and informs policy and practice (Chakraborty & Biswas, 2019; Maxwell, 2012).

4. ***Autonomy*** – the extent to which a job offers autonomy, self-reliance and flexibility in arranging work schedules and deciding on the methods for their execution (Hackman & Oldham, 1976). Academics typically have a high level of autonomy in their work, as they have the flexibility to design their courses, choose their research topics and manage their schedules (Muleya, 2017; Uppal, 2017).

5. ***Feedback*** – the clarity with which a job conveys task performance effectiveness (Hackman & Oldham, 1976). Feedback for academics can come from multiple sources, including student evaluations, peer reviews and research citations (Sabbagha, 2016; Sahito & Vaisanen, 2017).

According to the JCM model, these five core job characteristics have the potential to positively influence employees' psychological states, fostering a sense of meaningfulness, responsibility and knowledge of results and outcomes. As a result, these characteristics lead to favourable outcomes such as increased motivation, enhanced JS and improved performance (Hackman & Oldham, 1976, 1980). Institutions can strategically apply the JCM principles to design academic roles that optimise these core job characteristics in the context of academic JP. This, in turn, has

the potential to ultimately enhance faculty members' motivation, JS and overall performance. This model suggests that organisations can improve JP by designing more engaging and motivating jobs.

5.4.2 Campbell's Model of Job Performance

Campbell's Model of Job Performance, proposed by John P. Campbell in 1990, is a widely recognised and influential framework for understanding and predicting JP across different occupational contexts. The model provides a comprehensive taxonomy of performance components, offering valuable insights into the various aspects of JP that can be considered in employee selection, training and development (Campbell, 1990; Viswesvaran & Ones, 2000).

Campbell's Model is built upon the premise that JP is a multidimensional construct composed of several distinct but interrelated components. This model outlines eight generalisable performance components across different jobs, including task-specific behaviours, non-task-specific behaviours, written and oral communication, effort, personal discipline, teamwork, supervision and management/leadership. Campbell's model emphasises that the importance of each component may vary depending on the specific job and organisational context (Campbell, 1990). The eight performance components are discussed next.

1. ***Task-specific behaviours:*** These are the core activities directly related to the specific job and are essential for achieving job objectives. Task-specific behaviours may include technical skills, knowledge and problem-solving abilities relevant to the job role. For academics, this includes activities such as teaching, designing courses, conducting research, publishing articles and securing research funding (Calarco, 2016; Campbell, 1990; Koopmans et al., 2011).

2. ***Non-task-specific behaviours:*** These are the behaviours that indirectly contribute to JP by fostering a positive work environment, maintaining relationships with colleagues and promoting organisational culture. Examples include communication skills, adaptability and emotional intelligence (Campbell, 1990). Academics contribute to their institutions by participating in committees, collaborating with colleagues and engaging in professional

development activities that enhance the overall work environment (Calarco, 2016; Campbell, 1990; Koopmans et al., 2011).

3. ***Written and oral communication:*** Effective communication is crucial for job performance in many roles, as it facilitates the accurate and timely exchange of information among team members, management and external stakeholders. This component includes skills such as listening, presenting and writing. Effective communication is essential for academics as they present lectures, facilitate discussions, write research articles and interact with students, colleagues and external stakeholders (Campbell, 1990; Viswesvaran & Ones, 2000).

4. ***Effort:*** This component refers to the amount of energy, persistence and motivation an employee exhibits in completing job tasks. High levels of effort often translate into improved job performance (Campbell, 1990). Academics must demonstrate a high level of effort in their teaching, research and service activities to achieve positive outcomes and contribute to the success of their institutions.

5. ***Personal discipline:*** Personal discipline involves an employee's ability to follow rules, maintain ethical standards and adhere to organisational policies and procedures. This component contributes to the overall integrity and professionalism of the workplace. Thus, academics must adhere to ethical standards, academic integrity and institutional policies and procedures to maintain a professional and reputable work environment (Campbell, 1990; Koopmans et al., 2011).

6. ***Teamwork:*** Teamwork involves the ability to work effectively with others, collaborate on projects and contribute positively to group dynamics. Successful teamwork requires skills such as cooperation, conflict resolution and active participation in group decision-making (Campbell, 1990). Academics often work collaboratively on research projects, co-author publications and engage in interdisciplinary teaching, requiring effective teamwork skills (Luqman et al., 2020; Ogiamien & Izuagbe, 2016).

7. ***Supervision:*** This component pertains to the abilities required for managing, guiding and directing the work of others, especially for those in leadership roles. Supervision involves skills such as performance management, delegation and providing feedback (Campbell, 1990). For academics in leadership roles, such as department chairs and programme directors, supervision involves managing and guiding the work of others, including junior faculty, support staff and graduate students (Aduma et al., 2022; Oyetunji, 2013).

8. ***Management/leadership:*** Management and leadership involve the strategic direction and oversight of an organisation or team. This component includes skills such as goal-setting, decision-making and motivating others. Academic leadership involves setting strategic direction, making decisions and motivating others within the context of a department, programme or institution (Campbell, 1990; Sonnentag et al., 2008).

In light of developments from the late 1980s until now, Campbell (2012) updated the model from Campbell et al. (1993) to reflect a unified underlying structure defined in precise terms. The aim was to minimise vague abstractions, even if it meant the model appeared less captivating (Campbell & Wiernik, 2015; Russell et al., 2017). The revised model presents a comprehensive delineation of eight fundamental aspects of individual performance in a professional role, which will be discussed next.

1. ***Technical performance:*** This pertains to role-specific requirements, varying in complexity and encompassing core interpersonal tasks like customer service.

2. ***Communication:*** This dimension underscores the proficiency of clear and organised information conveyance, encompassing both oral and written communication, without limiting to formal contexts.

3. ***Initiative, persistence and effort:*** Referred to as “conscientious initiative” or “active performance”, this emphasises voluntary efforts beyond designated tasks and persevering in challenging conditions.

4. ***Counterproductive work behaviour:*** Recognises actions detrimental to an organisation's goals. It has two main subfactors: actions against the organisation and actions against individuals.

5. ***Hierarchical leadership performance:*** Distinguishes leadership from management, focusing on interpersonal influence. Six subfactors (as referenced by Campbell (2012)) describe leadership actions across organisational levels, encapsulating transformational and charismatic leadership.

6. ***Hierarchical management performance:*** This aspect targets the allocation and preservation of organisational resources.

7. ***Peer/team member leadership performance:*** Similar to hierarchical leadership but it occurs in a team or peer context and includes behaviours like helping, cooperating and motivating that are not part of hierarchical leadership.

8. ***Peer/team member management performance:*** In high-performance teams, members often undertake management functions. This factor acknowledges management performance in both peer/team and hierarchical settings.

In essence, these eight factors seek to holistically integrate various performance dimensions, ranging from individual tasks to leadership roles in diverse organisational settings (Campbell & Wiernik, 2015; Russell et al., 2017).

Considering the unique and multifaceted nature of academic roles, a compelling argument emerges for the concurrent use of both models. While Campbell's model provides a broad framework to understand various dimensions of performance, the JCM delves deeper into the influence of job design and the inherent attributes on performance. By employing these models in tandem, a comprehensive and nuanced understanding of academic performance can be achieved, ensuring both breadth and depth in analysis.

5.4.3 Motowidlo and Borman's Contextual Performance Model

Motowidlo and Borman's Contextual Performance Model (Borman & Motowidlo, 1993) is another valuable and widely recognised model for understanding and predicting academic performance. Borman and Motowidlo's (1993) model includes five types of citizenship behaviours, namely: diligently and energetically persisting to finish task activities; willingly undertaking tasks not formally included in one's job description; assisting and collaborating with colleagues; adhering to organisational rules and procedures; and actively promoting, backing and protecting organisational objectives. This model differentiates between task performance (the primary activities directly related to achieving job objectives) and contextual performance (activities beyond formal job descriptions that support the broader organisational, societal and psychological setting). The model emphasises the importance of considering both task performance and contextual performance when evaluating an employee's overall JP. Contextual performance involves activities that are not directly related to job responsibilities but have an important effect on organisational, social and psychological circumstances. These behaviours act as catalysts for the efficient completion of the allocated responsibilities (Diaz-Vilela et al., 2015). Contextual performance includes behaviours such as helping and cooperating with others, following organisational rules and procedures, and demonstrating initiative. In other words, contextual performance refers to the behaviours that support the organisational, social and psychological environment in which task performance occurs. Contextual performance behaviours are critical to the functioning of an organisation, even though they may not be directly tied to specific job tasks (Demerouti et al., 2014).

In relation to academics' JP, the model can be applied to understand how various aspects of an academic's role contribute to the overall success of an educational institution. The model highlights two main categories of contextual performance:

1. ***Interpersonal facilitation*:** This category encompasses behaviours that promote cooperation, harmony and effective social interactions among colleagues and students (Borman & Motowidlo, 1993). For academics, interpersonal facilitation may involve mentoring students, collaborating with colleagues on research projects, or participating in departmental meetings and activities (Kahya, 2007; Kireru, 2010; Xu & Ye, 2014).

2. ***Job dedication*****:** This category refers to behaviours that reflect an individual's commitment, conscientiousness and persistence in performing job-related tasks (Borman & Motowidlo, 1993). For academics, job dedication may be demonstrated through activities such as staying up to date on the latest research in their field, attending conferences, or going above and beyond to support student learning (Kahya, 2007; Kireru, 2010; Xu & Ye, 2014).

5.4.4 Ability-Motivation-Opportunity Model

The AMO Model, developed by Appelbaum et al. (2000), is a comprehensive framework that emphasises the importance of three key elements in determining employee job performance: ability, motivation and opportunity. By enhancing these factors, organisations can foster higher JP. The foundations of AMO can be seen in Vroom's (1964) work, where he states that performance is a result of both ability and motivation. However, this approach ignores the external environment's influence and concentrates solely on internal (individual) traits (Ujma & Ingram, 2019). According to this model, the nexus between HRM practices and outcomes at both the employee and the organisational levels is mediated by the impact these practices have on employees' abilities, motivation and opportunities (Kremmydas & Austen, 2020).

The three key elements of the AMO model will be discussed next.

1. ***Ability:*** In the context of academic performance, ability refers to the knowledge, skills and competencies required for an academic to effectively perform their tasks. This can include subject matter expertise, research skills, teaching abilities and communication skills. Institutions can support academics' abilities by offering professional development opportunities, resource access and mentoring programmes (Appelbaum et al., 2000; Morales-Sánchez & Pasamar, 2019).

2. ***Motivation:*** Motivation encompasses the internal and external factors that drive an academic to engage in their work and perform at a high level (Appelbaum et al., 2000). Motivation can be influenced by factors such as job satisfaction, organisational commitment and intrinsic interest in the subject matter. Institutions can enhance academics' motivation through recognition and

rewards systems, clear career progression paths and supportive work environments (Morales-Sánchez & Pasamar, 2019; Okoya, 2013).

3. ***Opportunity:*** Opportunity refers to the environmental and organisational factors that enable or constrain an academic's ability to perform effectively (Appelbaum et al., 2000). This can include access to resources, supportive management and a collegial work culture. Institutions can create opportunities for academics by providing necessary resources, fostering a collaborative work environment and promoting work-life balance (Morales-Sánchez & Pasamar, 2019; Waqas et al., 2021).

By considering this model in relation to academic job performance, institutions can develop targeted strategies for faculty selection, training and development to improve the overall effectiveness of their academic staff. This can lead to better teaching outcomes, research productivity and service contributions, ultimately enhancing the quality of education and research output (Deogaonkar & Nanoty, 2023; Morales-Sánchez & Pasamar, 2019).

In the context of assessing the performance of academics, this study has strategically employed Campbell's model of JP and the JCM, recognising the necessity of including comprehensive and multidimensional frameworks. Moeller's (2009) three-dimensional perspective on JP, which emphasises teaching, service and research, serves as a testament to the multifaceted nature inherent to academia. This model seamlessly aligns with Campbell's model of JP, which aims to understand the intricate facets embedded within job roles. The compatibility between these models becomes evident as Campbell's model breaks JP down into multiple components, aligning with the complexity of academic roles delineated by Moeller. On the other hand, the JCM by Hackman and Oldham complements these perspectives by focusing on the conditions and attributes of a job that can influence performance outcomes.

When applied to academia, the intrinsic factors defined by Hackman and Oldham include elements such as task significance and autonomy that resonate directly with the teaching, research and service dimensions proposed by Moeller. By harmoniously integrating these models, a more in-depth understanding can be attained into the

diverse demands intrinsic to academic roles and the underlying factors that drive excellence in these areas.

5.5 ANTECEDENTS OF JOB PERFORMANCE

Empirical studies suggest that several factors influence JP (Ahmed et al., 2022; LiLin, 2018; Nam & Park, 2019). At the organisational level, organisational culture (ur Rehman et al., 2016) and organisational justice (Al-Qahtani, 2017) have positively influenced JP. Similarly, perceived organisational support and procedural justice influenced JP (Sharma & Dhar, 2016). Furthermore, work-family-related factors and personality have been shown to significantly affect individual JP (Boon et al., 2012).

Other factors are leadership styles (Ahmed et al., 2022; LiLin, 2018; Nam & Park, 2019), work engagement (Christian et al., 2011; Lazauskaite-Zabielske et al., 2018; Tisu et al., 2020), OC (LiLin, 2018; Tolentino, 2013), stress (Akah et al., 2022; Banerjee & Mehta, 2016; Karunanithy & Ponnampalam, 2013; Rajeshwaran & Aktharsha, 2017; Shahid et al., 2013), personality characteristics like core self-evaluations and perceptions of group potency (Neill et al., 2016), JS (Bakotić, 2016; Valaei & Jiroudi, 2016) work environment (Affendi & Ramlee, 2024), and demographic factors (further discussed in section 5.7) (Adenekan, 2017; Aduma et al., 2022; Amegayibor, 2021; Ding, 2021; Fadilah & Hidayat, 2019; Hendrawijaya, 2019; Njogu, 2017).

5.6 CONSEQUENCES AND IMPLICATIONS OF JOB PERFORMANCE

An employee's JP has far-reaching effects on themselves and their employer (Bakker & Demerouti, 2017; Viswesvaran & Ones, 2000). JP is crucial because of how it may affect an employee's work and the organisation as a whole. Increased job satisfaction, employee engagement and dedication to the organisation are just some of the positive results that may be expected when workers perform at a high level (Albrecht et al., 2018; Mone et al., 2011). Promotions, higher salaries and bonus pay could all be possible due to enhanced JP (Shaw et al., 2002). On the other hand, poor performance on the job has been linked to several unfavourable consequences, including job instability, stress and lower well-being (Sverke et al., 2002, 2006).

Success and efficiency in the workplace depend on high employee performance (Bakker & Demerouti, 2017). Workplaces where workers consistently exceed expectations in their roles often see gains in output, income and market share (Combs

et al., 2006). Moreover, exceptional performance on the job improves an organisation's standing in the marketplace and its appeal to prospective employees (Gatewood et al., 2016). In contrast, poor performance on the job may have a negative impact on an organisation's efficiency, cost and reputation (Jex & Britt, 2014).

The quality of a worker's work affects the community at large, especially in the fields of education, healthcare and public service. Improved results for students, patients and citizens may result from high performance in various fields (Heponiemi et al., 2008; Shin & Jung, 2014; Williams, 2019). On the other hand, poor work performance may exacerbate broader social problems including inadequate access to basic necessities like healthcare and education (Williams, 2019).

5.7 DEMOGRAPHIC FACTORS AND JOB PERFORMANCE

Literature suggests that demographic factors may influence levels of JP. Thus, significant differences may exist in the level of JP based on demographic factors (Adenekan, 2017; Aduma et al., 2022; Hendrawijaya, 2019; Ohide & Mbogo, 2017). This section will explore the impact of age, gender, education level, job level and years of service on JP. In line with the objectives of this study, understanding the relationship between demographic factors and JP provides a comprehensive and in-depth perspective on JP.

5.7.1 Age

Findings of the effect of age on JP are contradictory. A study by Adenekan (2017) found that age negatively correlated with academics' JP in Nigeria. By contrast, Hendrawijaya (2019) reported positive links between age and the JP of employees in 14 cigar companies in Indonesia. Similarly, in Nigeria, age significantly positively influenced the JP of librarians (Oyeniran & Akphorhonor, 2019), while Amegayibor (2021) and Mohammed et al. (2021) found age significantly influenced the JP of employees of manufacturing firms as well as employees of public and private organisations in Ghana, respectively. However, Ali and Davies (2003) observed an inverted U relationship between age and the JP of rubber tappers in Malaysia. They explained that the link between age and JP increases with age, peaking at 43 years and declining thereafter. This suggests that further empirical research on the effect of age on academic JP is warranted.

5.7.2 Gender

Like age, research on the influence of gender on JP is varied. Cauilan (2020) and Amegayibor (2021) found gender insignificantly influenced the JP of academics in the Philippines and employees of manufacturing firms in Ghana, respectively. Gender also influenced the JP of employees of public and private organisations in Ghana (Mohammed et al., 2021). In contrast, according to Hussain et al.'s (2018) findings, female educators did better than their male counterparts when teaching English and Science, while male educators excelled when instructing Math in Punjab, Pakistan. Similarly, results from Green et al. (2009) revealed significant gender-based differences in the JP of brokerage firm equity analysts. For instance, when comparing the number of stocks covered by men and women, they found that women tend to be less accurate in their earnings forecasts and that the number of companies covered by women is lower on average (around 9 vs 10). Women were also shown to have a far higher likelihood of being named All-Stars than males, suggesting that they do better in other areas of JP as well. Furthermore, studies by Adenekan (2017) and Hendrawijaya (2019) found that gender positively correlated with academics' JP in Nigeria and the JP of employees in 14 cigar companies in Indonesia, respectively. Likewise, gender significantly influenced the JP of librarians in university libraries in Nigeria (Oyeniran & Akphorhonor, 2019), and hospital staff in Malaysia (Affendi & Ramlee, 2024).

5.7.3 Educational level

Similar to age, findings of the effect of educational level on JP are contradictory. Oyeniran and Akphorhonor (2019) found education level insignificantly influenced the JP of librarians in university libraries in Nigeria. Contrarily, educational background was found to have a significant bearing on employee performance at PT Three Cast Indonesia LLC (Fadilah & Hidayat, 2019). Hendrawijaya (2019) also reported a positive link between education and the JP of employees in 14 cigar companies in Indonesia. In the same vein, a meta-analysis by Ng and Feldman (2009) showed education as positively affecting core task performance. Amegayibor (2021) also found that education significantly influenced the JP of employees of manufacturing firms in Ghana. Therefore, it is suggestive that education promotes JP by providing individuals with more declarative and procedural knowledge with which they can complete their tasks successfully (Aldino & Susanti, 2022; Ohide & Mbogo, 2017).

5.7.4 Job level (rank)

Literature suggests that among all the demographic factors, job level or position and its relationship with JP has received little attention. Ugwu and Ugwu (2017) found job level or position significantly influenced university librarians' JP in Nigeria. This finding corroborated the findings of Kahya (2007), which indicted that job grade or position positively influenced the JP of a medium-sized metal company in Turkey. These results suggest that the higher the job position, the better the JP; however, more research is required on this topic.

5.7.5 Years of service (working experience)

Generally, working experience or tenure seems to have positive effects on JP. For instance, Oyeniran and Akphorhonor (2019) found work experience significantly influenced university librarians' JP in Nigeria. This finding was corroborated by Hendrawijaya (2019) and Wahyudi (2018) who also reported positive links between years of service and the JP of employees in 14 cigar companies in Indonesia and lecturers at Pamulang University, respectively. Also, employees' work experience enhanced the JP of hotel employees in Kenya (Njogu, 2017). Therefore, this is indicative that working experience or tenure promotes JP on the premise that work-related knowledge and abilities may be gained via experience (de Sivatte et al., 2021).

This section concludes the literature review on JP. The second objective is to conceptualise the theoretical interconnections between OS, JS, OC and JP in the remainder of the chapter. These interrelationships not only provide a broader understanding of JP but also reveal the cascading effects that one concept may have on another.

The upcoming discussions are organised in a logical sequence to ensure clarity and coherence. This is to meet the objectives of the literature review, particularly the second objective which aims to conceptualise the relationship between OS, JS, OC and JP in terms of explanatory theoretical models. The discussions commence by examining the direct impact of OS on JP, followed by its influence on JS and then on OC. Subsequently, the focus will shift to deciphering the direct connections between JS and JP, OC and JP and the dynamic interplay between JS and OC. The concluding section discusses the mediating roles that both JS and OC assume in these intricate relationships.

5.8 THEORETICAL INTEGRATION OF OCCUPATIONAL STRESS, JOB SATISFACTION, ORGANISATIONAL COMMITMENT AND JOB PERFORMANCE

5.8.1 Relationship between occupational stress and job performance

Findings regarding the relationship between OS and JP are inconsistent. For example, Chen et al. (2006) found no significant correlation between job stress and the JP of employees working in accounting capacities in the USA and Taiwan, Nabirye (2010) recorded significant negative relationships between these concepts among hospital nurses in Kampala City, Uganda. Alkubaisi (2015) and Soran et al. (2014) also reported that job stress has a negative impact on employees' performance in the Qatari bank sector and banking employees from small-medium enterprises in Turkey, respectively. Asamoah-Appiah and Aggrey-Fynn (2017) confirmed a negative effect of OS on employees' performance in an oil palm plantation company in Ghana. Also, a study by Aduma et al. (2022) revealed that the stress level of lecturers affects the degree or quality of JP, with those with average stress levels reporting better JP in the universities studied. Lastly, OS negatively affected the JP of academic staff at research universities in Malaysia (Yousefi & Abdullah, 2019), employees of private sector universities in Karachi, Pakistan (Ali, Raheem et al., 2014), lecturers' performance in Nigeria's federal universities (Sonna & Nkechi, 2021) and that of academics in a technical university in Ghana (Bartels, 2020). Consequently, this present study hypothesised (H_{06}) that OS negatively influences the JP of academics at technical universities in Ghana.

5.8.2 Relationship between occupational stress and job satisfaction

Similar to the inconsistency observed in the relationship between OS and JP, the findings regarding the relationship between OS and JS also exhibit conflicting findings. A study of Turkish National Police (TNP) members from seven cities in Turkey by Kula (2017) showed a negative and significant relationship between organisational stress and JS; but also revealed no significant effect of operational stress on JS, even though the direction of the relationship was negative as hypothesised (Kula, 2017).

Chaudhry (2012) found diverse correlations between OS and JS. This author found no significant relationship between JS and overall OS; an inverse relationship between OS and overall JS in faculty members of private universities; and no relationship between OS and overall JS in faculty members of public universities. Furthermore, this

author found no relationship between OS and overall JS in the case of both male and female university faculty members; conversely, his results indicated that younger university teachers are more sensitive to OS and JS. He also indicated no significant relationship between OS and overall JS in faculty members of universities with regard to the nature of employment contract – visiting, contract and permanent (Chaudhry, 2012).

Yet, studies by Li et al. (2017), Jahanzeb (2010) and Ahsan et al. (2009) have revealed a significant negative effect of job stress on the JS of academics in China, Pakistan and Malaysia, respectively. Similarly, Wu et al. (2021), Jin (2016) and Hayajneh et al. (2021) found significant negative relationships between job stress and JS among bank employees, employees of the Korean Rural Development Administration and employees in the Jordanian telecommunication sector, respectively. Lastly, in Maharani and Tamara (2024), OS negatively influenced the JS of employees in the financial services industry in Indonesia. This present study, therefore, hypothesised (H_{A2}) that OS negatively influences the JS of academics at technical universities in Ghana.

5.8.3 Relationship between occupational stress and organisational commitment

OS and OC are essential elements which usually have an effect on work productivity and efficiency of staff within an organisation (Burman & Shastri, 2013). However, the available literature presents conflicting findings concerning the relationship between OS and OC. For instance, Chen et al. (2006) found no significant correlations between OS and OC among accounting professionals in Taiwan and America. In contrast, others studies found a significant negative correlation between OS and OC in hospitals in Amman, Jordan (Saadeh & Suifan, 2020) and managers of SMEs in Hungary (Karacsony, 2019).

The relationship between OS and OC within HEIs also presents a mixed picture. In their study, Zhuwao et al. (2015) observed a statistically significant relationship between employee OS and OC among HEI employees. Their research also found that academic employees exhibited moderate levels of OS and OC. However, studies by Khatibi et al. (2009) and Viljoen and Rothmann (2009) indicated a significant negative relationship between OS and OC among employees of the National Olympic and Paralympic Academy (NOPA), as well as both academic and non-academic staff in a

university of technology in South Africa. These findings are supported by Ngirande (2021), who identified a negative and statistically significant relationship between OS and OC among academic staff at two historically black South African institutions of higher learning. This present study, consequently, hypothesised (H_{A3}) that OS negatively influences the OC of academics at technical universities in Ghana.

5.8.4 Relationship between job satisfaction and job performance

Regarding the relationship between JS and JP, a comprehensive meta-analysis involving approximately 48 studies conducted by Davar and Bala (2012) concluded that a positive, statistically significant relationship exists between JS and JP. In addition, Rageb et al. (2013) found a significant positive relationship between JP and JS among staff from a database related to the host Arab Academy for Science and Technology and Maritime Transport (AASTMT). JS was further found to affect the performance of employees in Croatian companies positively (Bakotić, 2016), middle-level leaders in Indonesia (Eliyana et al., 2019) and employees of a limited liability company in Indonesia (Hendri, 2019). Similarly, recent studies revealed a significant positive bearing of JS on the JP of academics or lecturers in Indonesia (Angriani et al., 2020) and Nigeria (Okolocha et al., 2021; Otache & Inekwe, 2022). Thus, a satisfied faculty member would be expected to perform well on the job. Hence, this present study hypothesised (H_{A4}) that JS positively influences the JP of academics at technical universities in Ghana.

5.8.5 Relationship between organisational commitment and job performance

Literature suggests that OC and JP are significantly correlated (Benziane, 2017; Hendri, 2019; Kawiana et al., 2018; Memari et al., 2013). Indeed, multiple studies such as Chen et al. (2006), Rageb et al. (2013) and Kawiana et al. (2018) have established a positive relationship between OC and JP. These studies focused on various professional contexts, such as accounting professionals in Taiwan and America, staff members of the College of Management and Technology in Egypt and bank employees in Indonesia. Further studies by Tolentino (2013), Budiansyah (2020) and Chanana (2021) show that commitment correlates significantly with the JP of academic personnel in Indonesia and India, respectively. In their study, Sittar et al. (2021) observed a positive, albeit weak, connection between OC and the JP of university lecturers in Central Punjab. This present study, therefore, hypothesised

(H_{A6}) that OC positively influences the JP of academics at technical universities in Ghana.

The preceding literature review shows that aside from the conflicting findings on the relationships between the concepts, no literature could be found on the interrelationships between OS, JS, OC and JP among academics in a Ghanaian technical university context. Specifically, a review of the current literature on OS, JS, OC and JP indicates that theoretical models do not clarify the relationship between the independent variable, OS, and the dependent variables, JS, OC and JP, and how it enhances them in one single study. Also, HR practitioners are unaware of the theoretical and practical link between OS, JS, OC and JP, specifically in the Ghanaian technical university context. Lastly, an empirical investigation of the relationship between OS, JS, OC and JP has not been conducted and the implications of addressing OS to enhance JS, OC and JP have not been fully understood, underscoring the necessity for further research in this area.

