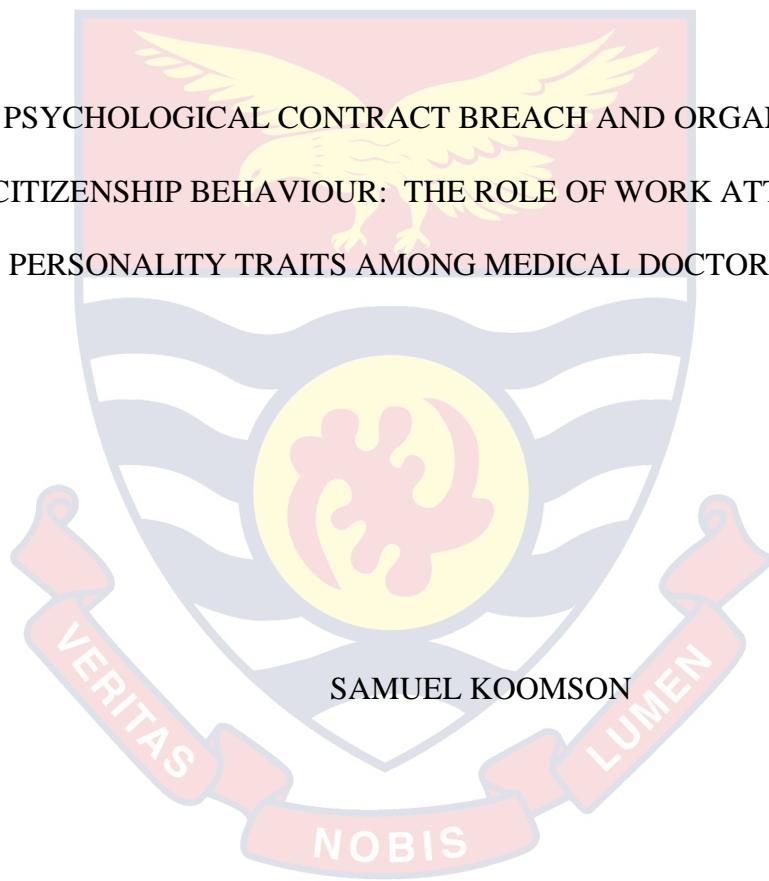
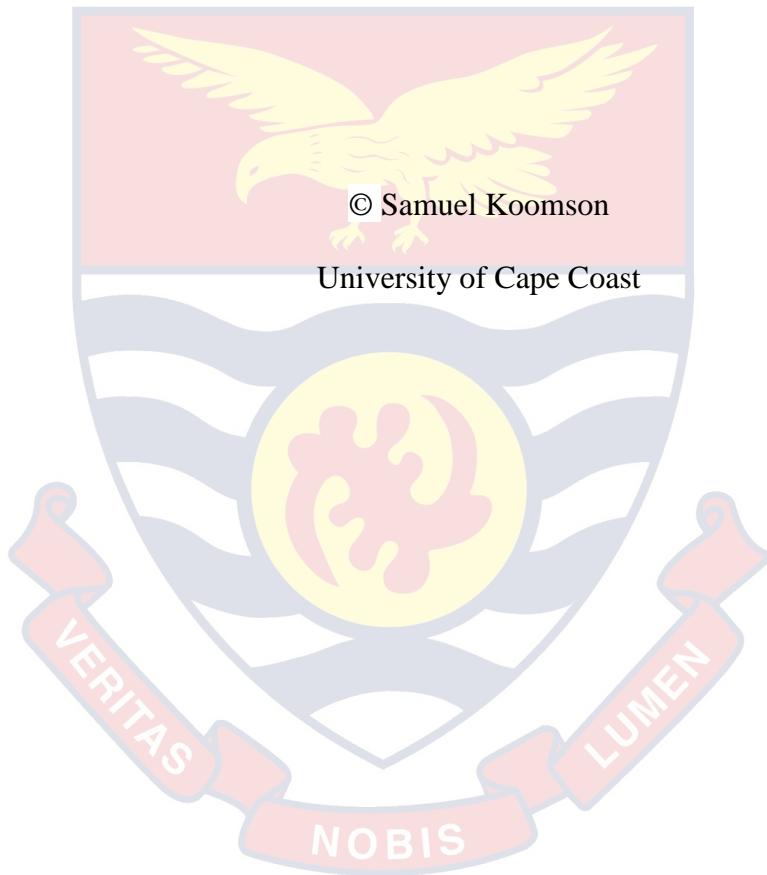


UNIVERSITY OF CAPE COAST

PSYCHOLOGICAL CONTRACT BREACH AND ORGANISATIONAL  
CITIZENSHIP BEHAVIOUR: THE ROLE OF WORK ATTITUDES AND  
PERSONALITY TRAITS AMONG MEDICAL DOCTORS IN GHANA



2021



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PSYCHOLOGICAL CONTRACT BREACH AND ORGANISATIONAL  
CITIZENSHIP BEHAVIOUR: THE ROLE OF WORK ATTITUDES AND  
PERSONALITY TRAITS AMONG MEDICAL DOCTORS IN GHANA

BY  
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Thesis submitted to the Department of Management of the School of Business,  
College of Humanities and Legal Studies, University of Cape Coast, in partial  
fulfillment of the requirements for the award of Doctor of Philosophy degree  
in Business Administration

MARCH 2021

## DECLARATION

### Candidate's Declaration

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

Candidate Signature ..... Date: .....

Name: Samuel Koomson

### Supervisors' Declaration

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

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

Name: Prof. (Mrs.) Abigail Opoku Mensah

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

Name: Dr. Nick Fobih

## ABSTRACT

This study was designed to assess the direct relationship between psychological contract breach and organisational citizenship behaviour among medical doctors in Ghana. It further looked at the mediating roles of work attitudes (job satisfaction, organisational commitment, and job involvement) and moderating roles of personality traits (conscientiousness, agreeableness, extraversion, openness to experience, and neuroticism) on this direct relationship. The positivist philosophical paradigm, quantitative research approach, explanatory research design, and cross-sectional study design were utilised. A structured, pre-tested, self-administered and validated questionnaire was employed. The simple one-stage cluster sampling approach was utilised. IBM SPSS Statistics Software for windows, version 23 and Smart PLS Software, version 2.0M.3 were used to analyse the data. After controlling for sex, age, employment type and organisational tenure, this study found a significant negative relationship between psychological contract breach and organisational citizenship behaviour. This negative relationship was partially mediated by job satisfaction, organisational commitment and job involvement. Conscientiousness and openness to experience traits moderated the relationship between psychological contract breach and organisational citizenship behaviour. Similar finding was recorded for extraversion trait, but not in the direction hypothesized. However, agreeableness trait did not moderate this relationship. This research concludes that positive work attitudes reduce the effect of psychological contract breach on citizenship behaviour. Also, this study established that, during a psychological contract breach, medical doctors who are more conscientious, extraverted, and opened to new experiences are more likely to be good organisational citizens. Therefore, this study recommends the need for managers of Ghana Health Service to improve the welfare and well-being of medical doctors working in stressful environments. Moreover, healthcare managers should consider recruiting, retaining, and promoting medical doctors who display high scores on conscientiousness, extraversion, and openness to experience. Those who display low scores should be encouraged, motivated and groomed to catch-up to increase their propensity to be good organisational citizens, during a psychological contract breach.

## KEY WORDS

Healthcare management

Medical doctors

Organisational citizenship behaviour

Personality traits

Psychological contract breach

Work attitudes

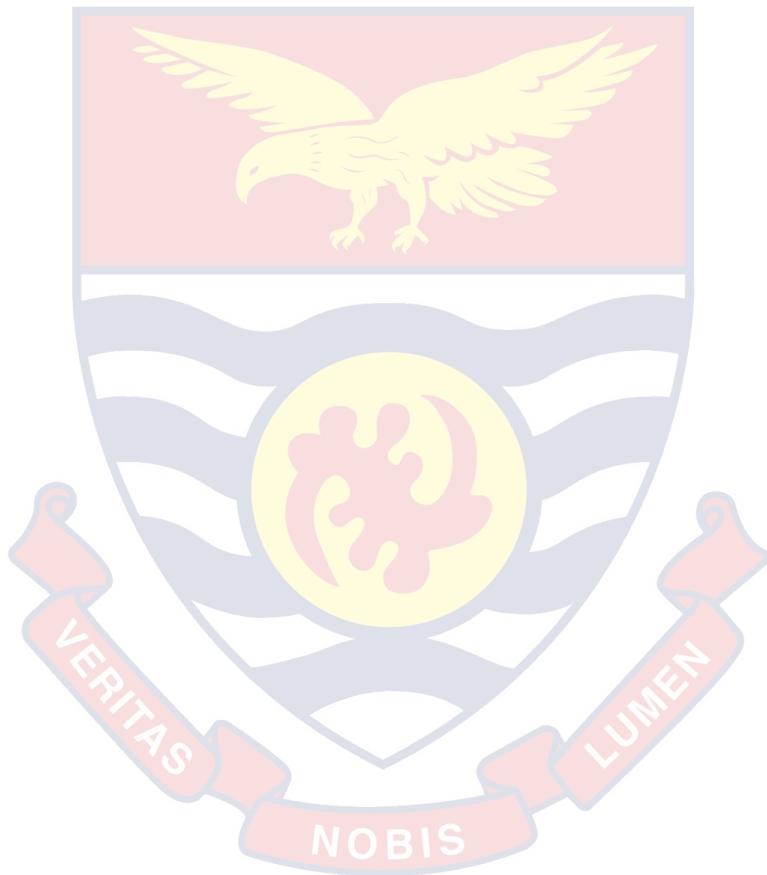


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## DEDICATION

To my Principal Supervisor, Prof. (Mrs.) Abigail Opoku Mensah and my  
beloved son, Jedidiah Kwesi Koomson



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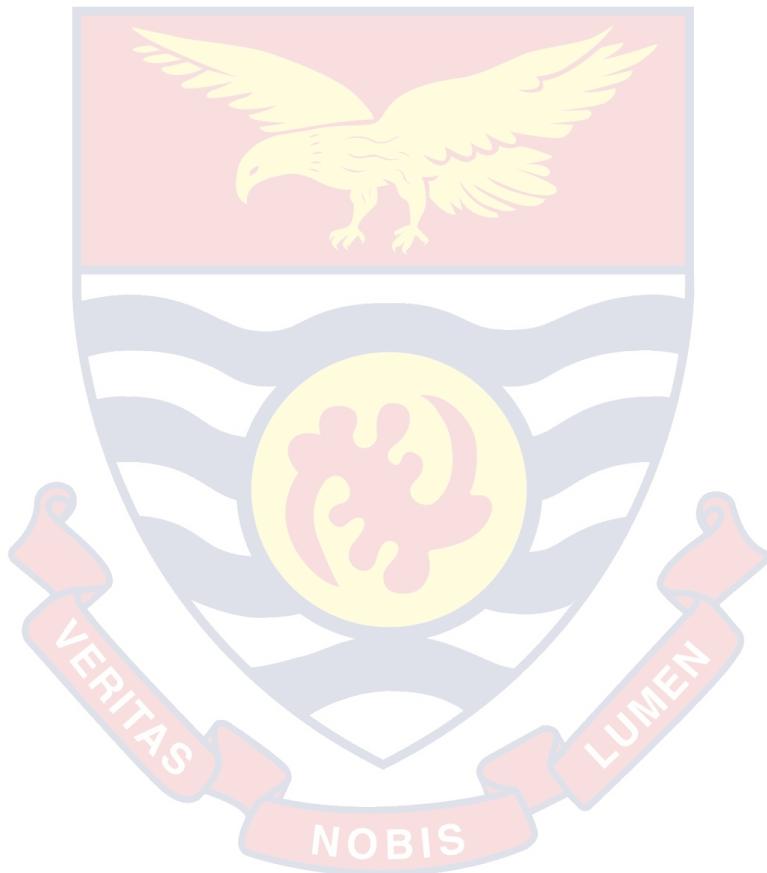
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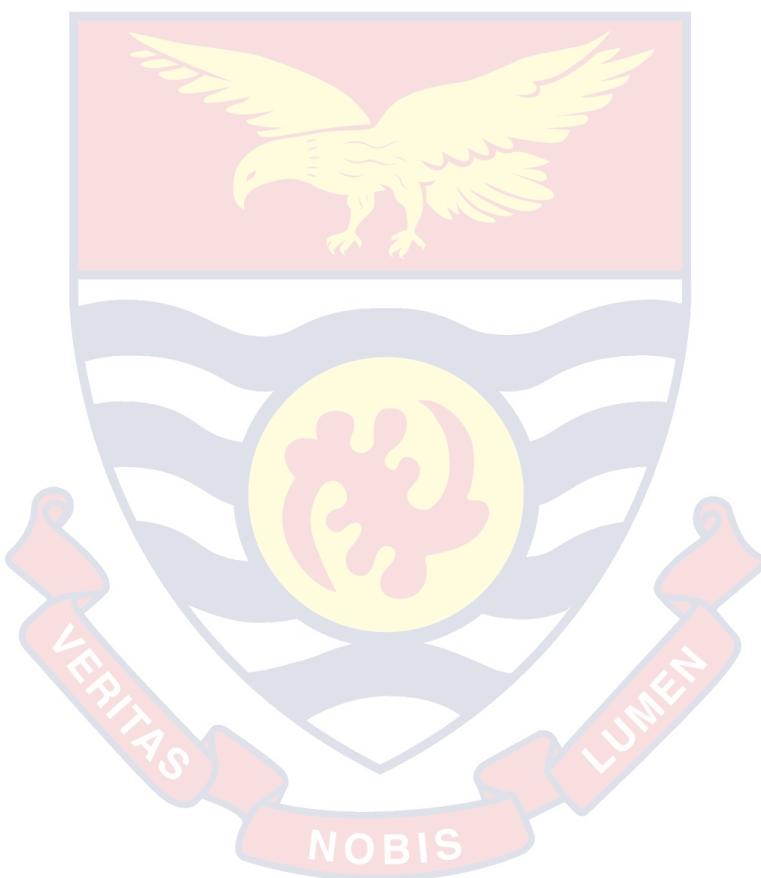
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## LIST OF ACRONYMS

AGR	Agreeableness
AVE	Average Variance Extracted
CAFOD	Catholic Agency for Overseas Development
CON	Conscientiousness
EXT	Extraversion
GEN	General Information
HR	Human Resource
HRM	Human Resource Management
IBM	International Business Machines
IQR	Interquartile Range
JIV	Job Involvement
JST	Job Satisfaction
KMO	Kaiser-Meyer-Olkin Measure of Sampling Adequacy
MSQ	Minnesota Satisfaction Questionnaire
NEU	Neuroticism
OCB	Organisational Citizenship Behaviour
OCBI	Organisational Citizenship Behaviour Towards the Individuals
OCBO	Organisational Citizenship Behaviour Towards the Organisation
OCT	Organisational Commitment
OPE	Opennes to Experience
PCB	Psychological Contract Breach
PLS	Partial Least Squares

PLS-SEM	Partial Least Squares-Structural Equations Modeling
R	Reverse Coded
SEM	Structural Equations Modeling
UAE	United Arab Emirates
US	United States
VAF	Variance Accounted For
VIF	Variance Inflator Factor



## CHAPTER ONE

### INTRODUCTION

Although medical doctors lead the care of patients (British Medical Association, 2017) and are perhaps the most valuable assets of healthcare organisations (Malik & Khalid, 2016), medical doctors in the Upper East and Upper West Regions of Ghana have relatively high doctor population ratio. The doctor population ratio for the Upper East and Upper West Regions for year 2017 were one doctor to 26,489 persons and one doctor to 14,821 persons respectively (Ghana Health Service, 2018; Ministry of Health, 2018). This disparity could be seen as a breach of psychological contract, which can lead to undesirable work attitudes (Agbozo, Ansa-Bonnah, Hoedoafia & Atakora, 2018). Even greater, the psychological contract breach could result in low citizenship behaviour among workers (Griep, Vantilborgh, Hansen & Conway, 2018). Christy and Duraisamy (2014) argue that the personality traits of individuals tend to ease or enlarge the strain associated with a psychological contract breach. Yet, empirical healthcare literature addressing the relationship among these key variables (psychological contract breach, organisational citizenship behaviour, work attitudes, and personality traits), in a single model, is sparse. This study is designed to fill this gap.

### Background to the Study

The notion of a psychological contract implies that there is a set of expectations either written or unwritten (van Niekerk, Chrysler-Fox & van Wyk, 2020), operating at all times between every member of an organisation, and the various managers, who represent the employer in that organisation

(Huy & Takahashi, 2018). Conway and Briner (2005) define psychological contract as employee's beliefs regarding mutual obligations between the employee and the organisation. Over the years, according to Raeder (2018), the nature of psychological contract has changed from an imposed relationship: compliance, command and control; permanent employment relationship: finite duties and meeting job requirements to a mutual relationship: commitment, participation and involvement; variable employment relationship: people and skills only obtained and retained when required; multiple roles; and added value. Alcover, Rico, Turnley and Bolino (2017) share a similar opinion.

As described by Guest, Conway and Briner (1996), psychological contract may provide some indication of the answers to the two fundamental employment relationship questions that individuals pose: 'What can I reasonably expect from the organisation?' and 'What should I reasonably be expected to contribute in return?' Employers may expect employees to do their best on behalf of the organisation: 'to put themselves out for the company'; to be fully committed to its values, to be compliant and loyal; and to enhance the image of the organisation with its customers and suppliers (Rousseau & Geller, 1994).

Employees, on the other hand, may expect to be treated fairly as humans, to be provided with work that uses their abilities, to be rewarded equitably in accordance with their contribution, to be able to display competence, to have opportunities for further growth, to know what is expected of them, to be given feedback-preferably positive-on how they are

doing, to be involved in decision making, and to trust in the management of the organisation to keep their promises (Guest et al., 1996).

A study by Dantas and Ferreira (2015) showed that healthcare professionals are willing to offer their employers with loyalty and a performance of excellence. In return, what they expect to receive from their employers included, but not limited to professional recognition, career progression, interesting work and fair compensation. The expectations of these healthcare professionals are comparable to the 8<sup>th</sup> and 16<sup>th</sup> UN Sustainable Development Goal, which seeks to provide decent work and economic development for all, and promote peaceful and inclusive societies for sustainable development respectively (Catholic Agency for Overseas Development, 2015).

According to American Psychological Association (2014), workers report having more trust in their companies when the organisation recognises employees for their contributions, provides opportunities for involvement, and communicates effectively. Also, employee involvement, recognition and communication were relevant in predicting trust in management (American Psychological Association, 2014). In a subsequent survey, employee involvement, recognition and communication predicted the variance in trust; and, finally, employee engagement and trust in management were crucial factor in predicting employee well-being (American Psychological Association, 2017).

Within the same time period, Gallup's State of the American Workplace Report (2017) maintains that employees need to be in an environment where there is mutual trust and respect for one another's efforts

and results. Ghana National Healthcare Quality Strategy Report (2017) also declares the need for management to build a culture of “joy at work” in terms of financing, logistics, recognition and rewards to give room for health providers to treat clients with dignity and respect, deliver high quality care and be motivated to continuously improve quality. The declaration by Ghana National Healthcare Quality Strategy Report (2017) is consistent with the mission of the Ghana Health Service (2017), which seeks to establish a more equitable, efficient, accessible and responsive health care system in Ghana. Thus, fairness, trust, recognition, rewards and career expectations are of utmost priority to employees at the workplace (Huy & Takahashi, 2018).

A psychological contract is said to have been fulfilled when an organisation meets its obligations to an employee from the employee's vantage (Karagonlar, Eisenberger & Aselage, 2016). A fulfilled psychological contract reinforces the benefits of pursuing a set of progressive human resource management (HRM) practices. In confirmation to this statement, Conway and Coyle-Shapiro (2012), in their research, uncovered that 90% of human resource managers in United Kingdom say that the concept is useful and 36% say they use it to manage people. Therefore, a positive psychological contract is worth taking seriously (Guest et al., 1996).

Fulfilling a psychological contract serves to build upon the social exchange element (Karagonlar et al., 2016), which are founded on trust, reciprocation and reward (Barić, 2016). Yu (2016) asserts that psychological contract is a cornerstone of employee behaviours. The assertion by Yu (2016) is described by the Social Exchange Theory (Blau, 1964), one of the most applied conceptual paradigms for understanding workplace behaviour. The

social exchange theory advocates that favours are done with the intention that later return will occur (Cropanzano, Anthony, Daniels & Hall, 2017).

The social exchange theory proposes that, if the organisation helps the employee out, the employee is more likely to do something in return for the organisation (Golden & Veiga, 2018). Fallon and Rice (2015) opines that employees will behave favourably within firms when they perceive the organisation as having their best interests at heart, by offering them safe working environment, focused training, career development plans and new learning opportunities. When a psychological contract is fulfilled, employees become happy (Roy & Konwar, 2019) and they show favourable work attitudes: they show high level of job satisfaction (Antonaki & Trivellas, 2014), organisational commitment (Agbozo et al., 2018), and job involvement (Akinbobola & Zamani, 2018).

From the perspective of Abdullah (2018), job satisfaction is a person's psychological response to his/her work, as a result of assessment or work experience, with proud indicators of employment, suitability of work facilities, promotion opportunities, supervisory presence in the execution of work, and the existence of colleagues who support. In the words of Akbar, Udin and Djastuti (2018), organisational commitment is a strong desire to remain a member of a particular organisation, the desire to strive at what organisation desires and certain beliefs and acceptance of value and purpose of the organisation. Job involvement is explained by Opoku Mensah (2016) as the psychological importance that people have for their job.

The social exchange theory also elucidates the relationship between psychological contract and organisational citizenship behaviour (Haryadi,

Anggraeni & Ibrahim, 2018). The theory assumes that, when employees feel that their employer has treated them well by fulfilling their psychological contract, they reciprocate by engaging in extra-role behaviours like organisational citizenship behaviour (Ahmad & Zafar, 2018). In the opinion of Galbraith (2016), organisational citizenship behaviour is a behaviour performed by employees that are outside of their formal job description.