5.8.6 Relationship between job satisfaction and organisational commitment

Studies have reported a positive relationship between JS and OC involving qualified professionals (Wu & Norman, 2006). For example, a positive relationship was recorded between JS and OC through a case analysis of the College of Management and Technology, an Arab academy for science and technology and maritime transport (Rageb et al., 2013). Likewise, Lumley (2009) ascertained a significant relationship between these two concepts in a study involving 86 employees across four South African information technology firms.

Another study by Anari (2012) found that there is a positive significant relationship between JS and OC. Ogunlana et al.'s (2016) study on library and information professionals in Nigeria confirmed previous research showing that JS and OC concepts have a positive and canonical relationship. They again observed various directions of relationships, owing to related parts of these two concepts. OC sub-dimensions (affective, continuance and normative) and JS sub-factors (education, remuneration, promotion, supervision, condition of service, job role, co-workers, supervision, procedures) are reciprocally connected (Ogunlana et al., 2016). Li et al. (2017) and Yongu and Aondoaver (2018) found a significant relationship between JS and the OC of academics in China and resident doctors at Benue State University

Teaching Hospital Makurdi. Furthermore, JS emerged as a predictor of OC in higher educational institutions in Nigeria (Atanu et al., 2018) and India (Bashir & Gani, 2020). However, Bancoro's (2023) research yielded contrasting results, indicating that OC among regular, full-time faculty members at the Negros Oriental State University's College of Business Administration main campus was not a significant driver of JS and that the reverse was also true. The author suggests that several factors, such as the demographic characteristics of the respondents and their intrinsic interest in the field, could contribute to shaping this conclusion.

According to Rageb et al. (2013), although results and conclusions on the relationship between JS and OC are mixed (i.e. there is still some debate regarding the linkage of both concepts – JS is an antecedent of OC and vice versa), there is strong evidence that JS is an antecedent of OC. Thus, the findings of Atanu et al. (2018), Bashir and Gani (2020), Leite et al. (2014), Li et al. (2017) and Yongu and Aondoaver (2018) corroborated JS as an antecedent, instead of an outcome of OC. This present study, therefore, hypothesised (H_{A5}) that JS positively influences the OC of academics at technical universities in Ghana.

5.8.7 Mediating roles of job satisfaction and organisational commitment

As discussed in section 5.8.1, previous research has demonstrated that OS can negatively affect JP (Sonna & Nkechi, 2021; Yousefi & Abdullah, 2019). Furthermore, studies have shown that JP is positively influenced by JS (Okolocha et al., 2021; Otache & Inekwe, 2022) and OC (Benziane, 2017; Hendri, 2019; Kawiana et al., 2018; Memari et al., 2013), while JS also affects OC (Atanu et al., 2018; Bashir & Gani, 2020; Yongu & Aondoaver, 2018). Moreover, OS has been found to indirectly effect JP through psychological capital (PsyCap) (Wang et al., 2023; Yao et al., 2022). Consequently, it is reasonable to posit that the relationship between OS and JP could potentially be mediated by factors such as JS and OC (Lee et al., 2000; Nisar & Rasheed, 2020). Notably, JS has gained recognition as a potential mediator between OS, employee health and other organisational outcomes (Feng et al., 2018). Thus, OC could also serve as a mediator in linking OS and JP (Lee et al., 2000; Sungu et al., 2019). The existing literature, therefore, suggests the complex interactions of OS, JS, OC and JP, implying that the relationships between OS and JP could be mediated by factors such as JS and OC (Narsa & Wijayanti, 2021).

This research proposes several mediation hypotheses that focus on the dynamics between OS, JS, OC and JP. First, it is hypothesised that JS acts as a mediator in the relationship between OS and JP, with the assumption being that an increase in OS results in decreased JS, subsequently leading to a reduction in JP (H_{A7}). Similarly, it is proposed that OC mediates the relationship between OS and JP, where a surge in OS results in a decrease in OC, in turn leading to diminished JP (H_{A8}). Additionally, JS is hypothesised to mediate the relationship between OS and OC, such that elevated OS leads to decreased JS, ultimately resulting in reduced OC (H_{A9}). Furthermore, the study hypothesises that OC mediates the impact of JS on JP, such that higher JS levels result in increased OC, which ultimately improves JP (H_{A10}). Lastly, it is conjectured that JS and OC act as serial mediators in the relationship between OS and JP. This supposition indicates that higher levels of OS lead to lower JS, subsequently resulting in decreased OC and ultimately leading to a reduction in JP (H_{A11}).

5.9 CHAPTER SUMMARY

In this chapter, JP was defined and an overview of JP among academics and pertinent JP theories or models were also covered. This chapter also discussed the antecedents and consequences of JP. It concluded with the integration of the four concepts: OS, JS, OC and JP. Thus, it examined previous research findings on the relationships between these concepts.

This satisfies the first specific objective of this study, which was to conceptualise OS, JS, OC and JP from a theoretical standpoint. This chapter also fulfils the final specific objective of the study, which was to conceptualise the relationship between OS, JS, OC and JP in terms of explanatory theoretical models. In the chapter that follows, the research design and methodology are discussed.

CHAPTER 6: RESEARCH DESIGN AND METHODOLOGY

6.1 INTRODUCTION

This chapter focuses on the study's design and methodology. The research design, overview of the hypotheses, population, sample, data collection and data analysis procedure are described. The measuring instruments as well as ethical considerations will also be explained, and a chapter summary is provided.

6.2 RESEARCH DESIGN

A research design is the researcher's broad strategy for addressing the study question(s) (Saunders et al., 2019). According to Blanche et al. (2006), the strategic framework bridges the gap between research topics and research implementation. This study used an explanatory, descriptive, cross-sectional quantitative survey design. This explanatory study aimed to identify scientifically meaningful and statistically significant relationships between OS, JS, OC and JP among academics in permanent employment at three technical universities in Ghana (Shmueli et al., 2016; Yin, 2014). This research design was chosen for its ability to offer a comprehensive understanding of the complex dynamics and interrelationships between OS, JS, OC and JP, thereby contributing valuable insights to both the academic community and policymakers. The robust methodology inherent in explanatory research, often incorporating statistical techniques for hypothesis testing, adds rigour to the study, making the findings more generalisable (Babbie, 2020). Thus, by employing explanatory research, the researcher was able to elucidate the relationship between the OS, JS, OC and JP of academics who were permanently employed at three technical universities in Ghana.

In addition, the research was also descriptive in nature as hypotheses were formulated on the probable relationship between the variables of OS, JS, OC and JP and the differences between age, gender, educational level, job level and years of service in respect of these variables. A descriptive design gathers, analyses and tabulates data regarding current circumstances, practices, beliefs, processes, trends, and cause-and-effect linkages, and uses percentile and statistical approaches to make correct interpretations (Jalagat, 2017; Saunders et al., 2019). The goal of descriptive research is to provide a detailed and systematic description of a population, situation or phenomenon. It can answer "what", "where", "when" and "how" questions, but not

"why" (McCombes, 2022). Descriptive designs utilise a quantitative methodology that employs survey questionnaires (Jalagat, 2017).

Further details regarding the research design of this study will be provided in the subsequent subsections. This includes the research philosophy, approach, strategy and time horizon, as well as the research variables and unit of analysis.

6.2.1 Research philosophy

The research philosophy represents the lens through which a researcher views the world and their subject of inquiry, shaping their approach to investigating and understanding complex phenomena. Thus, elucidating the research philosophy is important because it shapes the overall research design and influences the methods used to collect and analyse data (Saunders et al., 2019). There are four major philosophies or research paradigms in business and management: positivism (often linked with quantitative research), realism (also aligned with quantitative methods, focuses on objective reality), interpretivism (associated with qualitative research, delves into subjective experiences) and pragmatism (adaptable, integrates both qualitative and quantitative approaches) (Saunders et al., 2019). Each of these has a substantial effect on the researcher's understanding of the issues under investigation and, by extension, how research questions are addressed (Makota, 2014; Saliya, 2023; Tamminen & Poucher, 2020).

This study employed a positivist paradigm in answering the research questions. Positivism is rooted in the belief that reality is objective and can be accurately understood through measurement and observation, making it an ideal approach for the objectives of this research study (Adams et al., 2014). Positivism effectively investigates relationships between variables that can be quantified and measured (Eden et al., 2020; Reijseger et al., 2010). The positivist researcher attempts to remain objective by being dispassionate, unbiased and uninvolved in the subject being studied. The epistemology of this paradigm consists of scientific procedures, empirical evidence, law-like generalisations, mathematical precision, causal explanation and prediction as a kind of constructive knowledge (Saunders et al., 2019). Also, this study's ontological position asserts that reality is external and objective, and can be distinctly observed and quantified (Saunders et al., 2019). This aligns with the positivist doctrine that there is a single observable reality that can be empirically measured and

understood through hypothesised relationships among variables (Fisher, 2007; Saunders et al., 2019). Furthermore, the axiology of this research, although less emphasised in positivist research, involves maintaining a value-free and unbiased approach during the collection and analysis of data. This ensures that the findings are not influenced by the researcher's personal beliefs or values, adhering strictly to the principles of neutrality and objectivity as demanded by the positivist philosophy (Fisher, 2007; Saunders et al., 2019). Thus, this study adheres to the positivist research paradigm because it used standardised research instruments to evaluate human behaviour in the context of Ghanaian technical universities (Naidoo, 2016). Thus, for the purposes of this study, positivism allowed for the formulation and testing of specific hypotheses about the interplay between OS, JS, OC and JP, which may contribute to the development and refinement of theory (Leedy & Ormrod, 2021; Saunders et al., 2019).

6.2.2 Research approach

The research approach denotes the overall strategy or plan that guides a researcher's efforts to address a research problem or answer research questions. It is influenced by the researcher's research philosophy, as well as the specific objectives, context and nature of the research problem (Brough, 2019; Saunders et al., 2019). From the three main research approaches (i.e. quantitative, qualitative and mixed method), a deductive, quantitative approach was used to probe the nuances of the interplay between OS, JS, OC and JP. Thus, this study employed a quantitative research approach in line with a positivist philosophy.

Quantitative studies may be distinguished from qualitative studies by focusing on numerical data (numbers) against non-numerical data (words, images, video clips and other similar material). Therefore, the term "quantitative" is frequently used interchangeably with any method of gathering information via the use of numbers (such as a questionnaire) and any method for analysing that information (such as graphs or statistics) (Saunders et al., 2019). According to Goodwin (2010), the term "quantitative research" refers to a kind of study in which results are provided in numerical form, such as the average performance of several groups on a certain task, the proportion of persons who engage in a given behaviour, and so on. Inferences are made from the data using a mix of statistical analysis and deductive reasoning. In a deductive study, the researcher builds a hypothesis on the basis of an abstract, logical

link among ideas before turning to actual, empirical data (Neuman, 2007). The researcher may then want to compare his or her hypotheses about the nature of the world to “hard facts”.

Quantitative research measures and quantifies relationships between variables, tests hypotheses, and establishes generalisable patterns or trends. It involves collecting and analysing numerical data using statistical methods (Saunders et al., 2019). In quantitative research, questions or hypotheses are advanced to establish the connection among variables (Creswell & Creswell, 2018; Gravetter & Forzano, 2018). The objective is to extrapolate the findings to a larger population. In research, maintaining objectivity, reliability and reproducibility depends on its capacity to be generalised (Blackmon & Maylor, 2005). By adopting a quantitative approach, the study can identify patterns and relationships that may be generalisable across the three technical universities in Ghana. This can help inform policies and interventions to enhance JS, reduce OS and improve OC and JP across these institutions (Bairagi & Munot, 2019; Bordens & Abbott, 2002).

6.2.3 Research strategy/method

The research strategy guides the data collection and analysis methods employed, contributing significantly to the validity and reliability of the findings (Yin, 2014). Various research strategies exist, including archival research, action research, surveys and narrative enquiry (Saunders et al., 2019). However, a survey method was used to align with the current study’s actions, beliefs and attitudes (Creswell & Creswell, 2018). A survey is a strategy for gathering information from a representative subset of a community in order to generalise about the behaviour, beliefs and attitudes of the whole population (Creswell & Creswell, 2018). The survey method is often used in cross-sectional investigations (Saunders et al., 2019). It is versatile, reliable and facilitates the collection of data from a large sample, offering a broad, generalised perspective on the research topic (Babbie, 2020).

Given that this present study involved several variables, the survey method allowed for the simultaneous collection and examination of multiple variables, thereby enhancing the comprehensiveness and depth of the study (Fowler, 2013). Also, survey research provides a cost-effective and time-efficient means of collecting data from a large sample. Since the research covered three universities, the sample size was

substantial. The survey approach enables researchers to reach many respondents within a short period and to collect data efficiently (Bryman & Bell, 2015).

6.2.4 Time horizon

The time horizon refers to the temporal aspect of research, which determines how the researcher observes and interprets the changes over time (Bryman, 2016). It establishes the timeframe within which data is collected, thus defining the scope of the study from a temporal perspective. Essentially, it answers the question, “when was the data collected?” (Saunders et al., 2019). According to Saunders et al. (2019), the two forms of time horizon available to researchers are longitudinal and cross-sectional studies. Cross-sectional studies are often referred to as “snapshot” studies because they examine a phenomenon at a single point in time, akin to taking a snapshot. Longitudinal studies, on the other hand, track the same variables or groups over an extended period (Saunders et al., 2019).

This cross-sectional study allowed the researcher to gather data quickly (i.e. one point in time) (University of Southern California Libraries, 2016). In this type of study, variables are observed without influencing them (Thomas, 2022). According to Menard (2002), cross-sectional studies are generally quicker, simpler and less expensive to execute than longitudinal studies, which require follow-up with respondents over an extended period. Thus, given that research in an academic setting often operates under tight budgetary and time constraints, the cross-sectional approach offers practical advantages.

Figure 6.1 provides a summary of the research design.

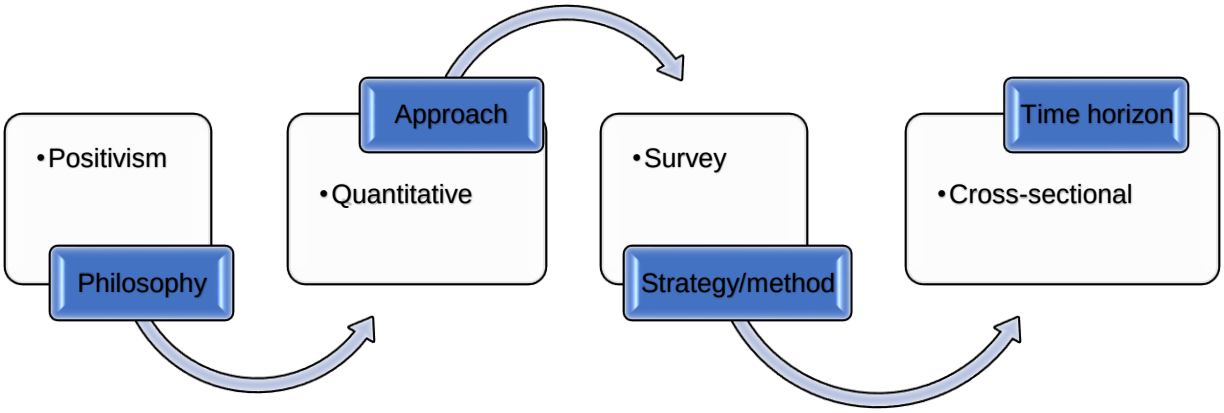

Figure 6.1: Research design summary

Source: Researcher's own

6.2.5 Validity and reliability of the study

Concepts such as validity and reliability serve as criteria for evaluating research quality. They indicate the effectiveness of a methodology, technique or assessment in measuring a given variable. Specifically, validity pertains to the accuracy of the measure, while reliability focuses on its consistency (Middleton, 2023). Adams et al. (2007) state that information quality and the procedures employed to acquire this information affect the validity and reliability of a research study. If this problem is handled improperly, it may have far-reaching effects on the validity of the study conclusions, thus making it a crucial part of the overall research process (Adams et al., 2007).

6.2.5.1 Validity

Validity is defined as the correctness of the results analysed, the suitability of the measurements utilised and the generalisability of the conclusions (Saunders et al., 2019). To assess initial validity and reliability of the questionnaire design (Amoako et al., 2023), a pilot study was conducted with 50 participants. The data from the pilot study was not included in the main study (Mbundu, 2011).

Two types of validity are distinguished, namely internal and external validity. Internal validity pertains to the extent to which a research study's design and resulting data support correct inferences regarding cause and effect relationships and other connections within the data (Leedy & Ormrod, 2021). It also refers to the researcher's confidence that observed cause-and-effect relationships are not influenced by other

factors (Bhandari, 2022). Internal validity was rigorously ensured through several key strategies:

i. the research design was meticulously planned to align with the study objectives and hypotheses (McComb, 2012; Munro, 2015),
ii. the concepts of OS, JS, OC, and JP were selected based on their relevance to the research questions and their established significance in the literature (McComb, 2012; Munro, 2015),
iii. Validity was further strengthened by employing reliable and standardised measuring instruments for data collection (refer to the discussion in section 6.5), as advocated by Ledimo (2012),
iv. data analysis was conducted using robust statistical methods to ensure the accuracy and reliability of the results (Ledimo, 2012), and
v. Transparency and integrity were upheld throughout the reporting process, following ethical guidelines as articulated by Zohrabi (2013), which emphasise the honest presentation of the study's outcomes.

Leedy and Ormrod (2021) define the external validity of a research study as the extent to which the conclusions drawn from the research can be generalised. External validity was ensured by:

i. incorporation of models and theories relevant to the research topic, objectives, and problem statement. This strategic approach, guided by theoretical frameworks as recommended by Leedy and Ormrod (2021), facilitated the extrapolation of findings to broader contexts and enhanced the study's relevance beyond its immediate scope,
ii. selecting a representative sample of academics from three technical universities. This approach, in line with the recommendations of Bloomberg and Wolpe (2012) ensured diversity and inclusivity in the sample, thereby supporting the generalisability of findings, and
iii. administering the same standardised measuring instruments to all participating academics, adhering to the established protocols as advocated by Nwokeocha (2015).

A detailed discussion on the measures taken to establish the statistical validity of this study's data is provided in section 6.8.2.

6.2.5.2 Reliability

Reliability refers to dependability or consistency (Neuman, 2007) and relates to the consistency of a measure over time. Research reliability refers to the extent to which a research methodology produces outcomes that are both consistent and replicable. A measure is considered reliable if, when repeatedly applied to the same subject, it generates consistent findings (Dudovskiy, 2022). This research addressed both internal and external reliabilities.

Internal reliability, according to Zohrabi (2013), is concerned with the consistency of data collection, analysis and interpretation. When an independent researcher reanalyses the data and arrives to conclusions that are comparable to those of the original researcher, this is an example of internal reliability (Zohrabi, 2013). External reliability pertains to the replication of the research study (Zohrabi, 2013).

To ensure internal reliability in this study, the following control mechanisms were implemented:

i. All data collected was stored electronically, encrypted and password protected by the administrator, with exclusive access granted only to the researcher.
ii. Reliability in analysis was ensured using statistical packages like SPSS and SmartPLS to analyse the data (further details are provided in section 6.8).
iii. Internal consistency and the resulting reliabilities of the data collection instruments were determined using Cronbach's alpha and composite reliability coefficients.

To ensure external reliability, the following control mechanisms were implemented:

i. Explicit explanations of the underlying assumptions of the key concepts, analytical units and context were provided, as Zohrabi (2013) states that reliability may be improved by the identification and description of concepts and premises.
ii. The study techniques and goals were explained to the participants which, it was anticipated, would aid comprehension leading to reproducible results (McComb, 2012).
iii. Instruments that have been utilised effectively in other research were employed to evaluate the concepts in this study.

iv. Strict validity and reliability standards were met by the survey utilised to gather the data.
v. Participation was restricted to academics from the three technical universities.
vi. The four data collection instruments met rigorous validity and reliability standards.

A detailed discussion on the measures taken to establish the statistical reliability of this study's data is provided in section 6.8.2.

6.2.6 Research variables

A variable is a research attribute that may change, such as age, gender, height, work position, income, an event, scenario, behaviour, or personal attribute (Adams et al., 2007; Cozby, 2009). In quantitative research independent and dependent variables exist. The independent variable refers to the "cause" variable, whereas the dependent variable refers to the "effect" variable (Tshabalala, 2011). The dependent variables in this study were JS, OC and JP, whereas the independent variable was OS. The aim of this study was therefore to determine how JS, OC and JP (dependent variables) interact with OS (independent variable) and to evaluate the relationship between these variables.

6.2.7 Unit of analysis

A unit of analysis refers to the primary entity or entities under examination in a research study. In the realm of social sciences, it often denotes the level at which data is aggregated for analysis. Common units of analysis include individuals, groups, organisations and social interactions. The choice of the unit of analysis is pivotal as it shapes the research questions, methodology and the interpretation of findings. Essentially, it determines what the study is about and from whose perspective the topic is being investigated (Martin & Roodt, 2008; Patten & Newhart, 2018). The unit of analysis for this research study was permanently employed individual academics in three selected technical universities in Ghana.

6.3 FORMULATION OF THE RESEARCH HYPOTHESES

According to McLeod (2018), the purpose of a hypothesis is to provide a clear and defensible description of the researcher's anticipated result. Tabachnick and Fidell (2013) argue that the significance of hypothesis formation stems from the fact that it may provide the researcher with a sense of purpose, a clear path forward and a

sharper focus on its target variables. The hypotheses provide more direction for data collection, allowing the researcher to focus on the most pertinent details (Tabachnick & Fidell, 2013). The central hypothesis of this study was articulated to explore whether OS, JS and OC influence the JP of technical university academics. Thus, twelve specific research hypotheses (null and alternate hypotheses), as presented in Table 6.1, were developed after reviewing the literature in Chapters 2, 3, 4 and 5.

Table 6.1: Research hypotheses

Research Objective	Hypothesis	Statistical Procedure
Research objective 1: To investigate the statistical nature of the relationships between OS, JS, OC and JP among technical university academics.	H_{O1}: OS does not negatively influence the JP of technical university academics. H_{A1}: OS negatively influences the JP of technical university academics.	Partial least squares structural equation modelling (PLS-SEM) analysis
	H_{O2}: OS does not negatively influence the JS of technical university academics. H_{A2}: OS negatively influences the JS of technical university academics.	PLS-SEM analysis
	H_{O3}: OS does not negatively influence the OC of technical university academics. H_{A3}: OS negatively influences the OC of technical university academics.	PLS-SEM analysis
	H_{O4}: JS does not positively influence the JP of technical university academics. H_{A4}: JS positively influences the JP of technical university academics.	PLS-SEM analysis
	H_{O5}: JS does not positively influence the OC of technical university academics. H_{A5}: JS positively influences the OC of technical university academics.	PLS-SEM analysis
	H_{O6}: OC does not positively influence the JP of technical university academics. H_{A6}: OC positively influences the JP of technical university academics.	PLS-SEM analysis
	H_{O7}: JS does not mediate the influence of OS on the JP of technical university academics. H_{A7}: JS mediates the influence of OS on the JP of technical university academics in that higher OS leads to lower JS, which in turn results in decreased JP.	PLS-SEM analysis
	H_{O8}: OC does not mediate the influence of OS on the JP of technical university academics. H_{A8}: OC mediates the influence of OS on the JP of technical university academics in that higher OS leads to lower OC, which in turn results in decreased JP.	PLS-SEM analysis

Research Objective	Hypothesis	Statistical Procedure
	H_{O9}: JS does not mediate the influence of OS on the OC of technical university academics. H_{A9}: JS mediates the influence of OS on the OC of technical university academics in that higher OS leads to lower JS, which in turn results in decreased OC.	PLS-SEM analysis
	H_{O10}: OC does not mediate the influence of JS on the JP of technical university academics. H_{A10}: OC mediates the influence of JS on the JP of technical university academics in that higher JS leads to increased OC, which in turn results in better JP.	PLS-SEM analysis
	H_{O11}: JS and OC do not serially mediate the influence of OS on the JP of technical university academics. H_{A11}: JS and OC serially mediate the influence of OS on the JP of technical university academics in that higher OS leads to lower JS, which in turn results in decreased OC, ultimately leading to reduced JP.	PLS-SEM analysis
Research objective 2: To investigate whether significant differences exist in OS, JS, OC and JP in terms of biographical variables (age, gender, educational level, job level and years of service).	H_{O12}: Significant differences do not exist in OS, JS, OC and JP among technical university academics in terms of biographical variables (age, gender, educational level, job level and years of service). H_{A12}: Significant differences do exist in OS, JS, OC and JP among technical university academics in terms of biographical variables (age, gender, educational level, job level and years of service).	Mann-Whitney test, independent samples t-test and Kruskal-Wallis tests for significant differences

Note: *H_O = Null hypothesis; H_A = Alternative hypothesis*

6.4 POPULATION AND SAMPLE

The population refers to the entire group of individuals, items or observations that share a common characteristic of interest and are the focus of a research study (Babbie, 2020). It represents the larger target group from which a sample is drawn to make inferences and generalise the findings. This empirical study was conducted amongst academics in permanent employment at three technical universities. Further, these three technical universities represent the leading technical universities in Ghana in terms of progress, infrastructure, number of programmes, human resources, etc. They offer a wide variety of programmes and levels of tuition, from higher national diplomas to various postgraduate degrees. As the universities are in different regions of Ghana, the respondents in this study represent a broad and diverse group of academics.

The target population was thus 660 permanently employed academics from three selected universities in Ghana. The number of academics at each of the three selected technical universities is provided in Table 6.2.

A sample refers to a portion of data taken from the larger population under study, primarily chosen due to the limitations of time and financial resources associated with research endeavours (Wegner, 2017). Samples enable researchers to collect data that represents the values found within the population as a whole. Thus, sampling refers to selecting a subset of individuals, items or observations from a larger population to represent and make inferences about the population as a whole (Babbie, 2020). In research, sampling plays a crucial role in data collection as it provides a more feasible and practical approach compared to studying the entire population. By studying a smaller sample, researchers can draw conclusions and generalise about the larger population. Convenience sampling was employed due to practical constraints, limited resources and time limitations. This method of sampling, a non-probability sampling technique, relates to obtaining samples that the researcher finds convenient. This allowed the researcher to draw and select readily available samples (Jonker & Pennink, 2010; Khaola, 2013). However, when non-probability sampling is used no generalisation of the population can be made. The primary advantage of convenience sampling is its ease of implementation, making it a convenient choice when conducting research within a constrained timeframe and with limited resources. Thus, this

technique allowed the researcher to get the desired sample size reasonably quickly and cost-effectively (Saunders et al., 2019).

Table 6.2: Breakdown of the population of the study

Selected University	Approximate Number of Permanently Employed Academics
University A	155
University B	190
University C	315
Total	**660**

In determining the appropriate sample size, the following formula by Yamane (1967) was applied:

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

Where:

n = the sample size

N = population size

e = level of precision

95% confidence level

$$n = \frac{660}{1 + 660(.05)^2}$$

$$n = \underline{\underline{249}}$$

Therefore, a sample size of 250 academics was deemed adequate, although 317 permanently employed academics participated in the study (demographic details are provided in section 7.2 of Chapter 7). It should be noted that a sample of 317 respondents is more than the 200 needed to test a structural equation model for valid results (Azam, 2015; Hair et al., 1998; Kock, 2018).

6.5 RESEARCH SURVEY

Surveys are a popular quantitative method for data collection, with standardised questionnaires being employed to gather data from a large group of respondents (Bryman, 2016). Thus, surveys are an efficient means of gathering data from a large population (Babbie, 2020). Existing valid and reliable standardised research survey instruments were used in this study. The research survey consisted of five sections: the OS, JS, OC, and JP instruments, as well as a section that sought to obtain demographic data. The first four sections covered the OS, JS, OC and JP instruments, specifically four scales: the Job Stress Scale developed by Parker and Decotiis (1983), the shortened Brayfield and Rothe (1951) Job Satisfaction Scale (JSS), the Organisational Commitment Scale developed by Allen and Meyer (1990) and the Job Performance Scale for academics by Moeller (2009); these were used to assess academics' OS, JS, OC and JP, respectively. These scales are standardised scales tested and approved for research purposes and pose no harm or risk to the respondents. The last section of the survey dealt with demographic data such as age, gender, educational level, job level, and years of service. A description of the various surveys is provided in the following sections.

6.5.1 Occupational stress survey

A 13-item job stress scale developed by Parker and DeCotiis (1983) was used to assess academics' OS scored on a 5-point Likert scale (i.e. 1 = strongly disagree; 5 = strongly agree). This scale was used due to its validity and reliability in measuring overall job stress (Fields, 2002; Jamal, 2007). The scale recorded reliability values of 0.86 in Arshadi and Damiri (2013) and 0.89 in Jamal (2007). Recently, this scale recorded reliability values of 0.97 in Punu and Wijono (2022) and 0.88 in Herdian et al. (2023). Results from a pilot study conducted by the researcher prior to the main study yielded a reliability value of 0.75.

6.5.2 Job satisfaction survey

Brayfield and Rothe's (1951) 6-item global JSS was employed to assess academic's JS scored on a 5-point Likert scale (i.e. 1 = strongly disagree; 5 = strongly agree). The scale exhibited good reliability in previous studies (Dhurup et al., 2016; Michael et al., 2005; Zeffane et al., 2018) as well as in the pilot study. The scale recorded reliability values of 0.709 in Dhurup et al. (2016), 0.79 in Michael et al. (2005) and 0.90 in Zeffane et al. (2018). The pilot study produced a reliability coefficient of 0.94.

6.5.3 Organisational commitment survey

The OC Scale, developed by Allen and Meyer (1990), was used to determine the OC levels of the academics. This scale includes three dimensions, namely, affective, continuance and normative commitment, with six items each scored on a 5-point scale (Allen & Meyer, 1990, 1996; Jaros, 2007). Jordan et al. (2017) reported reliability coefficients (Cronbach's alpha) of 0.80 for affective OC, 0.73 for continuance OC and 0.58 for normative OC among 409 university lecturers in Austria, Croatia, Czech Republic, Germany, Serbia and Slovenia. Furthermore, Folorunso et al. (2014) indicated Cronbach's alpha coefficients of 0.79 for affective, 0.80 for normative, 0.79 for continuance and 0.82 for alpha on general commitment among academic staff at Oyo State-owned tertiary institutions. In addition, Dhurup et al. (2016) reported reliability coefficients of 0.77 for affective, 0.74 for normative and 0.77 for continuance commitment. Lastly, results from the pilot study recorded Cronbach's alpha coefficients of 0.88 for affective, 0.91 for normative, 0.94 for continuance and 0.94 for alpha on overall commitment.

6.5.4 Job performance survey

The JP scale by Moeller (2009) was used to measure the self-rated JP of the academics. This three-dimensional scale has 13 items scored on a 5-point Likert scale (i.e. 1 = very poor; 5 = very good). The first six items are related to teaching performance, four to research performance, while the last three to service performance. This scale recorded a reliability value of 0.83 in Moeller (2009). Lastly, results from the pilot study recorded Cronbach alpha coefficients of 0.87 for teaching performance, 0.74 for research performance, 0.89 for service performance and 0.90 for alpha on overall JP.

6.5.5 Demographic survey

A self-developed set of questions in the questionnaire was used to obtain demographic information from the respondents. The demographic questions gathered data regarding age, gender, educational level, job level and length of service. This information was necessary for finding significant differences between the groups. Barkhuizen and Rothmann (2008) posit that academics lack homogeneity, so it would have been wrong to observe academic stress without considering all their professional and personal characteristics.

6.6 DATA COLLECTION

During data collection, the researcher is required to adhere to established protocols in order to ensure the integrity of the information obtained (Latchigadu, 2016). The following protocols were adhered to prior to data collection for this study. Firstly, permissions (see Appendices B, C and D) were obtained to use the scales to measure OS, OC and JP, while the JS was available in the public domain. The researcher then obtained ethical approval from UNISA (reference number 2021_HRM_007 attached as Appendix H) after receiving approval for the research proposal from the Departmental Research and Ethics Committee. This was done so that the researcher could make sure the respondents were not put in any ethically questionable situations (Kumedzro, 2016). Thirdly, the management of the three selected technical universities granted permission for the study. Consequently, with the assistance of the gatekeepers appointed by the three technical universities, the questionnaires (Appendix A) were administered from February to May 2022 to the full-time academics who had consented to participate in the study. The study employed a flexible approach to the administration of questionnaires, providing both online and paper-based options to accommodate the preferences of the participating academics. This decision was informed by the understanding that individuals have varying levels of comfort and accessibility with different modes of survey administration. Some academics preferred the traditional paper-based questionnaires due to their familiarity with the format and the ease of use, while others opted for the online version, citing convenience and time efficiency. By offering both options, the researcher aimed to ensure that all potential respondents felt at ease and were more inclined to participate in the study, regardless of their preferences. This approach aligns with best practices in survey research, where respondent comfort and accessibility are prioritised to enhance response rates and data quality (Dillman et al., 2016; Hohwü et al., 2013). The researcher guaranteed complete anonymity and confidentiality to all respondents. For the paper-based questionnaires, sealed boxes were placed at central locations within the technical universities where respondents could deposit their sealed envelopes containing the completed questionnaires anonymously. This method ensured that no identifying information was collected, and the responses could not be traced back to any individual.

6.7 ETHICAL CONSIDERATIONS

When conducting research, it is ethically imperative to work with honesty and integrity. Failure to adhere to these principles at any stage of the research process will result in unsuccessful outcomes (Adams et al., 2007). Researchers must follow certain ethical principles and norms (e.g. informed consent, confidentiality, anonymity, etc.) to safeguard society and human study respondents from damage and to meet professional, legal and social duties (Polit & Beck, 2018). Thus, this research followed the policy on research ethics of the University of South Africa (UNISA, 2014) as explained below.

i. **University institutional ethics approval:** Ethical approval was obtained from the Ethics Review Committee of the University (see Appendix E).

ii. **Organisational informed consent:** As stated in the data collection section, organisational consent was sought from the Registrars of the selected technical universities.

iii. **Respondents' informed consent:** The respondents gave their permission after being fully informed about the nature and purpose of the study, as well as their right to obtain the findings. This was all described in the consent form. The benefits of the study were discussed, including those for the respondents and the technical universities as a whole. For the online data collection, respondents were initially directed to a consent section outlining the research's purpose, the respondents' role, the confidentiality of responses and their right to withdraw from the study at any point (Israel & Hay, 2006). To ensure that only consenting respondents could proceed, the form was structured such that their progression was contingent on indicating their consent. This procedure aligns with the ethical standards of online data collection and assures respondents' autonomy (Mann & Stewart, 2000). Conversely, for the paper-based questionnaire, a printed consent form was attached to each. Respondents were required to sign the form, thus providing explicit documentation of their consent to participate in the study (Kumar, 2018).

iv. **Autonomy, confidentiality and anonymity:** Academics were not obligated to take part and their anonymity was always protected. In other words, participation was voluntary, and respondents could withdraw from the study at any time. The names of the technical universities were not mentioned in the study and the demographic information pertaining to the academics did not

contain or ask to the names of the respondents, so no results could be linked to a particular individual. For the paper-based questionnaires, the respondents were asked to place the completed questionnaires into envelopes provided by the researcher, seal the envelopes, and deposit them in sealed boxes located at central locations within the technical universities, ensuring that the responses remained anonymous. The researcher collected these sealed boxes and stored the questionnaires securely. Lastly, access to the data was limited to the researcher alone and the data was saved on a laptop secured by a password. This also contributed to the confidentiality of the study.

v. **Beneficence:** The principle of beneficence was applied. Thus, in this study the benefits and risks were considered and the benefits outweighed the risks. The risk associated with this study is that participation may cause temporary discomfort, as respondents reflect on their OS levels, JS and OC. Consequently, the researcher ensured that respondents understood that they could withdraw at any time without penalty (Resnik, 2015). Furthermore, where there was the possibility that respondents could be harmed or put in a position of discomfort, detailed debriefing was provided. Another potential risk was that respondents might fear negative repercussions or job insecurity if they expressed dissatisfaction or high levels of OS. To mitigate this risk, the study clearly communicated that participation was voluntary and responses would not be linked to individuals (Resnik, 2015).

Aside from the risks, this study promises numerous benefits. Firstly, by enhancing an understanding of these complex relationships, it offers critical insights into improving workplace conditions and practices within the university setting (Punch, 2013). Furthermore, the findings could potentially influence institutional and national policy changes, facilitating the development of healthier, more supportive work environments within Ghana's higher education sector (Yin, 2014). Finally, the study results could inform the design of targeted interventions for managing OS and improving JS and JP, ultimately contributing to the well-being and productivity of university staff (Waltz et al., 2010).

6.8 STATISTICAL ANALYSIS

This section discusses the analytical procedure and tools employed in analysing the data. The analysis comprised three phases: phase 1 included descriptive statistical analysis comprising demographic variables and item and construct descriptives; phase 2 focused on confirmatory composite analysis (i.e. measurement model assessment for reliability and validity results) which is the first stage of the PLS-SEM analytical procedure; and in phase 3, correlation analysis, structural model assessment and tests for significant mean differences were conducted based on the demographic information obtained.

This study used IBM SPSS (Version 28) and SmartPLS (Version 4). IBM SPSS is a popular social science statistical analysis program with a user-friendly interface that facilitates extensive data manipulation and analysis. It enables various statistical tests including frequencies, means, correlation, as well as predictive analytics like regression (Field, 2013). SPSS manages and transforms massive datasets efficiently, assuring data analysis quality and efficiency.

However, SmartPLS software focuses on partial least squares structural equation modelling (PLS-SEM) implementation (Ringle et al., 2022). PLS-SEM is an exploratory, variance-based method for structural equation modelling (SEM), a sophisticated statistical tool that tests complicated theoretical models with numerous variables (Hair et al., 2017). SmartPLS excels when used with complicated models and small datasets or non-normal data (Ringle et al., 2022).

Both SPSS and SmartPLS were employed in this study to ensure a rigorous, comprehensive analysis of the collected data. The utilisation of these tools facilitated an accurate assessment of the relationships between OS, JS, OC and JP within the three technical universities in Ghana.

6.8.1 Descriptive statistics

In statistical analysis, a descriptive statistic is a summary statistic that summarises data from a sample in a meaningful way (Holcomb, 2016). Before doing inferential statistical comparisons, descriptive statistics are often generated and they include the mean, standard deviation, kurtosis and skewness for continuous data and frequency tables for categorical data (Kenton, 2019).

Descriptive statistics were utilised to characterise the data from the OS, OC, JS and JP instruments. The stage of descriptive statistical analysis included the following three actions.

6.8.1.1 Demographic profile of the respondents

First, descriptive statistics present a narrative of the sample by generating frequency distributions for the respondents' demographic profile. Section 7.2 displays the findings. To see if there are any notable differences in respondents' judgements of the constructs, these traits were employed in further analysis.

6.8.1.2 Item descriptives

This section details the mean values, standard deviations, kurtosis and skewness for all the items of the OS, OC, JS and JP instruments. The mean represents the centre of a collection of scores, while the standard deviation gives a sense of how scores are dispersed around the mean (Pallant, 2016). Skewness quantifies asymmetry; if the same pattern of numbers appears to the left and right of a central point, we say that the distribution or data set is symmetrical. Kurtosis explains the heaviness of the tails and, if the difference between the lowest and highest scores is small, it means that the data is concentrated around the mean, whereas a larger difference suggests that the data is dispersed (Leech et al., 2005). The outcomes are reported in Chapter 7, section 7.3. To be considered approximately normal, thresholds for skewness and kurtosis should be between -2 and +2 (George & Mallery, 2010).

6.8.2 Confirmatory composite analysis (measurement model assessment)

This phase of analysis covers confirmatory composite analysis (a.k.a. measurement model assessment). This analysis is the first stage of the PLS-SEM approach. The second stage (discussed in section 6.8.4) is the structural model assessment (Hair et al., 2019; Hair Jr., Hult et al., 2017). The measurement model analysis examined reliability and validity, including the convergent and discriminant validity of the constructs in this study (Hair et al., 2019).

According to Hair et al. (2010), SEM is a multivariate technique that fuses aspects of multiple regression and factor analysis to generate a set of interconnected dependence relationships simultaneously. Hair et al. (2010) further state that all SEM approaches are different in that they approximate various and connected dependent

paths, making it possible to symbolise unobserved concepts and models in relationships while also accounting for measurement error in this estimating process.

Covariance-based SEM (CB-SEM) and variance-based partial least squares (PLS-SEM) are two SEM approaches accessible to researchers (Hair & Alamer, 2022; Hair Jr., Matthews et al., 2017). CB-SEM is primarily used to confirm existing theory (i.e. explanation). Conversely, PLS, is a prediction-oriented approach to SEM that may be used in both exploratory and confirmatory studies (Ringle et al., 2020). As users seek both high prediction accuracy and well-developed causal explanations, PLS-SEM bridges the gap between confirmatory and predictive research (Sarstedt et al., 2019). Understanding the relationships between underlying causes, prediction and theoretical constructs is at the heart of what Gregor (2006, p. 626) calls “dynamic explanation and prediction theory”. This point of view is consistent with the goals of most business studies, which seek to disprove an explanation (i.e. theory) and provide suggestions for managerial action (i.e. prediction).

Given the primary objective of this study to explain the effects of OS, JS and OC on JP, the PLS-SEM method was employed (Shmueli et al., 2016). This method is particularly suited to identifying variables that have a scientifically meaningful and statistically significant relationship with the outcome, thus facilitating a comprehensive understanding of the complex dynamics within the technical universities in Ghana. Furthermore, given the need for latent variable scores (e.g. for OC and JP) in the subsequent analyses, the PLS-SEM is the most suitable model to use (Hair & Alamer, 2022; Hair et al., 2019; Hair Jr., Hult et al., 2017).

The PLS-SEM utilised to evaluate the association between OS, JS, OC and JP was conducted using SmartPLS 4 (Ringle et al., 2022). Since its release in 2005, SmartPLS has been a popular software tool because of its intuitive design and advanced reporting features (Wong, 2013). SmartPLS comprises software with graphical user interface for variance-based SEM using the PLS.

Given the multidimensional nature of OC (i.e. affective dimension of OC (OCA), the normative dimension of OC (OCN) and the continuance dimension of OC (OCC)) and JP (i.e. teaching performance dimension (JPT), the service performance dimension (JPS) and the research performance dimension (JPR)) measures, two measurement models (i.e. lower or first-order and higher or second-order models) were assessed

using the two-stage approach (Hair Jr., Hult et al., 2017; Sarstedt et al., 2019). The two-stage approach in PLS-SEM is particularly relevant when dealing with higher-order constructs or second-order constructs, such as OC and JP in this study, which each have multiple dimensions.

The first stage involved evaluating the reliability and validity of the measurement models, which included the first-order constructs (i.e. the individual dimensions of OC and JP) and their associated indicators (Hair et al., 2017). At this stage, the latent variable scores of the first-order constructs were created, which served as the indicators for the second-order constructs (i.e. OC and JP) in the next stage (Ringle et al., 2022).

The second stage of the assessment involved evaluating the higher-order (second-order) constructs, namely OC and JP, utilising the latent variable scores from the first stage. Regardless of the nature of the first-order constructs, the second-order constructs are considered reflective because the dimensions of the first-order constructs are seen as manifestations of the higher-order construct (Hair et al., 2019). Both the reliability and validity of these second-order constructs are evaluated. Once the adequacy of the measurement model is confirmed, the structural model, which considers the relationships among the second-order constructs, is evaluated (Hair et al., 2019). Thus, the results of the first stage act as indicators for the second-order constructs in the second stage. In addition, the path coefficients between other constructs are estimated (Duarte & Amaro, 2018). Consequently, the utilisation of a two-stage approach in PLS-SEM is advantageous owing to its ability to effectively handle higher-order constructs like OC and JP.

6.8.2.1 Construct reliability

Construct reliability evaluates the extent to which a collection of variables or items gauge a solitary, unidimensional latent construct, as assessed typically by Cronbach's alpha or composite reliability measures (Hair et al., 2010). This study utilised both measures. Cronbach's alpha, a statistical tool, is used to gauge the internal consistency or reliability of a multi-item test or scale. It offers a reliability estimate of how consistently these items gauge a single, unidimensional latent construct (Cronbach, 1951). One limitation of Cronbach's alpha involves its sensitivity to the number of items and sample size (Manenzhe & Ngirande, 2021; Pallant, 2016).

Composite reliability, also recognised as Dillon-Goldstein's rho or construct reliability, is akin to Cronbach's alpha in assessing the internal consistency reliability. It evaluates the reliability of a latent construct measured by several indicators in the context of SEM or factor analysis. The notion of composite reliability takes into account both the loadings of the indicators on the construct and the variances of the error terms. This makes it a more accurate measure of reliability, particularly when the factor loadings of indicators are not equivalent, which is often the situation in practical settings (Hair et al., 2010). Low construct reliability suggests that the items are not measuring the same underlying construct, which can introduce inaccuracies in the measurement and consequently bias the study results. Values above 0.70 are acceptable for establishing construct reliability (Hair et al., 2019; Hair Jr., Hult et al., 2017).

The first criterion to be evaluated is typically indicator reliability (loadings) and multicollinearity as well as internal consistency reliability (Hair Jr., Matthews et al., 2017). Multicollinearity is a statistical phenomenon where two or more independent variables in a multiple regression model are highly correlated, meaning one can be linearly predicted from the others with a substantial degree of accuracy (Dormann et al., 2013). Multicollinearity can obscure the relative importance of the independent variables as it becomes challenging to separate out the individual contributions of predictors to the dependent variable (O'Brien, 2007). Also, due to multicollinearity, the standard errors of the coefficients are typically large, which implies that estimates of the coefficients are less precise. This can lead to wider confidence intervals or non-significant results even when a true effect is present, thereby complicating the interpretation of the model parameters (Farrar & Glauber, 1967).

In the context of SEM or factor analysis, indicator loadings (also known as factor loadings) are the correlation coefficients between the observed variables (indicators) and their underlying latent variable. These loadings provide an estimate of the relevance of each indicator to the latent variable (Brown, 2015). If the loadings are low, it indicates that the observed variable is a poor measure of the latent construct, which can compromise the validity and reliability of the constructs and thereby undermine the credibility of the study's findings. This refers to the square of the factor loading (i.e. loading^2) and represents the amount of variance in an observed variable that is accounted for by the latent construct. High indicator reliability is desirable as it

means that a large proportion of the variance in the observed variable is explained by the construct, thereby enhancing the precision of the measurement (Hair et al., 2010).

6.8.2.2 Convergent validity

Convergent validity refers to how well a construct explains the variation in its indicators. Average variance extracted (AVE) for all items on each construct is used to evaluate convergent validity. Adequate convergence is shown by an AVE > 0.50, which means that more than half of the variation in the indicators is accounted for in the construct score (Hair et al., 2019; Hair Jr., Hult et al., 2017). The convergent validity values, as reported in section 7.4.2, are above 0.50, ranging from 0.57 to 0.81.

6.8.2.3 Discriminant validity tests

Discriminant validity of the measurement models determines the extent to which the constructs are empirically distinct from one another (Hair et al., 2019; Hair Jr., Hult et al., 2017). There are three criteria for establishing discriminant validity, namely, cross-loading, Fornell and Larcker, and heterotrait-monotrait (HTMT) ratio approaches (Fornell & Larcker, 1981; Henseler et al., 2015; Rönkkö & Cho, 2022). These approaches were employed in this study (Hair et al., 2019). The Fornell-Larcker criterion indicates that the coefficient AVE must be greater than the quadratic correlation between all constructs in the model. HTMT is an approximation of the correlation of factors (more specifically, the upper limit). Henseler et al. (2015) recommend that the HTMT value should not exceed 0.85 (conservative limit) or 0.90 (liberal limit). In addition, the researcher needs to evaluate the cross-loading to make sure that the indicator is not misassigned to the wrong element (Hair et al., 2019; Henseler et al., 2016). The results of these analyses, as reported in section 7.4.2, showed evidence of discriminant validity between all the constructs.

6.8.3 Correlation analysis

Correlation analysis explores the existence, direction and degree of correlation between two constructs (Hair et al., 2014; Leedy & Ormrod, 2021). The degree and direction of the bivariate linear relationship between the two variables may be determined by the researcher by calculating a correlation coefficient. Subsequently, a connection exists when a change in one variable is accompanied by a steady and predictable shift in the other.

The OS, OC, JS and JP were correlated using the bi-variate correlation approach (i.e. Pearson's correlation) to determine the degree and direction of the association, which was appropriate for the data distribution. Pearson's correlation coefficient, also known as Pearson's *r*, is a statistical measure that assesses the degree of association between two variables (Rodgers & Nicewander, 1988). This was deemed appropriate for this study as it helped to identify and measure the strength of linear relationships between the constructs (i.e. OS, OC, JS and JP). This helped in the preliminary assessment of relationships before running more complex analyses like PLS-SEM.

The values of the correlation coefficient may be anything from -1 to 1 (Hair et al., 2010). If the value is negative, then the inverse connection holds: in other words, a rise in one variable results in a reduction in the other. When the value is zero, no correlation is found and when it is positive, the two variables are positively correlated as they both go up (Hair et al., 2010). Strong negative or positive linear relationships between variables are represented by correlation coefficients close to -1 or +1 (Patten & Newhart, 2018).

In correlation analysis, effect sizes are typically measured using Pearson's correlation coefficient, denoted as *r*, which gauges the linear correlation between two variables in terms of both its direction and strength. Effect sizes are statistical measures that describe the magnitude of a relationship, difference or effect observed in the study. These are important because they provide a measure that allows the significance of findings to be interpreted irrespective of the sample size, something p-values alone do not provide (Sullivan & Feinn, 2012). According to guidelines suggested by Cohen (1988), an *r* value less than or equal to 0.29 signifies a small effect size, indicating a weak relationship between the variables where changes in one correspond to minor alterations in the other. An *r* value less than or equal to 0.49 represents a medium effect size, implying a moderate relationship between the variables where shifts in one lead to moderate adjustments in the other. Lastly, an *r* value greater than or equal to 0.50 constitutes a large effect size, signalling a strong relationship between the variables where variations in one are associated with substantial changes in the other.

The outcomes of the correlation analysis are presented in section 7.5.

6.8.4 Structural model assessment

This is the second stage of the PLS-SEM approach as indicated in section 6.8.2 (Hair et al., 2019; Hair Jr., Hult et al., 2017). Thus, in line with the PLS-SEM analytical procedure, having fulfilled all requirements of the measurement model (i.e. the reliability and validity of the measures), the structural model can be assessed (Hair et al., 2019; Hair Jr., Hult et al., 2017; Henseler et al., 2016; Ringle et al., 2020). Structural model evaluation in PLS-SEM considers the collinearity check, model fit, explanatory power, predictive relevance and path significance (Hair et al., 2019; Hair Jr., Hult et al., 2017; Ringle et al., 2020). Hair et al. (2019) suggest that to avoid skewing results, collinearity should be checked before examining structural connections. Using the variance inflation factor (VIF), the outer and inner model was evaluated for collinearity (VIF). The outer model in PLS-SEM is the measurement model. It represents the relationships between the latent variables (also known as constructs or factors) and their associated observed variables (also known as indicators, manifest variables or measures) (Becker et al., 2012). The inner model in PLS-SEM is the structural model and represents the relationships among the latent variables. The inner model tests the hypotheses of the research study and assesses the interactions and relationships among the constructs of interest (Hair et al., 2017). For this study, there was an absence of multicollinearity concerns in the data, as the VIF values for both the outer and the inner models were below 3.3 (Hair et al., 2019; Rosen & Hochwarter, 2014).

Next, as suggested by Hair et al. (2019), the model fit, explanatory power and predictive relevance were examined using the standardised root mean squared residual (SRMR), R^2 and Q^2. A blindfolding procedure was employed to determine the predictive relevance denoted by Q^2 which must be greater than 0.0 (Geisser, 1974; Hair et al., 2019; Henseler et al., 2016; Stone, 1974). For good model fit, the SRMR value must be less than 0.08 (Henseler et al., 2016; Hu & Bentler, 1998, 1999). The model for this study exhibited both a good fit and predictive relevance (see Table 7.16).

The statistical significance was determined through bias corrected and accelerated (BCa) bootstrapping procedure with 10,000 resamples at 0.05 significance level (Hair et al., 2019; Hair Jr., Hult et al., 2017). The results of this analysis, as reported in section 7.6, addressed research objective 1 and hypotheses 1 to 11.

6.8.5 Tests for significant mean differences

The second objective of this study was to investigate whether significant differences exist in OS, JS, OC and JP in terms of the categories of the demographic variables of age, gender, educational level, job level and years of service. The researcher employed three tests, namely, Mann-Whitney U test, independent samples t-test and the Kruskal-Wallis test, to examine the group differences. The Mann-Whitney U test is a nonparametric statistical test for comparing discrepancies between two independent groups, particularly when the dependent variable is ordinal or continuous and does not follow a normal distribution (Mann & Whitney, 1947). This test ranks the scores from both groups together and then examines the ranks to see if one group tends to have higher or lower scores than the other. The Mann-Whitney U test was useful in this study as the study compared the levels of OC of two groups within the study sample (e.g. gender, two age groups and two educational groups).

The independent samples t-test is a statistical procedure used to determine if a significant difference exists between the means of two unrelated groups. Prior to conducting the t-test, Levene's test for equality of variances was applied to ensure the assumption of homogeneity of variances was met. This test ascertains whether the variances of the two groups are equal, which is a fundamental assumption for the t-test. For the t-test, a two-tailed approach was adopted, which checks for any significant difference without specifying the direction of the difference. The significance level, or alpha, was set at 0.05. This means that any p-value below 0.05 would be considered indicative of a statistically significant difference between group means. Moreover, the 95% confidence interval (CI) of the mean difference was calculated to offer a range in which the true mean difference likely lies. If this interval contains zero, it suggests that the difference is not statistically significant.