Besides, Organ (2018) educates that organisational citizenship behaviour is a free, voluntary and selfless interest for the good of others, such as organisation, clients/customers, clients' relatives or groups. It is informally instructed, not explicitly recognised by formal compensation or rewards system, and is combined to promote efficiency and effectiveness in organisations. Liaquat and Mehmood (2017) augment that organisational citizenship behaviour has always been valuable to organisations, because, it comes with numerous benefits. In the healthcare sector in particular, Gupta (2019) puts forward that organisational citizenship behaviour exhibited by healthcare professionals has the potential of boosting the satisfaction of co-workers, patients, patients' friends, and their relatives.

Beside the social exchange theory, the affective events theory (Weiss & Cropanzano, 1996), is utilised in this study to explain the likely mediating role of three work-related attitudes, namely job satisfaction, organisational commitment and job involvement in the relationship between psychological contract and organisational citizenship behaviour. In Weiss and Cropanzano's (1996) understanding, the affective events theory assumes that events at the workplace often evoke emotional reactions among employees. It is through

these affective experiences that employees' attitudes and behaviours are influenced.

Christy and Duraisamy (2016) rely on the assumptions of the affective event theory in analysing the mediating role of psychological well-being in the relationship between psychological contract breach and organisational citizenship behaviour and finds that the unmet expectations leads to low psychological well-being of employees, which eventually reduces their indulgence in citizenship acts. Malik and Khalid (2016) also investigates the mediating role of work engagement over the relationship between psychological contract breach and turnover intentions and reveals that the breach in psychological contract resulted in low work engagement of the employees, which, in turn, increased their turnover intentions.

Zhao, Wayne, Glibkowsi and Bravo (2007) add that psychological contracts, in particular, are perceived as emotional events. In their opinion, psychological contracts are work events, which show an employee's perception of organisational obligations, and, thus, are inherently related to affective reactions, which in turn contribute to the establishment of work attitudes and the desire to putting more efforts into one's job. In line with the proclamations by Zhao et al. (2007), the affective events theory was used by Bal, De Lange, Jansen and Van de Velde (2012) to investigate the mediating role of job satisfaction in the longitudinal relationship between contract breach and changes with job performance over time. Similarly, Christy and Duraisamy (2016), in their quantitative study, used the affective events theory to advocate that positive psychological state of employees can save the worsening scenario and can suppress the negativity caused by a psychological contract breach.

As part of the objectives of this study, the moderating role of the Big Five personality factors on the nexus between psychological contract breach and organisation citizenship behaviour is examined, using the psychological contract theory, which originates from the social exchange theory. The psychological contract theory advocates that employee perceptions of their contract are attributed to many factors, including their personality traits (Peng, Jien & Lin, 2016). As such, certain personality traits of individuals may ease the brunt associated with a psychological contract breach. In line with the psychological contract theory, Panagiotou (2017) finds that personal factors can likely lead employees to exhibit positive behaviour at the workplace, despite a breach in their psychological contract, and a high per cent of people behaving differently from each other is based on personality (Digman, 1990).

Simply, personality traits can buffer the negative effect of a psychological contract breach on the employee's tendency be bad organisational citizens (Heffernan & Rochford, 2017). Equally, Organ (2018), a renowned advocate of the social exchange and psychological contract theory, submits that organisational citizenship behaviour can result from dispositional traits, such as an individual's disposition to be helpful or hardworking, implying that individual differences could ease the stress associated with a psychological contract breach (Bankins, 2014), and lead employees to be good organisational citizens. Hence, personal values are sure to moderate the knock-outs (Christy & Duraisamy, 2014).

Personality traits, in particular the Big Five personality factors (Goldberg, 1992), contain evidence of association with organisational citizenship behaviour (Abdullah, 2018), and this evidence is illustrated by the

Five Factor theory of personality, which is credited to Goldberg (1992). The Five Factor theory of personality holds that individuals who display high scores on conscientiousness, agreeableness, extraversion, openness to experience, and low score on neuroticism (also called emotional instability) are likely to be good organisational citizens (Yildiz, 2018).

From the Five Factor theory of personality, conscientious people are prepared, hardworking, highly motivated, organised, persistent, cautious and disciplined. Extroverts are outgoing, social, energetic, enthusiastic, assertive, talkative, ambitious, and fun-loving. People who are opened to new experiences are imaginative, independent, experimenting and interested in variety. Agreeable people are helpful, accommodating, co-operative, kind and supportive. Finally, neurotic persons are anxious, emotionally unstable and self-blaming (Goldberg, 1992).

Drawing on the Five Factor theory of personality and psychological contract theory, Jafri (2014) put forward that, employees, who are by nature agreeable and conscientiousness, are less likely to be affected by breach in their psychological contract. The author justifies that employees, who are agreeable by nature have the disposition to be helpful or cooperative. Similarly, Jafri explains that employees who are conscientious, generally, enjoy tasks they excel at, hence, are less likely to be affected by breach in their psychological contract. Ishaq and Shamsher (2016) show that employee low on neuroticism or high on self-control less frequently execute deviant behaviours during a psychological contract breach. Like every other employee, the influence of personality factors on psychological contract breach is applicable to medical doctors.

Medical doctors are healthcare workers who are responsible for leading the care of patients (British Medical Association, 2017), especially in fighting pandemics such as novel Covid-19 (Day, 2020). They appear to be the most valuable assets of healthcare organisations (Malik & Khalid, 2016), due to their relatively limited number, high cost, duration and academic rigors involved in their course of study (Almaaitah, Harada, Sakdan & Almaaitah, 2017). They evaluate symptoms, consider possible diagnoses, undertake examinations and tests, conduct surgeries, advise patients on treatment options, and monitor the progress of treatment. If necessary, they will refer patients onwards to a specialist doctor in a highly-ranked and reputable health facility for further opinion (British Medical Association, 2017).

Medical doctors belong to the social/helping occupations and, as such, they are generally expected to be opened to change and experimenting, emotionally stable, accommodating, caring, attentive to others, agreeable, self-less, trusting, sensitive to their inner thoughts, dutiful, role-conscious and extraverted (McCrae & Costa, 2010). Upon their graduation, new medical doctors solemnly declare to do the best of their ability to serve humanity, care for the sick and promote good health (Sriharan et al., 2001). Medical doctors are needed in their right numbers and distribution to help improve health outcomes, particularly in Upper East and West Regions of Ghana (Ministry of Health, 2018).

Against this background, the present study seeks to assess the mediating role of work attitudes and moderating role of personality traits in the relationship between psychological contract breach and organisational citizenship behaviour among medical doctors operating in the Upper East and

Upper West Regions of Ghana, using the quantitative research process (Creswell & Creswell, 2017), a scientific process (Rahi, 2017), where a researcher finds a theory, makes predictions based on the theory (Howell, 2013), then uses experiment to test it numerically (Leppink, 2016) and objectively (Bryman, 2008). The quantitative research process adopted follows the positivist philosophical paradigm, which believes a single version of what is real (Ryan, 2018).

### **Statement of the Problem**

In spite of the crucial role of medical doctors in healthcare delivery, the Ghana National Healthcare Quality Strategy Report (2017) reveals the existence of poor reward and recognition mechanisms laid down for healthcare professionals, including medical doctors. To buttress this point, Quaye (2018) argues that the Ghanaian healthcare sector has been overwhelmed with several agitations regarding working conditions for medical doctors. In particular, Hornuovo (2016) shows that psychological contract violation, which is a consequence of psychological contract breach, moderately exists among health workers in selected hospitals in the Greater Accra Region. This finding highlights psychological contract breach among healthcare professionals working in the Greater Accra Region of Ghana.

By way of extension, this breach is assumed to be intensified in the Upper East and Upper West Regions of Ghana, where severe regional inequalities exist in terms of the distribution of medical doctors, hospital admission rates, number of hospital beds, available health facilities, and doctor population ratio (Ghana health Service, 2018). For instance, the hospital

admission rates for Upper East and Upper West Regions have been relatively high for three years consistently, from 2015 to 2017 (Appendix A). Concomitantly, the number of hospital beds available to serve Ghanaians living in the Upper East and Upper West Regions have been relatively low from 2016 to 2017 (Appendix B). In addition, the total number of health facilities such as, chip compounds, clinics, and hospitals for the two regions have been comparably minimal from 2016 to 2017 (Appendix C).

Even worse, the doctor population ratio for the two regions have been relatively high from year 2011 to 2017, with Upper East Region topping the table by recording one doctor to 26,489 persons for the year 2017 (Appendix D). Also, little recognition is given to these medical doctors for their efforts, as they are put on the same salary structure with their colleagues in the other regions of Ghana (Larbi, 2015), connoting a likely breach of psychological contract on the part of their employer, namely Ghana Health Service. Work attitudes, such as job satisfaction, commitment and involvement can become negative in response to unfavourable treatment in a psychological contract (Ko & Hur, 2014).

Moreover, when there is a breach of a psychological contract by the employer, employees may fail to become good organisational citizens (Ahmad & Zafar, 2018), as expounded by the social exchange theory (Blau, 1964). It is also argued that the personality traits of employees could likely worsen the strain accompanying a psychological contract breach (Panagiotou, 2017), and this problem is explained by the psychological contract theory. However, there is paucity of research on the mediating effect of work attitudes: job satisfaction, organisational commitment and job involvement in the

relationship between psychological contract breach and organisational citizenship behaviour. The few closely related studies that exist in this area have used work engagement (Malik & Khalid, 2016) and psychological well-being (Christy & Duraisamy, 2016) as mediating variables.

Additionally, empirical literature addressing the effect of the Big Five personality dimensions on the connection between psychological contract breach and organisational citizenship behaviour is limited. The few closely related studies in this area used narrow personality traits, such as locus of control (Francisco, 2015), self-esteem and equity sensitivity (Shih & Chuang, 2013), and intrinsic motivation (Panagiotou, 2017) as moderating factors, ignoring broad traits like conscientiousness, agreeableness, extraversion, openness to experience, and neuroticism.

Even more, existing studies have paid more attention to other sectors such as banking (Hazrati, 2017; Niesen, Hoetegem, Vander Elst, Battistelli & De Witte, 2018), airline (Kuang-Man, 2013), and educational institutions (Agbozo et al., 2018; Francisco, 2015), neglecting the healthcare sector (Bonilla, 2018). Besides, few analysts like Shih and Chuang (2013) have applied partial least squares-structural equation modeling (PLS-SEM), which has been argued by Hair, Risher, Sarstedt and Ringle (2018) to be a superior and robust analytical technique in drawing conclusions. A position paper by Christy and Duraisamy (2014) reveal that psychological contract studies are based in America, European or Western context, while very few exist in non-western context. Li and Dai (2015), in their review, debate that there is short of studies on the reason, nature, results and consequences of psychological contract, which restricts the application value of the Social Exchange Theory.

Analysing psychological contract breach, three distinct work attitudes (job satisfaction, organisational commitment, and job involvement), organisational citizenship behaviour, and all the Big Five Personality dimensions (conscientiousness, extraversion, agreeableness, openness to experience, and neuroticism) in a single model is novel and offers insight into their complexity. As a consequence, this study sought to assess the mediating role of work attitudes and moderating role of personality traits in the relationship between psychological contract breach and organisational citizenship behaviour among medical doctors in the Upper East and Upper West Regions of Ghana.

### Purpose of the Study

This study sought to assess the mediating role of work attitudes and moderating role of personality traits in the relationship between psychological contract breach and organisational citizenship behaviour among medical doctors in Ghana.

### Research Objectives

The following research objectives were considered: to

- 1) Examine the relationship between psychological contract breach and organisational citizenship behaviour among medical doctors in the Upper East and Upper West Regions of Ghana,
- 2) Analyse the mediating effect of job satisfaction on the relationship between psychological contract breach and organisational citizenship

behaviour among medical doctors in the Upper East and Upper West Regions of Ghana,

- 3) Ascertain the mediating effect of organisational commitment on the relationship between psychological contract breach and organisational citizenship behaviour among medical doctors in the Upper East and Upper West Regions of Ghana,
- 4) Examine the mediating effect of job involvement on the relationship between psychological contract breach and organisational citizenship behaviour among medical doctors in the Upper East and Upper West Regions of Ghana,
- 5) Test the moderating role of conscientiousness trait on the relationship between psychological contract breach and organisational citizenship behaviour among medical doctors in the Upper East and Upper West Regions of Ghana,
- 6) Analyse the moderating effect of agreeableness trait on the relationship between psychological contract breach and organisational citizenship behaviour among medical doctors in the Upper East and Upper West Regions of Ghana,
- 7) Examine the moderating role of extraversion trait on the relationship between psychological contract breach and organisational citizenship behaviour among medical doctors in the Upper East and Upper West Regions of Ghana,
- 8) Test the moderation effect of openness to experience trait on the relationship between psychological contract breach and organisational

citizenship behaviour among medical doctors in the Upper East and Upper West Regions of Ghana, and

- 9) Investigate the moderating effect of neuroticism trait on the relationship between psychological contract breach and organisational citizenship behaviour among medical doctors in the Upper East and Upper West Regions of Ghana.

### Research Questions

The following research questions were considered: to

- 1) What is the relationship between psychological contract breach and organisational citizenship behaviour among medical doctors in the Upper East and Upper West Regions of Ghana?
- 2) What is the mediating effect of job satisfaction on the relationship between psychological contract breach and organisational citizenship behaviour among medical doctors in the Upper East and Upper West Regions of Ghana?
- 3) What is the mediating effect of organisational commitment on the relationship between psychological contract breach and organisational citizenship behaviour among medical doctors in the Upper East and Upper West Regions of Ghana?
- 4) What is the mediating effect of job involvement on the relationship between psychological contract breach and organisational citizenship behaviour among medical doctors in the Upper East and Upper West Regions of Ghana?

- 5) What is the moderating role of conscientiousness trait on the relationship between psychological contract breach and organisational citizenship behaviour among medical doctors in the Upper East and Upper West Regions of Ghana?
- 6) What is the moderating effect of agreeableness trait on the relationship between psychological contract breach and organisational citizenship behaviour among medical doctors in the Upper East and Upper West Regions of Ghana?
- 7) What is the moderating role of extraversion trait on the relationship between psychological contract breach and organisational citizenship behaviour among medical doctors in the Upper East and Upper West Regions of Ghana?
- 8) What is the moderation effect of openness to experience trait on the relationship between psychological contract breach and organisational citizenship behaviour among medical doctors in the Upper East and Upper West Regions of Ghana?
- 9) What is the moderating effect of neuroticism trait on the relationship between psychological contract breach and organisational citizenship behaviour among medical doctors in the Upper East and Upper West Regions of Ghana?

## Hypotheses

The following hypotheses are considered:

$H_{01}$ : There is no significant negative relationship between psychological contract breach and organisational citizenship behaviour among medical doctors working in the Upper East and Upper West Regions of Ghana.

$H_1$ : There is a significant negative relationship between psychological contract breach and organisational citizenship behaviour among medical doctors working in the Upper East and Upper West Regions of Ghana.

$H_{02}$ : Job satisfaction does not mediate the relationship between psychological contract breach and organisational citizenship behaviour among medical doctors in the Upper East and Upper West Regions of Ghana.

$H_2$ : Job satisfaction mediates the relationship between psychological contract breach and organisational citizenship behaviour among medical doctors in the Upper East and Upper West Regions of Ghana.

$H_{03}$ : Organisational commitment does not mediate the relationship between psychological contract breach and organisational citizenship behaviour among medical doctors in the Upper East and Upper West Regions of Ghana.

$H_3$ : Organisational commitment mediates the relationship between psychological contract breach and organisational citizenship behaviour among medical doctors in the Upper East and Upper West Regions of Ghana.

H<sub>04</sub>: Job involvement does not mediate the nexus between psychological contract breach and organisational citizenship behaviour among medical doctors in the Upper East and Upper West Regions of Ghana.

H<sub>4</sub>: Job involvement mediates the nexus between psychological contract breach and organisational citizenship behaviour among medical doctors in the Upper East and Upper West Regions of Ghana.

H<sub>05</sub>: Conscientiousness trait does not moderate the connection between psychological contract breach and organisational citizenship behaviour among medical doctors in the Upper East and Upper West Regions of Ghana.

H<sub>5</sub>: Conscientiousness trait moderates the connection between psychological contract breach and organisational citizenship behaviour among medical doctors in Upper East and Upper West Regions of Ghana.

H<sub>06</sub>: Agreeableness trait does not moderate the connection between psychological contract breach and organisational citizenship behaviour among medical doctors in the Upper East and Upper West Regions of Ghana.

H<sub>6</sub>: Agreeableness trait moderates the connection between psychological contract breach and organisational citizenship behaviour among medical doctors in Upper East and Upper West Regions of Ghana.

H<sub>07</sub>: Extraversion trait does not moderate the relationship between psychological contract breach and organisational citizenship behaviour among medical doctors in the Upper East and Upper West Regions of Ghana.

H<sub>7</sub>: Extraversion trait moderates the connection between psychological contract breach and organisational citizenship behaviour among medical doctors in Upper East and Upper West Regions of Ghana.

H<sub>8</sub>: Openness to experience trait does not moderate the connection between psychological contract breach and organisational citizenship behaviour among medical doctors in the Upper East and Upper West Regions of Ghana.

H<sub>8</sub>: Openness to experience trait moderates the connection between psychological contract breach and organisational citizenship behaviour among medical doctors in Upper East and Upper West Regions of Ghana.

H<sub>9</sub>: Neuroticism trait does not moderate the connection between psychological contract breach and organisational citizenship behaviour among medical doctors in the Upper East and Upper West Regions of Ghana.

H<sub>9</sub>: Neuroticism trait moderates the connection between psychological contract breach and organisational citizenship behaviour among medical doctors in Upper East and Upper West Regions of Ghana.

### Significance of the Study

This study is relevant for diverse reasons. First of all, this study extends understanding on the relationship between psychological contract breach and work-related outcomes. As healthcare professionals are constantly, whether consciously or unconsciously, calculating the amount of support they receive and give in any given work situation, a healthcare manager or employer that understands the psychological contract, from the perspective of

their employees, will have an advantage in creating a motivational work environment where their employees perceive psychological contract fulfilment.

Besides, deploying policy initiatives that strive to increase medical doctors' positive perception about their employers, such as Ghana Health Service and Ministry of Health may result in medical doctors developing favourable attitudes towards the organisation, and the positive attitudes could lead them to becoming good organisational citizens. To add, practitioners and academicians alike should note that the nature of psychological contract employed may impact upon employees' attitude to work and their tendency to be organisational citizens.

Moreover, Ghana Health Service may have to look into the personality aspect of medical doctors before recruiting and retaining them. If medical doctors are hired with certain personality traits, they may exhibit desirable good organisational citizenship, in spite of a psychological contract breach. Recruiting, retaining and promoting medical doctors with wrong personality traits during a psychological contract breach may lead to low level of job satisfaction, low commitment towards their organisation, low job involvement, and low tendency to be organisational citizens.

These negative work behaviours may cause poor service delivery: dissatisfied co-workers, patients, patients' friends and their relatives; and lead to patient's health complications. In severe cases, lives may be lost. Additionally, this study is a reminder to the Ghana Health Service and Ministry of Health in appreciating that, one of their key roles is to manage expectations, which means clarifying and communicating what they believe

medical doctors should achieve, the competencies they should possess, and the values they should uphold, particularly at the time of employment.

These expectations can be outlined in job advertisements on both print and electronic medium, such as company websites and magazines, by giving detailed information on what the employer is willing to provide, not only regarding pay or career prospects, but also support and social aspects. The managing of expectations could also be continued in the initial job interview and in periodic individual discussions concerning objectives and goals to explore the individual employer-employee expectations fit. By doing so, breaches of psychological contract may be reduced right from the start to prevent negative employee workplace behaviours. A fulfilled psychological contract is necessary for a continuing, harmonious relationship between medical doctors and their organisation.

Furthermore, this research project thickens the essence of shaping a psychological contract, especially at the recruitment and induction stage when promises and commitments are made by employers on such matters as interesting work, learning and development opportunities, unreasonable demands on employees, feedback on performance, fair treatment, work/life balance, a reasonable degree of security, and a safe working environment. In addition, by examining work attitudes in this study, different levels of work attitudes of medical doctors in the form of job satisfaction, organisational commitment and job involvement were investigated.

In addition, this study reinforces the argument that, maintaining positive psychological contracts requires an alert attitude and takes time, effort and resources. This investigation can reveal the areas that require changes in

order to promote organisational citizenship behaviour. More so, this study would be useful to researchers, government organisations, business consulting firms, and non-governmental organisations who are interested in improving the welfare of medical doctors working in stressful environments. Overall, this thesis is original, spiced with study from closely related and relevant authorities and would contribute to academic knowledge, as far as medical education is concern.

### **Delimitations**

There are several regions in Ghana. However, this study focuses on Upper East and Upper West Regions of Ghana. Furthermore, healthcare professional comprise medical doctors, midwives, nurses among others. But, this study pays particular attention to medical doctors working in diverse health facilities in the Upper East and Upper West Regions of Ghana. Variables used in the study were psychological contract breach; work attitudes: job satisfaction, organisational commitment and job involvement; organisational citizenship behaviour; and the Big Five personality factors (conscientiousness, agreeableness, openness to experience, extraversion, and neuroticism). Organisational citizenship behaviour was used as the target endogenous latent variable, while the exogenous latent variables were psychological contract breach and personality traits.

Furthermore, work attitudes: job satisfaction, organisational commitment and job involvement serve as mediators, while the Big Five personality factors functioned as moderators. As mediators, work attitudes performed two roles: They served as both exogenous latent construct to

organisational citizenship behaviour and endogenous latent construct to psychological contract breach. This study did not cover narrow individual traits, such as need for achievement, need for cognition, and internal locus of control. Additionally, this study followed the positivist philosophical paradigm, which believes in one absolute truth.

### **Limitations of the Study**

In every research, the approach employed comes with some weaknesses, which may affect the study's findings. In line with this statement, Collet-Klingenbergs and Kolb (2011) submit that a researcher must be aware of potential limitations of his/her study and honestly share them with the readers. This study employed the quantitative research approach and, thus, improper representation of the target population could affect the study's findings. The researcher addressed this limitation by ensuring that only members who fell within the required sample responded to this study. Moreover, the data collected emerged from self-reported inventories, and, thus, the honesty of the responses given in terms of indulgence in citizenship acts may be questioned. The researcher addressed this limitation by stating clearly in the questionnaire that participants should answer the questionnaire with all honesty.