The Kruskal-Wallis test is a nonparametric test used to compare three or more independent groups, and is applicable when the dependent variable is either ordinal or continuous and lacks a normal distribution (Kruskal & Wallis, 1952). It ranks all the scores together and then examines whether the ranks differ significantly across the groups. This test was beneficial for the study because the researcher wanted to compare the OS, JS, OC and JP across the tenure (i.e. work experience) and position or designation of the academics.

The level of statistical significance was set at $p \leq .05$. Thus, the null hypothesis is rejected if $p \leq .05$; i.e. the results are statistically significant (Pallant, 2016). The outcome from this analysis as reported in section 7.7 of Chapter 7 addressed research objective 2 and hypothesis 7.

6.9 CHAPTER SUMMARY

This chapter covered the empirical inquiry conducted within the scope of this study. The research design, formulation of the research hypotheses, population, sample size, measurement tools and ethical considerations were discussed. The chapter concluded with a discussion of the statistical analysis methods employed.

The next chapter presents and discusses the results of this study.

CHAPTER 7: RESULTS AND DISCUSSION

7.1 INTRODUCTION

This chapter discusses and presents the findings of the statistical analysis. The analysis included descriptive statistics, normality tests, and inferential statistical analysis, including correlation analysis, PLS-SEM, and tests for statistically significant mean differences. Thus, the analysis comprised three phases: phase 1 included descriptive statistical analysis comprising demographic variables and item and construct descriptives; phase 2 focused on confirmatory composite analysis (i.e. measurement model assessment for reliability and validity results) which is the first stage of the PLS-SEM analytical procedure; while in phase 3 correlation analysis, structural model assessment including mediation tests and tests for significant mean differences based on the demographics were conducted. The results are presented in a methodical fashion using tables and figures that include the necessary statistical data. In-depth descriptions and analyses of the results are provided as part of the interpretation process.

7.2 DEMOGRAPHIC PROFILE OF THE RESPONDENTS

The academics who participated in the study are profiled in this section. Gender, age, education, tenure and designation or position were used to compile the biographical details. The results are illustrated in Table 7.1.

Table 7.1: Demographic profile

Characteristics		Count	%
Gender	Male	224	70.7
	Female	93	29.3
	Total	317	100.0
Age	< 25 years	0	0.0
	26–34 years	18	5.7
	35–44 years	114	36.0
	45–54 years	151	47.6
	55–60 years	34	10.7
	Total	317	100.0
Highest education level	Bachelor’s degree	0	0.0
	Master’s degree	284	89.6
	Doctorate/PhD	33	10.4
	Total	317	100.0

Characteristics		Count	%
Tenure	1–5 years	19	6.0
	6–10 years	74	23.3
	11–15 years	75	23.7
	16–20 years	80	25.2
	21 years and above	69	21.8
	Total	317	100.0
Designation or position	Instructor/tutor	1	0.3
	Assistant lecturer	22	6.9
	Lecturer	232	73.2
	Senior lecturer	60	18.9
	Associate/assistant professor	2	0.6
	Professor	0	0.0
	Total	317	100.0

Note: Percentages may not add up to exactly 100% due to rounding.

The results in Table 7.1 reveal that the sample was male dominated (70.7%) as compared with 29.3% females. In terms of the age distribution, 47.6% were within the 45 to 54 years group, 36% were in the 35 to 44 years group followed by 55 to 60 years (10.7%) and 26 to 34 years (5.7%). Concerning education, all the academics had a postgraduate tertiary education with 89.6% having a master's degree while the rest (10.4%) of the respondents were doctorate holders. Regarding tenure, the largest group of academics encompassed those with 16 to 20 years of service, accounting for 25.2%, followed by those with 11 to 15 years of service, comprising 23.7%. 94% of the academics had more than five years of experience. The last demographic element is designation or position. The results demonstrated that the majority (73.2%) of the academics were at the lecturer stage, followed by senior lecturers (18.9%), assistant lecturers (6.9%), associate/assistant professors (0.6%) and instructors/tutors (0.3%).

7.3 DESCRIPTIVE STATISTICS

Descriptive statistics provide understandable data summaries. This study employed measures such as central tendency (specifically the mean), variances (represented by standard deviation) and distribution patterns (kurtosis and skewness). Thus, these statistics were computed for the OS, JS, OC and JP scales. The results are presented in Table 7.2.

Table 7.2: Construct/item descriptive statistics

Items	*n*	Min	Max	Mean	Std. Deviation	Skewness	Kurtosis
Occupational Stress (OS)							
OSS1	317	1	4	2.38	0.943	0.060	-0.910
OSS2	317	1	4	2.26	0.963	0.288	-0.871
OSS3	317	1	4	2.16	0.998	0.422	-0.893
OSS4	317	1	4	2.17	1.033	0.322	-1.116
OSS5	317	1	4	2.40	0.945	0.015	-0.927
OSS6	317	1	4	2.25	0.989	0.321	-0.925
OSS7	317	1	4	2.35	0.942	0.096	-0.907
OSS8	317	1	4	2.30	0.956	0.236	-0.876
OSS9	317	1	5	2.18	1.016	0.460	-0.740
OSS10	317	1	5	2.21	1.080	0.504	-0.664
OSS11	317	1	5	2.36	1.048	0.376	-0.668
OSS12	317	1	5	2.19	1.036	0.518	-0.600
OSS13	317	1	5	2.28	1.077	0.410	-0.740
Composite OS				*2.27*	*0.738*	*0.459*	*-0.891*
Job Satisfaction (JS)							
JSS1	317	1	5	4.33	1.150	-1.647	1.550
JSS2	317	1	5	4.25	1.045	-1.433	1.292
JSS3	317	1	5	4.32	1.040	-1.448	1.121
JSS4	317	1	5	4.23	1.032	-1.366	1.128
JSS5	317	1	5	4.26	1.144	-1.464	0.979
JSS6	317	1	5	4.14	1.135	-1.144	0.315
Composite JS				*4.26*	*0.984*	*-1.305*	*0.710*
Organisational Commitment (OC)							
OCA1	317	1	5	4.24	0.921	-1.185	0.809
OCA2	317	1	5	4.41	0.891	-1.587	2.054
OCA3	317	1	5	4.18	0.966	-1.067	0.428
OCA4	317	1	5	4.61	0.619	-2.161	7.611
OCA5	317	1	5	4.65	0.611	-2.407	8.834
OCA6	317	1	5	4.57	0.625	-1.964	6.755
Composite OCA				*4.45*	*0.582*	*-1.980*	*7.360*
OCN1	317	1	5	4.15	0.970	-1.090	0.613
OCN2	317	1	5	4.33	0.965	-1.428	1.322
OCN3	317	1	5	4.12	1.016	-1.032	0.315
OCN4	317	1	5	4.50	0.794	-2.077	5.068
OCN5	317	1	5	4.54	0.793	-2.187	5.443
OCN6	317	1	5	4.46	0.781	-1.934	4.819

Items	*n*	Min	Max	Mean	Std. Deviation	Skewness	Kurtosis
Composite OCN				*4.35*	*0.732*	*-2.106*	*5.603*
OCC1	317	1	5	4.17	0.976	-1.253	1.165
OCC2	317	1	5	4.34	0.959	-1.521	1.757
OCC3	317	1	5	4.14	0.979	-1.022	0.302
OCC4	317	1	5	4.52	0.732	-1.999	5.085
OCC5	317	1	5	4.58	0.741	-2.337	6.592
OCC6	317	1	5	4.50	0.732	-2.018	5.642
Composite OCC				*4.37*	*0.684*	*-2.119*	*6.141*
Composite OC				*4.39*	*0.586*	*-1.865*	*6.710*
Job Performance (JP)							
JPT1	317	3	5	4.53	0.705	-1.159	-0.053
JPT2	317	3	5	4.44	0.720	-0.871	-0.581
JPT3	317	3	5	4.45	0.756	-0.952	-0.604
JPT4	317	3	5	4.44	0.775	-0.931	-0.709
JPT5	317	3	5	4.57	0.692	-1.333	0.353
JPT6	317	3	5	4.37	0.783	-0.744	-0.976
Composite JPT				*4.46*	*0.597*	*-0.662*	*-0.950*
JPT7	317	2	5	4.35	0.838	-1.253	0.951
JPT8	317	2	5	4.37	0.826	-1.245	0.918
JPT9	317	1	5	4.29	0.864	-1.110	0.625
JPT10	317	2	5	4.38	0.832	-1.311	1.069
Composite JPR				*4.35*	*0.674*	*-1.261*	*1.297*
JPT11	317	3	5	4.68	0.488	-1.012	-0.382
JPT12	317	3	5	4.64	0.499	-0.831	-0.764
JPT13	317	3	5	4.60	0.503	-0.571	-1.310
Composite JPS				*4.64*	*0.441*	*-0.798*	*-0.461*
Composite JP				*4.47*	*0.476*	*-0.646*	*-0.890*

Note: All items scored on a 5-point Likert scale.

Table 7.2 presents the statistical results for OS, JS, OC and JP. For OS, the mean scores ranged from 2.16 to 2.38, with an overall scale mean of 2.27 (*SD = 0.738*). The skewness values fell within the acceptable range of -2 to +2, indicating positive skewness. Furthermore, the kurtosis values were between -2 and +2, which is also consistent with a normal distribution (George & Mallery, 2010).

Regarding JS, the overall mean score was 4.26 (*SD = 0.984*) and the indicator mean scores ranged from 4.14 to 4.33. The skewness values for these items were within the -2 to +2 normality range (George & Mallery, 2010) and the items were negatively

skewed. Also, kurtosis values were within the recommended range to assume normality.

As previously mentioned, OC has three dimensions. The affective commitment (AC) dimension had an overall mean score of 4.45 (*SD* = 0.582) with indicator mean scores ranging from 4.18 to 4.65. Similarly, the normative commitment dimension had an overall mean score of 4.35 (*SD* = 0.732) with indicator mean scores ranging from 4.12 to 4.54. The last dimension, the continuance commitment dimension, recorded an overall mean score of 4.37 (*SD* = 0.684) with indicator mean scores ranging from 4.14 to 4.58. The composite mean score for the overall OC of the academics was 4.39 (*SD* = 0.586). Comparatively, AC (*M* = 4.45; *SD* = 0.582) had the highest mean score, followed by continuance commitment (*M* = 4.37; *SD* = 0.684) and then normative commitment (*M* = 4.35; *SD* = 0.732). The kurtosis values confirmed the presence of normality assumption problems as most of the figures were above 2.

Akin to OC, JP also has three subscales. The overall JP recorded a mean score of 4.47 (*SD* = 0.476) with service performance having the highest mean (*M* = 4.64; *SD* = 0.441), followed by teaching performance (*M* = 4.46; *SD* = 0.597) and then research performance (*M* = 4.35; *SD* =0.674). Both skewness and kurtosis values were within the recommended normality range of -2 and +2, thus, normality can be assumed.

7.4 CONFIRMATORY COMPOSITE ANALYSIS (MEASUREMENT MODEL ASSESSMENT)

This section of the PLS-SEM analysis examines the reliability and validity of the latent variable, including both the convergent validity and discriminant validity (Hair et al., 2019). The results are described in the subsequent sections.

7.4.1 Reliability tests

This subsection reports on the item loadings, reliability and collinearity results. Given the multidimensional nature of OC (i.e. OCA, OCN and OCC) and JP (i.e. JPT, JPS and JPR) measures, two measurement models (i.e. lower or first-order and higher or second-order models) were assessed using the two-stage approach (Hair Jr., Hult et al., 2017; Sarstedt et al., 2019). In the first step of the two-stage method, scores for the first-order constructs were estimated. The results from the first stage were utilised as indicators for the second-order constructs (i.e. OCA, OCN and OCC onto OC; JPT,

JPS and JPR onto JP) in the second stage, while also estimating the path coefficients between other constructs (Duarte & Amaro, 2018).

Table 7.3: Item loadings, loadings² and collinearity – first-order model

Items	Loadings	Loadings²	*SE*	*t*-statistics	*p*-values	VIF
JPT1 <- JPT	0.796	0.634	0.023	34.713	0.000	2.575
JPT2 <- JPT	0.872	0.761	0.014	60.840	0.000	3.498
JPT3 <- JPT	0.757	0.573	0.029	26.213	0.000	1.830
JPT4 <- JPT	0.821	0.674	0.021	38.562	0.000	2.228
JPT5 <- JPT	0.787	0.620	0.024	32.985	0.000	2.691
JPT6 <- JPT	0.816	0.666	0.022	36.360	0.000	2.810
JPR7 <- JPR	0.851	0.723	0.025	33.978	0.000	3.438
JPR8 <- JPR	0.796	0.634	0.030	26.258	0.000	1.561
JPR9 <- JPR	0.717	0.514	0.035	20.599	0.000	1.325
JPR10 <- JPR	0.846	0.716	0.029	29.572	0.000	3.390
JPS11 <- JPS	0.876	0.768	0.024	36.851	0.000	2.192
JPS12 <- JPS	0.876	0.768	0.024	36.805	0.000	2.140
JPS13 <- JPS	0.914	0.835	0.013	68.081	0.000	2.632
JSS1 <- JS	0.914	0.835	0.011	83.965	0.000	4.856
JSS2 <- JS	0.902	0.813	0.014	63.117	0.000	4.271
JSS3 <- JS	0.909	0.826	0.011	84.845	0.000	4.877
JSS4 <- JS	0.890	0.793	0.013	68.488	0.000	3.711
JSS5 <- JS	0.905	0.819	0.015	60.351	0.000	4.136
JSS6 <- JS	0.888	0.789	0.016	55.515	0.000	3.683
OCA1 <- OCA	0.566	0.320	0.067	8.429	0.000	1.326
OCA2 <- OCA	0.777	0.604	0.033	23.818	0.000	1.848
OCA3 <- OCA	0.719	0.516	0.041	17.569	0.000	1.589
OCA4 <- OCA	0.875	0.765	0.025	35.584	0.000	2.733
OCA5 <- OCA	0.826	0.683	0.038	21.710	0.000	2.354
OCA6 <- OCA	0.798	0.637	0.046	17.333	0.000	2.267
OCC1 <- OCC	0.663	0.440	0.057	11.672	0.000	1.601
OCC2 <- OCC	0.834	0.695	0.025	32.712	0.000	2.135
OCC3 <- OCC	0.756	0.572	0.038	20.119	0.000	1.740
OCC4 <- OCC	0.888	0.788	0.026	33.706	0.000	3.294
OCC5 <- OCC	0.866	0.750	0.028	31.242	0.000	3.200
OCC6 <- OCC	0.819	0.670	0.041	19.916	0.000	2.521
OCN1 <- OCN	0.695	0.484	0.052	13.374	0.000	1.698
OCN2 <- OCN	0.838	0.702	0.026	32.728	0.000	2.306
OCN3 <- OCN	0.758	0.574	0.038	19.894	0.000	1.800
OCN4 <- OCN	0.923	0.853	0.014	66.674	0.000	4.980
OCN5 <- OCN	0.900	0.810	0.021	43.839	0.000	4.649

Items	Loadings	Loadings²	*SE*	*t*-statistics	*p*-values	VIF
OCN6 <- OCN	0.863	0.744	0.030	28.631	0.000	3.235
OSS1 <- OS	0.808	0.652	0.020	40.882	0.000	4.593
OSS2 <- OS	0.692	0.479	0.040	17.370	0.000	2.405
OSS3 <- OS	0.671	0.450	0.038	17.530	0.000	2.154
OSS4 <- OS	0.801	0.641	0.023	35.347	0.000	3.394
OSS5 <- OS	0.785	0.616	0.028	27.608	0.000	3.912
OSS6 <- OS	0.750	0.562	0.032	23.566	0.000	2.956
OSS7 <- OS	0.742	0.551	0.035	21.456	0.000	3.219
OSS8 <- OS	0.785	0.615	0.025	30.855	0.000	3.719
OSS9 <- OS	0.711	0.505	0.034	20.668	0.000	3.087
OSS10 <- OS	0.772	0.596	0.032	23.943	0.000	4.037
OSS11 <- OS	0.696	0.484	0.043	16.089	0.000	2.364
OSS12 <- OS	0.629	0.396	0.046	13.809	0.000	2.164
OSS13 <- OS	0.743	0.552	0.036	20.832	0.000	2.765

The results of the indicator loadings and collinearity of the first order model are shown in Table 7.3. All indicator loadings (also illustrated by Table 7.3 and Figure 7.1) reported therein are shown to be statistically significant ($p < 0.001$). Indicator reliability has also been demonstrated well for most items, with reliability estimates higher than 0.50. Seven items have reliability estimates below 0.50, however, these seven items, despite their lower reliability, exhibit significant loadings. Moreover, their respective constructs demonstrate robust construct reliability and validity. Given the significance of their loadings and their constructs' overall reliability and validity, the decision was made to retain these items in the study (Hair Jr., Matthews et al., 2017). Thus, the decision to retain these items was made with the understanding that their inclusion adds contextual relevance and depth to the constructs being measured. It is, therefore, recommended that future research should explore alternative measurements or attempt to improve the reliability of these items. This could potentially lead to more robust findings and contribute to the ongoing refinement of research methodologies in this field. Furthermore, the VIF values are all less than 5, signifying no multicollinearity problem (Duarte & Amaro, 2018; Hair et al., 2019; Saari et al., 2021; Sarstedt et al., 2019).

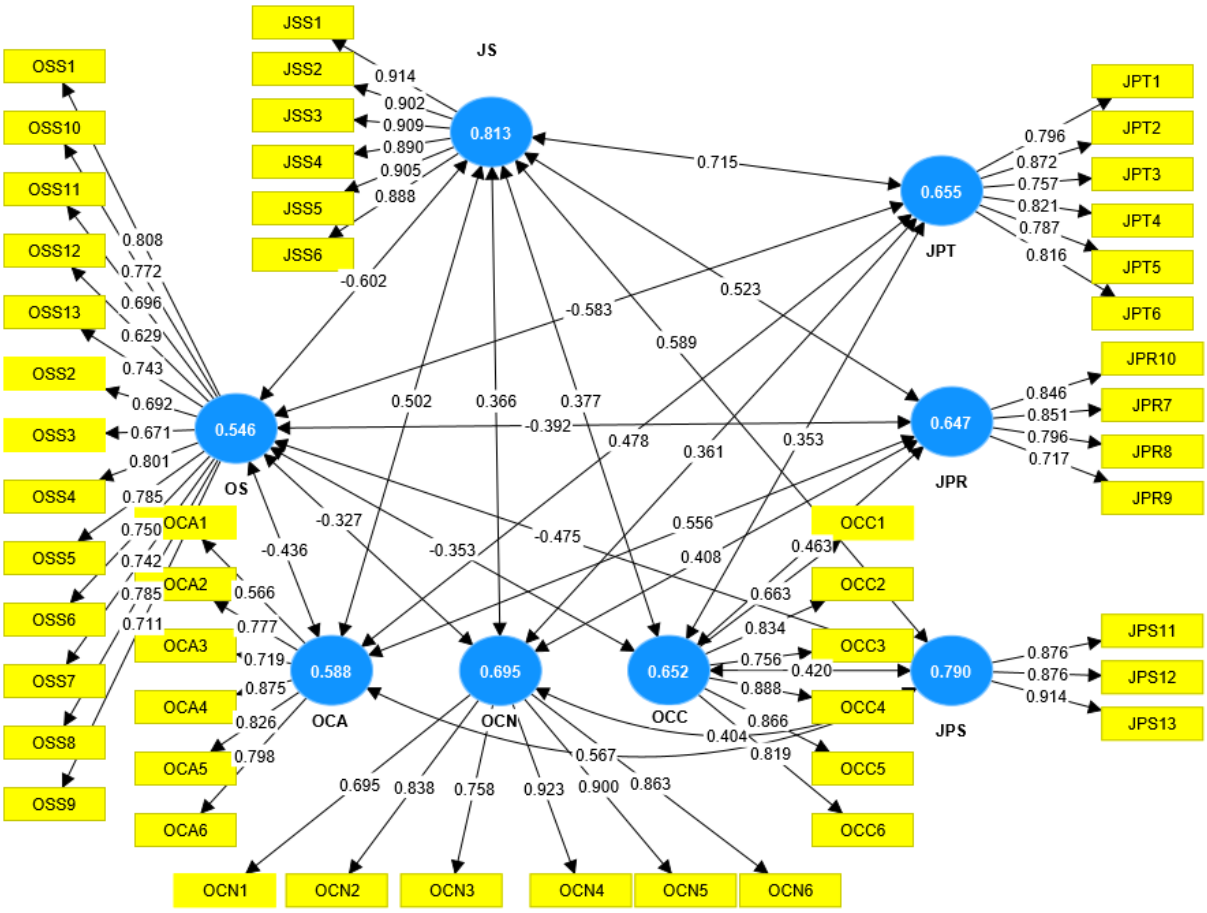

Figure 7.1: Measurement model results – first-order model

Table 7.4: Item loadings and reliability – second-order constructs

Items	Loadings	Reliability	*SE*	*t*-statistics	*p*-values
JPR	0.757	0.573	0.031	24.293	0.000
JPS	0.836	0.699	0.032	26.335	0.000
JPT	0.829	0.687	0.021	38.675	0.000
*JS	1.000	1.000	0.000	0.000	0.000
OCA	0.942	0.888	0.010	92.700	0.000
OCC	0.866	0.751	0.043	19.978	0.000
OCN	0.839	0.704	0.049	17.217	0.000
*OS	1.000	1.000	0.000	0.000	0.000

**** This is a first-order construct only***

The results of the indicator loadings and reliability of the second-order model are shown in Table 7.1 and Figure 7.2. All indicator loadings reported therein are shown to be statistically significant ($p < 0.001$). Indicator reliability has also been established, with reliability estimates higher than 0.50. This suggests that the indicators for OC (i.e. OCA, OCC and OCN) and JP (i.e. JPR, JPS and JPT) exhibit acceptable loadings and

reliability (Duarte & Amaro, 2018; Hair et al., 2019; Saari et al., 2021; Sarstedt et al., 2019).

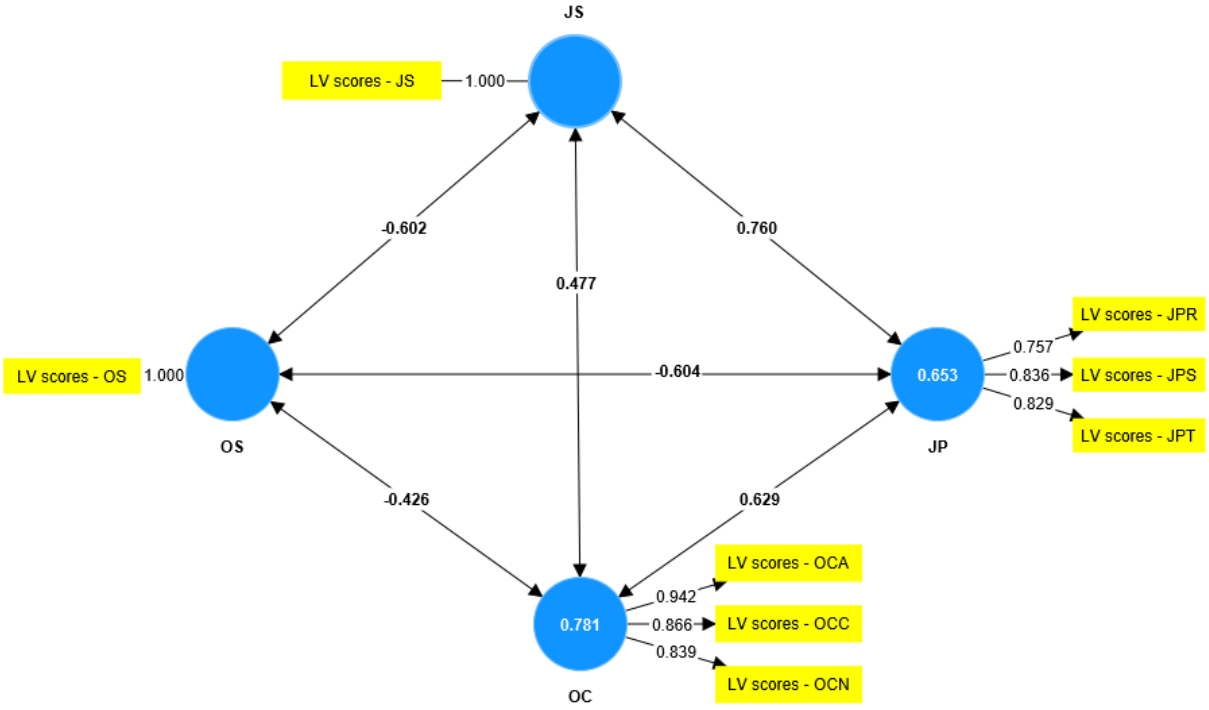

Figure 7.2: Measurement model results – second-order model

Table 7.5: Construct reliability – first-order constructs

Construct	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)
JPR	0.816	0.815	0.879
JPS	0.867	0.870	0.919
JPT	0.894	0.897	0.919
JS	0.954	0.955	0.963
OCA	0.857	0.878	0.894
OCC	0.893	0.918	0.918
OCN	0.911	0.931	0.931
OS	0.930	0.934	0.940

Table 7.5 presents construct reliabilities from the first-order model using Cronbach's alpha, rho_a and rho_c. The results revealed that all the latent variables have construct reliability values above the minimum threshold of 0.7, suggesting adequate construct reliabilities (Hair et al., 2019; Shmueli et al., 2019).

Table 7.6: Construct reliability for second – order constructs

Construct	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)
JP	0.734	0.741	0.849
OC	0.859	0.891	0.914

Table 7.6 depicts the construct reliability for the second-order constructs JP and OC. From Table 7.6, it is clear that both JP and OC exhibited adequate construct reliabilities (Hair et al., 2019; Shmueli et al., 2019).

7.4.2 Convergent validity tests

The AVE for all the items on each construct was used to assess convergent validity, which quantifies how much the construct converges to explain the variance of its items (Hair et al., 2019). The results are reported in Table 7.7.

Table 7.7: Construct convergent validity

Construct	Average variance extracted (AVE)
First-order constructs	
JPR	0.647
JPS	0.790
JPT	0.655
JS	0.813
OCA	0.588
OCC	0.652
OCN	0.695
OS	0.546
Second-order constructs	
JP	0.653
OC	0.781

The results in Table 7.7 indicate that the AVEs for the first-order constructs range from 0.546 to 0.813 and those of the second-order constructs JP and OC are 0.653 and 0.781, respectively. Therefore, all AVEs are greater than the critical level of 0.50, thus meeting the requirements for convergent validity and suggesting that all the constructs explain more than 50% of the variance of its items (Hair et al., 2019; Shmueli et al., 2019).

The subsequent section (7.4.3) reports on the discriminant validity results following the establishment of adequate construct reliability and convergent validity.

7.4.3 Discriminant validity tests

This section accounts for the discriminant validity of the measurement models. This was to determine the extent to which the constructs are empirically distinct from one another (Hair et al., 2019; Hair Jr., Matthews et al., 2017). The three criteria for establishing discriminant validity, namely, cross-loading, Fornell and Larcker, and the HTMT ratio criteria, were employed in this study. The results are reported in Table 7.8 to Table 7.13.

Table 7.8: Cross-loading criterion for discriminant validity – first-order model

Items	JPT	JPR	JPS	JS	OCA	OCC	OCN	OS
JPT1	***0.796***	0.369	0.514	0.575	0.442	0.327	0.330	-0.469
JPT2	***0.872***	0.364	0.492	0.642	0.411	0.292	0.310	-0.530
JPT3	***0.757***	0.291	0.388	0.511	0.347	0.261	0.268	-0.423
JPT4	***0.821***	0.291	0.393	0.598	0.357	0.284	0.257	-0.464
JPT5	***0.787***	0.326	0.479	0.554	0.410	0.293	0.305	-0.505
JPT6	***0.816***	0.341	0.378	0.581	0.350	0.257	0.280	-0.432
JPR7	0.305	***0.851***	0.395	0.417	0.399	0.308	0.287	-0.331
JPR8	0.345	***0.796***	0.379	0.446	0.495	0.404	0.360	-0.349
JPR9	0.359	***0.717***	0.394	0.411	0.471	0.443	0.350	-0.276
JPR10	0.294	***0.846***	0.369	0.393	0.402	0.312	0.300	-0.294
JPS11	0.412	0.449	***0.876***	0.486	0.512	0.376	0.383	-0.367
JPS12	0.543	0.365	***0.876***	0.535	0.466	0.345	0.325	-0.440
JPS13	0.501	0.466	***0.914***	0.547	0.533	0.398	0.371	-0.456
JSS1	0.632	0.430	0.544	***0.914***	0.428	0.327	0.298	-0.517
JSS2	0.627	0.428	0.517	***0.902***	0.442	0.337	0.325	-0.545
JSS3	0.655	0.541	0.586	***0.909***	0.496	0.396	0.357	-0.602
JSS4	0.652	0.462	0.546	***0.890***	0.476	0.339	0.360	-0.525
JSS5	0.632	0.498	0.525	***0.905***	0.445	0.338	0.336	-0.562
JSS6	0.667	0.459	0.457	***0.888***	0.424	0.298	0.296	-0.499
OCA1	0.192	0.181	0.342	0.180	***0.566***	0.374	0.383	-0.248
OCA2	0.325	0.690	0.418	0.441	***0.777***	0.622	0.565	-0.374
OCA3	0.317	0.485	0.363	0.375	***0.719***	0.574	0.513	-0.265
OCA4	0.443	0.409	0.531	0.488	***0.875***	0.635	0.591	-0.412
OCA5	0.445	0.357	0.520	0.376	***0.826***	0.619	0.603	-0.368
OCA6	0.428	0.332	0.412	0.372	***0.798***	0.576	0.558	-0.305
OCC1	0.134	0.132	0.253	0.116	0.481	***0.663***	0.314	-0.223
OCC2	0.284	0.620	0.377	0.393	0.653	***0.834***	0.505	-0.351
OCC3	0.253	0.440	0.302	0.315	0.616	***0.756***	0.454	-0.232
OCC4	0.326	0.317	0.381	0.369	0.632	***0.888***	0.457	-0.312
OCC5	0.332	0.291	0.384	0.259	0.605	***0.866***	0.475	-0.313

Items	JPT	JPR	JPS	JS	OCA	OCC	OCN	OS
OCC6	0.335	0.274	0.307	0.276	0.622	***0.819***	0.431	-0.244
OCN1	0.179	0.143	0.267	0.133	0.507	0.332	***0.695***	-0.218
OCN2	0.274	0.550	0.371	0.387	0.634	0.529	***0.838***	-0.323
OCN3	0.245	0.392	0.285	0.296	0.576	0.488	***0.758***	-0.215
OCN4	0.353	0.301	0.397	0.368	0.616	0.479	***0.923***	-0.321
OCN5	0.350	0.283	0.361	0.274	0.579	0.453	***0.900***	-0.278
OCN6	0.370	0.266	0.312	0.292	0.605	0.448	***0.863***	-0.253
OSS1	-0.439	-0.288	-0.348	-0.472	-0.342	-0.272	-0.261	***0.808***
OSS2	-0.379	-0.229	-0.297	-0.412	-0.266	-0.222	-0.201	***0.692***
OSS3	-0.414	-0.250	-0.367	-0.443	-0.309	-0.284	-0.211	***0.671***
OSS4	-0.510	-0.366	-0.451	-0.530	-0.381	-0.291	-0.273	***0.801***
OSS5	-0.475	-0.272	-0.315	-0.495	-0.340	-0.260	-0.244	***0.785***
OSS6	-0.399	-0.303	-0.332	-0.473	-0.305	-0.254	-0.234	***0.750***
OSS7	-0.321	-0.238	-0.261	-0.343	-0.273	-0.223	-0.217	***0.742***
OSS8	-0.424	-0.320	-0.389	-0.431	-0.332	-0.284	-0.256	***0.785***
OSS9	-0.455	-0.296	-0.418	-0.449	-0.339	-0.289	-0.230	***0.711***
OSS10	-0.527	-0.361	-0.431	-0.516	-0.361	-0.287	-0.286	***0.772***
OSS11	-0.401	-0.251	-0.277	-0.369	-0.298	-0.232	-0.273	***0.696***
OSS12	-0.347	-0.210	-0.269	-0.350	-0.227	-0.145	-0.195	***0.629***
OSS13	-0.438	-0.320	-0.334	-0.438	-0.363	-0.297	-0.241	***0.743***

Table 7.9: Cross-loading criterion for discriminant validity – second-order model

Constructs	JP	JS	OC	OS
JPR	***0.757***	0.523	0.545	-0.392
JPS	***0.836***	0.589	0.534	-0.475
JPT	***0.829***	0.715	0.456	-0.583
JS	0.760	***1.000***	0.477	-0.602
OCA	0.657	0.502	***0.942***	-0.436
OCC	0.505	0.377	***0.866***	-0.353
OCN	0.482	0.366	***0.839***	-0.327
OS	-0.604	-0.602	-0.426	***1.000***

According to Table 7.8 (first order) and Table 7.9 (second order), the outer loading of each construct is greater than its cross-loading on the other constructs. According to the cross-loading criterion for discriminant validity, indicators must be more strongly associated with their target constructions than with any other constructs. Consequently, the employment of the cross-loading standard shows the existence of discriminant validity (Abdi et al., 2013; Bin-Nashwan et al., 2019; Chin, 1998; Hair Jr., Hult et al., 2017).

Table 7.10: Fornell-Larcker criterion for discriminant validity – first-order model

Constructs	JPR	JPS	JPT	JS	OCA	OCC	OCN	OS
JPR	0.804							
JPS	0.480	0.889						
JPT	0.409	0.547	0.809					
JS	0.523	0.589	0.715	0.901				
OCA	0.556	0.567	0.478	0.502	0.767			
OCC	0.463	0.420	0.353	0.377	0.751	0.808		
OCN	0.408	0.404	0.361	0.366	0.706	0.555	0.833	
OS	-0.392	-0.475	-0.583	-0.602	-0.436	-0.353	-0.327	0.739

Table 7.11: Fornell-Larcker criterion for discriminant validity – second-order model

Constructs	JP	JS	OC	OS
JP	***0.808***			
JS	0.760	***1.000***		
OC	0.629	0.477	***0.884***	
OS	-0.604	-0.602	-0.426	***1.000***

The results of the Fornell-Larcker criterion are reported in Table 7.10 (first order) and Table 7.11 (second order). As indicated in these tables, for all latent variables, the square root of the AVE (given diagonally) for each construct is greater than the correlations between the constructs. As a result, the discriminant validity of the latent constructs has been established (Duarte & Amaro, 2018; Fornell & Larcker, 1981).

Table 7.12: HTMT ratio criterion for discriminant validity – first-order model

Constructs	JPR	JPS	JPT	JS	OCA	OCC	OCN	OS
JPR								
JPS	0.568							
JPT	0.474	0.619						
JS	0.586	0.645	0.773					
OCA	0.634	0.655	0.536	0.538				
OCC	0.494	0.469	0.385	0.385	0.849			
OCN	0.445	0.450	0.394	0.375	0.799	0.601		
OS	0.441	0.520	0.631	0.631	0.477	0.374	0.348	

Table 7.13: HTMT ratio for discriminant validity – second-order model

Constructs	JP	JS	OC	OS
JP				
JS	0.880			
OC	0.787	0.507		
OS	0.698	0.602	0.454	

The results of the HTMT criterion are reported in Table 7.12 (first order) and Table 7.13 (second order). All the HTMT estimates were found to be beneath the 0.90 threshold, but it is worth noting that although the estimate for JS and JP (0.880) in Table 7.13 is above the more conservative threshold of 0.85, it is below the 0.90 liberal threshold. Thus, discriminant validity was established (Duarte & Amaro, 2018; Hair et al., 2019; Henseler et al., 2015).

7.5 CORRELATION ANALYSIS

The relationship between the variables was calculated using Pearson correlations. These correlations helped to determine the strength and direction of the relationship between the OS, JS, OC and JP variables. The primary purpose of correlation in social research, as stated by Tabachnick and Fidell (2013), is to identify the direction and strength of a link between variables. Table 7.14 illustrates the results.

Table 7.14: Pearson correlation matrix

Variables	1	2	3	4	5	6	7	8	9	10
1. OS	--									
2. JS	-.595**	--								
3. OCA	-.423**	.481**	--							
4. OCN	-.322**	.349**	.709**	--						
5. OCC	-.343**	.354**	.749**	.550**	--					
6. OC	-.407**	.442**	.917**	.865**	.866**	--				
7. JPT	-.576**	.713**	.453**	.349**	.336**	.426**	--			
8. JPR	-.385**	.517**	.547**	.392**	.434**	.513**	.405**	--		
9. JPS	-.469**	.586**	.556**	.399**	.412**	.510**	.542**	.478**	--	
10. JP	-.602**	.764**	.620**	.458**	.472**	.580**	.872**	.773**	.737**	--

Notes: (*N* = 317), ** $p \leq 0.01$; * $p \leq 0.05$. $r \leq 0.29$ (small practical effect size), $r \leq 0.49$ (medium practical effect size), $r \geq 0.50$ (large practical size)

As depicted in Table 7.14, the results indicate that OS had a significant negative relationship to JS (*r* = -.595; large effect; $p \leq .01$), OCA (*r* = -.423; medium effect; $p \leq .01$), OCN (*r* = -.322; medium effect; $p \leq .01$), OCC (*r* = -.343; medium effect; $p \leq .01$), overall OC (*r* = -.407; medium effect; $p \leq .01$), JPT (*r* = -.576; large effect; $p \leq .01$), JPR (*r* = -.385; medium effect; $p \leq .01$), JPS (*r* = -.469; medium effect; $p \leq .01$) and overall JP (*r* = -.602; large effect; $p \leq .01$).

The results also indicate that JS had a significant positive relationship to OCA (*r* = .481; medium effect; $p \leq .01$), OCN (*r* = .349; medium effect; $p \leq .01$), OCC (*r* = .354; medium effect; $p \leq .01$), overall OC (*r* = .442; medium effect; $p \leq .01$), JPT (*r* = .713; large effect; $p \leq .01$), JPR (*r* = .517; large effect; $p \leq .01$), JPS (*r* = .586; large effect; $p \leq .01$) and overall JP (*r* = .764; large effect; $p \leq .01$).

Similarly, OCA correlated significantly with JPT (*r* = .453; medium effect; $p \leq .01$), JPR (*r* = .547; large effect; $p \leq .01$), JPS (*r* = .556; large effect; $p \leq .01$) and overall JP (*r* = .620; large effect; $p \leq .01$). Also, OCN associated significantly with JPT (*r* = .349; medium effect; $p \leq .01$), JPR (*r* = .392; medium effect; $p \leq .01$), JPS (r_s = .399; medium effect; $p \leq .01$) and overall JP (*r* = .458; medium effect; $p \leq .01$). Equally, OCC connected significantly with JPT (*r* = .336; medium effect; $p \leq .01$), JPR (*r* = .434; medium effect; $p \leq .01$), JPS (*r* = .412; medium effect; $p \leq .01$) and overall JP (*r* = .472; medium effect; $p \leq .01$). Lastly, overall OC correlated significantly with JPT (*r* = .426;

medium effect; $p \leq .01$), JPR ($r = .513$; large effect; $p \leq .01$), JPS ($r = .510$; large effect; $p \leq .01$) and overall JP ($r = .580$; large effect; $p \leq .01$).

7.6 STRUCTURAL MODEL ASSESSMENT

Having satisfied all requirements during the first stage of the PLS-SEM approach (i.e. adequate measurement model in terms of its acceptable reliability and validity – see section 7.4), the structural model is examined in this section (Hair et al., 2019; Hair Jr., Hult et al., 2017; Henseler et al., 2016; Ringle et al., 2020). The results cover collinearity check, structural model fit, explanatory power, predictive relevance and path significance (Hair et al., 2019; Hair Jr., Hult et al., 2017; Ringle et al., 2020). The results are subsequently reported in subsections 7.6.1 and 7.6.2.

7.6.1 Collinearity checks

Before evaluating the structural relationships, Hair et al. (2019) state that collinearity must be examined to make sure it is not skewing the findings. Thus, first the outer and inner model of this study was checked for collinearity issues using the VIF. The results are presented in Table 7.15.

Table 7.15: Outer and inner model VIF

Outer model				
Constructs			**VIF**	
JPR			1.354	
JPS			1.608	
JPT			1.486	
JS			1.000	
OCA			3.172	
OCC			2.298	
OCN			1.999	
OS			1.000	
Inner model				
Constructs	**JP**	**JS**	**OC**	**OS**
JP				
JS	1.731		1.569	
OC	1.347			
OS	1.633	1.000	1.569	

As shown in Table 7.15, all the VIF values for both outer and inner models are below 3.3. This demonstrates the absence of multicollinearity concerns in the data (Hair et al., 2019; Rosen & Hochwarter, 2014).

7.6.2 Structural path assessment

This section reports on the structural model fit, explanatory power, predictive relevance and path significance. Table 7.16 and Figure 7.3 depict the results.

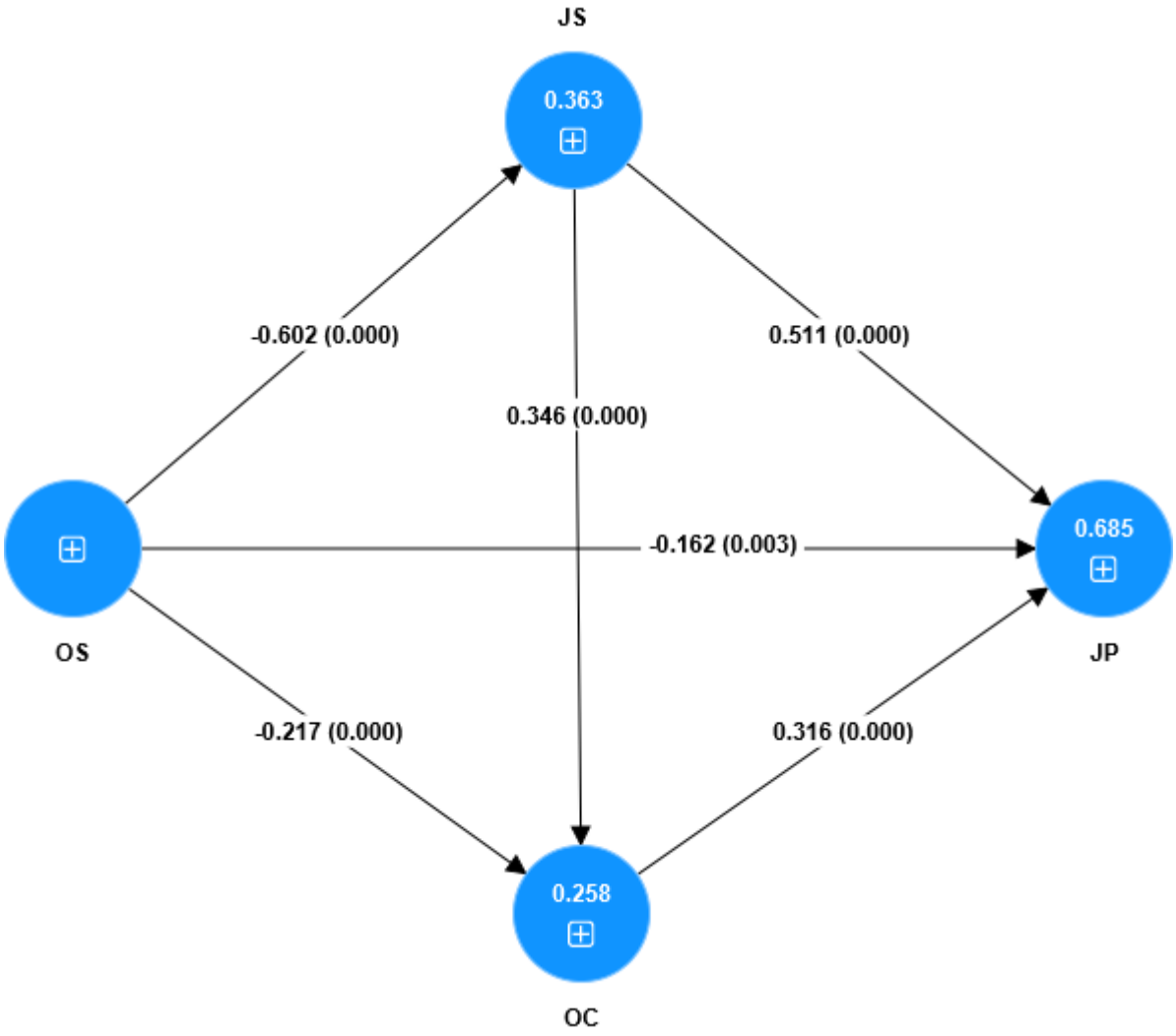

Figure 7.3: Structural model results

Table 7.16: Structural model results

Path	*β*	*SE*	*t*-statistics	*p*-values	f^2	BCa CI	
						2.5%	97.5%
Direct effects							
OS -> JP	-0.162	0.054	2.995	0.003	0.051	-0.274	-0.062
OS -> JS	-0.602	0.042	14.374	0.000	0.569	-0.677	-0.511
OS -> OC	-0.217	0.057	3.842	0.000	0.041	-0.332	-0.110

Path	*β*	*SE*	*t*-statistics	*p*-values	f^2	BCa CI	
						2.5%	97.5%
JS -> JP	0.511	0.052	9.878	0.000	0.480	0.411	0.610
JS -> OC	0.346	0.064	5.383	0.000	0.103	0.223	0.474
OC -> JP	0.316	0.061	5.180	0.000	0.235	0.197	0.433
Indirect effects							
OS -> JS -> JP	-0.308	0.035	8.848	0.000	-	-0.383	-0.246
OS -> OC -> JP	-0.069	0.026	2.679	0.007	-	-0.126	-0.029
OS -> JS -> OC	-0.208	0.039	5.378	0.000	-	-0.289	-0.137
JS -> OC -> JP	0.109	0.037	2.988	0.003	-	0.053	0.191
OS -> JS -> OC -> JP	-0.066	0.022	3.006	0.003	-	-0.115	-0.032
Total effects							
OS -> JP	-0.604	0.046	13.248	0.000	-	-0.685	-0.503
OS -> JS	-0.602	0.042	14.374	0.000	-	-0.677	-0.511
OS -> OC	-0.426	0.056	7.614	0.000	-	-0.532	-0.314
JS -> JP	0.621	0.048	12.957	0.000	-	0.517	0.705
JS -> OC	0.346	0.064	5.383	0.000	-	0.223	0.474
OC -> JP	0.316	0.061	5.180	0.000	-	0.197	0.433

Summary of the explanatory power, predictive relevance and fit of the model

Constructs	R^2	R^2 adjusted	Q^2	Q^2predict	SRMR
JP	0.685	0.682	0.441	0.358	0.075
JS	0.363	0.361	0.340	0.359	
OC	0.258	0.253	0.207	0.172	

Note: The *β* coefficients are standardised.

The results in Table 7.16 indicate satisfactory structural model explanatory power, relevance and fit indices. Specifically, the R^2 values suggest OS accounts for 36.3% variance in JS, and both OS and JS account for 25.8% variation in OC. Further, OS, JS and OC jointly contribute to 68.5% of JP. Further assessment revealed that the structural model exhibited adequate predictive relevance as the Q^2 and Q^2predict values are greater than 0.0 (see Table 7.16) (Geisser, 1974; Hair et al., 2019; Henseler et al., 2016; Stone, 1974) and a good model fit, as the SRMR value is less than 0.08 (Henseler et al., 2016; Hu & Bentler, 1998, 1999). Consequently, the structural model depicted in Figure 7.3 can be used to verify hypotheses H_1, H_2, H_3, H_4, H_5 and H_6 in this study.

As presented in Table 7.16 and Figure 7.3, all the direct, indirect and total effects are significant as the *p*-values are less than 0.05. For the direct effects, OS significantly negatively predicted JP (*β* = -0.162; *SE* = 0.054; *t* = 2.995; *p* = 0.003; f^2 = 0.051 [small effect size]; BCa 95%CI [-0.274; -0.062]), JS (*β* = -0.602; *SE* = 0.042; *t* = 14.374; *p* = 0.000; f^2 = 0.569 [large effect size]; BCa 95%CI -0.677; -0.511]) and OC (*β* = -0.217;

SE = 0.057; *t* = 3.842; *p* = 0.000; f^2 = 0.041 [small effect size]; BCa 95%CI [-0.332; -0.062]). Thus, OS is significantly negatively linked to JP, JS and OC in that a decrease in OS leads to an increase in JP, JS and OC.

In addition, JS significantly positively predicted JP (*β* = 0.511; *SE* = 0.052; *t* = 9.878; *p* = 0.000; f^2 = 0.480 [large effect size]; BCa 95%CI [0.411; 0.610]) and OC (*β* = 0.346; *SE* = 0.064; *t* = 5.383; *p* = 0.000; f^2 = 0.103 [small effect size]; BCa 95%CI [0.223; 0.474]). This suggests that JS is significantly positively connected to JP and OC such that an increase in JS results in an upsurge in JP and OC. Similarly, OC significantly positively predicts JP (*β* = 0.316; *SE* = 0.061; *t* = 5.180; *p* = 0.000; f^2 = 0.235 [medium effect size]; BCa 95%CI [0.197; 0.433]); suggesting an increase in OC yields an increase in JP.

Mediation analyses were conducted using PLS-SEM in SmartPLS, utilising a bootstrapping technique (BCa bootstrapped confidence intervals) with 10,000 resamples to understand the indirect effects (i.e. mediating effects). An indirect effect was considered significant if its bootstrapped 95% confidence interval did not encompass zero. It is evident that OS had significant negative indirect effects on JP through JS (*β* = -0.308; *SE* = 0.035; *t* = 8.848; *p* = 0.000; BCa 95%CI [-0.383; -0.246]) and OC (*β* = -0.069; *SE* = 0.026; *t* = 2.679; *p* = 0.007; BCa 95%CI [-0.126; -0.029]), thus suggesting the mediating effects of JS and OC. Also, OS had a significant negative indirect effect on OC through JS (*β* = -0.208; *SE* = 0.039; *t* = 5.378; *p* = 0.000; BCa 95%CI [-0.289; -0.137]). JS had a significant positive indirect effect on JP through OC (*β* = 0.109; *SE* = 0.037; *t* = 2.988; *p* = 0.003; BCa 95%CI [0.053; 0.191]), implying the mediating role of OC in the JS–JP nexus. Lastly, OS had a significant negative indirect effect on JP serially through JS and OC (*β* = -0.066; *SE* = 0.022; *t* = 3.006; *p* = 0.003; BCa 95%CI [-0.115; -0.032]). This indicates the joint mediating role of JS and OC in predicting JP from OS.

In examining the direct effects, OS notably negatively predicted JP, JS and OC, as previously delineated. Additionally, JS significantly positively predicted both JP and OC, with OC, in turn, positively predicting JP. For the mediating roles of JS and OC, it becomes evident that the indirect effect of OS on JP, channelled through JS and OC, was significant. Yet, even with these mediators incorporated in the model, OS retained a significant direct influence on JP. This observation suggests that the relationship

between OS and JP experiences partial mediation by JS and OC. Specifically, this mediation is characterised as “partial” because, in tandem with the significant indirect effects through JS and OC, the direct effect of OS on JP remains discernible and statistically significant when mediating paths are accounted for. In a similar vein, the mediation of JS in the relationship between OS and OC and its subsequent impact on JP, can also be classified as partial. The foundation for this classification stems from the notable indirect effect of JS, combined with the persistence of direct effects even when the mediator’s influence is taken into consideration. Thus, both direct and indirect effects are significant across all relationships; hence, the mediators offer partial, rather than full mediation, given the continued significance of direct paths even in the presence of mediators (Carrión et al., 2017).

Assessment of the total effects (which is the combined influence of the direct effect between two constructs and the indirect effect flowing through the mediator) show that OS had significant negative total effects on JP (β = -0.604; *SE* = 0.046; *t* = 13.248; *p* = 0.000; BCa 95%CI [-0.685; -0.503]), JS (β = -0.602; *SE* = 0.042; *t* = 14.374; *p* = 0.000; BCa 95%CI -0.677; -0.511]) and OC (β = -0.426; *SE* = 0.056; *t* = 7.614; *p* = 0.000; BCa 95%CI [-0.532; -0.314]). Additionally, JS had significant positive total effects on JP (β = 0.621; *SE* = 0.048; *t* = 12.957; *p* = 0.000; BCa 95%CI [0.517; 0.705]) and OC (β = 0.346; *SE* = 0.064; *t* = 5.383; *p* = 0.000; BCa 95%CI [0.223; 0.474]). Likewise, OC had a significant positive total effect on JP (β = 0.316; *SE* = 0.061; *t* = 5.180; *p* = 0.000; BCa 95%CI [0.197; 0.433]).

7.7 TESTS FOR SIGNIFICANT MEAN DIFFERENCES

To identify variations in OS, JS, OC and JP with respect to demographic factors (i.e. gender, age, educational level, designation or position and tenure), tests for significant differences were conducted; in this case, the Mann-Whitney test for OC (given the presence of normality problems as most of the figures were above 2) based on gender, age group and educational level. However, independent samples t-tests and Kruskal-Wallis tests were performed to establish whether or not the data provided strong support for research hypothesis 12 (H_{12}: *Significant differences do exist in OS, JS, OC and JP among technical university academics in terms of the biographical variables of age, gender, educational level, designation and years of service or tenure*).

Table 7.17 tabulates the Mann-Whitney test results for OC based on gender, age and

education.

Table 7.17: Mann-Whitney test results for OC based on gender, age and education

Demographic Variable	n	Mean Rank	Mean	Median	SD	Z	*p*-value
Gender							
Male	224	160.38	4.40	4.50	0.584	-0.419	0.675
Female	93	155.67	4.36	4.50	0.594		
Total	317		4.39	4.50	0.586		
Age group							
< 45 years	132	172.94	4.48	4.50	0.508	-2.303	0.021
≥ 45 years	185	149.05	4.32	4.50	0.629		
Total	317		4.39	4.50	0.586		
Education							
Master's degree	284	161.55	4.40	4.50	0.589	-1.462	0.144
Doctorate/PhD	33	137.08	4.28	4.33	0.551		
Total	317		4.39	4.50	0.586		

Based on the *p*-values in Table 7.17, it is evident that there were no statistically significant differences in OC based on the gender and educational levels of the academics. This means that there is no discernible difference between the academics with regard to OC and that gender and educational level do not play a substantial role in influencing OC among academics. However, the OC of the academics differs statistically significantly in that academics who belong to the < 45 years group (M = 4.48) which scored higher in OC compared to the ≥ 45 years group (M = 4.32). Thus, age significantly influenced academics' OC levels in that the younger academics are more committed than the older academics. Nevertheless, it is crucial to remember that the Mann-Whitney U test primarily assesses distributions and not exclusively median differences, especially when the shape and dispersion of the distributions differ. Therefore, although younger academics exhibit higher average scores, the test identified differences in the distribution of the scores.