Another limitation arose from the generalisation of the results to cover medical doctors in all the regions of Ghana. Therefore, the results of the study should be interpreted with caution. The generalisation of the study to cover other dynamic and stress-free environments was also limited in the sense that this study was limited to healthcare facilities. Furthermore, since data were collected at a snap-shot one point in time (cross-sectional in nature), processes

and changes that might have occurred over the period may not have been captured. In addition, data was collected from only one sector of the Ghanaian economy: the health sector.

Also, the study adopted close-ended Likert-type scale statements, which might limit the amount of information that respondents may provide with respect to the main variables of the study. Additionally, the inability to control the environment (respondents), because of the use of questionnaires, could affect the study's findings. This is because responses, generally, depend on the conditions of respondents during the time questionnaires were administered to them. As such, their responses may be influenced by their current situations, which could eventually affect the study's findings. This limitation was addressed by stating in the questionnaires that participant should be honest in their responses. Another limitation of this study was that not all work attitudes were considered in this study. Other work attitudes, such as organisational identification was ignored.

### **Definition of Terms**

This section defined and explained terms, key words and variables as used in the context of this study. Terms, key words and concepts explained under this section were medical doctor; hospital admission rate; doctor population ratio by region; psychological contract breach; work attitudes: job satisfaction, organisational commitment, job involvement; organisational citizenship behaviour; personality traits; and common method variance.

**Medical doctor:** Medical doctors are healthcare workers, who are responsible for leading the care of patients (British Medical Association, 2017).

**Hospital admission rate:** This is the average number of hospital admissions per 1,000 population (Ghana Health Service, 2018).

**Doctor population ratio by region:** This refers to the number of medical doctors per population in a region (Ghana Health Service, 2018).

**Psychological contract breach:** Psychological contract breach represents an organisation's failure to deliver on an expected obligation to an employee, which is either written or unwritten (Robinson & Rousseau, 1994). In the present study, psychological contract breach was measured with an instrument sourced from the study by Conway and Briner (2005), containing 15 items capturing areas such as pay, advancement opportunities, employee recognition, fairness in rewards, trust, management support, management involvement and influence, and resource support. The original Cronbach Alpha for the scale was 0.86.

**Work attitudes:** Work attitudes evaluate a person's job by expressing how they feel toward beliefs about and attachment to job (Opoku Mensah, 2016). Three different work attitudes were measured in this study, namely job satisfaction, organisational commitment and job involvement. Overall, work attitudes consisted of 49 items with original Cronbach Alpha of 0.83.

**Job satisfaction:** Job satisfaction is how a person feels about his/her job and different aspects of work (Spector, 1997). The current study utilised the 20-item short form of the Minnesota Satisfaction Questionnaire (MSQ) by University of Minnesota (1977) to measure job satisfaction among medical doctors. The original Cronbach's Alpha for the scale is 0.98. Sample item was: 'I have the chance to do something that makes use of my abilities' (JST11).

**Organisational commitment:** Organisational commitment is a strong desire to remain a member of a particular organisation, the desire to strive at what organisation desire and certain beliefs and acceptance of value and purpose of the organisation (Akbar et al., 2018). This study employed Meyer and Allan's (1997) 19-item scale to measure organisational commitment among medical doctors, since it has been most frequently used by earlier researchers (Akbar et al., 2018; Ayoade, Ogunnaike & Omotayo, 2018; Clarke & Mahadi, 2017; Leephajaroen, 2016; Opoku Mensah, 2016; Yildiz, 2018). The original Cronbach Alpha for the main scale was 0.66.

**Job involvement:** Job involvement is the psychological importance that people have for their job. A highly involved person is expected to devote more time and energy to his/her work (Opoku Mensah, 2016). This study utilised a 10-item scale developed by Kanungo (1982) to measure job involvement. The original Cronbach Alpha for the scale was 0.86.

**Organisational citizenship behaviour:** Organisational citizenship behaviour is a voluntary behaviour that is not explicitly recognised by formal reward

systems and, in sum, enhances the efficient and effective functioning of organisations (Organ, 2018). This study employed the Organisational Citizenship Behaviour Scale by Lee and Allen (2002), which has been utilised by Patki and Abhyankar (2016). The original Cronbach Alpha for the main scale was 0.86. The scale contains 16 items.

**Personality traits:** Personality traits are the structures and propensities inside a person that explain his or her characteristic patterns of thought, emotion and behaviour (Colquitt, Le-Pine & Wesson, 2009). The 20-item Mini-IPIP scales of the Big Five personality factors developed by Donnellan, Oswald, Baird and Lucas (2006) was adapted for this study. Four items measured each of the Big Five factors of personality. The Big Five factors were conscientiousness, agreeableness, extraversion, openness to experience, and neuroticism. The original Cronbach Alpha for the composite variable of personality traits was 0.88.

**Common method variance:** The term common method variance or bias refers to variance that is attributable to the measurement method rather than to the constructs the measures represent (Nougarou, 2017). Because this study used self-reported methods, there was a risk that common method bias could present problems. Therefore, the research instrument: questionnaire was structured in a way to cater for common method variance, using the recommendations made by Podsakoff, MacKenzie, Lee and Podsakoff (2003).

## Organisation of the Study

The study was structured into five chapters. Chapter One covered the introduction, which contained an untitled introduction, background to the study, statement of the problem, purpose of the study, research objectives, research questions, hypotheses, significance of the study, delimitations, limitations, definition of terms, organisation of the study, and chapter summary. Chapter Two looked at the literature review, involving the theoretical review, conceptual issues, empirical review, conceptual framework of the study, and lessons learnt from the literature review. Research methods were covered in Chapter Three. Chapter Four was devoted to the results and discussion. Last, but not least, summary, conclusions and recommendations were described in Chapter Five.

## Chapter Summary

The chapter began with an untitled and short introduction that presented the problem under study, why the problem was important, how the study related to previous work, and the theoretical implications of the study. The chapter followed with a background to the study, where the writer showed the relevance of the study by citing the findings of prior studies. The chapter continued with the statement of the problem and identified gaps in existing literature. Subsequently, the purpose of the study was declared, and nine research objectives were set to give the study direction. Based on the stated research objectives, research questions, hypotheses were formulated. The significance of the study was later presented, followed by delimitations, limitations, definition of terms, and organisation of the study.

## CHAPTER TWO

### LITERATURE REVIEW

#### Introduction

This study sought to assess the mediating role of work attitudes and moderating role of personality traits in the relationship between psychological contract breach and organisational citizenship behaviour among medical doctors in Ghana. This chapter covers the literature review of this study. Literature review is an activity, in which the knowledge base is engaged to inform another study. The chronological approach, where earlier studies come first, is utilised. The literature review is embodied by theoretical review, conceptual issues, empirical review, conceptual framework of the study, and lessons learnt from the literature review. It ends with a chapter summary.

#### Theoretical Review

The theoretical review section of the literature review looks at the underpinning theories, in which the study dwells. A theory is an organised set of ideas, which seeks to explain a particular phenomenon. The three theories that are used to reinforce this study are the Social Exchange Theory (Blau, 1964), Affective Events Theory (Weiss & Cropanzano, 1996), and the Five Factor Theory of Personality (Goldberg, 1992). Under the social exchange theory, the writer explains the fundamentals of social exchange theory, key conditions of a social exchange, propositions of the social exchange theory (Blau, 1964), the social norm of reciprocity, differences between economic and social exchange, negotiated versus reciprocal exchanges, social exchange theory (Blau, 1964) in the context of employer-employee relations, strength of

the social exchange theory (Blau, 1964), boundaries and limitations of the social exchange theory(Blau, 1964), how the social exchange theory is related to this study (Blau, 1964), and psychological contract theory (Peng et al., 2016). Subsequently, the affective events theory (Weiss & Cropanzano, 1996) and the Five Factor theory of personality (Goldberg, 1992) were expounded.

### Fundamentals of social exchange theory

The social exchange theory, which is credited to Blau (1964), is based on the pivotal presumption that the exchange of social and material resources is a fundamental form of human interaction. A resource is anything that can be transmitted through interpersonal behaviour, including commodities, material or symbolic behaviour. The interaction between the parties tends to create a form of relationship between them and this relationship continues or terminates based on prior history of the relationship. Expressed another way, the human interactions are shaped by reciprocal exchange of rewards.

### Key conditions of a social exchange

Blau (1968) highlights four key tenets in a social exchange, namely (1) social actors engage in activities as a means of obtaining desired goals; (2) all social activities entail some cost to the actor-time, resources, and energy; (3) actors engage in recurring exchanges with specific partners overtime; (4) social actors seek to economise their activities as much as possible, by keeping cost below rewards. Rewards are positive reinforcement, including pleasures, gratifications and satisfactions. Some form of social rewards is personal attraction, social acceptance/recognition, compliance/power, social approval,

instrumental services and respect/prestige. Costs, on the other hand, are punishments or lost rewards. They come in the form of investment, direct costs, and opportunity. Investment is the time and effort devoted to developing skills, which will be used to reward others. Direct costs are resources given to another in exchange for something else. Opportunity is the loss of rewards, which would have been available elsewhere.

### Propositions of the social exchange theory

The social exchange theory is based on the premise that, (1) the desire for social rewards leads individuals to enter into exchange relationships with one another; (2) reciprocal social exchange creates trust and social bonds between individuals; (3) unilateral services create power and status differences; (4) power differences make organisations possible, (5) the fair exercise of power evokes social approval and the unfair exercise of power evokes social disapproval; (6) if subordinates collectively agree that their superior exercises power generously, they will legitimate his power; (7) legitimate power is required for stable organisation; and (8) if subordinates collectively experience unfair exercise of power, an opposition movement will develop (Blau, 1968).

### The social norm of reciprocity

The social norm of reciprocity expects that people will respond to each other in similar ways. On one hand, responding to gifts and kindness from others with similar benevolence on their own. This assertion is expressed in the popular quotation: ‘you scratch my back, I scratch yours’. On another

hand, responding to harmful, hurtful acts from others with either indifference or some form of retaliation (eye for eye, tooth for tooth...). Gouldner (1960) stipulates that, once reciprocity has been established as a norm governing the relationship between two individuals, it requires the individuals to abide by two key principles: First, individuals must assist those who have previously given them assistance. Second, individuals should not do anything that might harm those who have previously given them assistance.

Putnam, Leonardi and Nanetti (1994) distinguish between balanced or specific and generalised or diffuse reciprocity. Balanced reciprocity refers to a simultaneous exchange of items of equivalent value, for instance, when office-mates exchange holiday gifts. Generalised reciprocity refers to a continuing relationship of exchange that is at any given time unrequited or imbalanced, but that involves mutual expectations that a benefit granted now should be repaid in the future. Friendship, for example, almost always involves generalised reciprocity.

### Differences between economic and social exchange

Blau (1964) provides a distinction between economic and social exchange. The author argues, unlike an economic exchange, which involves quantifiable material goods, social exchange is based on intangible goods that are not quantifiable. For instance, advice, support, positive attitudes, signs of recognition, mutual aid and empathy all play a part in structuring social exchanges between individuals. In order for an exchange to produce the anticipated outcome in terms of durability and relational quality, the goods involved in the exchange must have a value. The individuals involved in the

exchange are committed to pursuing the exchange if, in return for what they have given, they receive goods that have an estimated or perceived value equivalent to the goods they have previously given, even if the return is deferred over time. The maintenance of the relationship in the long term is heavily dependent on the sense of trust established between the two individuals.

Furthermore, the differences between social and economic exchanges stem from the content of the exchange transaction and from the conceptual units of analysis employed. Social exchanges can be purely social or a combination of social and economic exchanges. In contrast to pure economic exchanges, the benefits from social exchange often are not formal and legally binding explicitly, and the exchange is voluntary. Therefore, social exchange theory emphasizes on the social relations and personal ties among the actors that shape the exchange of resources and benefits. Personal ties are the bonds that result from successful, mutually rewarding interactions over time. They are founded upon trust, reciprocation and reward (Barić, 2016). In contrast to social exchanges, which take place within a social system, economic exchanges take place in the market. Such transactions imply the allocation of resources with disregard to personal ties, in favour of an immediate maximisation principle of profit making (Blau, 1964).

Blau (1964) adds that economic exchange relationships are shorter term, quid pro quo, and involve weaker interpersonal attachments. Social exchange relationships are longer term, more open ended, and associated with stronger interpersonal attachments. Compared with those in economic exchange relationships, individuals engaged in quality social exchanges

demand less immediate payback and are more generous. Given this distinction and patterns of reciprocity, individuals who develop mutual and beneficial exchanges over time often move from economic exchange to social exchange, as reciprocal, mutual patterns stimulate trust, loyalty, and commitment among the parties.

### Negotiated versus reciprocal exchanges

Building from Blau (1964), Molm and colleagues (Molm, 2003; Molm, Schaefer & Collett, 2009) suggested there are two forms of exchange relationships: negotiated and reciprocal relations. As their names suggest, these two types of relationships come about in different ways. Negotiated exchange relations are based on bargained and binding arrangements, wherein both parties agree upon the terms of a discrete, bilateral transaction (Molm, 2003). Reciprocal exchanges, in contrast, are non-negotiated and are engaged in voluntarily without specific assigned arrangements in terms of what is exchanged or the time, by which the exchange should be transacted. Reciprocal relationships tend to result from a successful series of interactions between two parties.

Consistent with Blau's (1964) arguments, Molm et al. (2009) have found that the dynamics of each type of relationship differs. Their research shows that reciprocal exchanges produce lower levels of power use and inequality, stronger engendered trust and affective commitment among the parties involved, and stronger perceptions of fairness. In essence, their research shows that reciprocal exchanges involve a willingness to be vulnerable to another for future obligations, termed as trust, which promotes

an overall level of commitment. Negotiated exchanges highlight assurances or expectations of incentives based on stated agreements and, therefore, an assessment of risk, which is interpreted as trust, is unnecessary. Like Blau's (1964) theorising, their work suggest that beneficial negotiated exchanges may evolve into reciprocal exchanges if partners display trustworthy characteristics.

### Social exchange theory in the context of employer-employee relations

Adams (1965) suggested that people make calculations about the resources they give to and receive from the exchange partner, and compare their treatment to referent others to gauge whether the social exchange is mutual or equitable. If calculations suggest that more is given than received, individuals become motivated to balance the exchange and restore equity perceptions. Fiske (1991) argues that subordinates feel they deserve to be in lower positions and subsequently pay homage, are loyal, and are deferential to the authority figures. In return, subordinates are entitled to receive aid, protection, and support from their leaders or employers. Research suggests that once social exchange relationships are created, workers not only reciprocate via work performance and positive attitudes, but also engage in beneficial activities that go beyond their formal job duties in order to benefit their employers (Sluss, Klimchak & Holmes, 2008).

According to Aselage and Eisenberger (2003), the exchange or reciprocation, in social relationships becomes stronger when both partners are willing to provide resources valuable to the other. Whereas employees value beneficial treatment, employers seek loyalty and dedication (Coyle-Shapiro &

Shore, 2007). But, which of the two parties starts first? Narwin (2016) argue that organisation/employers are the initiators. Positive actions directed at employees by the organisation/employer are argued to contribute to the establishment of high-quality exchange relationships (Wayne, Shore & Liden, 1997).

Empirical evidence supports this sequential order of reciprocation. Most notably, these exchanges have been used to explain the positive consequences that arise when employees respond to perceived psychological contract fulfilment. For instance, Moore (2014) found that psychological contract fulfilment positively related to employee engagement and can predict 49.9% of the variance in employee engagement. A longitudinal study by Jabeen, Behery and Elanain (2015) discovered that psychological contract fulfilment was positively related to organisational commitment. Odhiambo (2015) showed that an improvement in the psychological contract fulfilment by the school (employer) would directly improve job satisfaction among the teachers (employees). Maia and Bastos (2015) performed a longitudinal quasi-qualitative study and disclosed that psychological contract fulfilment was positively related to affective organisational commitment.

### **Strength of the social exchange theory**

Narwin (2016) highlights that the major strength of the social exchange theory lie within its reciprocator values. Reciprocator values interact with human being considering the assumption that human interaction with each other in full recognition will be noticed and reciprocated accordingly. It creates a positive feeling among the individuals, which are internally

rewarding. Bridging this multilevel phase is considered as strength of social exchange theory.

### **Boundaries and limitations of the social exchange theory**

Blau (1964) points out that the norm of reciprocity cannot apply with full force in relations with children, old people or with those who are mentally or physically handicapped. Besides, the norm of reciprocity functions differently in some degree in different cultures (friendship, kinship, and neighbourly relations). Emerson (1976) defined social exchange theory as a collection of different theories. The author argues that, social exchange theory is not a theory; it is rather a frame of references where many theories come to speak together, whether in argument or mutual support. From the perspective of Cropanzano and Mitchell (2005), the social exchange lacks sufficient theoretical precision, and, thus, has limited utility.

Moreover, in the opinion of Mitchell, Cropanzano and Quisenberry (2012), the social exchange theory is a bit misleading, as social exchange does not involve a solitary conceptual model, but rather refers to a family of related theoretical frameworks. While social exchange theorists agree on the reciprocal nature of social exchange patterns, not all models explicate the same principles about resources or how they are perceived. Traditional models of exchange suggest that resources are objects to be exchanged (Adams, 1965; Gergen, 1980; Homans, 1961, 1974; Thibault & Kelley, 1959). Parties within the exchange are said to be driven primarily by individual self-interest, maintaining calculations on what was received versus what is to be given in return.

By and large, this view of exchange has been criticised partially because it ignores the importance of interpersonal interactions (Cropanzano & Rupp, 2008), and because these models assume a universal self-interest (Cropanzano, Stein & Goldman, 2007). In Lawler, Thye and Yoon's (2008) view, the social exchange theory focuses on self-interest. The authors stated that the social exchange relationship is developed only to the degree that the incentives to exchange, preferences of actors and structures of opportunity are stable, which is not similar to collectivist approach. They add that the social exchange theory holds that its ultimate goal of relationship is intimacy when this might not always be the case. Moreover, the theory mostly deals with reward system from an organisation perspective. But, it is not viable to consider in different culture.

Narwin (2016) shares in the view of Lawler et al. (2008) that the social exchange theory appears as more on an individualistic approach. Cropanzano et al. (2017) suggests that social exchange theory's theoretical utility is challenged by at least three major issues, all of which play into a fourth. First, there are many similar and overlapping constructs used to operationalize initiating actions and target responses. Second, there is insufficient appreciation of the extent to which some of the constructs frequently employed in social exchange research are hedonically positive (e.g. supervisor support, helping), while others are hedonically negative (e.g., abusive supervision, incivility). Third, social exchange theory fails to completely articulate the distinction between behavioural action and inaction.

More clearly, Cropanzano et al. (2017) argues that social exchange theory inherently assumes the absence of something that is hedonically

positive (justice, trust) is effectively the same as the presence of something that is hedonically negative (injustice, distrust). However, Cropanzano et al. (2017) argues that this assumption is not necessarily true. Fourth, as a consequence of the prior three concerns, another critical issue emerges. The behavioural predictions offered by social exchange theory have become too general and imprecise.

In response to some of the criticisms of the social exchange theory, contemporary theorists have incorporated interpersonal relationships into their exchange theories (Mills & Clark, 1982; Organ, 1988, 1990). Some of these newer models allow the possibility for individuals to fulfil their obligations toward others even when it is not necessarily in their personal interest to do so (Fiske, 1991). For example, Korsgaard, Meglino, Lester and Jeong (2010) find that citizenship behaviour is not always driven by self-interest and, instead, can be motivated by aspirations to help others. Likewise, Thau and Mitchell (2010) reveal that retaliation is not always motivated by self-gain.

Francisco (2015) adds that leader-member exchange influenced the effect of psychological contract breach on faculty employees' tendency to decrease or increase organisational citizenship behaviour. Patki and Abhyankar (2016) show that agreeableness, which involves being caring, helpful and accommodating positively correlated with both organisational citizenship behaviour towards the individual and organisational citizenship behaviour towards the organisation. A similar finding is uncovered by Leephaijaroen (2016). Heffernan and Rochford (2017) discover that social networks moderate the relationship between psychological contract breach and turnover intentions through social status and strong connectedness. Organ

(2018) updates that organisational citizenship behaviour result from dispositional traits, such as an individual's disposition to be helpful or caring.

### **How the social exchange theory is related to this study**

The social exchange theory explains how we give meaning to, explain or understand the results of research (Howell, 2013). It is a standardised principle, on which basis we can explain the relationship between two or more concepts and variables (Rahi, 2017). The Social Exchange theory has been one of the most applied conceptual paradigms for understanding workplace behaviour (Cropanzano & Mitchell, 2005). Blau (1964) views social exchange as the reward activity related to others' reactions. Social exchange involves the idea that, favours are done with an assumption that later returns will occur (Abdullah, 2018).

It serves to establish reciprocal obligations from the employee to the employer. The theory argues that, if the organisation helps the employee out, the employee is more likely to do something in return for the organisation. On the other hand, if the employee feels the organisation has not done anything for him/her, the employee will be less likely to engage in any positive workplace behaviour (Golden & Veiga, 2018). In essence, the social exchange theory suggests that when an individual enters into an employment relationship, he/she does not only consider the economic benefits (for instance, pay), but also, the socio-economic benefits such as self-esteem, fairness and care (Malik & Khalid, 2016). This statement suggests that psychological contract breach can occur even when employees' economic contracts are fulfilled (Gallani, Krishnan, Marinich & Shields, 2019).

Work attitudes, such as job satisfaction, employees' organisational commitment and job involvement can become negative in response to unfavourable treatment in a psychological contract (Ko & Hur, 2014). Moreover, when there is a breach of a psychological contract on the part of the employer, employees may fail to become good organisational citizens (Ko & Hur, 2014). As a consequence, the social exchange theory is utilised in explaining the possible negative relationship between psychological contract breach and organisational citizenship behaviour.