Table 7.18 tabulates the independent samples t-test results for OS, JS and JP based on gender, age and education.

Table 7.18: Independent samples t-test results for OS, JS and JP based on gender, age and education

		Levene's Test for Equality of Variances		t-test for Equality of Means							
		F	Sig.	t	df	Significance		Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
						One-Sided p	Two-Sided p			Lower	Upper
Gender											
OS	Equal variances assumed	1.018	0.314	0.082	315	0.468	0.935	0.007	0.091	-0.172	0.187
	Equal variances not assumed			0.083	180.067	0.467	0.934	0.007	0.089	-0.169	0.184
JS	Equal variances assumed	0.245	0.621	0.436	315	0.332	0.663	0.053	0.122	-0.186	0.292
	Equal variances not assumed			0.431	168.268	0.333	0.667	0.053	0.123	-0.189	0.295
JP	Equal variances assumed	0.018	0.894	-0.092	315	0.463	0.927	-0.005	0.059	-0.121	0.110
	Equal variances not assumed			-0.092	171.037	0.464	0.927	-0.005	0.059	-0.122	0.111
Age											
OS	Equal variances assumed	0.327	0.568	-0.318	315	0.376	0.751	-0.027	0.084	-0.193	0.139
	Equal variances not assumed			-0.317	280.286	0.376	0.752	-0.027	0.084	-0.193	0.139
JS	Equal variances assumed	0.243	0.623	0.737	315	0.231	0.462	0.083	0.112	-0.138	0.303
	Equal variances not assumed			0.737	281.588	0.231	0.462	0.083	0.112	-0.138	0.304
JP	Equal variances assumed	0.377	0.540	0.989	315	0.162	0.323	0.054	0.054	-0.053	0.160
	Equal variances not assumed			0.990	283.336	0.161	0.323	0.054	0.054	-0.053	0.160
Education											
OS	Equal variances assumed	0.110	0.741	-0.336	315	0.369	0.737	-0.046	0.136	-0.313	0.222
	Equal variances not assumed			-0.334	39.687	0.370	0.740	-0.046	0.137	-0.322	0.231
JS	Equal variances assumed	1.907	0.168	0.894	315	0.186	0.372	0.162	0.181	-0.194	0.518
	Equal variances not assumed			0.825	38.323	0.207	0.415	0.162	0.196	-0.235	0.559
JP	Equal variances assumed	0.232	0.630	0.545	315	0.293	0.586	0.048	0.088	-0.125	0.220
	Equal variances not assumed			0.564	40.547	0.288	0.576	0.048	0.085	-0.123	0.219

The results of the independent samples t-tests in Table 7.18 indicate that there are no statistically significant differences in the level of OS, JS and JP based on gender, age groups and education as the *p*-values are greater than 0.05. Levene's test confirmed the homogeneity of variances across the groups and the subsequent t-tests revealed no significant differences in the means of OS, JS or JP based on the demographic categories, with all *p*-values exceeding the 0.05 threshold. Additionally, the 95% CIs for the mean differences consistently encompassed zero, underscoring the lack of significant disparities in OS, JS and JP across the examined demographics in the studied population. This suggests that the OS, JS and JP of the academics in terms of their gender, age and education do not differ significantly.

Table 7.19 displays the Kruskal-Wallis test results for tenure or years of service.

Table 7.19: Kruskal-Wallis test results based on tenure

Constructs	Tenure	n	Mean Rank	Mean	Median	SD	H	*p*-value
OS	1–5 years	19	141.24	2.12	1.92	0.641	10.257	0.036
	6–10 years	74	146.24	2.15	2.15	0.755		
	11–15 years	75	142.77	2.13	2.00	0.624		
	16–20 years	80	169.74	2.36	2.23	0.737		
	≥ 21 years	69	182.78	2.49	2.15	0.810		
	Total	317		2.27	2.08	0.738		
JS	1–5 years	19	183.84	4.61	4.83	0.533	6.390	0.172
	6–10 years	74	154.35	4.19	4.83	1.017		
	11–15 years	75	175.01	4.44	4.83	0.910		
	16–20 years	80	155.91	4.17	4.83	1.118		
	≥ 21 years	69	143.33	4.13	4.50	0.926		
	Total	317		4.26	4.83	0.984		
OC	1–5 years	19	183.79	4.51	4.67	0.556	15.778	0.003
	6–10 years	74	153.53	4.39	4.50	0.568		
	11–15 years	75	185.54	4.56	4.67	0.434		
	16–20 years	80	159.57	4.38	4.50	0.601		
	≥ 21 years	69	128.54	4.19	4.33	0.684		
	Total	317		4.39	4.50	0.586		
JP	1–5 years	19	184.97	4.66	4.77	0.318	4.161	0.385
	6–10 years	74	159.61	4.45	4.69	0.495		
	11–15 years	75	166.34	4.53	4.69	0.425		
	16–20 years	80	159.26	4.47	4.65	0.487		
	≥ 21 years	69	142.92	4.38	4.54	0.515		
	Total	317		4.47	4.62	0.476		

The outcomes in Table 7.19 reveal a significant variation in OS scores across different tenure groups (H(4) = 10.257, *p* = 0.036), with longer-tenured employees seemingly experiencing higher levels of stress. Conversely, JS appears to be unaffected by tenure length, as there is no statistically significant difference in JS scores across the tenure groups (H(4) = 6.390, *p* = 0.172), while OC presents a significant difference across different tenure groups (H(4) = 15.778, *p* = 0.003). Interestingly, employees with longer tenure seem to possess lower levels of organisational commitment, as the commitment scores display a tendency to decrease with tenure. Lastly, JP scores do not statistically significantly vary across different tenure groups (H(4) = 4.161, p = 0.385), indicating that tenure length does not have a considerable impact on JP in this sample. However, it is vital to approach these findings with the understanding that the Kruskal-Wallis test tests distributional differences and not specific median differences.

Table 7.20 shows the Kruskal-Wallis test results for designation or position.

Table 7.20: Kruskal-Wallis test results based on designation or position

Constructs	Designation	n	Mean Rank	Mean	Median	SD	H	*p*-value
OS	< Lecturer Rank	23	113.57	1.93	1.69	0.697	10.422	0.005
	Lecturer Rank	232	168.29	2.34	2.23	0.750		
	> Lecturer Rank	62	141.08	2.12	1.92	0.659		
	Total	317		2.27	2.08	0.738		
JS	< Lecturer Rank	23	167.57	4.38	4.83	1.045	0.300	0.861
	Lecturer Rank	232	159.03	4.25	4.83	0.972		
	> Lecturer Rank	62	155.70	4.23	4.83	1.016		
	Total	317		4.26	4.83	0.984		
OC	< Lecturer Rank	23	191.57	4.58	4.67	0.441	3.567	0.168
	Lecturer Rank	232	154.73	4.37	4.50	0.605		
	> Lecturer Rank	62	162.90	4.41	4.50	0.555		
	Total	317		4.39	4.50	0.586		
JP	< Lecturer Rank	23	183.46	4.60	4.77	0.427	3.426	0.180

Constructs	Designation	n	Mean Rank	Mean	Median	SD	H	*p*-value
	Lecturer Rank	232	153.55	4.44	4.58	0.488		
	> Lecturer Rank	62	170.32	4.53	4.69	0.438		
	Total	317		4.47	4.62	0.476		

The results in Table 7.20 demonstrate statistically significant differences in academics' levels of OS based on their designation or position (H(2) = 10.422, p = 0.005). In this case, lecturers report higher levels of stress (median = 2.23) compared to those above (median = 1.92) and below lecturer rank (median = 1.69), as reflected by the median scores. This indicates that designation or position has a significant influence in determining OS among academics. However, when examining JS, the test indicates that there is no statistically significant difference among the ranks (H(2) = 0.300, p = 0.861). This suggests that designation or position does not significantly affect JS within the context of this study.

Regarding OC (H(2) = 3.567, p = 0.168) and JP (H(2) = 3.426, p = 0.180), no statistically significant differences are found among the designations. This indicates that designation or rank does not significantly influence the academics' OC and JP.

7.8 INTERPRETATION AND DISCUSSION

This part synthesises and analyses the findings, discussing them in terms of each of the defined study objectives. Thus, the biographical profile of the sample is presented in this part, together with the outcomes of the tested study hypotheses.

7.8.1 Demographic profile of the sample

As indicated in Table 7.1, the sample was male dominated, with the respondents being mainly lecturers aged between 45 and 54 years and having at least a master's degree. The majority of the sample had more than five years of experience at a technical university.

7.8.2 Sample profile: OS, JS, OC and JP

This section discusses the means of the measures. Table 7.21 displays the highest and lowest means of the four measuring instruments.

Table 7.21: Summary of means of measuring instruments

Construct	Lowest mean	Highest mean
OS	2.16	2.38
JS	4.14	4.33
OC	Normative commitment (4.35)	Affective commitment (4.45)
JP	Research performance (4.35)	Service performance (4.64)

The academics' OS profile revealed that most respondents experience moderate levels of OS. Nonetheless, the large values of standard deviation show that the data points are far from the mean. This suggests that some academics had exceptionally high levels of OS while others experienced relatively low levels of OS.

In terms of the JS profile of the academics, the respondents were generally satisfied with their academic profession. This finding supports Saner and Eyüpoğlu (2012) who posit that academics are generally satisfied with their work. This implies the academics feel enjoyment in their job, are seldom bored and most days they are enthusiastic about their job.

With regard to OC, the high mean scores obtained for all three components of OC suggest that the academics expressed positive perceptions of their psychological bond with their universities and their desire to contribute towards the attainment of the technical universities' goals (Meyer & Allen, 1991). This can be attributed to the freedom that academics receive in terms of choosing the course to teach, the topic of research and how to plan for the day (Adriaenssens et al., 2006; Lim, 2014). Furthermore, AC recorded the highest mean score, suggesting high levels of positive sentiments of identification with, connection to and engagement in the technical universities (Meyer & Allen, 1984). This is possible given the availability of time to learn and academics' aptitude in disseminating their perspectives (Southcombe et al., 2015).

Regarding JP, the academics displayed positive perceptions of their teaching, research and service performance, with service performance recording the highest

mean score. This suggests the academics were mostly committed to their service responsibilities as they were available for committee work and exhibited good general effectiveness in service work.

7.8.3 Empirical research objective 1: Discussion of the structural model results

Empirical research objective 1 was to investigate the statistical nature of the relationships between OS, JS, OC and JP among technical university academics. Table 7.14 Table 7.16 and Figure 7.3 are applicable in this section.

7.8.3.1 Relationship between occupational stress and job performance

The results of both the correlation analysis and the structural model assessment reveal that OS is significantly negatively linked to JP. In other words, OS negatively predicted JP as hypothesised in H_{A1}. Importantly, OS had both significant negative direct and indirect effects on the JP of academics. Thus, H_{A1} is statistically supported in this study. This finding suggests that the more academics experience OS, the less they experience JP. This finding of the current study is inconsistent with the findings of Chen et al. (2006) but consistent with those of Aduma et al. (2022), Alkubaisi (2015), Ali, Raheem et al. (2014), Asamoah-Appiah and Aggrey-Fynn (2017), Alkubaisi (2015), Nabirye (2010), Soran et al. (2014), Sonna and Nkechi (2021), Soran et al. (2014) and Yousefi and Abdullah (2019). In particular, Ali, Raheem et al. (2014), Sonna and Nkechi (2021) and Yousefi and Abdullah (2019) reported significant negative effects of OS on the JP of academics in universities in Pakistan, Nigeria and Malaysia, respectively.

7.8.3.2 Relationship between occupational stress and job satisfaction

The results suggest that OS significantly negatively predicted JS. Thus, H_{A2} is statistically supported in this study as OS is significantly negatively linked to JS. The implication is that a decrease in OS leads to an increase in JS for academics in technical universities. In other words, academics in technical universities are more likely to experience JS if they have less stress related to their occupation. This finding corroborates the findings of earlier studies by Li et al. (2017), Jahanzeb (2010) and Ahsan et al. (2009), which also revealed a significant negative effect of OS on the JS of academics in China, Pakistan and Malaysia, respectively. Similarly, this finding of the current study substantiates the findings of Wu et al. (2021), Jin (2016) and Hayajneh et al. (2021), suggesting that universities may improve faculty JS by

reducing academic OS through measures such as providing sufficient resources and facilities, maintaining academic freedom and providing adequate space for research and collaboration.

7.8.3.3 Relationship between occupational stress and organisational commitment

H_{A3} is statistically supported in this study as OS is significantly negatively linked to OC. The inference is that a decrease in OS leads to an increase in OC for academics in technical universities. In other words, academics in technical universities are more likely to be committed to their institutions if they have less stress related to their occupation. The findings of this study align with a significant subset of the literature, establishing a negative relationship between OS and OC. Thus, this result echoes the conclusions drawn by research conducted among hospitals in Jordan (Saadeh & Suifan, 2020), SMEs in Hungary (Karacsony, 2019) and universities in South Africa (Ngirande, 2021; Viljoen & Rothmann, 2009).

However, the findings of this study diverge from other subsets of the literature, which either found no significant relationship between OS and OC or found mixed results. Chen et al.'s (2006) work, for example, found no significant correlation between OS and OC among accounting professionals in Taiwan and America. This difference might be due to variations in occupational fields, cultural contexts or research methods, thereby emphasising the context-dependency of these phenomena.

Given the mixed findings across different studies, future research could focus on elucidating the factors contributing to these inconsistencies. It would be particularly worthwhile to investigate potential moderating variables that could influence the relationship between OS and OC, such as organisational culture, leadership styles, job role, or the presence of stress management interventions.

7.8.3.4 Relationship between job satisfaction and job performance

The results of both the correlation analysis and the structural model assessment reveal that JS is significantly positively linked to JP. In other words, JS negatively influenced JP as hypothesised in H_{A4}. This result aligns with a substantial body of existing literature, for instance the meta-analysis by Davar and Bala (2012), which incorporated about 48 studies, concluded a similar positive and significant relationship between these two factors. Similar findings were also noted across different geographies and

industries, such as among employees of the Arab Academy for Science and Technology and Maritime Transport (Rageb et al., 2013), Croatian companies (Bakotić, 2016), middle-level leaders in Indonesia (Eliyana et al., 2019) and a limited liability company in Indonesia (Hendri, 2019).

In the specific context of academia, this study finding reiterates those of Angriani et al. (2020) and Okolocha et al. (2021), as well as Otache and Inekwe (2022), where a significant positive relationship between JS and JP among academics or lecturers was identified. This recurrent pattern across multiple studies suggests that satisfied academics are likely to perform better on the job. This consistency of findings across various contexts adds to the robustness of the positive correlation between JS and JP. This correlation, thus, seems to be a universal phenomenon and not exclusive to a specific type of organisation or geographical location.

7.8.3.5 Relationship between job satisfaction and organisational commitment

Both the correlation analysis and the structural model assessment results reveal that JS significantly positively influenced the OC of academics, thus supporting H_{A5}. This finding, which indicates that higher JS among academic staff at technical universities in Ghana is associated with increased OC, aligns with a considerable body of existing literature. Studies involving qualified professionals have often demonstrated a positive relationship between JS and OC (Wu & Norman, 2006). Examples include the case analysis of the College of Management and Technology at the Arab Academy for Science and Technology and Maritime Transport (Rageb et al., 2013) and Lumley's (2009) research involving four information technology companies in South Africa. Anari (2012) also demonstrated a significant positive relationship between these two concepts, a finding which was corroborated by Ogunlana et al. (2016) in their study on library and information professionals in Nigeria.

Interestingly, Ogunlana et al. (2016) observed various directions of relationships between JS and OC sub-factors, highlighting the complexity of the relationship between these two overarching constructs. This complexity is echoed in Bancoro's (2023) study, which suggested that OC is not a prominent driver of JS or vice versa in a certain context, thereby emphasising the role of demographic factors, intrinsic interest in the field and other possible moderating variables.

While the literature indicates mixed results and conclusions about the relationship between JS and OC, this current study, along with research conducted by Atanu et al. (2018), Bashir and Gani (2020), Leite et al. (2014), Li et al. (2017) and Yongu and Aondoaver (2018), supports the idea of JS as an antecedent to OC. This suggests that efforts to enhance JS may subsequently foster greater OC, which could have profound implications for employee retention and overall institutional performance.

7.8.3.6 Relationship between organisational commitment and job performance

Both the correlation analysis and the structural model results provide evidence that OC significantly positively influenced JP, supporting H_{A6}. This suggests that an increase in the level of OC among academics in technical universities in Ghana leads to an increase in their JP. This finding is consistent with a wide range of literature on the OC–JP nexus. For instance, various studies conducted in different contexts and across diverse professions have found a positive relationship between OC and JP (Benziane, 2017; Hendri, 2019; Kawiana et al., 2018; Memari et al., 2013). Chen et al. (2006), Rageb et al. (2013) and Kawiana et al. (2018) all reported a positive correlation between OC and JP among accounting professionals in Taiwan and America, staff members of the College of Management and Technology in Egypt and bank employees in Indonesia, respectively.

Further support for the results of this study comes from studies specifically focused on the academic sector. Both Tolentino (2013) and Budiansyah (2020) found that commitment correlates significantly with JP among academic personnel in Indonesia. Similarly, Chanana (2021) reported a significant relationship between these variables among academic staff in India. It is worth noting, though, that Sittar et al. (2021) observed a positive, albeit weak, connection between the OC and JP of university lecturers in Central Punjab, indicating that while there seems to be a generally positive correlation, the strength of this correlation may vary in different contexts.

The consistency of the findings of this study with this body of literature suggests that strategies aimed at fostering OC may lead to significant improvements in JP. This could involve a range of initiatives, from creating a supportive and inclusive work culture to providing opportunities for professional growth and advancement, recognising and rewarding staff contributions and fostering a sense of belonging and purpose among employees. However, the variability in the strength of the OC–JP

relationship across different studies also indicates that there may be moderating factors at play. Future research could explore potential moderators, such as organisational culture, job characteristics and individual personality traits, to gain a more nuanced understanding of how OC influences JP in different contexts.

7.8.3.7 Mediating roles of job satisfaction and organisational commitment

The results of the SEM revealed that OS had significant negative indirect effects on JP through JS and OC, suggesting the mediating effects of JS and OC, thus confirming H_{A7} and H_{A8}. Also, OS had a significant negative indirect effect on OC through JS, supporting H_{A9}. JS had a significant positive indirect effect on JP through OC, implying the mediating role of OC at the JS–JP nexus. This confirms H_{A10}. Lastly, OS had a significant negative indirect effect on JP serially through JS and OC. This indicates the joint mediating role of JS and OC in predicting JP from OS, thus supporting H_{A11}.

The findings of this study align with those in existing literature which show that OS has a detrimental impact on JP (Sonna & Nkechi, 2021; Yousefi & Abdullah, 2019), while JS and OC have been observed to enhance JP (Benziane, 2017; Hendri, 2019; Kawiana et al., 2018; Memari et al., 2013; Okolocha et al., 2021; Otache & Inekwe, 2022). This research adds a nuanced understanding by showing significant negative indirect effects of OS on JP through JS and OC, corroborating the notion of these variables as mediators (Lee et al., 2000; Nisar & Rasheed, 2020).

The analysis further revealed a notable negative indirect effect of OS on OC through JS, confirming previous studies indicating that JS can influence OC (Atanu et al., 2018; Bashir & Gani, 2020; Yongu & Aondoaver, 2018). It also supports the potential of JS as a mediator between OS, worker health and other organisational outcomes (Feng et al., 2018). Likewise, the findings align with literature positing OC as a mediator between OS and JP (Lee et al., 2000; Sungu et al., 2019).

Additionally, the research identifies a significant positive indirect effect of JS on JP through OC. This echoes prior work illustrating the role of OC in improving JP when JS levels increase (Benziane, 2017; Hendri, 2019; Kawiana et al., 2018; Memari et al., 2013). Further, the result indicates that OS has a significant negative indirect effect on JP through the joint mediation of JS and OC. This integrated mediation role of JS and OC in predicting JP from OS adds depth to the understanding of how these variables interact.

In summary, these findings underscore the intricate relationship between OS, JS, OC and JP. They provide empirical evidence that reinforces and enriches the narrative in the literature on the mediating roles played by JS and OC in the link between OS and JP (Narsa & Wijayanti, 2021). The outcomes offer practical implications for the management of OS in technical universities in Ghana, highlighting the importance of maintaining high JS and OC to mitigate the adverse effects of stress on JP.

7.8.4 Empirical research objective 2: Discussion of the tests for significant mean differences

Empirical research objective 2 was to investigate whether significant differences exist in OS, JS, OC and JP in terms of biographical variables (age, gender, educational level, job level and years of service).

7.8.4.1 Gender

The findings of the current study do not demonstrate any significant differences in OS, JS, OC and JP between males and females in Ghana's technical universities. This suggests that gender does not play a substantial role in determining these variables among academics, which is a result that aligns with several existing studies.

Research by Amarasena et al. (2015), Chirchir (2016), Milledzi et al. (2017) and Paul and Phua (2011) reported no significant gender-based differences in JS among academics in Sri Lanka, Kenya, Singapore and Ghana respectively. They proposed that female academics may have the same expectations as their male counterparts, explaining the absence of a significant difference. These current findings confirm this pattern, suggesting consistency in job satisfaction irrespective of gender.

Similarly, the study aligns with Cauilan (2020) and Amegayibor (2021), who found that gender did not significantly influence the JP of academics in the Philippines and employees of manufacturing firms in Ghana. This counters findings from Hussain et al. (2018) and Green et al. (2009), who reported gender differences in JP in teaching and equity analysis contexts, respectively.

When it comes to OS, the outcomes of the current study mirror the findings of Barkhuizen and Rothmann (2008) and Atindanbila (2011), who found no significant gender-based differences in OS among academics in South Africa and Ghana. However, this contradicts studies by Mahmood and Yadav (2017), Simons et al.

(2019), Zábrodská et al. (2018) and the review by Watts and Robertson (2011), which reported higher levels of OS among females.

Lastly, in terms of OC, this research agrees with Elkhdr and Kanbur (2018) and Bashir and Gani (2020), who found no significant gender differences in OC among university lecturers in Libya and India, respectively. However, it contradicts research conducted by Affum-Osei et al. (2015), Gasengayire and Ngatuni (2019), Lorch (2019) and Mabasa and Ngirande (2015), who reported significant gender effects on OC, generally suggesting higher levels among males.

In summary, while some disparities exist in the literature, the lack of significant gender differences found in this study across OS, JS, OC and JP aligns with several existing studies across different geographies and contexts. This implies a possible overarching trend where gender does not substantially influence these variables within academic environments, at least in settings similar to those of the current study. This could indicate progress towards gender equality in academic institutions, but further research is needed to confirm this.

7.8.4.2 Age

The results of this study, as outlined in Table 7.18, suggest no significant age-related differences in OS, JS and JP among the academics. However, the study did find a significant difference in OC based on age. Academics under the age of 45 (M = 4.48) demonstrated higher OC compared to those aged 45 or over (M = 4.32), indicating that younger academics are more committed than older ones. This aligns with the negative correlation previously found between age and OC.

In relation to the literature, the findings of this study partially align with existing research. Amarasena et al. (2015) reported no significant age-based differences in JS among academics in Sri Lanka, a finding that is consistent with the current study. However, other research such as that conducted by Chirchir (2016), Malik (2011), Milledzi et al. (2017), Musi (2015) and Paul and Phua (2011) identified age as a factor influencing JS in different countries. Similarly, the effects of age on JP appear to be mixed, with studies reporting both positive and negative correlations (Adenekan, 2017; Ali & Davies, 2003; Amegayibor, 2021; Hendrawijaya, 2019; Oyeniran & Akphorhonor, 2019). In terms of OS, findings vary, with some studies reporting age-based

differences (Mahmood & Yadav, 2017) and others not finding any (Akinmayowa & Kadiri, 2014; Barkhuizen & Rothmann, 2008).

When it comes to OC, the current study findings contrast with the majority of existing literature. While Timalsina et al. (2018) and Bashir and Gani (2020) found no age-based differences in OC, several other studies found that age significantly positively influenced OC (Affum-Osei et al., 2015; Amangala, 2013; Elkhdr & Kanbur, 2018; Gasengayire & Ngatuni, 2019). These studies often reported that older employees were more committed, contrary to the findings of this study. These authors, particularly Affum-Osei et al. (2015) and Elkhdr and Kanbur (2018), theorise that as employees age, the stakes of leaving their organisation increase owing to decreased job opportunities and increased personal investment in the organisation.

Overall, while there are some disagreements with the wider literature, this study contributes valuable findings to the discussion on age-related differences in academic environments. The finding of increased OC among younger academics, in particular, warrants further research and consideration.

7.8.4.3 Educational level

Based on the *p*-values presented in Table 7.18, the study found no significant differences in the levels of OS, JS, OC and JP among academics when considering their educational levels. Essentially, educational level does not seem to significantly affect these aspects of academic life. This means that based on educational level, there is no substantial variance between the academics' OS, JS, OC and JP and that educational level does not play a substantial role in determining academics' OS, JS, OC and JP.

In the context of existing literature, these findings demonstrate some contrast. Oyeniran and Akphorhonor (2019) reported an insignificant influence of education level on JP among librarians in Nigeria, aligning with this study. Yet other studies found a significant influence of education on JP in diverse settings (Amegayibor, 2021; Fadilah & Hidayat, 2019; Hendrawijaya, 2019; Ng & Feldman, 2009), suggesting that education can enhance JP by equipping individuals with the knowledge they need for their tasks.

Regarding JS, previous research presents an inconsistent picture. While some researchers have found that education level significantly influenced JS (Damazo, 2017; Malik, 2011; Pham, 2016), others reported no significant differences (Amarasena et al., 2015; Paul & Phua, 2011; Yapa et al., 2014). Interestingly, Damazo (2017) noted that highly educated police officers were less satisfied than their less educated peers.

For OS, Mahmood and Yadav (2017) found significant differences based on education, with professionals with degrees experiencing higher levels of stress. However, Check and Okwo (2012) and Faraji et al. (2019) reported no significant influence of education level on stress perception in teachers and nurses respectively.

The literature on the effect of education level on OC is also mixed. While some researchers found no significant influence of education level on OC (Gasengayire & Ngatuni, 2019), others reported a negative correlation (Iqbal et al., 2011; Nifadkar & Dongre, 2014) or a positive correlation (Affum-Osei et al., 2015; Mensah & Adjei, 2015; Bashir & Gani, 2020; Kassaw & Golga, 2019). This suggests that the relationship between education level and OC might be context-specific.