### **Psychological contract theory**

Another theory that has evolved from Social Exchange Theory is the psychological contract theory. Psychological contract theory advocates that employee perceptions of their contract are attributed to many factors, including the personality traits of employees (Peng et al., 2016). Because psychological contracts represent how people interpret promises and commitments, employees working in the same organisation can have different views, regarding specific terms (Rousseau & Wade-Benzoni, 1994). These contracts are subjective, largely because of differences in cognitive ability among individuals (Shore & Tetrick, 1994). After describing the psychological contract theory, the next section followed with an explanation of the affective events theory, which was employed to clarify the mediating role of three work attitudes, namely job satisfaction, employees' organisational commitment and job involvement in the association between psychological contract breach and organisational citizenship behaviour.

### Affective events theory

Scholars, such as Weiss and Cropanzano (1996), Zhao et al. (2007), and Bal et al. (2012) have used the affective events theory to elucidate that perceptions of psychological contract breaches are profoundly related to work outcomes. In the view of Weiss and Cropanzano (1996), the affective events theory assumes that events at the workplace often evoke emotional reactions among employees. It is through these affective experiences that employees' attitudes and behaviours are influenced. Thus, a negative event at the workplace triggers the cognitive evaluations of one's job, in such a way that experience of negative events will cause a more negative view of the job and, consequently, lower the desire to put effort into the job (Thoresen, Kaplan, Barsky, Warren & de Chermont, 2003).

Zhao et al. (2007) argued that psychological contract breaches, in particular, are perceived as negative emotional events. In their opinion, psychological contract breaches are negative work events where an employee perceives that organisational obligations are not kept, and, thus, is inherently related to affective reactions, which, in turn, contribute to the establishment of unfavourable work attitudes and low desire to putting more efforts into one's job. In line with the proclamations of Zhao et al. (2007), Bal et al. (2012) used the affective events theory to investigate the mediating role of job satisfaction in the longitudinal relationship between psychological contract breach and changes with job performance over time, drawing sample from 240 employees from a multinational risk management organisation in the Netherlands.

In this study, the analyst focuses on the effects of medical doctors' psychological contract breach on three dimensions of work-related attitudes,

namely job satisfaction, employees' commitment to their health facility, and job involvement, as well as their subsequent impact on medical doctors' tendency to be good or bad organisational citizens. Job satisfaction, employees' organisational commitment and job involvement are the three most central constructs in organisational behaviour and psychology (Opoku Mensah, 2016) and are critically important for employees' tendency to be organisational citizens (Abdullah, 2018; Akinbobola & Zamani, 2018; Leephaijaroen, 2016).

In line with the affective events theory, the writer of this thesis anticipates that the negative events (psychological contract breaches) would influence medical doctors' state of mind, and subsequently lead them to show unfavourable work attitudes (low job satisfaction, commitment and involvement), as well as low tendency to indulge in extra role behaviours (low organisational citizenship behaviour). As a consequence, affective events theory is employed in this study to elucidate the possible mediating effect of work attitudes, namely job satisfaction, organisational commitment and involvement in the nexus between psychological contract breach and organisational citizenship behaviour.

Simply, the analyst expects psychological contract breach to be negatively related to organisational citizenship behaviour among medical doctors, and this negative relationship is expected to be mediated by job satisfaction, medical doctors' commitment to their health facilities, and job involvement. The next section reviews the five factor theory of personality, which aids in explaining the moderating role of the Big-Five personality factors.

## Five Factor theory of personality

The Five Factor Theory of Personality, credited to Goldberg (1992), holds that individuals who display high scores on Openness to experience, Conscientiousness, Extraversion, Agreeableness, and low score on Neuroticism (also called emotional instability) are likely to be satisfied with their job (Seddigh, Berntson, Platts & Westerlund., 2016), demonstrate better organisational commitment (Yildiz, 2018), are more involved in their work (Chuang, 2010), and are likely to be good organisational citizens (Abdullah, 2018).

Conscientious people are prepared, cautious and disciplined. Extraverts are outgoing, social, energetic, enthusiastic, assertive, talkative, ambitious, and fun-loving. People who are opened to experience are imaginative, independent and interested in variety. Agreeable people are helpful, co-operative and trusting. Finally, neurotic persons are anxious, emotionally unstable and self-blaming (Goldberg, 1992). Upon describing the two main theories used in the study, the subsequent section explains the concepts and variables emanating from this study.

In a nut shell, in this study, the social exchange theory is utilised in explaining the possible negative relationship between psychological contract breach and organisational citizenship behaviour. The affective effects theory is employed in clarifying the likely mediating role of job satisfaction, medical doctors' organisational commitment, and job involvement in the possible negative relationship between psychological contract breach and organisational citizenship behaviour. Finally, the Five Factor theory of personality and the psychological contract theory are joined to expound the

moderating role of each of the Big-Five personality dimensions (conscientiousness, extraversion, agreeableness, openness to experience, and neuroticism) on the proposed negative relationship between psychological contract breach and organisational citizenship behaviour.

## **Conceptual Issues**

The conceptual issues section of the literature review explains the various concepts and variables relevant to this study. They are psychological contract, psychological contract breach, personality, personality traits, personality traits versus psychological contract breach and its consequences, job satisfaction, organisational commitment, organisational citizenship behaviour, as well as the linkages between demographic variables and key concepts used in the study.

### **Psychological contract**

To understand the employment relation between an employee and his/her organisation, Rousseau (1995) developed the concept of the psychological contract. The psychological contract is defined as the employee's beliefs regarding mutual obligations between the employee and the organisation (Conway & Briner, 2005; Rousseau, 1995). Psychological contracts differ from legal contracts such that psychological contracts are subjective in nature and exist in the eye of the beholder (Suazo, Martínez & Sandoval, 2009).

In support of the explanation by Suazo et al. (2009), Huy and Takahashi's (2018) add that the notion of a psychological contract implies that

there is a set of expectations operating at all times between every member of an organisation and the various managers and others in that organisation, and these expectations may be interpreted differently by parties (employer and employee) in the same employment relationship, regarding specific terms (Rousseau & Wade-Benzoni, 1994). These expectations are often implicit – they are not defined in the employment contract. As argued by scholars (Skinner, 1974; Vroom, 1964), though employees behave in ways they expect will produce positive outcome, they do not necessarily know what to expect both from employers and from the ever-changing environment.

The ideal contract of employment would detail expectations of both employee and employer. Typical contracts, however, are incomplete due to bounded rationality, which limits individual information seeking, and to a changing organisational environment that makes it impossible to specify all conditions up front. Both the employee and employer are left to fill up the blanks (Rousseau & Geller, 1994). It is somewhat blurred at the edges. It is also dynamic – it develops over time as experience accumulates, employment conditions change and employees re-evaluate their expectations (Guest & Conway, 1997).

As described by Guest et al. (1996), the psychological contract may provide some indication of the answers to the two fundamental employment relationship questions that individuals pose: ‘What can I reasonably expect from the organisation?’ and ‘what should I reasonably be expected to contribute in return?’ Employees may expect to be treated fairly as humans, to be provided with work that uses their abilities, to be rewarded equitably in accordance with their contribution, to be able to display competence, to have

opportunities for further growth, to know what is expected of them, to be given feedback (preferably positive) on how they are doing, to be involved in decision making, and to trust in the management of the organisation to keep their promises (Guest et al., 1996).

In line with the expectations of employees, a study by Smith, Walker and Kemmis (2011) reveals that the provision of training is seen as the most important obligation of employers. Employers may expect employees to do their best on behalf of the organisation – ‘to put themselves out for the company’ – to be fully committed to its values, to be compliant and loyal, and to enhance the image of the organisation with its customers and suppliers (Rousseau & Geller, 1994). Smith et al. (2011) revealed that serious attention to learning on the job was the top-most priority that employers expect from their employees, followed by attendance and punctuality.

Dantas and Ferreira (2015) discovered that healthcare professionals are willing to offer their employers with loyalty and a performance of excellence among others. In return for this, what they expect to receive from their employers included, but not limited to professional recognition, career progression and fair compensation. Yarbrough (2018) augments that employees are constantly, whether consciously or unconsciously, calculating the amount of support they receive and give in any given work situation.

It is unlikely that the psychological contract and, therefore, the employment relationship will ever be fully understood by either party. Sometimes, these assumptions are justified: often, they are not. Mutual misunderstandings can cause friction and stress and lead to recriminations and poor performance, or to a termination of the employment relationship.

(Rousseau & Geller, 1994). Disappointments on the part of management, as well as employees may, therefore, be inevitable. These disappointments can, however, be alleviated if management appreciate that one of their key roles is to manage expectations, which means clarifying what they believe employees should achieve, the competences they should possess and the values they should uphold.

The issue is not a matter of just articulating and stipulating these requirements, but of discussing and agreeing them with individuals and teams (Sim, 1994). As such, the management of psychological contract is a core task of management (Guest & Conway, 2002). A psychological contract creates emotions and attitudes that form and control behaviour (Spindler, 1994). It can be balanced, fulfilled or breached. A psychological contract is said to be balanced if the degree to which people's expectations of what the organisation will provide to them and what they owe the organisation in return matches the organisation's expectations of what it will give and get in return (Huy & Takahashi, 2018). A balanced psychological contract is necessary for a continuing, harmonious relationship between the employee and the organisation. A quantitative study by Zupan, Mihelič and Aleksić (2018) finds that employees in Central and Eastern Europe and East Asia prefer balanced types of anticipatory psychological contract for both employee and employer obligations.

Psychological contract fulfilment represents the degree to which a company meets its obligations to an employee, from the employee's vantage, and it serves to build upon the social exchange element, resulting in positive employee behaviours (Karagonlar et al., 2016). When a psychological contract

is fulfilled, employees become satisfied with their job, and they demonstrate high level of organisational committed and job involvement. In other words, employees will behave favourably within firms when they perceive the organisation as having their best interests at heart, that is, safe working environment, focused training, career development plans and new learning opportunities (Fallon & Rice, 2015). In addition, psychological contract fulfilment reinforces the benefits of pursuing a set of progressive human resource management practices. A research by Conway and Coyle-Shapiro (2012) suggests that 90% of human resource managers in United Kingdom say the concept is useful and 36% say they use it to manage people. Hence, a positive psychological contract is worth taking seriously (Guest et al., 1996).

### Psychological contract breach

The inverse of psychological contract fulfilment has been identified as psychological contract breach. Psychological contract breach represents an organisational failure to deliver on an expected obligation, whether written or unwritten (Robinson & Rousseau, 1994). A study by Bunderson (2001) argues that the psychological contract between a professional and his/her employing organisation is shaped by both professional and administrative work beliefs and, therefore, involves both professional and administrative roles and perceived role obligations.

Bal et al. (2012) proposed three main types of contract breach. According to them, economic breach refers to breach of those employer obligations that embody short-term specific monetary inducements, which are primarily materialistic in nature (Raja, Johns & Ntalianis, 2004). Socio-

emotional breach concerns breach of obligations of long-term exchanges that maintain the employee–employer relationship and are less specific in nature than breach of economic obligations, for instance, participation in decision making and interesting work (Zhao et al., 2007). Lastly, developmental breach consists of employee training and developmental opportunities (Maurer, Weiss & Barbeite, 2003).

Breach in a contract undermines the trust an individual has in that employing organisation (Ruben, 2012). For instance, an organisation staffed by ‘cheated’ individuals, who expect more than they get is heading for trouble (Spindler, 1994). Breach of a psychological contract may result from unsatisfactory human resource practices, lack of support from line managers, additional demands, and previous history of breach (Conway & Coyle-Shapiro, 2012).

A breach of psychological contract, according to Griep et al. (2018), creates negative emotions (anger, betrayal, madness), relationship suffers (loss of trust and respect, reduces commitment), reduces employee well-being (lower job satisfaction), and withdrawal of behaviour (less willing to work hard, to share ideas, to be a good workplace citizen). Yarbrough (2018) adds that if the employee senses that there is a break in the psychological contract with his/her company, the company’s goals are no longer the employee’s goals. In effect, the relationship between the employee and their manager/organisation will be diminished, leading to reduced productivity and retention (Sekyi, Asiedu & Oppong, 2020), resulting from psychological contract violation.

A psychological contract violation is an emotionally charged feeling of anger or frustration due to the betrayal created by a breach of a psychological contract (Robinson & Morrison, 2000). Transactional violation reflects the employees' belief that the organisation is not meeting their economic and material interests. Relational violation reflects the belief that the organisation fails to provide employees with a long-term, stable future relationship and promote the common development of both sides. Perceptions of both violations cause employees to experience disappointment, resentment, and to recognise unfairness and inequality (Morrison & Robinson, 1997).

On the basis of their research, Guest and Conway (2002) emphasize the importance of communication in shaping the psychological contract, especially at the recruitment and induction stage when promises and commitments are made by employers on such matters as interesting work, learning and development opportunities, not to make unreasonable demands on employees, feedback on performance, fair treatment, work/life balance, a reasonable degree of security and a safe working environment. They also stressed that a positive psychological contract can only be achieved if management keeps its word – if it does not breach the contract.

The nature of the psychological contract is changing in many organisations in response to changes in their external and internal environments. Over the years, the nature of psychological contract has changed from an imposed relationship (compliance, command and control), permanent employment relationship, finite duties, meeting job requirements; to mutual relationship (commitment, participation and involvement), variable employment relationship (people and skills only obtained and retained when

required), multiple roles, and add value (Hiltrop, 1995). A breach in a psychological contract, according to Conway and Briner (2005), could result from unmet expectations by the employer to the employee in the form of a) pay, (b) advancement opportunities, (c) employee recognition, (d) fairness in rewards, (e) trust, (f) management support, (g) management involvement and influence, and (h) resource support.

Empirically, Agarwal and Bhargava (2013) showed that Indian managerial employees have a strong perception that their psychological contract has been breached. Similarly, Odhiambo (2015) revealed low level of psychological contract fulfilment among 180 public secondary school teachers in Kenya. Dantas and Ferreira (2015) revealed that employers had violated the psychological contract of nurses belonging to the Local Healthcare Unit in Portugal. Likewise, Hornuovo (2016) showed that psychological contract violation was moderate among 424 health workers in selected health facilities in the Ashanti Region of Ghana.

Christy and Duraisamy (2016) revealed medium level of psychological contract breach among the IT professionals in Chennai in India. Contrary to the earlier studies above, Sarikaya and Kok (2017) discovered low level of psychological contract breach among 93 research assistants of Pamukkale University in Turkey after conducting a survey. Parallel to Christy and Duraisamy's (2016) study, Zupan et al. (2018), in their quantitative research, found potential psychological contract breach situations for a Slovenian sample of 180 students. The next section explains the meaning of personality.

## Personality

Personality, as a word, is derived from the Greek word persona, which represent masks used by artists that show the pretence of appearance. It is about possession of traits with respect to masks, distinguished from the individual's traits behind the mask (Mavale & Narkhede, 2017). Varied definitions have been given by earlier researchers on the concept of personality. Kreitner (2010) defines personality as a combination of the stable, physical and mental characteristics that gives the individual his or her identity. These characteristics include generic and environmental influences. This definition indicates that personality is branded as 1) stable, 2) physical and mental characteristics, 3) influences the individual's behaviour, and 4) formed through generic and environmental factors.

In the view of Gibson, Ivancevich, Donnelly and Konopaske (2012), an individual's personality is a relatively stable set of characteristics, tendencies, and temperaments that have been formed by inheritance and by social, cultural, and environmental factors. The set of variables determines the commonalities and differences in the behaviour of individuals. The definition by Gibson et al. (2012) explains that personality has three elements: 1) the nature/character of a person is relatively stretched, 2) formed by environmental, social, cultural and genetic factors, and 3) influence the behaviour of individuals. Gibson et al.'s (2012) definition is more detailed than that of Kreitner (2010), as it includes two additional factors that could form personality: social and cultural dimensions.

Golpayegan (2017) defined personality as the combination of constant mental and physical features, which gives identity to the individuals. Abdullah

(2018) enlightens that personality is the nature and character of a relatively stable individual as a result of the interaction of heredity with the environment, which is manifested in the way of thinking, acting, and behaviour towards indicators: sincerity in achievement of work performance, proactive in the association with work environment, maintaining the trust given to him, being calm in the face of job constraints, and the willingness to learn. The definition by Abdullah captures only a few areas branded as 1) a set of stable characteristics, 2) inherited from the environment, and 3) influence the behaviour of individuals. After exploring the definition of personality, the next section provides understanding on the concept of personality traits.

### Personality traits

Personality traits are the structures and propensities inside a person that explains his or her characteristic patterns of thought, emotion and behaviour (Colquitt et al., 2009). Researchers have considered personality traits differently. Allport (1966) described different trait like central, secondary, common and cardinal traits, while Cattell's (1966) research explored 16 primary and five secondary factors and Eysenck and Eysenck (1978) expressed that only three traits of extraversion, neuroticism and psychoticism are enough to explain the personality of individuals. Yet, till date, the Big Five of Goldberg (1992) is mostly accepted for the personality trait constructs, which contain five core dimensions of personality.

The Big Five personality dimensions are firstly, Openness to experience, which is the inclination to be imaginative, independent, and interested in variety. Secondly, Conscientiousness is the affinity to be

prepared, cautious, and disciplined. Thirdly, the propensity to be gregarious, fun-loving, and warm is known as Extraversion. Fourthly, the tendency to be sympathetic, trusting, and supportive is termed as Agreeableness. Lastly, Neuroticism (or emotional instability) is the tendency to be anxious, emotionally unstable, and self-blaming (Goldberg, 1992; McCrae & Costa 2010). In what follows, each of the Big Five personality dimensions is discussed in detail. The discussion begins with Openness to experience.

### *Openness to experience*

People possessing this particular trait tends to be highly spatial, imaginative and creative (Howard & Howard, 1995) in their intellect. These people are sensitive to their inner thoughts and have the capability to analyse matters differently (Cattell & Mead, 2008). They are curious to know hidden things (intellectually curious) and to be deductive from different angles (Mount, Murray & Steve, 2005). Average people are on average scale on this particular trait (McCrae et al., 2000). Openness to experience is a personality dimension that characterizes someone who tends to seek new experiences and explore novel ideas. Someone high on Openness can be described as creative, innovative, imaginative, reflective, and untraditional. They are interested in re-examining established ideas (Cattel & Mead, 2008).

People who score low on openness to experience tend to be more conventional (Burch & Neil, 2008) in their problem solving approach, narrow in interests, unanalytical, and do not try to be explorative in finding new ways to solve a particular problem (Saucier, Hampson, Goldberg & Hampson, 2000). They tend to dislike variety and change and rather love to stick to their

old rigid routines (Goldberg, 1992). Openness to experience is positively correlated with intelligence, especially aspects of intelligence related to creativity, such as divergent thinking (McCrae & Costa, 1987). The next section talks about the Conscientiousness trait.

### ***Conscientiousness***

Conscientiousness trait holders tend to be very careful about their future planning (Burch & Neil, 2008); they are cautious about their surroundings, compact and fully scheduled (Cattell & Mead, 2008). They tend to be managed, prefer to be predictable and try to be risk free. They have propensity to work in such a way that have no flaw, where everything get done rightly and chaos can give them mental stress (McCrae et al., 2000). They try to be neat, clean and would like everything to be placed rightly (Saucier et al., 2000). Conscientiousness indicates an individual's degree of organisation, persistence, hard work, and motivation in the pursuit of goal accomplishment.

Some researchers have viewed this construct as an indicator of volition or the ability to work hard (Barrick & Mount, 1991). It has been the most consistent personality predictor of job performance across all types of work and occupations (Barrick, Mount & Judge, 2001). People ranking low on this trait will be careless about their work. They are less likely to work in a mannered way, which could lead to stressful chaos. These people are not inclined to work in a concise way that can assure their work would be free of faults (Goldberg, 1992). Conscientiousness personality trait highly influences the success in any organisation (Judge, Heller & Mount, 2002). Extraversion trait is considered in the subsequent section.

### ***Extraversion***

Sometimes, we meet people who seem to be more talkative, arguing for their opinions (Howard & Howard, 1995), interacting with everyone so frankly and seek excitement (Burch & Neil, 2008) in every bit of life (Cattell & Mead, 2008). Extraversion is the personality traits, which covers these kinds of people in our society (Ostendorf, 1990). Like agreeableness trait, this quality of personality also makes people more social (Mount et al., 2005) and going out to interact with people in the society (Saucier et al., 2000). People who score high on Extraversion tend to be cheerful, like people and large groups, and seek excitement and stimulation.

On the other side, a person who is more reserved, less likely to be social and tends to be uncomfortable with interacting with strangers is the trait opposite to the extraversion and is termed as introversion (Goldberg, 1992). These people are less likely to be opened with others easily and would prefer to be self-centred and alone. Research suggests that this personality dimension have quite healthy role in predicting the success in a career (Judge et al., 2002).

### ***Agreeableness***

Agreeableness is a personality trait that holds people to be accommodating and helping them to resolve issues (Burch & Neil, 2008) by creating win-win situation by their flexible attitude (Cattell & Mead, 2008). These people are usually highly social (Mount et al., 2005) and friendly and generous in negotiations in friendly environment to keep balance in opponents concerns (Ostendorf, 1990). These people have a propensity to attain

cooperation and social harmony (Goldberg, 1992). Helping others is their inbuilt feature and, for that reason, they believe others are also honest and trustworthy (Saucier et al., 2000). Agreeableness assesses one's interpersonal orientation. Individuals high on Agreeableness can be characterized as trusting, forgiving, caring, altruistic, and gullible.

The high end of Agreeableness represents someone who has cooperative values and a preference for positive interpersonal relationships.

On the contrary, people who rank low on this personality trait tend to be selfish, not caring for others concerns (Howard & Howard, 1995), unfriendly, manipulative, suspicious, ruthless, rough in social relationships (Ostendorf, 1990), and tend to have great conflict with others (Jensen-Campbell & Graziano, 2001). As they are selfish, so, they believe that others are also working on their personal motive and, for that reason, they are likely to be more suspicious (Goldberg, 1992). Furthermore, these people do not have concerns for others; therefore, they are less likely to help others sacrificing their personal interests.

### ***Neuroticism***

Neuroticism represents individual differences in adjustment and emotional instability. Frustrations, anger, anxiety, hostility, depression, self-consciousness, impulsiveness, stress, self-blame and vulnerability (Costa & McCrae, 1987; Howard & Howard, 1995) is the personality symbol of the persons who rank high on the neuroticism trait of personality (Ostendorf, 1990). This is a fundamental personality trait, which is associated with individuals who adopt the pessimistic approach, who always over react over

mistakes and faults made by them. These people are easily trapped by stress and tend to be emotional and anxious (Saucier et al., 2000). Moreover, most of the time, they are hopeless and frustrated when showing their feelings and exhibiting their behaviours (Ostendorf, 1990).

This personality trait holders lack emotional intelligence, are easily caught by mental disorder and depression (Burch & Neil, 2008), which may have a serious impact on their physical and psychological health (Goldberg, 1992). As a result, neuroticism people usually fail to achieve success in their careers, including extrinsic and intrinsic success (Judge et al., 1999). On the other hand, people who rank low on this personality trait are more self-confident, calm, even tempered, relaxed, optimistic, emotionally stable (Mount et al., 2005) and have more inner strength to face the stressful situations more soundly (Roberts & Robins, 2000).

They seem to be mature, cool and not likely to over react in stressful environments (Cattell & Mead, 2008). They tend to be full of hope and self-efficacy in blind holes. They are perceived to have more control over themselves. After conceptualising psychological contract and personality traits individually, it is apt to look at the interplay between personality traits and psychological contract breach, and this reaction is described in the succeeding section. Empirically, Kim et al. (2017) discovered that nurses in South Korea were neurotic.

## Personality traits versus psychological contract breach and its consequences

Christy and Duraisamy (2014) argue that individual differences tend to ease/magnify the consequences of a psychological contract breach. Firstly, psychological contracts comprise of unrecorded agreements on direct or indirect promises, depending upon the way that individuals interpret them (Robinson, 1996). Therefore, researchers universally accept that psychological contracts are personalised and likely to differ among employee groups (Turnley & Feldman, 2000). Herriot and Pemberton (1997) maintain that contracts are likely to vary across groups of individuals, which may be within organisations, across organisations, across sectors, and over time.

Secondly, psychological contracts are based on the perceptions of each party, and these perceptions are not necessarily shared (Robinson, 1996). The understanding of one or more employees can never exactly translate into the perfect understanding of others in the same organisation. Given a situation, humans are bound to differ in their perception of the same phenomenon. The organisation or management cannot expect all its employees to identify and recognise an event or circumstance in the same sense (Christy & Duraisamy, 2014).

Thirdly, differences may originate from employee perceptions (Raja et al., 2004) and/or personal needs at a certain point in time (Herriot & Pemberton, 1997). Just like what may motivate an employee need not necessarily motivate another, what constitutes as breach for one may not mean as breach to another employee. A person with a yearning for money can never be expected to be contended with any other intrinsic factor. Employees may

acknowledge and accept that which they did not expect in the first instance, but their unfulfilled need may urge them to be led in search of it (Christy & Duraisamy, 2014).

Fourthly, in a similar fashion, breach is a subjective experience, based on actions and on individual's perceptions of actions (Robinson, 1996). Scholars have argued that psychological contract breach is an individual's subjective evaluation of employer's promissory obligations rather than the objective existence (Robinson, 1996; Turnley & Feldman, 2000; Sparrow, 1996). This explains the case where the employer involuntarily throws an act of breach. What is seen as a reward by the management might be felt as an exploitation by the employee (Robinson & Morrison, 2000).

Fifthly, since psychological contract consists of individuals' beliefs about the terms and conditions of the exchange agreement between themselves and their organisations (Rousseau, 1995), these individual differences can affect their responses to contract breach. To any occurrence, humans tend to behave or react according to their traits and value systems. Even in adverse and compelling situations, humans do not have the propensity to behave independent of their value inhibitions (Robinson & Morrison, 2000). Finally, individual differences can potentially temper the severity with which employees respond to incidences of breach (Zhao et al., 2007). Thus, there is need to examine the effects of these variables.

The intensity of psychological contract breach depends on the type, size and responsibility of employees' perceived contract breach (Shore & Tetrck, 1994). The force with which the psychological contract breach knockouts the employee is a very imperative factor in analysing their reaction.

Personal values are sure to moderate the impact of such knockouts. This gives the reason for distinguished perception and reaction for psychological contract breaches (Christy & Duraisamy, 2014). The subsequent section reviews three concepts under work attitudes, namely job satisfaction, organisational commitment and job involvement respectively.

### **Job satisfaction**

Different authors have developed different approaches in defining job satisfaction. Some of the most commonly cited definitions of job satisfaction are analysed in the text that follows. Hoppock (1935) defines job satisfaction as any combination of psychological, physiological and environmental circumstances that cause a person truthfully to say I am satisfied with my job. Hoppock's approach makes clear that, while job satisfaction is stimulated by diverse external factors, it remains something internal that has to do with how the employee feels. In the opinion of Vroom (1964), job satisfaction focuses on the role of the employee in the work setting. Thus, the author defines job satisfaction as affective orientations on the part of individuals toward work roles, which they are presently occupying.

Lawler and Porter (1967) lay special importance on the impact of rewards on job satisfaction. They define job satisfaction as the intrinsic and extrinsic rewards that are not directly connected with job satisfaction, because of the employees' perceptions regarding the deserved level of pay. Schneider and Snyder (1975) hold that job satisfaction is a personal evaluation of the current conditions of the outcomes that arise as a result of having a job. Herzberg (1976) puts forward that employees in their work environment are

under the influence of factors that cause job satisfaction and factors that cause job dissatisfaction. This definition represents probably another most often cited point of view.

In the same year, job satisfaction was defined by Locke (1976) as a pleasurable or positive emotional state resulting from the appraisal of one's job or job experiences. Locke's definition represents one of the most widely used definitions in organisational research. Similarly, in the view of Newstrom and Davis (1985), job satisfaction represents a combination of positive or negative feelings that workers have towards their work. Their approach to job satisfaction shows that a worker can either feel positive or negative towards work.

Locke and Latham (1990) provide a somewhat different idea of job satisfaction. They proceed from the assumption that the objectives set at the highest level and high expectations for success in work provides achievement and success in performing tasks. Success is analysed as a factor that creates job satisfaction. One of the most often mentioned approaches on job satisfaction is the one given by Spector (1997). The author educates that job satisfaction is simply how a person feels about his/her job and different aspects of work. Spector's (1997) definition looks at the extent to which people like or dislike their jobs. In other words, a person may either be satisfied or dissatisfied in a particular work situation.

The definition by Spector (1997) looks similar to that of Herzberg (1976) and Newstrom and Davis (1985) in the sense that it indicates that people may either feel positive or negative about their work situation at any point in time. Spector (1997) lists three important features of job satisfaction.

First, organisations should be guided by human values. Such organisations will be oriented towards treating workers fairly and with respect. Hence, the job satisfaction cycle commence from the activities of the employer. Second, the behaviour of workers, depending on their level of job satisfaction, will affect the functioning and activities of the organisation's business.

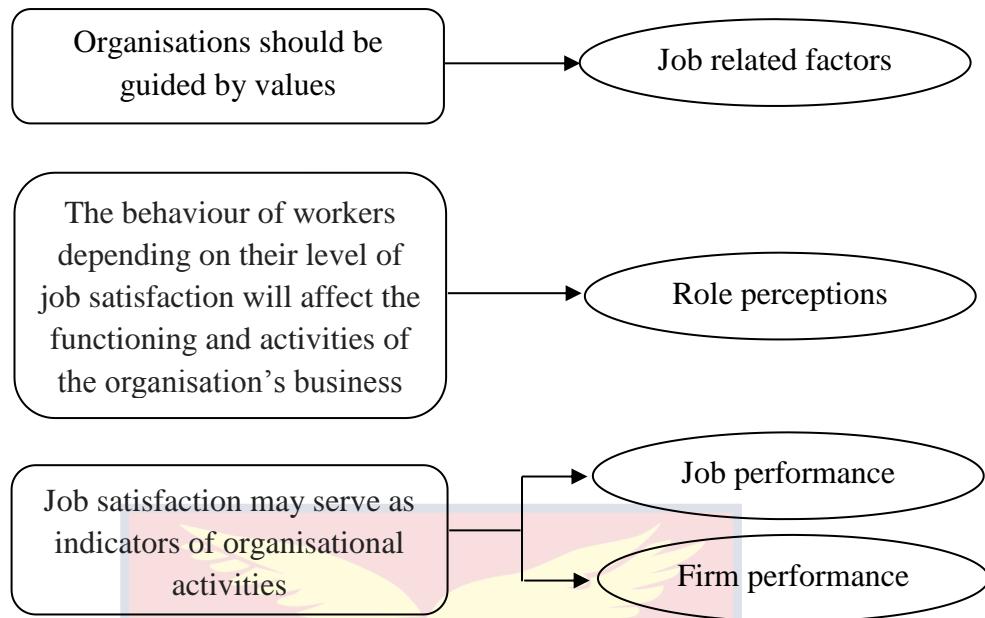
Consequently, a satisfied employee will demonstrate an affirmative behaviour. Third, job satisfaction may serve as indicators of organisational activities. By appraising job satisfaction, different levels of satisfaction in different organisational units can be defined. This can serve as a good indication by disclosing the organisational units that require changes to boost performance. Later on, job satisfaction is described by Roodt, Rieger and Sempance (2002) as one's perception and evaluation of the job. Within in the same period, Bhuiyan and Mengue (2002) explain that job satisfaction is the degree to which an individual makes sense positively or negatively about the intrinsic and/or extrinsic aspects of one's job.

Another definition by Statt (2004), emphasises that job satisfaction remains internal and has to do with how a person feels about the rewards he/her receives. Statt (2004) defines work satisfaction as the extent to which a worker is content with the rewards he or she gets out of his or her job, particularly in terms of intrinsic motivation. Assessing aspects of human feelings about work involves his/her psychological process. As a result, Piccolo, Judge, Takahashi, Watanabe and Locke (2005) provides a definition of work satisfaction as involving cognitive, affective, and evaluative responses or attitudes. The authors augment that job satisfaction is often regarded as a

broad psychological concept, and broad personality traits may be best suited to predict broadly defined outcomes.

Within the same period, Mullins (2005) defines job satisfaction as a complex and multifaceted concept, which can mean different things to different people. Mullins (2005) debates that job satisfaction is usually linked with motivation, however, the nature of this relationship is not clear. Satisfaction is not the same as motivation. Job satisfaction is more of an attitude, an internal state. It could, for example, be associated with a personal feeling of achievement, either quantitative or qualitative. Mullins definition connotes that job satisfaction has four unique branches 1) multiplex, 2) many-sided, 3) conceived differently by different people, and 4) linked to motivation, but, the link is unclear.

In the work of Armstrong (2006), job satisfaction refers to the attitude and feelings people have about their work. Positive and favourable attitudes towards the job indicate job satisfaction. Negative and unfavourable attitudes towards the job indicate job dissatisfaction (Armstrong, 2006). Armstrong's (2006) approach to job satisfaction is in line with several others (Newstrom & Davis, 1985; Spector, 1997). Christen, Iyer and Soberman (2006) reduce job satisfaction to four elements namely job related factors, role perceptions, job performance and firm performance. These four elements seem consistent with the three important features of job satisfaction proposed by Spector (1997), as shown in Figure 1.



*Figure 1: Connecting Christen et al.'s (2006) four elements to the three important features of job satisfaction proposed by Spector (1997)*

Source: Author's construct (2020)

Subsequently, Robbins, Judge, Millette and Watersmarsh (2008) argue that job satisfaction is a positive feeling about one's work, which is the result of an evaluation of its characteristics. Robbins et al.'s definition make clear the kind of feeling that is expected when one is said to be satisfied with his/her work: positive feeling. Their definition is silent on negative feeling. Aziri (2008) understands job satisfaction as an internal, external, positive or negative feeling. The author describes job satisfaction as a feeling that appears as a result of the perception that the job enables the material and psychological needs. This definition seems similar to that of Hoppock (1935), as it considers both intrinsic and extrinsic determinants, but, the similarity becomes severe when it is compared to the explanation by Lawler and Porter (1967).

In a subsequent publication, Aziri (2011) considers job satisfaction as one of the main factors when it comes to efficiency and effectiveness of business organisations. This definition supports the managerial paradigm, which insists that employees should be treated and considered, primarily, as human beans that have their own wants, needs, and personal desires. The author argues that a satisfied employee is a happy employee and a happy employee is a successful employee. Aziri (2011) informs that the concept of job satisfaction emerged as a result of the negative consequences of job dissatisfaction, such as lack of loyalty, increased absenteeism, and increased number of accidents.

In the same year, Luthans (2011) proposes three common dimensions that can be accepted to define job satisfaction: first, job satisfaction is the emotional response to the work situation; second, job satisfaction is often determined by how well the results meets or exceeds expectations; and third, job satisfaction represents some things related to attitude. In the work of Abdullah (2018), job satisfaction is described as a person's psychological response to his work, as a result of assessment or work experience, with proud indicators of employment, suitability of work facilities, promotion opportunities, supervisory presence in the execution of work, and the existence of colleagues who support. Gleaning from the views, it was established that job satisfaction is a concern employers. Empirically, Odhiambo (2015) revealed low level of job satisfaction among 180 public secondary school teachers in Gem district in Kenya. The next concept to review is the concept of organisational commitment.

## Organisational commitment

Organisational commitment is an enthusiasm to exercise the best and maximum efforts and potential, just for the sake of the organisation (Mowday, Porters, & Steers, 1982). Meyer and Allan (1997) developed three dimensions of organisational commitment. Affective commitment refers to the sense of dependence that employees have to their organisation. Continuance commitment refers to inclination of employees to remain in their organisations because of the negative consequences of leaving their organisation, like being unemployed. Normative commitment refers to the sense that employees consider themselves as members of the family. In this case, employees remain in their organisations and try to do their job well.

Akbar et al. (2018) define organisational commitment as a strong desire to remain a member of a particular organisation, the desire to strive at what organisation desire and certain beliefs and acceptance of value and purpose of the organisation. Empirically, Agarwal and Bhargava (2013) revealed low level of affective commitment among Indian managerial employees. Parallel to the research by Agarwal and Bhargava (2013), a systematic review by Setyowati, Priyotomo and Suharnomo (2017) disclosed that, medical doctors generally consider organisational commitment as a low-level priority. The last dimension of work attitudes considered in this research project is job involvement and it is conceptualised below.

## Job involvement

Job involvement is an individual's identification and engagement level for a job (Keller, 1997; Rabinowitz & Hall, 1977) or to what extent a person

views a job as an important component in his or her life (Paullay, Alliger & Stone-Romero, 1994), also called work centrality. Lodahl and Kejner (1965) suggest that job involvement has multi-work attitudes, which connotes the importance of work in a person's self-image. Robbins (2001) views job involvement as an identification level for a job from a person's psychological viewpoint.

Chang (2010) assumes that job involvement contains work values and work attitudes, which are often affected by individual factors; when a person perceives job satisfaction, he or she will engage more in his or her job to increase job performance. In Opoku Mensah's (2016) opinion, job involvement is the psychological importance that people have for their job. Empirically, Agarwal and Bhargava (2013) find low level of work engagement among Indian managerial employees. After describing each of the three work attitudes, the next section explains what constitute organisational citizenship behaviour.

### Organisational citizenship behaviour

In the view of Colquitt et al. (2009), organisational citizenship behaviour is a voluntary employee activity that happens at the workplace. In the opinion of Galbraith (2016), organisational citizenship behaviours are behaviours performed by employees that are outside of their formal job description. In the words of Abdullah (2018), organisational citizenship behaviour is the behaviour of workers, who are volunteered and, whose work exceeds their main task and their actions contribute positively to the development and effectiveness of the organisation, measured by indicators:

help colleagues, polite in work, tolerant in working, being a good organisational citizen, and obedient to organisational rules. Abdullah's definition adds another dimension, which is branded as exceeding the main duties of the worker.

Organisational citizenship behaviour is defined by Organ (2018) as a voluntary behaviour that is not explicitly recognised by formal reward systems and, in sum, enhances the efficient and effective functioning of the organisation. Organ's (2018) definition of organisational citizenship behaviour suggests three main dimensions, namely 1) free, voluntary and selfless interest for the good of others, such as organisation, clients/customers, clients' relatives or groups, 2) informally instructed, not explicitly recognised by formal compensation or rewards system, and 3) combined to promote efficiency and effectiveness in the organisation. The definition given by Colquitt et al. (2009) is similar to that of Organ (2018), except that it only captures the first dimension of Organ's definition.

Gupta (2019) agrees that organisational citizenship behaviour is a psychological contract, a reciprocal relationship from the individual's point of view between self and organisations. Empirically, Altuntas and Baykal (2014) found that nurses in Europe displayed high levels of organisational citizenship behaviour. On the contrary, Dehghani et al. (2015) revealed low organisational citizenship behaviour among hospital staff at Hormozgan University of Medical Sciences in Iran. Consistent to the research by Altuntas and Baykal (2014), Mahmoud and Ibrahim (2016) discovered that two-third of 413 nurses affiliated to 6 hospitals of Ministry of Health in Port Said Governorate in Egypt were good organisational citizens.

## Linkages between demographics and key concepts used in the study

Belasen and Frank (2012) revealed that being a woman manager positively influenced the conscientious personality trait. In the opinion of Jabeen et al. (2015), temporary workers were assumed to make lesser contribution to an organisation and its competitiveness as these workers receive fewer inducements and are usually not considered for promotion and long-term employment. Allen and Jang (2016) disclosed that females performed high on organisational citizenship behaviour (particularly for altruism) than their male counterparts. Niesen et al. (2018) argued that full-time employees spend more time at work, giving them more possibilities to exhibit better work attitudes and be good organisational citizens. They added that, higher organisational tenure has also been found to be positively related to better work-related behaviours.

### Empirical Review

This section presents the empirical review of the study. The empirical review section of the literature review documents the results of related studies and identifies the similarities, contradictions and gaps in such studies. This section is organised based on the research objectives of this study. The thematic areas are: relationship between psychological contract breach and organisational citizenship behaviour, mediating role of job satisfaction in psychological contract breach and organisational citizenship behaviour linkage, mediating effect of employees' organisational commitment in the relationship between psychological contract breach and organisational citizenship behaviour, and mediating role of job involvement in the connection

between psychological contract breach and organisational citizenship behaviour.

The empirical review continues with the moderating role of conscientiousness trait on the relationship between psychological contract breach and organisational citizenship behaviour, moderating effect of agreeableness trait on the relationship between psychological contract breach and organisational citizenship behaviour; moderating role of extraversion trait on the relationship between psychological contract breach and organisational citizenship behaviour, moderation effect of openness to experience trait on the relationship between psychological contract breach and organisational citizenship behaviour, and moderating effect of neuroticism trait on the relationship between psychological contract breach and organisational citizenship behaviour. The writer concludes the empirical review with the interplay between demographics and key concepts of the study.

### **Relationship between psychological contract breach and organisational citizenship behaviour**

This section provides direct and indirect literature on the relationship between psychological contract breach and organisational citizenship behaviour. To begin, a study by Francisco (2015) analysed the effect of psychological contract breach on organisational citizenship behaviour using 202 responses drawn from six different private educational institutions in Legazpi City in the Philippines. The author employed quantitative research approach, systematic sampling technique, and a questionnaire. Results of hierarchical regression analysis revealed that faculty employees' perceptions

of a psychological contract breach negatively affected their organisational citizenship behaviour. This results implied that the psychological contract breach led the faculty employees to display low citizenship behaviour at work.

However, Francisco's (2015) study was limited to employees in educational institutions, ignoring medical doctors in the healthcare sector. Moreover, Francisco's (2015) study was conducted in a non-Ghanaian context. Additionally, the author did not PLS-SEM, which has been argued to be a superior analytical technique in drawing conclusions. Christy and Duraisamy (2016) performed a quantitative study using responses of 442 employees belonging to information technology companies in Chennai in India, with the help of snow-ball sampling technique and a questionnaire. Regression analysis revealed that psychological contract breach negatively predicted organisational citizenship behaviour. This results inferred that the psychological contract breach caused the employees belonging to information technology companies to exhibit low citizenship behaviour. This result agreed with the earlier study by Francisco (2015) in Philippines.

Nonetheless, Christy and Duraisamy's (2016) study was limited for several reasons. First of all, the use of snow-ball sampling for a quantitative study was problematic in the sense that it defeated the assumptions of generalisation underlying quantitative research since members of the population were not given equal and independent chances of being selected. Moreover, their study was limited to the information technology sector, ignoring the healthcare sector. Additionally, their study did not employ PLS-SEM, which has been argued to be a superior analytical technique in drawing conclusions. Besides, their study was written in a non-Ghanaian context.

Niesen et al. (2018) assessed the influence of psychological contract on innovative work behaviours and discovered that psychological contract breach was negatively associated with innovative work behaviours among employees from an industrial organisation in the Region of Brussel in Belgium, after employing the quantitative research approach and a standard questionnaire. This result suggested that the psychological contract breach led the employees to show low innovative work behaviours in the industrial organisation. This outcome compared well with the initial studies by Francisco (2015) in the Philippines, and Christy and Duraisamy (2016) in India. Nonetheless, the analysers neglected the influence of psychological contract breach on organisational citizenship behaviour. In addition, their study disregarded the healthcare sector. Moreover, their study was written in a non-Ghanaian context.

Using employees in the banking sector in Indonesia and Malaysia, Haryadi et al. (2018) proved that psychological contract influenced organisational citizenship behaviour. This result implied that psychological contract affects employees' tendency to show citizenship behaviour. This outcome put forward by Haryadi et al. (2018) was consistent with the preceding studies by Francisco (2015) in the Philipines, Christy and Duraisamy (2016) in India, and Niesen et al. (2018) in Belgium. However, Haryadi et al. (2018) focused on banking sector employees, ignoring healthcare professionals, medical doctors in particular. In addition, their study was written in a non-Ghanaian context.