In conclusion, while the current study found no significant influence of education level on OS, JS, OC and JP among academics, previous research presents a more complex picture. This emphasises the importance of contextual factors and the need for further research in this area.

7.8.4.4 Job level (rank)

The findings displayed in Table 7.20 indicate that there are statistically significant differences in academics' levels of OS based on their job designation or rank. Lecturers reported higher levels of OS compared to those above and below their rank. This suggests that job designation significantly influences the level of OS among academics. For JS, OC and JP, however, no statistically significant differences were found based on rank, implying that designation does not have a substantial impact on these factors in the academic context of this study.

When contextualised within the existing literature, these findings align with certain previous research and contrast with others. Ugwu and Ugwu (2017) and Kahya (2007) found that job level or position significantly influences JP, which contradicts the results

of the current study. Regarding JS, similar to the current study results, Paul and Phua (2011) and Malik (2011) found that job level or rank insignificantly influenced JS in academics, but contrastingly, Milledzi et al. (2017), Amarasena et al. (2015) and Toker (2011) reported that JS significantly differed based on academic rank.

Regarding OS, Barkhuizen and Rothmann (2008) and Winter et al. (2000) reported that academic rank had a significant impact on OS levels, supporting the findings of this study. However, Akinmayowa and Kadiri (2014) found no significant differences in stress levels based on academic rank, emphasising the role of specific circumstances and context.

For OC, several studies showed significant differences based on job rank (BinBakr & Ahmed, 2015; Elkhdr & Kanbur, 2018; Karakaya, 2013; Timalsina et al., 2018), which is not in line with the findings of the current study.

In conclusion, the effect of academic rank on OS, JS, OC and JP remains a complex issue with mixed results across studies. This underscores the importance of contextual factors in shaping these relationships and the need for further research in this area.

7.8.4.5 Years of service (working experience)

The results shown in Table 7.19 indicate that there is a significant variation in OS scores across different tenure groups, with longer-tenured employees experiencing higher levels of stress. For JS, however, the result reveals no statistically significant difference based on tenure. There are significant differences in OC across different tenure groups, with a tendency for commitment to decrease with tenure. Lastly, JP scores do not significantly vary across tenure groups, indicating that tenure length does not have a significant impact on job performance in this sample.

In the context of existing literature, these findings present a nuanced view of the relationship between tenure and various job outcomes. For instance, while Oyeniran and Akphorhonor (2019), Hendrawijaya (2019), Njogu (2017) and Wahyudi (2018) found a positive link between tenure and JP, this relationship is not evident in the current study.

The findings of Mahmood and Yadav (2017) and Engle (2012) support the current study finding that tenure has a significant positive impact on OS. However, this was not corroborated by Akinmayowa and Kadiri (2014).

Regarding JS, while the current findings indicate no significant impact of tenure on JS, some studies like Chirchir (2016), Musi (2015) and Toker (2011) found a significant impact of tenure on job satisfaction. Conversely, the work of Amarasena et al. (2015), Malik (2011) and Paul and Phua (2011) supports the current study findings, reporting no significant influence of tenure on JS.

With respect to OC, the current findings show a negative relationship with tenure. This contrasts with the studies by Amangala (2013), Austin-Hickey (2013) and Iqbal et al. (2011), which reported a positive relationship between tenure and OC. On the other hand, this aligns with the findings of Affum-Osei et al. (2015), who reported a negative effect of tenure on OC. Bashir and Gani (2020) and Gasengayire and Ngatuni (2019) found no significant difference in OC based on tenure, which is inconsistent with the current study findings. These findings suggest that the impact of tenure on OS, JS, OC and JP is complex and context specific. This emphasises the need for further research in this area.

Overall, the current study revealed that gender and educational level do not significantly influence OS, JS, OC and JP among academics in Ghana's technical universities. Age, while not affecting OS, JS and JP, does influence OC, with academics under 45 showing a higher level of commitment than their older counterparts. Job designation influences OS, with lecturers reporting higher stress levels than academics of other ranks, but it does not significantly affect JS, OC and JP. Additionally, tenure influences both OS and OC, with longer-tenured employees experiencing higher stress levels and lower organisational commitment, yet it does not substantially influence JS and JP. These findings highlight the complex relationships between these demographic factors and various aspects of academic life in Ghana's technical universities.

Thus, the hypothesis (H_{A12}) that significant differences exist in OS, JS, OC and JP among technical university academics based on biographical variables (age, gender, educational level, job level and years of service) is partially accepted. Significant differences were observed in OS based on job level and years of service, as well as in OC based on age and years of service. However, for JS and JP, the biographical variables considered did not result in significant differences. Similarly, gender and educational level did not significantly affect any of the four variables considered (OS,

JS, OC and JP). Thus, while some biographical variables significantly influenced certain outcomes, the results did not fully support the hypothesis across all variables and factors.

7.9 SUMMARY OF DECISIONS REGARDING THE RESEARCH HYPOTHESES

Table 7.22 outlines the hypotheses and their corresponding outcomes in this study.

Table 7.22: Summary of hypotheses and outcomes

Hypothesis	Supportive outcome
H_{O1}: OS does not negatively influence the JP of technical university academics. H_{A1}: OS negatively influences the JP of technical university academics.	Not supported by empirical evidence Supported by empirical evidence
H_{O2}: OS does not negatively influence the JS of technical university academics. H_{A2}: OS negatively influences the JS of technical university academics.	Not supported by empirical evidence Supported by empirical evidence
H_{O3}: OS does not negatively influence the OC of technical university academics. H_{A3}: OS negatively influences the OC of technical university academics.	Not supported by empirical evidence Supported by empirical evidence
H_{O4}: JS does not positively influence the JP of technical university academics. H_{A4}: JS positively predicts the JP of technical university academics.	Not supported by empirical evidence Supported by empirical evidence
H_{O5}: JS does not positively predict OC of technical university academics. H_{A5}: JS positively predicts the OC of technical university academics.	Not supported by empirical evidence Supported by empirical evidence
H_{O6}: OC does not positively predict the JP of technical university academics. H_{A6}: OC positively predicts the JP of technical university academics.	Not supported by empirical evidence Supported by empirical evidence
H_{O7}: JS does not mediate the influence of OS on the JP of technical university academics. H_{A7}: JS mediates the influence of OS on the JP of technical university academics in that higher OS leads to lower JS, which in turn results in decreased JP.	Not supported by empirical evidence Supported by empirical evidence
H_{O8}: OC does not mediate the influence of OS on the JP of technical university academics. H_{A8}: OC mediates the influence of OS on the JP of technical university academics in that higher OS leads to lower OC, which in turn results in decreased JP.	Not supported by empirical evidence Supported by empirical evidence
H_{O9}: JS does not mediate the influence of OS on the OC of technical university academics. H_{A9}: JS mediates the influence of OS on the OC of technical university academics in that higher OS leads to lower JS, which in turn results in decreased OC.	Not supported by empirical evidence Supported by empirical evidence

Hypothesis	Supportive outcome
H_{O10}: OC does not mediate the influence of JS on the JP of technical university academics. H_{A10}: OC does not mediate the influence of JS on the JP of technical university academics in that higher JS leads to increased OC, which in turn results in better JP.	Not supported by empirical evidence Supported by empirical evidence
H_{O11}: JS and OC do not serially mediate the influence of OS on the JP of technical university academics. H_{A11}: JS and OC serially mediate the influence of OS on the JP of technical university academics in that higher OS leads to lower JS, which in turn results in decreased OC, ultimately leading to reduced JP.	Not supported by empirical evidence Supported by empirical evidence
H_{O12}: Significant differences do not exist in OS, JS, OC and JP among technical university academics in terms of biographical variables (age, gender, educational level, job level and years of service). H_{A12}: Significant differences do exist in OS, JS, OC and JP among technical university academics in terms of biographical variables (age, gender, educational level, job level and years of service).	Partly not supported by empirical evidence Partly supported by empirical evidence

7.10 CHAPTER SUMMARY

This chapter has provided an explanation of the descriptive, correlational and inferential statistics that are pertinent to this study, integrating both the literature and the empirical research outcomes. It has effectively addressed and confirmed all the proposed research questions, goals and hypotheses, except for the final hypothesis. The subsequent and concluding chapter will highlight the principal discoveries from the empirical investigation carried out in this chapter. It will formulate conclusions, discuss any constraints and provide recommendations rooted in the analysis findings of this chapter.

CHAPTER 8: CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS

8.1 INTRODUCTION

This chapter delineates the conclusions of the study, identifies its limitations and offers pertinent recommendations. Initially, the conclusions drawn from both the literature review and the empirical results are discussed. Subsequent sections present the study limitations and propose recommendations targeting the HRM domain, the participating technical universities and avenues for future research. The chapter concludes with a summary.

8.2 CONCLUSIONS

In line with the research objectives stated in Chapter 1, this section draws conclusions from the literature review and the empirical investigation.

8.2.1 Conclusions relating to the literature review

In terms of the literature review, this study aimed to achieve two specific objectives. The first objective was to explore and conceptualise the four concepts of OS, JS, OC and JP from a theoretical perspective. The secondary objective was to conceptualise the relationship between OS, JS, OC and JP in terms of explanatory theoretical models. These objectives were achieved in Chapters 2, 3, 4 and 5. Thus, this section provides conclusions on these two objectives.

Research objective 1: To explore and conceptualise the four concepts of OS, JS, OC and JP from a theoretical perspective

This objective was achieved in Chapters 2, 3, 4 and 5.

Occupational stress

OS as conceptualised in Chapter 2 emerges as a complex, multifaceted construct with considerable variance in its definitions. Stress, as stated by authors such as Aksoylu (2019), Ismail et al. (2021) and Okuhara et al. (2021), is an inescapable aspect of life, yet its specific scientific definition remains unsettled (Quick et al., 1997). This lack of consensus extends to the nature of stress and its categorisation as a stimulus or a response (Anand, 2019). From one perspective, stress is perceived as a force that acts upon an individual, whereas from another, it is seen as an individual's response to stressful conditions (Anand, 2019). The definition provided by Selye (1956), the pioneer of stress research, encapsulates both aspects, viewing stress as an adaptive

response to demands that either stimulate or threaten an individual. OS specifically is the stress associated with work and arises from the interaction between an employee and their work environment (Zakrizevska & Bulatova, 2015). NIOSH (2008) defines OS as the harmful response that occurs when job requirements mismatch with workers' capabilities, resources or needs, a definition endorsed by Blaug et al. (2007). In this context, French et al. (1974) regards the threatening characteristics of a job as OS. Moreover, the literature notes a dichotomy in the perception of stress, dividing it into positive (eustress) and negative (distress) forms (Adeoti et al., 2018; Darabi et al., 2017; Uzhenyu, 2019). Eustress is associated with motivation and fulfilment (Heylen, 2018; Selye, 1976; Uzhenyu, 2019), whereas distress is linked to negative emotions and outcomes (Sibisi, 2012). This dichotomy suggests the necessity for a conducive work environment that fosters eustress, particularly within the academic community (Uzhenyu, 2019).

To summarise, OS emerged as a complex, multifaceted concept with varying definitions. Stress is viewed as both an external force and an individual's response to challenges. OS, specifically related to work, arises from employee–environment interaction. The discussion also noted the distinction between positive (eustress) and negative (distress) forms of stress, emphasising the need for a conducive work environment fostering eustress, especially in academic contexts.

Job satisfaction

Drawing from the literature discussed in Chapter 3, JS emerges as an intricate, multifaceted concept that encompasses an individual's emotional responses and attitudes towards their job. Recognised as both a global and a multidimensional construct, JS encapsulates various facets including salary, supervision, corporate policy and nature of work (Ray & Ray, 2011; Rothmann, 2008). The multitude of definitions surrounding JS echoes its complexity (Anari, 2012; Ramlutchman, 2018). Locke (1976) characterises JS as a positive emotional state derived from job experiences, a definition that aligns with Abu-Shamaa et al.'s (2015) understanding of JS as the way employees perceive and appreciate their jobs. In the same vein, Hoboubi et al. (2016) and Ray and Ray (2011) see JS as the affective orientation or overall emotional state of an employee towards their work, with approval of all job aspects forming its basis. Arian et al. (2018) provide a broader view by positing that JS represents an attitudinal construct, encapsulating the feelings and attitudes of

employees towards their work life, whereas job dissatisfaction reflects issues in employees' occupational or personal status. In other words, JS is the constellation of feelings that employees have in relation to diverse intrinsic or extrinsic elements of their jobs (Chipunza & Malo, 2017).

To conclude, JS is a complex, multifaceted construct that intertwines emotional responses and attitudinal dispositions towards work. It incorporates various job aspects, from salary and supervisory relationships to corporate policies and job nature, highlighting its integral role in shaping work experiences and workplace morale.

Organisational commitment

As conceptualised in Chapter 4, OC is considered to be a significant emotional construct linked to individuals' affective responses to their organisations and the appraisal of their work environment (Stride et al., 2008; Testa, 2001). OC is often described as a person's emotional connection, identity and engagement in the organisation (Meyer & Allen, 1991), reflecting the person's willingness to contribute positively to the organisation's objectives and well-being (Mowday et al., 2013). The importance of OC is embedded in the intricate relationship between an individual and their organisation and the degree to which commitment fosters other positive work behaviours like citizenship behaviours and in-role job performance (Lambert et al., 2007). For this study, OC was defined as the psychological bond academics have with their universities, coupled with their eagerness to contribute to the universities' goals. This aligns with Meyer and Allen's (1991) model, which segments OC into three components: AC, NC and CC (Allen & Meyer, 1990, 1996; Anari, 2012; Jaros, 2007). AC denotes a worker's emotional connection, identity and organisational engagement (Meyer & Allen, 1984), NC expresses an individual's desire to stay with the firm, while CC relates to the perceived costs of quitting (Allen & Meyer, 1990; Meyer & Allen, 1991).

In conclusion, OC is presented as a crucial emotional construct that ties an individual's feelings and perceptions directly to their organisation, particularly within academic settings. It encompasses emotional attachment, identification and active participation, driving a positive contribution to organisational objectives and well-being. Overall, OC, categorised into AC, NC and CC, stands out as a vital component in understanding

and enhancing the employee–organisation relationship, with direct implications for work behaviours and JP.

Job performance

Drawing from the literature provided in Chapter 5, JP, broadly defined, pertains to how effectively a person conducts their job duties. It is an evaluation of an employee's effectiveness in performing their tasks (Balouch & Hassan, 2014). More specifically, Motowidlo (2003) explains JP as "the total expected value to the organisation of discrete behaviours that an individual carries out over a standard period of time" (p. 39). Dar et al. (2011) echo this sentiment, describing JP as successfully completing the tasks assigned within the constraints of the available resources. JP is multifaceted, consisting of behavioural and result components. Task performance involves specific behaviours linked to fundamental job duties, while contextual performance pertains to behaviours that enhance the work environment and organisational effectiveness. Adaptive performance, on the other hand, entails the ability to maintain performance levels in the face of unexpected changes (Borman & Motowildo, 1997; Pradhan & Jena, 2017; Sonnentag et al., 2008). In the academic context, JP is conceptualised on three dimensions: teaching performance (quality of class preparation and prompt grading), service performance (contributions to community and professional organisations) and research performance (achievements in the form of grants, publications and conferences). However, high work stress levels can potentially hamper academics' commitment to these tasks, particularly in publishing (Moeller, 2009).

In summary, JP is intricately defined as an individual's effectiveness in executing their job responsibilities, embodying both behavioural and result-oriented components. The multifaceted nature of JP encompasses task performance, contextual performance and adaptive performance, each playing a crucial role in contributing to overall organisational effectiveness. Within the academic sphere, JP is distinctly categorised into teaching, service and research performance, highlighting the diverse responsibilities shouldered by academics.

Research objective 2: To conceptualise the relationship between OS, JS, OC and JP in terms of explanatory theoretical models

This objective was achieved in Chapter 5. The conclusions drawn in terms of the sub-objectives are as follows:

Sub-objective 2.1: To theorise the relationship between OS and JP

The literature review clearly indicated that the theoretical nexus between OS and JP remains an area of contention, with varied findings observed across different contexts and sectors. For instance, Chen et al. (2006) reported no significant correlation between OS and JP among accounting employees in the USA and Taiwan. In contrast, numerous studies found a significant negative relationship between these two constructs. For example, Nabirye (2010) observed this negative impact among hospital nurses in Uganda, while Alkubaisi (2015), in the Qatari banking sector, and Soran et al. (2014), among Turkish banking employees, reported similar findings. Additionally, Asamoah-Appiah and Aggrey-Fynn (2017) confirmed this effect among employees in an oil palm plantation company in Ghana. In academia, the negative effect of OS on JP is also prevalent. Aduma et al. (2022) found that lecturers with average stress levels reported better JP. This pattern extends to academic staff at research universities in Malaysia (Yousefi & Abdullah, 2019), private sector university employees in Karachi, Pakistan (Ali, Raheem et al., 2014), federal university lecturers in Nigeria (Sonna & Nkechi, 2021) and academic staff in a technical university in Ghana (Bartels, 2020). In conclusion, while the relationship between OS and JP might vary depending on the specific context, there is strong evidence indicating that OS can have a negative impact on JP, particularly in academia.

Sub-objective 2.2: To theorise the relationship between OS and JS

The literature showed that the theorised nexus between OS and JS presents diverse outcomes across various professional settings and demographic groups. Kula (2017) found a negative and significant relationship between organisational stress and JS among Turkish National Police members, although operational stress did not show the same significant effect. Chaudhry (2012) further observed no significant relationship between JS and overall OS, with younger university teachers appearing more sensitive to the effects of OS and JS. Notably, these results were consistent irrespective of the nature of the employment contract. However, several studies presented a different perspective, showing a significant negative effect of job stress

on JS. This trend was found among academics in China (Li et al., 2017), Pakistan (Jahanzeb, 2010) and Malaysia (Ahsan et al., 2009), as well as among bank employees (Wu et al., 2021), employees of the Korean Rural Development Administration (Jin, 2016) and employees in the Jordanian telecommunication sector (Hayajneh et al., 2021). In conclusion, while the relationship between OS and JS appears inconsistent across studies, it is evident that in many cases, OS can have a significant negative impact on JS. The variation in findings could be attributed to factors like the nature of the profession, the specific context and demographic differences among study participants.

Sub-objective 2.3: To theorise the relationship between OS and OC

As observed in existing literature, the relationship between OS and OC appears to vary across different professions and geographical locations. Chen et al. (2006) found no significant relationship between OS and OC among accounting professionals in Taiwan and the United States. However, other studies in contexts like Amman in Jordan (among hospital staff) and Hungary (among managers of small and medium-sized enterprises) found a significant negative correlation between the two factors (Karacsony, 2019; Saadeh & Suifan, 2020). The relationship between OS and OC within HEIs is equally complex. Zhuwao et al. (2015) found a statistically significant relationship between OS and OC among HEI employees, with average levels of both OS and OC reported among academic employees. In contrast, Khatibi et al. (2009) and Viljoen and Rothmann (2009) found significant negative relationships between OS and OC among employees of the National Olympic and Paralympic Academy and academic and non-academic staff of a South African university of technology, respectively. Ngirande's (2021) research supports these findings, also revealing a negative, significant relationship between OS and OC among academic staff at two historically black South African HEIs. In conclusion, while findings differ across contexts, it is clear that OS can have a significant impact on OC.

Sub-objective 2.4: To theorise the relationship between JS and JP

The available literature suggests a significant positive correlation between JS and JP. This positive trend was echoed in diverse professional contexts across different countries. For instance, Bakotić (2016) found that JS positively affected employee performance in Croatian companies. In Indonesia, both Eliyana et al. (2019) and Hendri (2019) identified the positive impact of JS on the performance of middle-level

leaders and employees of a limited liability company, respectively. Moreover, recent studies by Angriani et al. (2020) in Indonesia and Okolocha et al. (2021) and Otache and Inekwe (2022) in Nigeria, substantiate this positive linkage between JS and JP among academic staff. Hence, these findings consistently underline the influential role of JS in enhancing JP across various sectors and geographical contexts.

Sub-objective 2.5: To theorise the relationship between JS and OC

The body of literature predominantly suggests a significant positive correlation between JS and OC. This relationship is evident across varied professional groups and geographies, as demonstrated by studies such as by Anari (2012), Lumley (2009), Rageb et al. (2013) and Wu and Norman (2006). Further empirical support for the positive link between JS and OC was found among academics in China (Li et al., 2017) and in HEIs in Nigeria (Atanu et al., 2018) and India (Bashir & Gani, 2020). Notwithstanding the majority view, Bancoro's (2023) research presented a different perspective, suggesting that the OC of regular full-time faculty on the main campus of the Negros Oriental State University is not a prominent driver of JS and vice versa, underscoring the influence of several factors including demographics and intrinsic interest in the field. Despite some controversy, there is strong evidence to consider JS as an antecedent of OC rather than the reverse, as advocated by Rageb et al. (2013). This perspective is further supported by Atanu et al. (2018), Bashir and Gani (2020), Leite et al. (2014), Li et al. (2017) and Yongu and Aondoaver (2018). In summary, while acknowledging some dissent, the literature predominantly substantiates the pivotal role of JS in engendering OC across diverse contexts.

Sub-objective 2.6: To theorise the relationship between OC and JP

The extant literature principally posits a positive and significant correlation between OC and JP. Evidence for this theoretical relationship has been established across various professional and geographical contexts. For instance, positive correlations have been reported among accounting professionals in Taiwan and America (Chen et al., 2006), staff of the College of Management and Technology in Egypt (Rageb et al., 2013) and bank employees in Indonesia (Kawiana et al., 2018). Academia is no exception to this trend, with studies by Tolentino (2013), Budiansyah (2020) and Chanana (2021) establishing a significant positive relationship between OC and JP among academic personnel in Indonesia and India. Furthermore, Sittar et al. (2021) observed a positive, albeit weak, relationship between these constructs among

university lecturers in Central Punjab. In conclusion, the scholarly consensus points towards a positive relationship between OC and JP, underlining the influence of commitment on performance across diverse employment sectors and regions.

8.2.2 Conclusions relating to the specific objectives of the empirical study

Research objective 1 sought to investigate the statistical nature of the relationships between OS, JS, OC and JP among technical university academics. This objective was achieved by empirically testing the research hypotheses (H_{A1} to H_{A11}).

The empirical results of the present study offer valuable insights into the relationships between OS, JP, JS and OC among academics in Ghanaian technical universities. Notably, all eleven hypotheses were substantiated, demonstrating the complexity of these relationships.

The evidence supports a significant negative influence of OS on JP (H_{A1}), indicating that higher levels of stress correspond to lower job performance. This highlights the detrimental impact of organisational stress on academics' ability to perform their roles effectively.

The findings also confirm that OS significantly negatively influences JS (H_{A2}) and OC (H_{A3}). This suggests that reducing OS could enhance both JS and OC. These findings emphasise the importance of addressing stress in the workplace to enhance the well-being and commitment of academic staff.

Conversely, a positive correlation was identified between JS and JP (H_{A4}), implying that greater JS could improve the JP of permanently employed academics at the three technical universities. This finding highlights the significance of promoting JS to enhance academic performance.

Furthermore, the study also revealed a positive association between JS and OC (H_{A5}), suggesting that increased JS might foster stronger OC. This demonstrates that improving JS can have a positive impact on academics' commitment to their institutions.

Moreover, a significant positive influence of OC on JP (H_{A6}) was observed. This suggests that higher OC can lead to improved JP among academics. Encouraging and nurturing OC can, therefore, have a positive impact on academic job performance.

The mediating roles of JS and OC were also confirmed. Specifically, OS was found to have significant negative indirect effects on JP through JS and OC, supporting the hypotheses H_{A7} and H_{A8}. This indicates that OS not only has a direct impact on JP but also does so indirectly through its effects on JS and OC. Also, OS demonstrated a significant negative indirect effect on OC through JS (H_{A9}), further emphasising the role of JS in the relationship between OS and OC. Furthermore, JS was found to have a significant positive indirect effect on JP through OC (H_{A10}), highlighting the mediating role of OC in enhancing the relationship between JS and JP.

Finally, the joint mediating role of JS and OC was supported in predicting JP from OS (H_{A11}). This highlights the complex nature of these relationships, indicating that JS and OC jointly mediate the impact of OS on JP.

In conclusion, this study provides valuable insights into the intricate dynamics between OS, JS, OC and JP among academic staff at Ghanaian technical universities. The results highlight the need for interventions to reduce OS, enhance JS and foster OC to ultimately improve JP in this context. The findings underscore the interrelated nature of these constructs and the potential for targeted strategies to optimise the work environment and academic outcomes.

Research objective 2: To investigate whether significant differences exist in OS, JS, OC and JP in terms of biographical variables

Research objective 2 was to investigate whether significant differences exist in OS, JS, OC and JP in terms of demographic variables (age, gender, educational level, job level and years of service). This objective was achieved by empirically testing research hypothesis H_{A12}.

Overall, the findings reveal that gender and educational level do not have a significant influence on these variables among academics at three technical universities in Ghana. Age, while not affecting OS, JS and JP, does influence OC, with academics under 45 showing a higher level of commitment than their older counterparts. Job designation was found to influence OS, with lecturers reporting higher stress levels than academics in other ranks, but it does not significantly affect JS, OC and JP. That is, OC significantly differs based on age. Additionally, tenure influences both OS and OC, with longer-tenured employees experiencing higher stress levels and lower OC, yet it does not substantially affect JS and JP; that is, OS and OC significantly differ

based on the tenure of the permanently employed academics at the three technical universities.

In conclusion, these findings demonstrate the complex factors influencing the levels of OS, JS, OC and JP among academics, which may include age and job level, but not gender or educational level. Thus, the hypothesis (H_{A12}) proposing significant differences in OS, JS, OC and JP among technical university academics based on demographic variables (age, gender, educational level, job level and years of service) is partially accepted. These findings underscore the need for a detailed understanding of these factors when developing interventions to enhance the well-being and performance of academic staff in these institutions.

Conclusions relating to the central hypothesis

The central hypothesis as stated in Chapter 1 is that there is a statistically significant relationship between OS, JS, OC and JP among academics who are permanently employed in a Ghanaian technical university setting. Also, significant differences do exist in terms of OS, JS, OC and JP and demographic variables (age, gender, educational level, job level and years of service) among academics who are permanently appointed at three technical universities in Ghana.

Conclusively, the empirical investigation produced statistically substantial results affirming the principal hypothesis concerning the nexus between OS, JS, OC and JP among academics who were permanently appointed at three technical universities in Ghana. However, regarding the significant differences in OS, JS, OC and JP based on the demographic variables, the empirical study only partially supported this hypothesis.

8.3 LIMITATIONS OF THE STUDY

The limitations of the empirical investigation and the literature review are discussed in this section.

8.3.1 Limitations of the literature review

The connection between OS, JS, OC and JP has been the subject of a wealth of research from a variety of academic disciplines throughout the world (see Chapters 2 to 5). Despite the importance of these four factors, there is a dearth of research on the theoretical link between them, particularly in the context of Ghana's technical

universities. This made it difficult for the researcher to locate up-to-date data, as well as to consult local studies and compare the findings of this study to those of other studies.