Ahmad and Zafar (2018) examined the effect of psychological contract fulfilment and psychological contract type on organisational citizenship

behaviour among employees and supervisors of four-star and five-star hotels in Pakistan. Results obtained from multiple regression analysis showed that psychological contract fulfilment and each psychological contract type contributed to the variability in organisational citizenship behaviour. This finding showed that the fulfilled psychological contract led the supervisors and employees to show high citizenship behaviour within the hotels. This result resembled the findings of initial studies conducted by Francisco (2015) in the Philippines, Christy and Duraisamy (2016) in India, Niesen et al. (2018) in Belgium, and Haryadi et al. (2018) in both Indonesia and Malaysia.

Yet, Ahmad and Zafar's (2018) study was not short of limitations. Firstly, the authors concentrated on the hospitality industry, ignoring the healthcare sector. Secondly, their study was written in a non-Ghanaian context. Thirdly, the authors did not apply PLS-SEM, which has been argued to be a superior analytical tool in drawing conclusions. Oppenheim (2018) assessed the impact of psychological contract type on organisational citizenship behaviour among working adults in the United States of America.

Multiple regression analysis revealed that each psychological contract type contributed to the variability in organisational citizenship behaviour. This revelation by Oppenheim (2018) can be likened to the research by Ahmad and Zafar (2018) in Pakistan, as both studies were interested in the effect of psychological contract type on employees' tendency to be organisational citizens. Nevertheless, Oppenheim's (2018) study was written in a non-Ghanaian context. Also, the author did not employ PLS-SEM, which has been argued to be a superior analytical tool in drawing conclusions. In addition, the author did not pay particular attention to the healthcare sector.

Shen, Schaubroeck, Zhao and Wu (2019) assessed the effect of psychological contract breach on organisation-directed citizenship behaviour in a survey through 312 employees and 86 supervisors of a pharmaceutical manufacturing company in China. Research approach was quantitative, research design was explanatory and study design was cross-sectional. The result of correlation and regression analysis showed that psychological contract breach was negatively related to organisation-directed citizenship behaviour. This finding suggested that the psychological contract breach led the employees to show low citizenship behaviour in the pharmaceutical manufacturing company. The discovery seemed similar to the result of previous studies by Francisco (2015) in the Philippines, Christy and Duraisamy (2016) in India, Niesen et al. (2018) in Belgium, Haryadi et al. (2018) in both Indonesia and Malaysia, Ahmad and Zafar (2018) in Pakistan, and Oppenheim (2018) in the United States of America.

Yet, although Shen et al. (2019) paid attention to employees in a pharmaceutical company, they overlooked medical doctors who lead the care of patients and are probably the most valuable assets of healthcare organisations, due to their relatively limited number, high cost, duration and academic rigors involved in their course of study. Furthermore, their study was written in a non-Ghanaian context. More so, the author did not utilise PLS-SEM, which has been argued to be a superior analytical technique in drawing conclusions.

Chahar (2019) analysed the linkage between psychological contract and organisational citizenship behaviour among 221 employees of academic organisations in Uttarakhand State in India. The study used the quantitative

research approach, explanatory research design, structured questionnaire, convenience sampling technique and cross-sectional study design. Structural equation modeling was used as analytical tool. Results showed that different element of psychological contract strongly predicted organisational citizenship behaviour.

Chahar's (2019) finding conformed to the findings of initial studies by Francisco (2015) in the Philipines, Christy and Duraisamy (2016) in India, Niesen et al. (2018) in Belgium, Haryadi et al. (2018) in both Indonesia and Malaysia, Ahmad and Zafar (2018) in Pakistan, and Oppenheim (2018) in the United States of America, and Shen et al. (2019) in China. In addition, Chahar's (2019) research can be likened to the results of earlier studies by Francisco (2015) in the Philippines, and Ishaq and Shamsher (2016) in Pakistan, because, these two studies focused on employees in educational institutions. Moreover, Chahar's (2019) research looked similar to that of Christy and Duraisamy (2016), because, both studies drew samples from employees in India.

However, Chahar's (2019) research was not without flaws. First and foremost, the author employed convenience sampling technique in selecting samples from the population, which was inappropriate, because, members of the population were not give equal and independent chances of being selected hence making the generalisation of the author's finding somewhat misleading. Secondly, the author neglected to consider medical doctors in the healthcare sector. Finally, Chahar's (2019) research was written in a non-Ghanaian context.

Gleaning from the findings put forward by earlier researchers and consistent to the social exchange theory, the writer expects a negative relationship between psychological contract breach and organisational citizenship behaviour. Therefore, the first objective of this research project sought to examine the relationship between psychological contract breach and organisational citizenship behaviour among medical doctors in the Upper East and Upper West Regions of Ghana.

### **Mediating effect of job satisfaction in the relationship between psychological contract breach and organisational citizenship behaviour**

This section sought to review the mediating role of job satisfaction in the relationship between psychological contract breach and organisational citizenship behaviour. However, first and foremost, the writer discusses literature on the effect of psychological contract breach on job satisfaction. Subsequently, the writer reviews literature on the effect of job satisfaction on organisational citizenship behaviour, after which literature on the mediating role of job satisfaction is put forward.

#### ***Effect of psychological contract breach on job satisfaction***

Odhiambo (2015) employed a descriptive survey design, stratified sampling technique, and drew a sample of 180 public secondary school teachers from a population of 400 in Gem district, Kenya to conduct a study. The results from linear regression analysis indicated that an improvement in the psychological contract fulfilment by the school (employer) directly improved job satisfaction among the teachers (employees). Yet, Odhiambo

(2015) focused on employees in educational institutions, neglecting medical doctors in the healthcare sector. Moreover, the author did not utilise PLS-SEM, which has been argue to be a superior analytical technique in drawing conclusions. Furthermore, Odhiambo's (2015) research was written in a non-Ghanaian context. Besides, the researcher neglected the effect of psychological contract breach on job satisfaction.

Oppenheim (2018) assessed the impact of psychological contract type on employee satisfaction with work arrangement among working adults in the United States of America. Multiple regression analysis revealed that, contrary to Odhiambo's (2015) research finding, psychological contract type did not contribute to the variability in employee satisfaction with work arrangement. This result suggested that psychological contract type was not relevant in explaining employee satisfaction with work arrangement. Yet, Oppenheim's (2018) study neglected medical doctors in the healthcare sector. In addition, Oppenheim's (2018) research was written in a non-Ghanaian context. Moreover, the author did not utilise PLS-SEM, which has been argued to be a superior analytical tool in drawing conclusions.

The review above suggests that psychological contract breach could possibly predict employees' job satisfaction in a negative direction. As such, in line with the social exchange theory, the writer anticipates psychological contract breach to have a negative and significant effect on job satisfaction among medical doctors operating in the Upper East and West Regions of Ghana.

### *Effect of job satisfaction on organisational citizenship behaviour*

Abdullah (2018) revealed a direct positive effect of job satisfaction on organisational citizenship behaviour among teachers drawn from public vocational high schools in Indonesia. This result showed that, when employees are satisfied with their jobs, they are likely to show high citizenship behaviour at work. However, Abdullah's (2018) study was written in a non-Ghanaian context. Moreover the author ignored medical doctors working in the healthcare sector. Oppenheim (2018) assessed the impact of employee satisfaction with work arrangement on organisational citizenship behaviour among working adults in the United States of America. Multiple regression analysis revealed that employee satisfaction with work arrangement did not contribute to the variability in organisational citizenship behaviour. This finding implied that employee satisfaction was not relevant in explaining citizenship behaviour among working adults in the United States of America.

Oppenheim's (2018) finding contravened the result of the prior research by Abdullah (2018) in Indonesia, in which the author disclosed a direct positive effect of job satisfaction on organisational citizenship behaviour among teachers. However, Oppenheim's (2018) study neglected to consider medical doctors in the healthcare sector. In addition, Oppenheim's (2018) research was written in a non-Ghanaian context. Moreover, the author did not utilise PLS-SEM, which has been argued to be a superior analytical tool in drawing conclusions. In spite of the inconsistency in the finding of Abdullah (2018) and Oppenheims (2018), and in conformity to the social exchange theory, the writer expects job satisfaction to positively predict

organisational citizenship behaviour of medical doctors working in the Upper East and West Regions of Ghana.

### ***Mediating role of job satisfaction***

Islam Khan, Ahmad, Ali and Ahmed (2014) used the quantitative research design through a questionnaire completed by 412 Malay-Chinese working in the banking and insurance sector of Malaysia to analyse the relationship among psychological empowerment, job satisfaction, and turnover intentions. Using self-reported data based on cross-sectional survey, the researchers discovered that job satisfaction successfully mediated the effect of psychological empowerment on turnover intentions. This finding implied that psychologically empowered employees exhibit high job satisfaction, which, in turn, reduce their turnover intentions, and vice versa. Yet, their research disregarded the mediating role of job satisfaction in the connection between psychological contract breach and organisational citizenship behaviour. In addition, their study focused on employees in banking and insurance sectors, neglecting employees in the healthcare sector, medical doctors in particular. Furthermore, their study was written in a non-Ghanaian context.

Christy and Duraisamy (2016) performed a quantitative study using responses of 442 employees belonging to information technology companies in Chennai in India, with the help of snow-ball sampling technique and a questionnaire. Mediated regression analysis revealed that psychological well-being partially mediated the connection between psychological contract breach and organisational citizenship behaviour. This results suggested that the unmet

expectations resulted in low psychological well-being of the employees, which eventually reduced their citizenship behaviour. Yet, their study was limited for several reasons. First of all, their study neglected to consider the mediating role of job satisfaction in their model. Furthermore, their study was conducted in India, a non-Ghanaian context.

Also, Christy and Duraisamy's (2016) study drew samples from the information technology sector, totally ignoring employees in the healthcare sector, particularly medical doctors. Additionally, the authors employed a non-random sampling technique, which defeated the generalisation purpose of a quantitative study, because, members of the population were not granted equal and independent chance of being selected. Besides, the author did not utilise PLS-SEM, which has been argue to be a superior analytical tool in drawing conclusions.

Gleaning from the views of the earlier researchers above and consistent to the affective events theory, the writer anticipates that job satisfaction would mediate the proposed negative relationship between psychological contract breach and organisational citizenship behaviour. Hence, the second research objective of this thesis sought to analyse the mediating effect of job satisfaction in the relationship between psychological contract breach and organisational citizenship behaviour among medical doctors in the Upper East and Upper West Regions of Ghana.

## **Mediating effect of organisational commitment in the relationship between psychological contract breach and organisational citizenship behaviour**

This section sought to review literature on the mediating role of organisational commitment in the relationship between psychological contract breach and organisational citizenship behaviour. However, first of all, the writer discusses literature on the effect of psychological contract breach on employees' organisational commitment. Subsequently, the writer reviews literature on the effect of organisational commitment on organisational citizenship behaviour, after which literature on the mediating effect of employees' organisational commitment was presented.

### ***Psychological contract breach and employees' organisational commitment***

Jabeen et al. (2015) performed a longitudinal study spanning 24-week time periods among employees of participating companies in United Arab Emirates' (UAE) context, with the help of a self-administered questionnaire. Results of Pearson's correlation analysis showed that psychological contract fulfilment was positively related to organisational commitment. This result implied that the fulfilled psychological contract improved the job satisfaction of the employees. Yet, the author overlooked the influence of psychological contract breach on employees' organisational commitment. Furthermore, the researchers did not utilise PLS-SEM, which has been argued to be a superior analytical tool in drawing conclusions. Moreover, Jabeen et al.'s (2015) study was written in a non-Ghanaian context.

Maia and Bastos (2015) performed a longitudinal quasi-qualitative study on the relationship between psychological contract fulfilment and affective organisational commitment among recruits in Autonomous Federal Government Agency of Brazil over three years. Identical to the study by Jabeen et al.'s (2015), Maia and Bastos (2015) found that psychological contract fulfilment positively related to affective organisational commitment. This result suggested that the fulfilled psychological contract made employees more committed to their jobs. Yet, Maia and Bastos's (2015) study overlooked the effect of psychological contract breach and organisational commitment. In addition, the authors paid less attention to employees in the healthcare sector, particularly medical doctors. Besides, their research work was written in a non-Ghanaian context.

Maycock and Amasi (2016) disclosed a negative relationship between psychological contract violation and employee commitment in Nigerian bank employees, using 140 responses and Pearson's correlation analysis. This finding implied that, when employees' psychological contract with their employers are violated, they become less committed to their jobs. Yet, Maycock and Amasi's (2016) research neglected to consider healthcare professionals, especially medical doctors. In addition, their study was written in a non-Ghanaian context. Also, the analysers did not employ PLS-SEM, which has been argued to be a superior analytical technique in drawing conclusions.

Hazrati (2017) surveyed the effect psychological contract breach on affective commitment. 155 employees of Bank Melli Iran in Dubai were targeted, but, 100 of them were selected as sample. The study employed

structural equation modeling via IBM SPSS AMOS as analytical tool. The study revealed that psychological contract breach negatively predicted affective commitment. This finding suggested that the unfulfilled expectations of employees reduced their level of job commitment. This outcome seemed similar to the result of the initial study by Maycock and Amasi (2016) in Nigeria. Moreover, Hazrati's (2017) research added up to an earlier study that focused on banking sector employees, namely Maycock and Amasi's (2016) in Nigeria. But, Hazrati's study was limited to banking sector employees, neglecting employees in the healthcare sector particularly medical doctors. Moreover, Hazrati's research was written in a non-Ghanaian context.

Agbozo et al. (2018) gathered data on 65 employees from a population of 215 teaching and non-teaching staff from a public university in Ghana, using the case study design, a questionnaire, stratified and purposive sampling techniques, and IBM SPSS software. The analysers found that employees' commitment to the university depended on the fulfilment of the perceived expectations by management. Agbozo et al.'s (2018) finding can be likened to the outcome of earlier researches by Maia and Bastos (2015) in Brazil, and Jabeen et al. (2015) in UAE.

Yet, Agbozo et al. (2018) employed a non-random sampling technique in selecting samples from the population, which was problematic, as it defeated the generalisation purpose of a quantitative study, because, members of the population were not granted equal and independent chance of being selected. Moreover, although their research was written in the Ghanaian context, it disregarded employees in the healthcare sector, especially medical

doctors. In addition, Agbozo et al. (2018) did not utilise PLS-SEM, which has been argued to be a superior analytical tool in drawing conclusions.

Gleaning from the findings of earlier researchers above and equivalent to the assumptions of the social exchange theory, there is a high possibility that psychological contract breach would negatively predict employees' organisational commitment. As a consequence, the writer expects psychological contract breach to have a negative effect on organisational commitment among medical doctors operating in the Upper East and West Regions of Ghana.

### *Organisational commitment and organisational citizenship behaviour*

Leephaijaroen (2016) reveals that the components of organisational commitment, which positively and significantly affected organisational citizenship behaviour were continuance commitment and affective commitment, after drawing samples from support staff at Ubon Ratchathani Rajabhat University in Thailand and applying multiple regression analysis. This finding suggested that a committed employee is more likely to show high citizenship behaviour. Yet, the author focused on employees in an educational institution, disregarding medical doctors in the healthcare sector. Moreover, Leephaijaroen's (2016) research was written a non-Ghanaian context. Besides, the author did not utilise PLS-SEM, which has been argued to be a superior analytical tool in drawing conclusions.

Anggraeni, Dwiatmadja and Yuniawan (2017) showed that citizenship behaviour was positively influenced by organisational commitment among 150 Indonesian young entrepreneurs, using quantitative research approach,

purposive sampling technique, and structural equations modeling. This result also implied that committed employees are in a better position to display high citizenship behaviour. However, their study was written in a non-Ghanaian context. More so, they did not consider medical doctors in the healthcare sector. Besides, the authors used a non-random sampling technique in selecting samples from the population, which was inappropriate for a quantitative study, because it deprived some members of the population of equal and independent chance of being selected.

In view of the findings from earlier researchers above and in line with the tenets of the social exchange theory, there is a possible positive relationship between organisational commitment and organisational citizenship behaviour. Consequently, the writer anticipates that organisational commitment would positively and significantly affect organisational citizenship behaviour among medical doctors operating in the Upper East and West Regions of Ghana.

### ***Mediating role of organisational commitment***

Islam, Ahmad, Ali, Ahmed and Bowra (2013) used a questionnaire, a simple random sampling technique, and a sample of 412 respondents in a survey conducted in Malaysian Banks. The results from structural equations modeling from the survey showed that affective and normative commitment performed the role of mediators between perceived organisational support and employees' turnover intentions. This result suggested that, when employees perceive high organisational support, they become committed to their job, which, in turn, reduces their turnover intentions. Yet, Islam et al.'s (2013)

research disregarded the mediating role of organisational commitment in the connection between psychological contract breach and organisational citizenship behaviour. Furthermore, the authors ignored healthcare sector employees, particularly medical doctors. Besides, their study was written in a non-Ghanaian context.

Christy and Duraisamy (2016) performed a quantitative study using responses of 442 employees belonging to information technology companies in Chennai in India, with the help of snow-ball sampling technique and a questionnaire. Mediated regression analysis revealed that psychological well-being partially mediated the connection between psychological contract breach and organisational citizenship behaviour. This finding implied that the unfulfilled expectations led to low psychological well-being among the employees, which, in turn, resulted in low citizenship behaviour. Yet, their study was limited for several reasons. First of all, their study neglected the mediating role of organisational commitment in the model.

Moreover, the use of snow-ball sampling for a quantitative study was problematic in the sense that it defeated the assumptions of generalisation underlying the quantitative research process, because, members of the population were not given equal and independent chance of being selected. Furthermore, Christy and Duraisamy's (2016) research was limited to employees in the information technology sector, ignoring employees in healthcare sector, particularly medical doctors. Additionally, Christy and Duraisamy (2016) did not employ PLS-SEM, which has been argued to be a superior analytical technique in drawing conclusions.

Islam, Ali and Ahmed (2018) conducted a quantitative study using data from 324 Pakistan nurses collected through questionnaire administration based on a survey by employing the convenience sampling technique. The results generated using structural equation modeling revealed the mediating role of organisational commitment in the relationship between perceived organisational support and turnover intention. This result suggested that, when employees perceive low organisational support, it reduce their organisational commitment, which eventually increases their turnover intentions. However, although the authors focused on nurses, they ignored medical doctors who lead the care of patients and are argued to be the most valuable assets of healthcare organisations, due to their relatively limited number, high cost, duration and academic rigors involved in their course of study.

In addition, Islam et al. (2018) employed a non-random sampling technique for a quantitative research design, which was problematic in the sense that, members of the population were denied equal and independent chance of participating in the study. More so, their study was written in a non-Ghanaian context. Gleaning from the findings of prior researchers above and consistent to the assumptions of the affective events theory, the writer expects organisational commitment to mediate in the proposed negative connection between psychological contract breach and organisational citizenship behaviour. In view of this expectation, the third objective of this thesis sought to ascertain the mediating effect of organisational commitment in the relationship between psychological contract breach and organisational citizenship behaviour among medical doctors in the Upper East and West Regions of Ghana.

## **Mediating role of job involvement in the relationship between psychological contract breach and organisational citizenship behaviour**

This section sought to review literature on the mediating role of job involvement in the relationship between psychological contract breach and organisational citizenship behaviour. Nevertheless, first and foremost, the writer discusses literature on the effect of psychological contract breach on job involvement. Successively, the writer reviews literature on the effect of job involvement on organisational citizenship behaviour, after which literature on the mediating effect of job involvement is presented.

### ***Psychological contract breach and job involvement***

Agarwal and Bhargava (2013) conducted a survey using 1,302 Indian managerial employees working in eight organisations. The investigators employed the quantitative research approach, explanatory research design and a structured questionnaire. Findings from hierarchical multiple regression analysis of IBM SPSS AMOS showed that Indian employees had a strong perception that their psychological contract has been breached, resulting in their low work engagement. Yet, Agarwal and Bhargava (2013) disregarded the relationship between psychological contract breach and job involvement. In addition, their study was written in a non-Ghanaian context. Moreover, their study did not focus on medical doctors in the healthcare sector.

Ugwu (2013) examined the effect of perceived psychological contract breach on work engagement using samples drawn from 218 employees from 11 commercial banks in Makurdi, North-Central Region in Nigeria in a cross-sectional survey. Results from hierarchical regression analysis showed that,

contrary to expectations, psychological contract breach was not negatively related to work engagement. This result implied that the unmet expectations of the banking sector employees was not relevant in predicting their work engagement. The researcher elucidated that, probably, contextual factors may have accounted for this unexpected result. This unexpected result challenged the result of the earlier study by Agarwal and Bhargava (2013) in India.

In spite of Ugwu's (2013) literature contribution, the author ignored the influence of psychological contract breach on job involvement. Furthermore, Ugwu did not employ PLS-SEM, which has been argued to be a superior analytical tool in drawing conclusions. To add, Ugwu's (2013) research was written in a non-Ghanaian context. Moreover, the author ignored healthcare sector employees, medical doctors in particular. Moore (2014) empirically examined the effect of psychological contract fulfilment on employee engagement. The study used archived secondary data of a major United States retail chain where the employees rated themselves on various items, including psychological contract fulfilment items and employee engagement items. The analyst controlled for employee tenure, supervisory status and gender.

Hierarchical regression suggested that psychological contract fulfilment positively related to employee engagement and predicted 49.9% of the variance in employee engagement. This finding implied that, when the expectations of employees are met, they are more likely to show high level of job engagement at the workplace. Nevertheless, Moore (2014) disregarded the effect of psychological contract breach on job involvement. In addition, the author focused on retail chain employees, ignoring medical doctors in the

healthcare sector. Furthermore, Moore's (2014) study was written in a non-Ghanaian context. To add, Moore (2014) did not employ PLS-SEM, which has been argued to be a superior analytical technique in drawing conclusions.

Malik and Khalid (2016) found a negative relationship between psychological contract breach and work engagement among 302 employees in private and public sector banks of Lahore in Pakistan, using a questionnaire and hierarchical multiple regression. This result suggested that the unfulfilled expectations of employees reduced their job engagement. This finding contravened the result of the initial study by Ugwu (2013) in Nigeria. Despite Malik and Khalid's (2016) literature contribution, they disregarded the effect of psychological contract breach on job involvement. In addition, the authors neglected employees in the healthcare sector, particularly medical doctors. Furthermore, their research was written in a non-Ghanaian context. Additionally, the researchers did not employ PLS-SEM, which has been argued to be a superior analytical technique in drawing conclusions.

A study by Akinbobola and Zamani (2018) used purposive sampling technique and multiple regression analysis to examine the effect of psychological contract fulfilment and perceived organisational support on job involvement among employees from public and private organisations in Abuja, Nigeria. The authors found a significantly positive joint prediction of psychological contract fulfilment and perceived organisational support on job involvement. Contrary to expectations, psychological contract fulfilment did not independently predict job involvement. This finding suggested that the fulfilled expectations of these employees was not relevant in predicting their job involvement at the work setting.

However, their study was not free of criticisms. First of all, the authors used a non-probability sampling technique to select samples from the population for a quantitative study, which was problematic in the sense that, members of the population were not granted equal and independent chance of being selected. Secondly, Akinbobola and Zamani's (2018) research was conducted in Nigeria, a non-Ghanaian context. Moreover, the authors did not employ PLS-SEM, which has been argued to be a superior analytical technique in drawing conclusions. Additionally, their study neglected to consider medical doctors in the healthcare sector.

Gleaning from the findings from prior researches, it was evident that inconsistencies existed in the literature, particularly regarding the predictive power of psychological contract on job involvement, which could create confusion among policy makers, practitioners, managers, stakeholders, and business consulting firms on the importance attached to psychological contracts at the workplace. Therefore, the relationship between psychological contract and job involvement is controversial, making it open for further research. In spite of this confusion and parallel to the social exchange theory, the writer expects psychological contract breach to negatively predict job involvement among medical doctors operating in the Upper East and West Regions of Ghana.

### ***Effect of job involvement on organisational citizenship behaviour***

A study by van der Heuvel (2012) assessed the effect work engagement on attitudes towards change among 208 employees in 10 Dutch Organisations, employing questionnaire, convenience non-probability

sampling technique, regression analysis, and univariate analysis of variance. Heuvel's (2012) study revealed that work engagement positively predicted attitudes towards change. This finding implied that, when employees are engaged in their work, they are in a better position to embrace change at work. However, the author overlooked the effect of job involvement on organisational citizenship behaviour. In addition, the researcher did not employ PLS-SEM, which has been argued to be a superior analytical tool in drawing conclusions. Furthermore, the author used a non-probability sampling technique for a quantitative study, which was improper, because, members of the population were not offered equal and independent chance of being selected.

Also, Heuvel's (2012) research was written in a non-Ghanaian context. More so, the author did not concentrate on medical doctors working in the healthcare sector. Christy and Duraisamy (2016) performed a quantitative study using responses of 442 employees belonging to information technology companies in Chennai in India, with the help of snow-ball sampling technique and a questionnaire. Regression analysis revealed that psychological well-being positively predicted organisational citizenship behaviour. The result implied that, when employees' psychological well-being is enhanced, they are more likely to show high citizenship behaviour. Yet, their study was limited for several reasons.

First of all, Christy and Duraisamy's (2016) study neglected the influence of job involvement on organisational citizenship behaviour. Moreover, their research was written in a non-Ghanaian context. Besides, the use of snow-ball sampling for a quantitative study was problematic in the

sense that it defeated the assumptions of generalisation underlying the quantitative research process, because, members of the population were not given equal and independent chances of being selected. Furthermore, their study was limited to employees in the information technology sector, ignoring employees in healthcare sector, particularly medical doctors. Additionally, Christy and Duraisamy (2016) did not employ PLS-SEM, which has been argued to be a superior analytical technique in drawing conclusions.

In view of the findings of the closely related studies on the nexus between job involvement and organisational citizenship, there is the probability for job involvement to positively predict organisational citizenship behaviour. Hence, in line with the social exchange theory, the writer antedates that job involvement would positively predict organisational citizenship behaviour among medical doctors operating in the Upper East and West Regions of Ghana.

### *Mediating role of job involvement*

Malik and Khalid (2016) found that work engagement partially mediated the relationship between psychological contract breach and turnover intentions among 302 employees in private and public sector banks of Lahore in Pakistan, using hierarchical multiple regression. This finding suggested that the unmet expectations reduced the level of work engagement of the employees, which subsequently increased their turnover intentions. In spite of this contribution, the authors disregarded the mediating effect of job involvement over the relationship between psychological contract breach and organisational citizenship behaviour. Furthermore, the authors did not use

PLS-SEM, which has been argued to be a superior analytical tool in drawing conclusions. Also, their study was written in a non-Ghanaian context. Besides, the authors focused on banking sector employees, neglecting employees in the healthcare sector, especially medical doctors.

Christy and Duraisamy (2016) performed a quantitative study using responses of 442 employees belonging to information technology companies in Chennai in India, with the help of snow-ball sampling technique and a questionnaire. Mediated regression analysis revealed that psychological well-being partially mediated the connection between psychological contract breach and organisational citizenship behaviour. This finding implied that, when employees sense that their psychological contract has been breached, it reduces their psychological well-being, which in turn, reduces their citizenship behaviour. Nonetheless, their study was limited for several reasons. Firstly, their study neglected the mediating role of job involvement in the model.

Secondly, the use of snow-ball sampling for a quantitative study was problematic, because, it defeated the assumptions of generalisation underlying a quantitative research, because, members of the population were not given equal and independent chances of being selected. Furthermore, their study was limited to the information technology sector, ignoring employees in the healthcare sector, particularly medical doctors. Thirdly, Christy and Duraisamy (2016) did not employ PLS-SEM, a superior analytical technique in drawing conclusions. Also, their research was written in a non-Ghanaian context.

Gleaning from the researches of closely related studies on this subject matter, there is the likelihood that job involvement would mediate the

proposed negative relationship between psychological contract breach and organisational citizenship behaviour. Therefore, parallel to the affective events theory, the writer anticipates that job involvement would mediate the proposed negative relationship between psychological contract breach and organisational citizenship behaviour. In this view anticipation, the fourth research objective of this research project sought to examine the mediating role of job involvement in the relationship between psychological contract breach and organisational citizenship behaviour medical doctors operating in the Upper East and West Regions of Ghana.

### **Moderating role of conscientiousness trait on the relationship between psychological contract breach and organisational citizenship behaviour**

This section reviews literature on the moderating role of conscientiousness personality trait on the relationship between psychological contract breach and organisational citizenship behaviour. Conscientious persons are prepared, hardworking, organised, cautious, highly motivated, persistent, and disciplined. Jafri (2014) used random sampling procedure to select 90 employees from colleges of Royal University of Bhutan in Asia. Correlation and regression analysis showed that employees who were naturally conscientious were less likely to be affected by breach in their psychological contract. This result implied that employees who were hardworking, persistent, highly motivated and organised were less prone to a breach in their psychological contract.

Jafri (2014) justified that individuals who were conscientious generally enjoyed tasks they excelled at, hence, were less likely to be affected by breach

in their psychological contract. However, Jafri's (2014) study was written in a non-Ghanaian context. In addition, the author did not provide healthcare literature on the subject matter. Moreover, the author overlooked the moderating effect of conscientiousness over the nexus between psychological contract breach and organisational citizenship behaviour. Also, the author did not employ PLS-SEM, which has been argued to be a superior analytical tool in drawing conclusions.

A study by Francisco (2015) revealed that locus of control, a personality variable that refers to how strongly people believe they have control over situations and experiences that affect their lives, influenced the effect of psychological contract breach on faculty employees' tendency to be organisational citizens using 202 responses drawn from six different private educational institutions in Legazpi City in the Philippines. Francisco employed the quantitative research approach, systematic sampling technique, a questionnaire, and moderated hierarchical regression analysis. Nevertheless, Francisco's (2015) study was conducted in a non-Ghanaian context.

Furthermore, Francisco (2015) neglected to consider the moderating effect of conscientiousness, a broader concept. Organisational citizenship behaviour has been defined by scholars as a broad concept, and broad personality traits may be best suited to predict broadly defined outcomes. In addition, the author ignored the responses of medical doctors in the healthcare sector. Moreover, the study did not employ PLS-SEM, which has been argued to be a superior analytical tool in drawing this conclusion.

Panagiotou (2017) studied the moderating role of intrinsic motivation on psychological contract breach-intention turnover relationship. The analyst

collected data on 162 employees from three different sectors, namely banking, hotels, and human resource consultancy in the Netherlands, Cyprus, Greece, and Spain. The author discovered that intrinsic motivation worked as a moderator between psychological contract breach and intention turnover. This result implied that employees who showed high intrinsic motivation were less affected by a psychological contract breach. Nonetheless, the researcher overlooked the moderating role of conscientiousness, a broader concept, on the relationship between psychological contract breach and organisational citizenship behaviour. Moreover, the author neglected medical doctors in the healthcare sector. Also, Panagiotou's (2017) research was written in a non-Ghanaian context.

Gleaning from the researches of related studies, it was evident that there was a paucity of literature on the moderating effect of conscientiousness in the relationship between psychological contract breach and organisational citizenship behaviour. Therefore, in line with the social exchange theory, the writer expects conscientiousness to moderate the proposed negative relationship between psychological contract breach and organisational citizenship behaviour. In view of this expectation, the fifth research objective of this research project sought to test the moderating role of conscientiousness trait on the relationship between psychological contract breach and organisational citizenship behaviour among medical doctors working in the Upper East and West Regions of Ghana.

## Moderating effect of agreeableness trait on the relationship between psychological contract breach and organisational citizenship behaviour

This section reviews literature on the moderating effect of agreeableness personality trait on the relationship between psychological contract breach and organisational citizenship behaviour. Agreeable persons are helpful, caring, trusting, accommodating, co-operative, and supportive. Jafri (2014) used simple random sampling technique to select 90 employees from colleges of Royal University of Bhutan in Asia. Correlation and regression analysis showed that employees who were by nature agreeable were less likely to be affected by breach in their psychological contract. The author justified that employees who are agreeable by nature have the disposition to be helpful or cooperative.

Nevertheless, Jafri (2014) ignored the interaction effect of agreeableness in the nexus between psychological contract breach and organisational citizenship behaviour. In addition, Jafri's (2014) work was written in a non-Ghanaian context. Besides, the author drew employees from an educational institution, neglecting healthcare sector employees, particularly medical doctors. To add, the author did not use PLS-SEM, which has been argued to be a superior analytical tool in drawing conclusions.

Ishaq and Shamsher (2016) analysed the effect of psychological contract on workplace deviant behaviour with the moderating role of revenge attitude, using responses from 176 employees selected randomly from Higher Education Commission Islamabad in Pakistan. Stepwise regression analysis revealed that low revenge attitude weakened the relationship between psychological contract breach and work place deviant behaviours. Yet, their

study neglected to consider the interaction effect of agreeableness on the connection between psychological contract breach and organisational citizenship behaviour. Also, their research was written in a non-Ghanaian context. Moreover, the authors did not utilise PLS-SEM, which has been argued to be a superior analytical technique in drawing conclusions. To add, the researchers neglected employees in the healthcare sector, particularly medical doctors.

Heffernan and Rochford (2017) examined whether social network (social status and local ties/connectedness) reduced the effect of a psychological contract breach on employees' intention to leave their organisation. Using a structured questionnaire, a sample of 242 responses from officers in the Irish Defence Forces, the results from hierarchical moderated regression of IBM SPSS AMOS demonstrated that perceptions of social networks reduced the effect of a psychological contract breach on turnover intentions.

Heffernan and Rochford's (2017) research resembled the prior study by Jafri (2014) in Asia, wherein the author found that employees who were naturally agreeable were less likely to be affected by breach in their psychological contract. Yet, similar to the study by Francisco (2015), Heffernan and Rochford (2017) ignored the moderating effect of the Big Five personality factor of extraversion, a broader trait, in their model. Also, their research was written in a non-Ghanaian context. In addition, the authors disregarded employees in the healthcare sector, particularly medical doctors.

Panagiotou (2017) studied the moderating role of agreeableness on psychological contract breach-job satisfaction relationship. The analyst

collected data on 162 employees from three different sectors, namely banking, hotels, and human resource consultancy in the Netherlands, Cyprus, Greece, and Spain. The author employed the quantitative research approach, explanatory study design and a questionnaire. However, contrary to the Panagiotou's (2017) expectation, regression analysis via process analysis of IBM SPSS Statistics showed that agreeableness did not moderate the effect of psychological contract breach on job satisfaction and turnover intention. This finding implied that agreeableness trait was not relevant in explaining psychological contract breach-job satisfaction/turnover intention relationship. This finding seemed contradictory to the earlier study by Chen et al.'s (2008) in China, where benevolence of supervisor weakened the connection between employer breach and employees' responses from supervisors. Also, Panagiotou's (2017) finding disputed the result of the study by Jafri (2014) in Asia, where the research declared that employees who were agreeable by nature were less likely to be affected by a breach in their psychological contract.

In spite of Panagiotou's (2017) literature contribution, the researcher overlooked the moderating role of agreeableness in the relationship between psychological contract breach and organisational citizenship behaviour. In addition, Panagiotou's (2017) research was written in a non-Ghanaian context. Additionally, the author ignored employees in the healthcare sector, medical doctors in particular. Moreover, the researcher did not employ PLS-SEM, which has been argued to be a superior analytical tool in drawing conclusions.

The review conducted above suggested that there is a paucity of literature on the moderating role of agreeableness in the relationship between

psychological contract breach and organisational citizenship behaviour. Moreover, there are inconsistencies in the literature regarding the interaction effect of agreeableness trait. This contradiction could create confusion among policy makers, practitioners, managers, stakeholders, and business consulting firms on the reaction of agreeable employees in the context of psychological contract breaches at the workplace. Therefore, the moderating effect of agreeableness trait over the connection between employer breaches and employee work-related outcomes is open for further research.

Against this backdrop and parallel to the social exchange theory, the sixth research objective of this thesis sought to analyse the moderating effect of agreeableness trait on the relationship between psychological contract breach and organisational citizenship behaviour among medical doctors in the Upper East and West Regions of Ghana. The writer expects agreeableness trait to moderate the proposed negative connection between psychological contract breach and organisational citizenship behaviour among medical doctors in the Upper East and West Regions of Ghana.

### **Moderating role of extraversion trait on the relationship between psychological contract breach and organisational citizenship behaviour**

This section reviews literature on the moderating role of extraversion personality trait on the relationship between psychological contract breach and organisational citizenship behaviour. Extraverts are outgoing, social, energetic, enthusiastic, assertive, talkative, ambitious, and fun-loving. Raja et al. (2004) investigated the effect of extraversion trait on psychological contract breach and its consequences using 197 responses from employees

working in five well-established private and public sector organisations located in Pakistan through snow-ball sampling. Stepwise regression analysis showed that employees who were high on extraversion were highly prone to experience breach. Moreover, Raja et al. (2004) revealed that extraversion heightened or worsened the relationship between perceptions of contract breach and feeling of contract violation.

However, Raja et al. (2004) disregarded the interaction effect of extraversion on the nexus between psychological contract breach and organisational citizenship behaviour. Furthermore, the authors neglected medical doctors working in the healthcare sector. Also, the authors did not use PLS-SEM, which has been argued to be a superior analytical tool in drawing conclusions. To add, their research was conducted in Pakistan, a non-Ghanaian context. Besides, the authors used a non-probability sampling technique in selecting samples for a quantitative study, which was problematic, as members of the population were not given equal and independent chance of being selected.

Jafri (2014) used random sampling technique to select 90 employees from colleges of Royal University of Bhutan in Asia and revealed that extraversion was positively associated with the perception of a breach. Jafri's (2014) outcome was consistent with the earlier study by Raja et al. (2004) in Pakistan, wherein the researcher disclosed that extraversion worsened the relationship between perceptions of contract breach and feeling of contract violation. Nevertheless, the author did not provide healthcare literature on the subject matter. Moreover, the researcher overlooked the moderating role of extraversion in the connection between psychological contract breach and

organisational citizenship behaviour. Furthermore, Jafri's (2014) study was written in a non-Ghanaian context. Besides, the author did not employ PLS-SEM, which has been argued to be a superior analytical tool in drawing conclusions.

Gleaning from the views of earlier researchers above, it is evident that, research on the moderating role of extraversion on the relationship between psychological contract breach and organisational citizenship behaviour is dearth. Therefore, in line with the closely related and relevant studies above and consistent to the social exchange theory, the writer expects extraversion to worsen the influence of psychological contract breach on organisational citizenship behaviour. In view of this expectation, the seventh research objective of this research project sought to examine the moderating role of extraversion trait on the relationship between psychological contract breach and organisational citizenship behaviour among medical doctors in the Upper East and Upper West Regions of Ghana.

#### **Moderating effect of openness to experience trait on the relationship between psychological contract breach and organisational citizenship behaviour**

This section reviews literature on the moderating role of openness to experience personality trait on the relationship between psychological contract breach and organisational citizenship behaviour. Persons who are opened to experiences are imaginative, independent, experimenting, and interested in variety. Jafri (2014) used random sampling procedure to select 90 employees from Colleges of Royal University of Bhutan in Asia. Correlation and

regression analysis revealed that openness to experience was negatively related to a breach of psychological contract, but not significantly. This result suggested that openness to experience was irrelevant in explaining the unmet expectations of employees.

However, the author did not provide healthcare literature on the subject matter. Moreover, Jafri (2014) overlooked the moderating role of openness to experience in the connection between psychological contract breach and organisational citizenship behaviour. Furthermore, Jafri's (2014) study was written in a non-Ghanaian context. More so, the author did not employ PLS-SEM, which has been argued to be a superior analytical tool in drawing conclusions.

A study by Francisco (2015) revealed that locus of control, a personality variable that refers to how strongly people believe they have control over situations and experiences that affect their lives, influenced the effect of psychological contract breach on faculty employees' tendency to be organisational citizens using 202 responses drawn from six different private educational institutions in Legazpi City in the Philippines. Francisco employed the quantitative research approach, systematic sampling technique, a questionnaire, and moderated hierarchical regression analysis. Nevertheless, Francisco's (2015) study was conducted in a non-Ghanaian context.

Furthermore, Francisco (2015) neglected to consider the moderating effect of openness to experience, a broader concept. Organisational citizenship behaviour has been defined by scholars as a broad concept, and broad personality traits may be best suited to predict broadly defined outcomes. In addition, the author ignored the responses of medical doctors in the healthcare

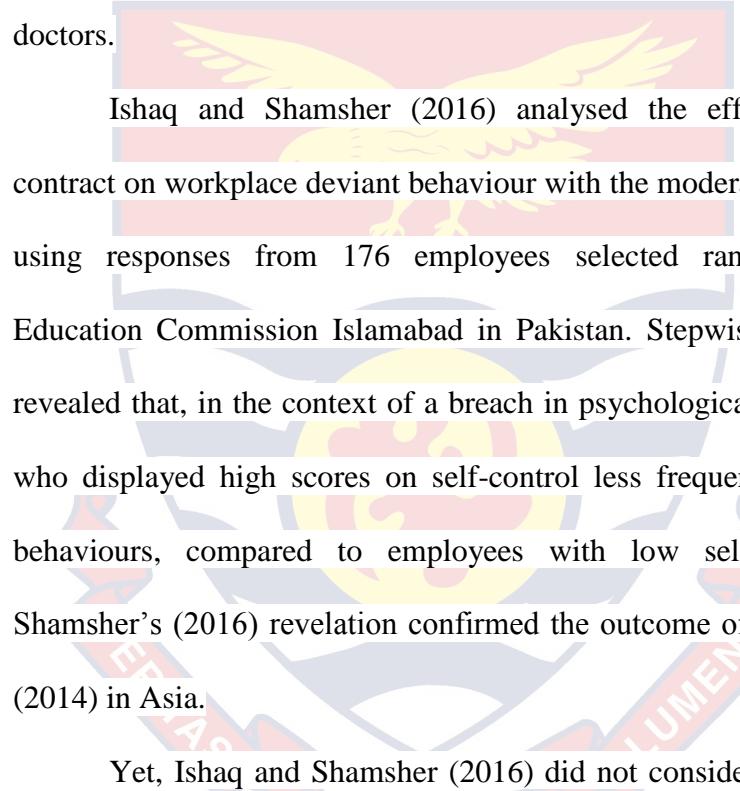
sector. Moreover, the study did not employ PLS-SEM, which has been argued to be a superior analytical tool in drawing this conclusion.

In view of the earlier researches above, it is evident that there is a paucity of research on the moderating role of openness to experience on the connection between psychological contract breach and organisational citizenship behaviour. In line with these earlier studies and consistent to the social exchange theory, the writer expects high openness to experience to weaken the effect of psychological contract breach on organisational citizenship behaviour. Against this backdrop, the eighth research objective of this thesis sought to analyse the moderating effect of openness to experience trait on the relationship between psychological contract breach and organisational citizenship behaviour among medical doctors in the Upper East and Upper West Regions of Ghana.

### **Moderating role of neuroticism trait on the relationship between psychological contract breach and organisational citizenship behaviour**

This section reviews literature on the moderating role of neuroticism personality trait on the relationship between psychological contract breach and organisational citizenship behaviour. Neurotic persons are anxious, emotionally unstable, and self-blaming. Jafri (2014) used random sampling procedure to select 90 employees from colleges of Royal University of Bhutan in Asia. Correlation and regression analysis showed that employees who scored high on emotional stability (low on neuroticism) were less prone to be affected by breach.

Nevertheless, Jafri (2014) ignored the moderating effect of neuroticism in the connection between psychological contract breach and organisational citizenship behaviour. Moreover, Jafri's (2014) research was written in a non-Ghanaian context. Even more, the author did not apply PLS-SEM, which has been argued to be a superior analytical tool in drawing conclusions. Furthermore, the author drew samples from employees in an educational institution, neglecting healthcare sector employees, particularly medical doctors.



Ishaq and Shamsher (2016) analysed the effect of psychological contract on workplace deviant behaviour with the moderating role self-control, using responses from 176 employees selected randomly from Higher Education Commission Islamabad in Pakistan. Stepwise regression analysis revealed that, in the context of a breach in psychological contract, employees who displayed high scores on self-control less frequently executed deviant behaviours, compared to employees with low self-control. Ishaq and Shamsher's (2016) revelation confirmed the outcome of initial study by Jafri (2014) in Asia.