8.3.2 Limitations of the empirical study

The findings and conclusions of this research are limited to a specific context. The sample included permanent academics at three technical universities in Ghana, suggesting caution in the generalisation of the results. The findings were also only based on cross-sectional data collected from permanent academics from three technical universities, therefore permanent academics at other public and private universities in Ghana were excluded.

Furthermore, this research study was a correlational one where the researcher used correlational statistics and structural model estimates using SPSS and SmartPLS to describe and measure the interrelationships between the four concepts. Hence an experimental design was excluded.

8.4 RECOMMENDATIONS

Based on the empirical findings, conclusions and limitations drawn from this study, recommendations targeting the HRM domain, the participating technical universities and avenues for future research are proposed.

8.4.1 Recommendations for the field of human resource management

The findings of this study present several pertinent recommendations for the broader field of HRM.

- The pronounced influence of OS on JP, JS and OC necessitates that HRM professionals prioritise the design and implementation of comprehensive stress management and wellness programmes. Such programmes should target root causes, providing employees with robust tools for holistic well-being, encompassing both mental and physical health aspects.
- HRM strategies should focus on crafting tailored professional development opportunities that align with individual aspirations and needs. This could entail offering specialised training, workshops and access to industry-specific conferences, fostering an environment that encourages continuous personal and professional growth.

- It is imperative for HRM to bolster employee engagement strategies. A comprehensive approach integrating regular feedback mechanisms, interactive sessions and transparent communication could help to nurture a profound sense of belonging and purpose among employees.
- Recognising the nuanced needs of employees based on demographic factors such as age and job level, HRM practitioners should adopt tailored practices. For example, structured mentorship programmes might resonate well with younger professionals, whereas senior employees might appreciate flexible work arrangements and advanced training opportunities. For long-tenured employees, who might experience increased stress and reduced commitment, strategies should include periodic role rotation, career advancement prospects and celebrations of service milestones.
- The field of HRM should also engage in proactive, periodic reviews of job roles and descriptions. Such reviews could reduce ambiguities, clarify expectations and potentially address stress points related to specific job designations.
- Lastly, irrespective of the specific findings of any study, HRM should consistently champion its commitment to diversity and inclusion, ensuring that every individual, regardless of gender, age or educational level, experiences a supportive and equitable working environment.

In essence, the future of HRM lies in its ability to continually adapt, innovate and respond to the unique challenges and needs of its workforce. By focusing on areas like employee wellness, professional growth, engagement and an understanding of demographic nuances, HRM can pave the way for a more resilient, satisfied and high-performing academic workforce.

8.4.2 Recommendations for the participating technical universities

The findings of this study also shed light on several areas for intervention in the participating technical universities.

- Technical universities are strongly encouraged to implement comprehensive stress management programmes. These should not only include workshops, counselling support and dedicated relaxation zones on the university premises but also extend to the adoption of holistic practices. Incorporating mindfulness

exercises, yoga and meditation sessions into the regular academic routines can act as effective buffers against stress and its adverse effects.

- For the betterment of their academic community, technical universities should prioritise the establishment of mentorship programmes. This becomes especially vital for younger academics or those who have recently joined. Such programmes may be instrumental in providing guidance, nurturing camaraderie and instilling a sense of belonging among the faculty.
- It is imperative for technical universities to undertake systematic reviews of academic job descriptions and responsibilities. Ensuring both equity and clarity in these roles is essential. Moreover, considering periodic rotations in roles can serve as a strategic approach to prevent faculty burnout and ensure fresh perspectives.
- The technical universities should cater to the diverse needs of their academic staff based on their career stages. Leadership training and early career grants may benefit younger academics immensely, while opportunities such as extended research sabbaticals or avenues for academic exploration may be invaluable for senior faculty members.
- Additionally, addressing the unique requirements of longer-tenured employees is crucial. Providing them with tailored training, clear paths for career progression and celebrating tenure milestones can significantly enhance their engagement and productivity.
- Maintaining an open line of communication between the faculty and administration is pivotal. Technical universities should, therefore, ensure the regular organisation of feedback sessions, open forums and periodic reviews. Such initiatives will foster a culture of continuous dialogue, addressing concerns and collective growth.
- Upholding the principles of equity and inclusivity is non-negotiable. Technical universities should ensure that their policies and practices align with these values, thereby creating an environment that respects and caters to the diverse demographic backgrounds of their academic staff.

- Lastly, the dynamic nature of academia necessitates continuous research and adaptability. Technical universities should remain engaged in ongoing research endeavours to monitor and understand the evolving academic landscape. Leveraging these insights to adapt strategies in real time will ensure the institutions remain at the forefront of academic excellence.

By conscientiously embedding these recommendations into their operational strategies, technical universities can foster an environment that not only champions academic brilliance but also ensures the well-being and growth of their academics.

8.4.3 Recommendations for further research

Given the empirical findings of this study as well as the study limitations, several avenues for future research are evident.

- While the present study was confined to academics in three technical universities, future research could encompass a broader spectrum of HEIs, or even other industries, to determine if similar patterns emerge.

- The influence of age and job level on OS, JS, OC and JP was evident, but the role of gender and educational level remained inconclusive. Future studies could delve deeper into the underlying reasons for this, possibly considering additional demographic variables such as ethnicity, socio-economic status, or family responsibilities. Employing qualitative methodologies, such as in-depth interviews or focus groups, can provide richer understanding of the underlying reasons behind these demographic influences.

- Given that lecturers reported higher stress levels compared to other ranks, it is essential to identify the specific stressors associated with various academic roles. Future research could conduct detailed role-specific stress assessments to inform targeted interventions aimed at reducing stress for particular groups within academia.

- The findings indicated that longer-tenured employees exhibited higher stress levels and lower OC. Investigating the causes behind these phenomena, perhaps through longitudinal studies or qualitative interviews, could provide valuable insights. Longitudinal studies would allow for tracking changes over

tie, while qualitative interviews would uncover personal experiences and perceptions.

- While the current study confirmed the mediating roles of JS and OC between OS and JP, exploring other potential mediators or even moderators such as personality traits, cultural factors and management practices could further enrich the understanding of these dynamics. Identifying these factors can help in developing interventions tailored to different individual and organisational contexts.

- Given the negative influence of OS on JS, OC and JP, future research could focus on designing, implementing and evaluating interventions to mitigate stress among academics, especially within the context of Ghana's technical universities. These interventions could include stress management training, organisational support programmes, and changes in job design. Evaluating the effectiveness of these interventions can provide practical insights for improving academic work environments.

- Considering the unique cultural and institutional contexts of Ghana, it might be enlightening to conduct comparative studies with similar institutions in different geographic or cultural contexts to discern universal versus context-specific patterns. This comparative approach can highlight best practices and innovative strategies from various regions that could be adapted to the Ghanaian context.

- With younger academics (under 45) showing higher OC than their older counterparts, future research might investigate the dynamics of generational shifts in the academic sector. Exploring the aspirations, motivations, and challenges of different age cohorts can inform policies and practices that support career development and retention across generations.

- While gender and educational level did not emerge as significant influencers in the current study, understanding why these variables did not have a pronounced impact, especially in contrast to prevailing literature in other contexts, could be an interesting avenue for future inquiries. Comparative

studies or meta-analyses could provide broader insights into these discrepancies.

- Given the correlational nature of this study, future research might benefit from incorporating experimental designs to establish causality between the concepts of OS, JS, OC and JP. Experimental methodologies could include controlled interventions and randomised trials that would allow for a more robust understanding of the directional influences and potential causative relationships among these variables.

8.5 CHAPTER SUMMARY

This chapter included the conclusions of the research, as well as its limitations and recommendations. The chapter began with the conclusions, which were based on the general purpose, literature objectives, empirical objectives and the research hypotheses of the study. These were examined and recommendations for the HRM field concerning OS, JS, OC and JP were offered. Recommendations were also given for the technical universities that took part in the study and the chapter ended with recommendations for further research. This chapter therefore accomplished the last specific objective of making recommendations for HRM practice and further research on OS, JS, OC and JP in the field of HRM.

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APPENDIX A – RESEARCH QUESTIONNAIRE

2022 FOR ACADEMICS OF TECHNICAL UNIVERSITIES IN GHANA

SECTION A: OCCUPATIONAL STRESS

This section concerns occupational stress as an academic. With respect to your own feelings about the University for which you are now working, please indicate the degree of your agreement or disagreement with each statement using the scale below.

1 = Strongly Disagree; 2 = Disagree; 3 = Uncertain; 4 = Agree; 5 = Strongly Agree

Item	Statement	Responses				
OSS1	Working here makes it hard to spend enough time with my family.	1	2	3	4	5
OSS2	I spend so much time at work, I can't see the forest for the trees.	1	2	3	4	5
OSS3	Working here leaves little time for other activities.	1	2	3	4	5
OSS4	I frequently get the feeling I am married to the university.	1	2	3	4	5
OSS5	I have too much work and too little time to do it in.	1	2	3	4	5
OSS6	I sometimes dread the telephone ringing at home because the call might be job-related.	1	2	3	4	5
OSS7	I feel like I never have a day off.	1	2	3	4	5
OSS8	Too many people at my level in the university get burned out by job demands.	1	2	3	4	5
OSS9	I have felt fidgety or nervous as a result of my job.	1	2	3	4	5
OSS10	My job gets to me more than it should.	1	2	3	4	5
OSS11	There are lots of times when my job drives me right up the wall.	1	2	3	4	5
OSS12	Sometimes when I think about my job I get a tight feeling in my chest.	1	2	3	4	5
OSS13	I feel guilty when I take time off from job.	1	2	3	4	5

SECTION B: JOB SATISFACTION

This section concerns your job satisfaction. With respect to your own feelings about the University for which you are now working, please indicate the degree of your agreement or disagreement with each statement using the scale below.

1 = Strongly Disagree; 2 = Disagree; 3 = Uncertain; 4 = Agree; 5 = Strongly Agree

Item	Statement	Responses				
JSS1	I find real enjoyment in my job in this university.	1	2	3	4	5
JSS2	I like my job better than the average person in this university.	1	2	3	4	5
JSS3	I am seldom bored with my job in this university.	1	2	3	4	5
JSS4	I would not consider taking another kind of job in this university.	1	2	3	4	5
JSS5	Most days I am enthusiastic about my job in this university.	1	2	3	4	5
JSS6	I feel fairly satisfied with my job in this university.	1	2	3	4	5

SECTION C: ORGANISATIONAL COMMITMENT

This section concerns your commitment to your University. Listed below is a series of statements that represent feelings that individuals might have about the company or organisation for which they work. With respect to your own feelings about the University for which you are now working, please indicate the degree of your agreement or disagreement with each statement using the scale below.

1 = Strongly Disagree; 2 = Disagree; 3 = Uncertain; 4 = Agree; 5 = Strongly Agree

Item	Statement	Responses				
	Affective Commitment					
OCA1	I would be very happy to spend the rest of my career with this university.	1	2	3	4	5
OCA2	I really feel as if this university's problems are my own.	1	2	3	4	5
OCA3	I do not feel like "part of the family" at my university. (R)	1	2	3	4	5
OCA4	I do not feel "emotionally attached" to this university. (R)	1	2	3	4	5
OCA5	This university has a great deal of personal meaning for me.	1	2	3	4	5
OCA6	I do not feel a strong sense of belonging to my university. (R)	1	2	3	4	5
	Normative Commitment					
OCN1	I do not feel any obligation to remain with my current employer. (R)	1	2	3	4	5
OCN2	Even if it were to my advantage, I do not feel it would be right to leave my university now.	1	2	3	4	5
OCN3	I would feel guilty if I left my university now.	1	2	3	4	5
OCN4	This organisation deserves my loyalty.	1	2	3	4	5
OCN5	I would not leave my university right now because I have a sense of obligation to the people in it.	1	2	3	4	5
OCN6	I owe a great deal to this university.	1	2	3	4	5
	Continuance Commitment					
OCC1	It would be very hard for me to leave my university right now, even if I wanted to.	1	2	3	4	5
OCC2	Too much in my life would be disrupted if I decided I wanted to leave my university now.	1	2	3	4	5
OCC3	Right now, staying with my university is a matter of necessity as much as desire.	1	2	3	4	5
OCC4	I feel that I have too few options to consider leaving this university.	1	2	3	4	5
OCC5	One of the few serious consequences of leaving this university would be the scarcity of available alternatives.	1	2	3	4	5
OCC6	One of the major reasons I continue to work for this university is that leaving would require considerable personal sacrifice—another university may not match the overall benefits that I have here.	1	2	3	4	5

SECTION D: JOB PERFORMANCE

Kindly consider your performance with regards to your teaching, service, research and scholarly activities responsibilities over the past year. Please evaluate your

performance regarding the following items based on your own personal standards and values by circling the appropriate number using the scale below.

1 = Very Poor; 2 = Poor; 3 = Adequate; 4 = Good; 5 = Very Good

Item	Statement	Responses				
Teaching Performance						
JPT1	Ability to stimulate students' interest.	1	2	3	4	5
JPT2	Responsiveness to students' questions and suggestions.	1	2	3	4	5
JPT3	Quality of evaluation procedures.					
JPT4	Demonstrating competency in course subject matter.	1	2	3	4	5
JPT5	Ability to communicate course content in an effective manner to students.	1	2	3	4	5
JPT6	Being available to students.	1	2	3	4	5
Research Performance						
JPT7	Making presentations at professional conferences and meetings.	1	2	3	4	5
JPT8	Preparing manuscripts for publication.	1	2	3	4	5
JPT9	Securing funding for my research activities.	1	2	3	4	5
JPT10	Contributions to professional and academic organisations beyond the university.	1	2	3	4	5
Service Performance						
JPT11	Contributions to the University.	1	2	3	4	5
JPT12	Availability for committee work.	1	2	3	4	5
JPT13	General effectiveness in service work.	1	2	3	4	5

SECTION E: BIOGRAPHICAL INFORMATION

When completing this questionnaire, please place an X in the applicable box.

Please indicate your ***gender***		Male
		Female
Please indicate your ***age*** range		Under 25 years
		25–34 years
		35–44 years
		45–54 years
		55–60 years
Please indicate your ***highest level of formal education***		Bachelor's degree
		Master's degree
		Doctorate/PhD
Kindly indicate your ***years of service*** with the University		1–5 years
		6–10 years
		11–15 years
		16–20 years
		21 years and above
Please indicate your ***job level (designation or position)***		Instructor/Tutor
		Assistant Lecturer
		Lecturer
		Senior Lecturer
		Associate/Assistant Professor

		Professor

UNISA university of south africa

APPENDIX B – APPROVAL FOR JOB PERFORMANCE SCALE

Re: REQUEST FOR PERMISSION TO USE JOB PERFORMANCE SCALE FOR MY MASTER'S DISSERTATION

Christin Moeller <moellerc@uwindsor.ca>

Wed 20/10/2021 11:39

To: MARTIN KWASI ABIEMO <61959979@mylife.unisa.ac.za>

Cc: Adele Bezuidenhout <adelecenturion@gmail.com>; Furtak, Aleksandra <hyraam@unisa.ac.za>; MARTIN ABIEMO <abimart2009@gmail.com>

Dear Martin,

I'm happy to approve your use of the Job Performance Scale in your dissertation. Please be sure to cite the article in any of your work.

Best of luck in your work!

Christin Moeller, Ph.D.

From: MARTIN KWASI ABIEMO <61959979@mylife.unisa.ac.za>
Sent: October 13, 2021 6:40 AM
To: Christin Moeller <moellerc@uwindsor.ca>
Cc: Adele Bezuidenhout <adelecenturion@gmail.com>; Furtak, Aleksandra <hyraam@unisa.ac.za>; MARTIN ABIEMO <abimart2009@gmail.com>
Subject: REQUEST FOR PERMISSION TO USE JOB PERFORMANCE SCALE FOR MY MASTER'S DISSERTATION

Dear Dr. Moeller,

I am Martin Kwasi Abiemo, a Ghanaian graduate student registered for a Master of Commerce in Business Management in the field of Human Resource Management by full research with the University of South Africa (Unisa). I am requesting your permission to use the job performance scale in my research study. My research is in the field of occupational stress, job satisfaction, organisational commitment and job performance and my dissertation is titled '*THE RELATIONSHIP BETWEEN OCCUPATIONAL STRESS, JOB SATISFACTION, ORGANISATIONAL COMMITMENT AND JOB PERFORMANCE WITHIN THREE TECHNICAL UNIVERSITIES IN GHANA*'.

I will include an acknowledgment of the author(s) and the source of the assessment tool. I would be happy to include specific wording, if you have a preferred form of acknowledgment.

My dissertation will be digitized and available online through the Unisa Library; the largest Library in Africa and other dissertation databases.

I would be very grateful if you could grant me permission to use the job performance scale as I have to include it in my ethical clearance application. I am available on abimart2009@gmail.com / 61959979@mylife.unisa.ac.za if you require any further information regarding my dissertation.

Copied to this email are my supervisors, Prof. Adele Bezuidenhout and Dr. Aleksandra M. Furtak.

I am counting on your favourable consideration and co-operation.

Thank you.

MARTIN KWASI ABIEMO

APPENDIX C – APPROVAL FOR JOB STRESS SCALE

RE: REQUEST FOR ASSISTANCE TO OBTAIN PERMISSION TO USE JOB STRESS SCALE

Dail Fields <dailfie@regent.edu>
Mon 18/10/2021 17:25

To: MARTIN KWASI ABIEMO <61959979@mylife.unisa.ac.za>

Cc: Furtak, Aleksandra <hyraam@unisa.ac.za>; Adele Bezuidenhout <adelecenturion@gmail.com>; MARTIN ABIEMO <abimart2009@gmail.com>

Martin:

As long as you use the scale only for academic purposes and not for commercial gain, it is my understanding that you may use the items and scale as reprinted in my book without further permission. I obtained and paid the copyright holder for reprint permission when the book was published. Just make sure to cite the book in your study.

Dail Fields, PhD
Adjunct Professor of Organizational Leadership
Regent University School of Business and Leadership
1000 Regent University Dr. Virginia Beach, VA 23464
757-639-4370
dailfie@regent.edu

From: MARTIN KWASI ABIEMO <61959979@mylife.unisa.ac.za>
Sent: Sunday, October 17, 2021 3:58 PM
To: Dail Fields <dailfie@regent.edu>
Cc: Furtak, Aleksandra <hyraam@unisa.ac.za>; Adele Bezuidenhout <adelecenturion@gmail.com>; MARTIN ABIEMO <abimart2009@gmail.com>
Subject: [External] REQUEST FOR ASSISTANCE TO OBTAIN PERMISSION TO USE JOB STRESS SCALE

Dear Prof.,
I am Martin Kwasi Abiemo, a Ghanaian graduate student registered for a Master of Commerce in Business Management in the field of Human Resource Management by full research with the University of South Africa (Unisa).
I came across the job stress scale developed by Parker and DeCotiis (1983) in your book titled "Taking the measure of work: A guide to validated scales for organizational research and diagnosis". However, I am unable to access the contacts including the email addresses of the developers to enable me to request permission to use the scale in my study.
I am, therefore, requesting your assistance in obtaining permission to use the Occupational/Job Stress by Parker and DeCotiis (1983) in my research study. That is, I need your guidance on how to obtain permission to use the scale, please.
Copied to this email are my supervisors, Prof. Adele Bezuidenhout and Dr. Aleksandra M. Furtak.
I look forward to a swift and favourable response.
Thank you.
Kind regards.

MARTIN KWASI ABIEMO

STUDENT ID: 61959979

UNISA university of south africa

APPENDIX D – APPROVAL FOR ORGANISATIONAL COMMITMENT SCALE

Re: REQUEST FOR PERMISSION TO USE ORGANISATIONAL COMMITMENT SCALE FOR MY MASTER'S DISSERTATION

Natalie Jean Allen <nallen@uwo.ca>
Wed 13/10/2021 17:34
To: MARTIN KWASI ABIEMO <61959979@mylife.unisa.ac.za>
Cc: Adele Bezuidenhout <adelecenturion@gmail.com>; Furtak, Aleksandra <hyraam@unisa.ac.za>; MARTIN ABIEMO <abimart2009@gmail.com>

Hello Martin,

Thank you for your interest in using the Three-Component Model (TCM) Employee Commitment Survey in your research.

You can get information about the TCM measure, a Users' Guide, and the measure itself at:

http://employeecommitment.com/

TCM Employee Commitment Survey | Measure three forms of employee commitment

Based on the Three-Component Model (TCM) of commitment (Meyer & Allen, 1992; 1997), the TCM Employee Commitment Survey measures three forms of employee commitment to an organization: desire-based, obligation-based and cost-based.

employeecommitment.c

For academic / research purposes, please choose the Academic Package. (There is no charge for this package.)
I wish you well with your research!

Best,

Natalie Allen

From: MARTIN KWASI ABIEMO <61959979@mylife.unisa.ac.za>
Sent: Wednesday, October 13, 2021 6:35 AM
To: Natalie Jean Allen <nallen@uwo.ca>
Cc: Adele Bezuidenhout <adelecenturion@gmail.com>; Furtak, Aleksandra <hyraam@unisa.ac.za>; MARTIN ABIEMO <abimart2009@gmail.com>
Subject: REQUEST FOR PERMISSION TO USE ORGANISATIONAL COMMITMENT SCALE FOR MY MASTER'S DISSERTATION

Dear Prof.

I am Martin Kwasi Abiemo, a Ghanaian graduate student registered for a Master of Commerce in Business Management in the field of Human Resource Management by full research with the University of South Africa (Unisa). I am requesting your permission to use

APPENDIX E – ETHICAL CLEARANCE FROM UNISA

UNISA HRM ETHICS REVIEW COMMITTEE

Date: 17 December 2021

Dear Mr Martin Kwasi Abiemo

Decision: Ethics approval from December 2021 to December 2024

NHREC Registration #: (if applicable)

ERC Reference #: 2021_HRM_007

Name: Mr Martin Kwasi Abiemo

Student #: 61959979

Researcher(s): Name: Martin Kwasi Abiemo
E-mail address, telephone # 61959979@mylife.unisa.ac.za, +233242838284

Supervisor(s): Name: Prof Adele Bezuidenhout
E-mail address, telephone # adelecenturion@gmail.com, +44 73 833 12111

Co-supervisor(s): Name: Dr Aleksandra M. Furtak
E-mail address, telephone # hyraam@unisa.ac.za, 012 429 2824

Working title of research:

The relationship between occupational stress, job satisfaction, organisational commitment and job performance within three technical universities in Ghana

Qualification: MCom

Thank you for the application for research ethics clearance by the Unisa HRM Ethics Review Committee for the above mentioned research. Ethics approval is granted for MK Abiemo for a period of **three (3) years**.

*The **low risk application** was **reviewed** by a Sub-committee of URERC on 30 September 2021 in compliance with the Unisa Policy on Research Ethics and the Standard Operating Procedure on Research Ethics Risk Assessment. The ethics application was approved on 17 December 2021.*

The proposed research may now commence with the provisions that:

1. **The researcher will ensure that the research project adheres to the relevant guidelines set out in the Unisa Covid-19 position statement on research ethics attached.**

University of South Africa
Preller Street, Muckleneuk Ridge, City of Tshwane
PO Box 392 UNISA 0003 South Africa
Telephone: +27 12 429 3111 Facsimile: +27 12 429 4150
www.unisa.ac.za

2. The researcher(s) will ensure that the research project adheres to the values and principles expressed in the UNISA Policy on Research Ethics.
3. Any adverse circumstance arising in the undertaking of the research project that is relevant to the ethicality of the study should be communicated in writing to the HRM Committee.
4. The researcher(s) will conduct the study according to the methods and procedures set out in the approved application.
5. Any changes that can affect the study-related risks for the research participants, particularly in terms of assurances made with regards to the protection of participants' privacy and the confidentiality of the data, should be reported to the Committee in writing, accompanied by a progress report.
6. The researcher will ensure that the research project adheres to any applicable national legislation, professional codes of conduct, institutional guidelines and scientific standards relevant to the specific field of study. Adherence to the following South African legislation is important, if applicable: Protection of Personal Information Act, no 4 of 2013; Children's act no 38 of 2005 and the National Health Act, no 61 of 2003.
7. Only de-identified research data may be used for secondary research purposes in future on condition that the research objectives are similar to those of the original research. Secondary use of identifiable human research data require additional ethics clearance
8. No field work activities may continue after the expiry date **December 2024**. Submission of a completed research ethics progress report will constitute an application for renewal of Ethics Research Committee approval.

Note:
*The reference number **2021_HRM_007** should be clearly indicated on all forms of communication with the intended research participants, as well as with the Committee.*

Yours sincerely,

Signature
Chair of DREC: Dr E Rudolph
E-mail: rudolec@unisa.ac.za
Tel: (012) 429 2586

Signature
Executive Dean: Prof MT Mogale
E-mail: mogalmt@unisa.ac.za
Tel: (012) 429-4805

University of South Africa
Preller Street, Muckleneuk Ridge, City of Tshwane
PO Box 392 UNISA 0003 South Africa
Telephone: +27 12 429 3111 Facsimile: +27 12 429 4150
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APPENDIX F – TURNITIN RECEIPT AND SUMMARY

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Digital Receipt

This receipt acknowledges that Turnitin received your paper. Below you will find the receipt information regarding your submission.

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Submission author:	Martin Kwasi Abiemo
Assignment title:	Complete dissertation/thesis FINAL
Submission title:	THE RELATIONSHIP BETWEEN OCCUPATIONAL STRESS, JOB S...
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File size:	5.17M
Page count:	250
Word count:	71,337
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Submission date:	29-Feb-2024 04:06PM (UTC+0200)
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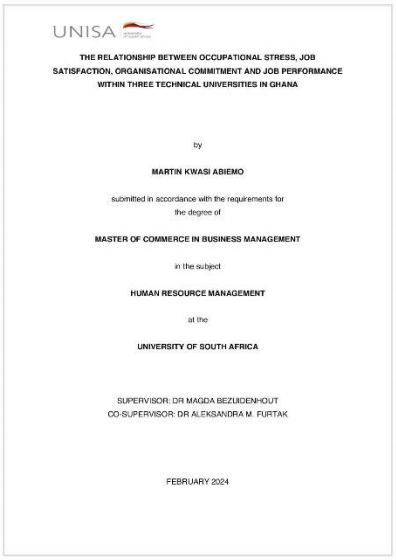

UNISA

THE RELATIONSHIP BETWEEN OCCUPATIONAL STRESS, JOB SATISFACTION, ORGANISATIONAL COMMITMENT AND JOB PERFORMANCE WITHIN THREE TECHNICAL UNIVERSITIES IN GHANA

by

MARTIN KWASI ABIEMO

submitted in accordance with the requirements for the degree of

MASTER OF COMMERCE IN BUSINESS MANAGEMENT

in the subject

HUMAN RESOURCE MANAGEMENT

at the

UNIVERSITY OF SOUTH AFRICA

SUPERVISOR: DR MAGDA BEZUIDENHOUT
CO-SUPERVISOR: DR ALEKSANDRA M. FURTAK

FEBRUARY 2024

UNISA university of south africa

THE RELATIONSHIP BETWEEN OCCUPATIONAL STRESS, JOB SATISFACTION, ORGANISATIONAL COMMITMENT AND JOB PERFORMANCE WITHIN THREE TECHNICAL UNIVERSITIES IN GHANA

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