Yet, Ishaq and Shamsher (2016) did not consider the moderating role of agreeableness on the relationship between psychological contract breach and organisational citizenship behaviour. In addition, the authors disregarded responses from employees in the healthcare sector, medical doctors in particular. Besides, their research was written in a non-Ghanaian context. The authors did not employ partial least square-structural equation modelling, which has been argued to be a superior analytical tool in drawing conclusions.

Gleaning from the views of the prior researchers above, there is evidence that literature addressing the moderating role of neuroticism in the relationship between psychological contract breach and organisational citizenship behaviour is scarce. Therefore, the ninth research objective of this research project sought to investigate the moderating effect of neuroticism trait on the relationship between psychological contract breach and organisational citizenship behaviour among medical doctors in the Upper East and Upper West Regions of Ghana. Consistent to the closely related studies above and in line with the social exchange theory, the writer expects low neuroticism or high emotional stability to weaken the proposed negative relationship between psychological contract breach and organisational citizenship behaviour.

### **Conceptual Framework of the Study**

This study sought to assess the mediating role of work attitudes and the moderating role of personality traits on the relationship between psychological contract breach and organisational citizenship behaviour among medical doctors in Ghana. This section presents the conceptual framework of this study. A conceptual framework explains the writer's idea on how the study is explored. This study's conceptual framework, shown in Figure 2, resided in three important theories, namely social exchange theory, affective events theory, and the Five Factor Theory of Personality.

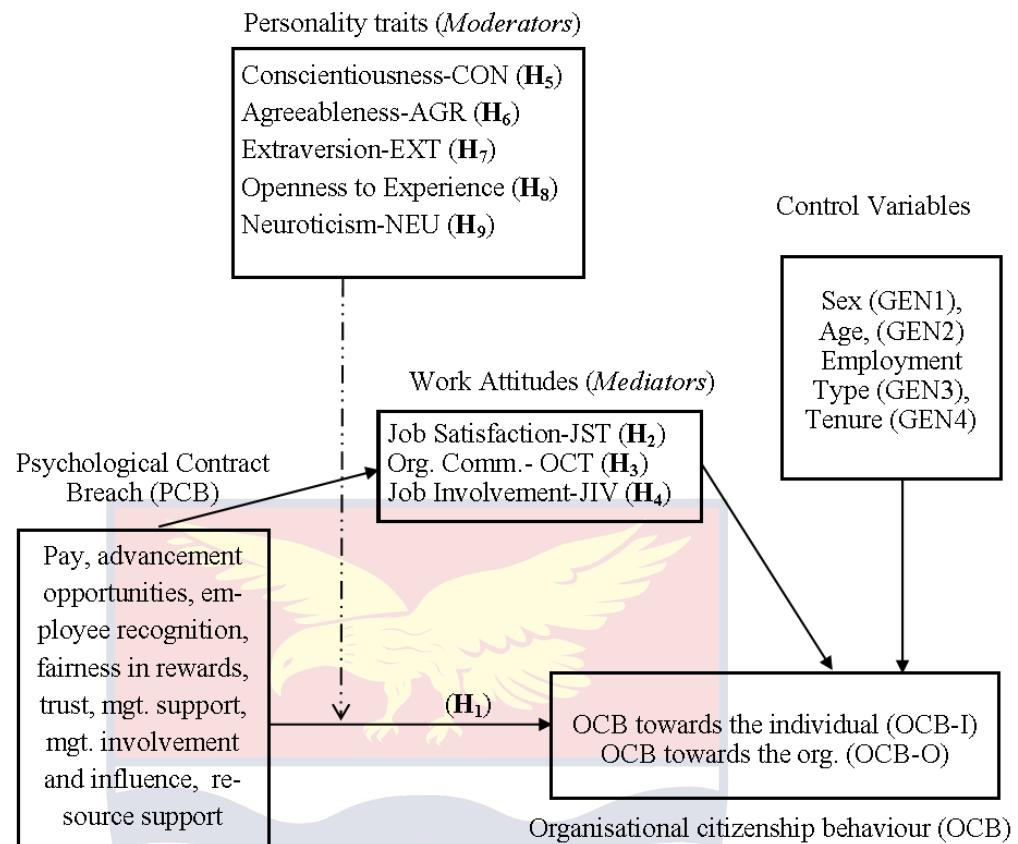


Figure 2: Conceptual framework of the study

Source: Author's construct (2019), based on views from the literature

First of all, the social exchange theory was used to explain the possible significant negative relationship between psychological contract breach and organisational citizenship behaviour (Hypothesis 1). Subsequently, the affective events theory was used to elucidate the mediating role of three distinct work attitudes, namely job satisfaction (Hypothesis 2), employees' organisational commitment (Hypothesis 3), and job involvement (Hypothesis 4) in the relationship between psychological contract breach and organisational citizenship behaviour.

Afterwards, the social exchange theory and the Five Factor Theory of Personality were deployed to expound the likely moderating effect of conscientiousness (Hypothesis 5), agreeableness (Hypothesis 6), extraversion (Hypothesis 7), openness to experience (Hypothesis 8), and neuroticism (Hypothesis 9) over the relationship between psychological contract breach and organisational citizenship behaviour.

Therefore, in this conceptual framework, organisational citizenship behaviour was used as the target endogenous latent construct, while the exogenous latent constructs were psychological contract breach and each of the Big Five personality trait dimensions, namely conscientiousness, agreeableness, extraversion, openness to experience, and neuroticism. The three distinct work attitudes, namely job satisfaction, organisational commitment and job involvement served as mediators, hence they are both exogenous and endogenous latent constructs. Simply, Figure 2 described one direct relationship (Hypothesis 1), three indirect relationships (Hypothesis 2 to 4), and five interaction effects (Hypothesis 5 to 9).

### Lessons Learnt from the Literature Review

Gleaning from the views from the literature, conceptually, the researcher found that the Big Five of Goldberg (1992) was mostly accepted for measuring personality trait constructs, which contain core and broad dimensions of personality, namely conscientiousness, agreeableness, extraversion, openness to experience, and neuroticism. Also, the most often cited definitions of job satisfaction emanated from three scholars, namely Herzberg (1976), Locke (1976), and Spector (1997).

It was also learnt that work attitudes, namely job satisfaction, organisational commitment, and job involvement require the efforts of the employer or employing organisation. In addition, the writer learnt that psychological contract usually begins from the employer or the employing organisation. After all, it is the employer that advertises the job in the first place, specifying the job description, job specification, and compensation package. Also, review on the conceptual issues revealed that job involvement has been scarcely defined by authors.

The theoretical review suggests that prior studies on personality traits laid more emphasis on the Big Five personality trait model, while providing insufficient explanation to the Big Five personality trait theory or the Five Factor Theory of Personality. It is the underpinning theory(s) that gives meaning and direction to the works of researchers, especially positivists. Explaining an underpinning theory also aids in proper interpretation of results within the scope of the study. Therefore, explaining an underpinning theory, vividly, is as equally important as explaining the model, which is derived from the theory.

To fill this gap, this study explained the Five Factor Theory of Personality, exclusively, and showed how the theory informed the current study. Furthermore, earlier studies have employed the social exchange theory to explain mediating role of employee attitudes in the connection between employer breaches and employee outcomes, which seemed problematic. In this study, the writer employed the affective events theory, advocated by Bal et al. (2012), in elucidating the mediating role of the three distinct work

attitudes in the relationship between psychological contract breach and organisational citizenship behaviour.

Empirically, to the best of the writer's knowledge, this study is one of a kind, as it is the first to provide empirical healthcare literature on the relationship between psychological contract breach and organisational citizenship behaviour among medical doctors. Same can be said for the mediating role of job satisfaction, organisational commitment and job involvement in the relationship between psychological contract breach and organisational citizenship behaviour. Moreover, examining the moderating role of the Big Five Personality dimensions on the relationship between psychological contract breach and organisational citizenship behaviour is unique. In other words, analysing the relationships among these ten concepts in a single model is novel, and offers insights regarding their complexity.

The empirical review revealed some inconsistencies in the literature, which called for further investigation. For instance, the relationship between psychological contract breach and job involvement was inconclusive. Same can be said for the relationship between job satisfaction and organisational citizenship behaviour. Similarly, the moderating effect of agreeableness trait on the relationship between psychological contract breach and employee-outcomes was indecisive in the literature. While a plethora of studies on psychological contract and employee outcomes prevailed in the western context, only a hand full of researches was written in the context of Sub-Saharan Africa.

Methodologically, using medical doctors to study the relationship among psychological contract breach, personality traits, work attitudes, and

organisational citizenship behaviour is one of a kind. Furthermore, a number of analysers did not measure their indicators on the same scale. For instance, disagreement and agreement were used in the study by Akkerman Kef and Meininger (2018). The current study measured variables on the same agreement scale. Besides, several investigators measured their variables on a five-point scale, although, a seven-point scale has been recommended by scholars, namely Adam (2018), Grace-Martin (2008), and Hartog et al. (2018), particularly for studies that intend to make inferences. The current study utilised a seven-pint Likert-type scale. Sex, age, organisational tenure, and employment type were widely used by earlier researchers as control variables of organisational citizenship behaviour. Therefore, this study followed same.

In addition, a number of analysts used cross-sectional survey as their study design. Also, the explanatory research design was the most frequently used research design. In terms of research approach, the quantitative research approach surpassed the qualitative research approach, in terms of the frequency of adoption. Considering the sampling technique, a number of researchers used non-probability sampling techniques, such as convenience sampling, purposive and snow-ball sampling to select samples for a quantitative study, but, that was inappropriate, because, members of the population were not given equal and independent chance of being part of those studies.

Besides, the sample sizes used in prior studies were mostly determined by the formula proposed by Yamane (1973) and Slovin. A number of statistical software was employed by researchers to analyse their data. They were IBM SPSS, AMOS, Lisrel, Stata, and Smart PLS. A questionnaire was

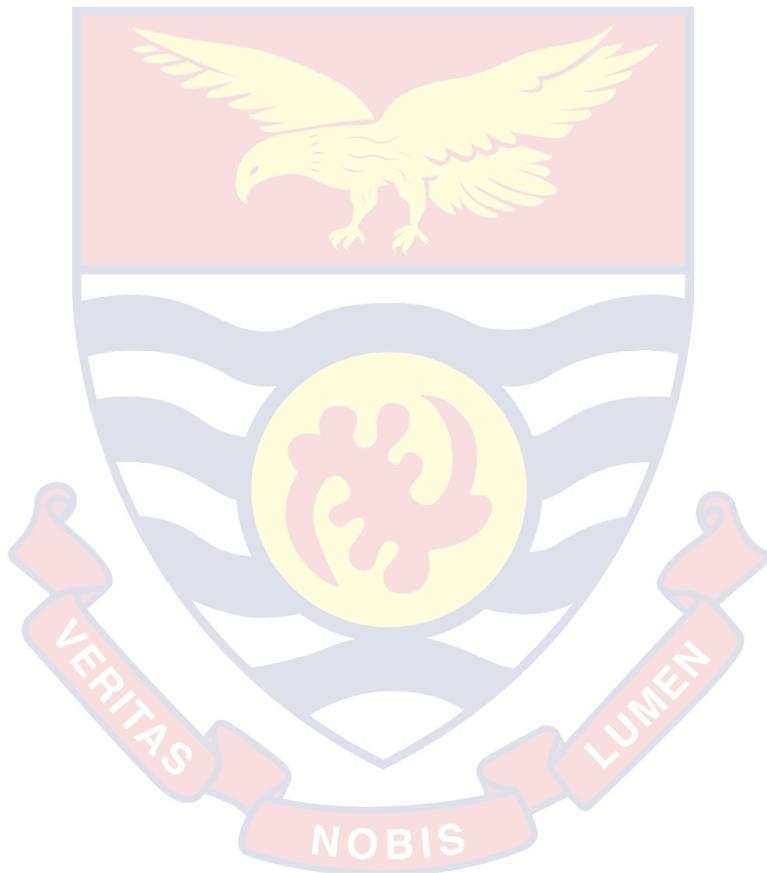
the most frequently used instrument for data collection for quantitative studies, while the qualitative studies adopted an interview guide. Other authors conducted meta-analysis studies. It was also observed that low Cronbach Alpha values were usually recorded for shorter instruments compared to longer ones. Another important lesson was the likely inflation of common method variance, when self-rating scales were used to measure concepts. As such, this study took steps to address common method variance, particularly during the questionnaire design.

### Chapter Summary

This chapter covered the theoretical review, conceptual issues, empirical review, conceptual framework of the study, and lessons learnt from the literature review. The theoretical review looked at the underpinning theories, in which the study lied. The three theories that were used to reinforce the present study were the Social Exchange Theory, Affective Events Theory, and the Five Factor Theory of Personality. Afterwards, the conceptual issues explained the concepts and variables used in this study, namely psychological contract, psychological contract breach, personality, personality traits, personality traits versus psychological contract breach and its consequences, job satisfaction, organisational commitment, organisational citizenship behaviour, as well as the linkages between demographic variables and key concepts used in the study.

The empirical review documented the results of closely related studies and identified the similarities, contradiction and gaps in such studies. The empirical review was organised based on the research objectives of this study

and it was conducted chronologically. Sequentially, the conceptual framework described the writer's idea on how the study was explored. It resided on time tested theories that embodied the findings of numerous investigations on how the phenomena occur. Finally, the lessons learnt from the literature review were presented.



## CHAPTER THREE

### RESEARCH METHODS

#### **Introduction**

This study sought to examine the mediating role of work attitudes and moderating role of personality traits on the relationship between psychological contract breach and organisational citizenship behaviour among medical doctors in Ghana. This chapter looks at the research philosophy, with emphasis on the positivist philosophical paradigm; research approach, where the quantitative approach was adopted; research design, which was explanatory, study design, which was cross-sectional; study area, which was Upper East and Upper West Regions of Ghana, population, which encompassed all medical doctors working in all the regions in Ghana. The sample size, ethical considerations, data collection instrument, common method variance, pre-testing, data collection procedures, factor analysis, reliability and validity tests procedures, and data processing and analysis were also presented. The chapter ends with a chapter summary.

#### **Research Philosophy**

A research philosophy is what a researcher perceives to be truth, reality and knowledge. It outlines the beliefs and values that guide the design of and the collection and analysis of data in a research study (Ryan, 2018). Creswell and Clark (2017) maintain that every researcher has the liberty to choose their own methods, technique and procedure. However, in choosing which philosophical ontology, epistemology and methodology, the researcher must make sure that the paradigm meets the needs and purpose of his/her study

(Opoku Mensah, 2016). Ontology relates to the values a researcher holds about what can be known as real and what someone believes to be factual (Bryman, 2008). Epistemology is our belief about how we may come to know the world. Ryan (2018) argues that, being able to justify the decision to adopt a philosophy should be part of the basis of research.

This study adopted the positivism philosophical paradigm. Positivism results from foundationalism and empiricism. Foundationalists believe that hypotheses should be proven through value-free, controlled experiments or observations. Foundationalism states that true knowledge should be incapable of being wrong (Howell, 2013). For example, foundationalists would argue that the existence of gravity is indisputable. Empiricism is one of two forms of foundationalist philosophy – rationalist or empiricist – which believes that knowledge should be objective and free from any bias, stemming from the researcher's values and beliefs (Phillips & Burbules, 2000). Positivists value proving or disproving hypotheses, and objectivism.

Objectivism takes the position that there is a single version of what is real, regardless of the researcher's perspective; the only way to find this truth and 'credible' data is to measure or observe the world with as little intervention from the researcher and other factors, as possible (Ryan, 2018). Objectivism follows the quantitative research process, wherein the researcher finds a theory, makes predictions based on the theory, and then, uses experiment to test it (Bryman, 2008). So, positivists normally select scientific method to produce knowledge (Rahi, 2017).

For example, if a new patient presents with a range of symptoms, the medical doctor would assess the patient, consider the possibilities based on the

available evidence and then explore those, using appropriate diagnostic processes until correctly concluding that the patient has infection, such as novel Covid-19. Therefore, given that this study is quantitative in nature, theory confined, involves the testing of hypotheses, deductive in reasoning, objective, and predictive in nature; the positivist philosophical paradigm is deemed appropriate and, therefore, adopted by the researcher.

### Research Approach

There are three types of research approaches namely, quantitative, qualitative and mixed methods. Quantitative studies are usually used in the natural sciences and are usually based on information that can be measured numerically (Leppink, 2016). It is the research approach, which is focused on the development of testable hypotheses (Howell, 2013) and theories (Bryman, 2008), which can be generalised across different fields. The quantitative approach places emphasis on the principle of reliability and statistical compartmentalization, as confirmed by Burns and Burns (2008). Generally, surveys, questionnaires, personality tests and standardised research instruments are used in the quantitative research approach (Creswell & Creswell, 2017).

Qualitative research approach depends upon systematic protocols and techniques, where subjective elements of the researcher are built into the findings and conclusions (Crotty, 1998). The basis of this kind of research is to understand why and how things (such as disease, health and illnesses) happen and not just about what, where and when? This can be said are the reasons why qualitative research approach is most appropriate when

conducting exploratory studies (Rahman, 2017). This is, because, it stresses on smaller units of samples rather than larger samples in order to assist a deeper study and analysis of the subject at stake (Leppink, 2016).

A qualitative research project constantly builds a comprehensive, holistic picture, analyses words, reports detailed views of informants, and conducts the study in a natural setting (Creswell & Clark, 2017). Among the many tools used in qualitative research approaches are case studies, interviews guides, and reviews. This approach offers the opportunity to understand the situation from ones' own eyes (Bryman, 2017). It also emphasizes on the validity of multiple meaning structures and holistic analysis (Burns & Burns, 2008). Therefore, it is used when there is the need to gain a deeper understanding or meaning into a specific event or situation (Denzin & Lincoln, 2011).

The mixed methods research focuses on collecting, analysing, and mixing both quantitative and qualitative data in a single study or series of studies (Creswell & Clark, 2011). Its central premise is that the use of quantitative and qualitative approaches, in combination, provides a better understanding of research problems than either approach alone (Leppink, 2016). Scholars suggest that the research approach used, should accommodate the research objectives (Leppink, 2016; Yin, 2017), skills of the researcher (Yin, 2017) and the type and quality of data to be collected (Jick, 1979).

Since the research objectives of the present study sought to test hypotheses, which are predictive-based, and the researcher seeking to collect large data that can be measured numerically, the quantitative research approach was adopted for this study. Among the many advantages of

quantitative research approach is that it offers a broader coverage of a series of events, where statistics are combined from a larger sample (Amarantunga & Baldry, 2002). In addition, quantitative approach enhances the use of statistical data analysis methods, thus, making it easier to generalise the findings from the study (Creswell & Creswell, 2017). Furthermore, quantitative approaches take the guesswork to a more concrete conclusion. This is, because, the results are usually based on quantitative measures rather than mere interpretation and, therefore, enables future application and comparison with other works (Bryman, 2017).

### Research Design

Most research can be divided into three different categories: exploratory, descriptive and causal (also called explanatory). Each serves a different end purpose and can only be used in certain ways (Malhotra & Malhotra, 2012). Exploratory research design focuses on the discovery of ideas and insights, as opposed to collecting statistically accurate data. The most common example of exploratory research takes place in the form of open-ended questions. Text responses may not be statistically measureable, but, they will give you richer quality information that can lead to the discovery of new initiatives or problems that should be addressed (Yin, 2017). Literature research, survey, focus group and case studies are usually used to carry out exploratory research (Darabi, 2007).

Unlike exploratory research, descriptive research is preplanned and structured in design, so, the information collected can be statistically inferred on a population. The main idea behind using this type of research is to better

define an opinion, attitude, or behaviour held by a group of people on a given subject (Robson, 1993). It is considered conclusive in nature, due to its quantitative nature. Since there are predefined categories a respondent must choose from, it is considered descriptive research. These questions will not give the unique insights on the issues, like exploratory research would.

Instead, grouping the responses into predetermined choices will provide statistically inferable data. This allows the analyst to measure the significance of the results on the overall population studying and the changes of respondent's opinions, attitudes, and behaviours, over time (Bryman & Bell, 2015). When a particular phenomenon is under study, the research is needed to describe it, to clarify and explain its inner properties (Huczynski & Buchanan, 2004). However, descriptive research should be thought of as a mean to an end, rather than an end in itself (Yin, 2017).

Like descriptive research, causal or explanatory research is quantitative in nature as well as preplanned and structured in design. For this reason, it is also considered conclusive research. Explanatory research differs in its attempt to explain the cause and effect relationship between variables. This is opposed to the observational style of descriptive research, because, it attempts to decipher whether a relationship is causal through experimentation. In the end, causal research will have two objectives: 1) To understand which variables are the causes and which variables are the effects and 2) to determine the nature of the relationship between the causal variables and the effect to be predicted (Yin, 2017). Given that the research objectives of this study sought to explain the causes and effect among the variables of interest, the explanatory research design was adopted.

## Study Design

A study design constitutes a general plan of how the researcher will go about answering the research objectives (Saunders & Lewis, 2012). There are many types of study designs and various scholars classify them in different ways. For example, Saunders and Lewis (2012) refer to experiments, surveys, case studies, action research, grounded theory, ethnography and archival research. Bryman and Bell (2015) defines a study design as a design in research, which consists of five types: experimental design, cross-sectional study design, longitudinal design, case study design, and comparative design. Yin (2017) argues that, in choosing a study design, there are three conditions to be considered: the type of objective, the extent of control an investigator has over actual behavioural events, and the degree of focus on contemporary as opposed to historical events.

Therefore, given the type of research objectives set (regression-based, path modeling), the researcher's limited control over actual behavioural events, and the researcher's high degree of focus on contemporary as opposed to historical events, the cross-sectional study design was used as the study design for this study. Cross-sectional study design collects quantitative data at a snap-shot one point in time.

## Study Area

This study was conducted in the Upper East and Upper West Regions of Ghana. Figures from Ghana Health Services (2018) revealed that these two regions recorded the highest number of hospital admission rates in the country consistently from 2015 to 2017. Hospital admission rate is the average number

of hospital admissions per 1,000 population in a year. Upper East Region recorded a hospital admission rate of 72.20% in 2015, 69.50% in 2016, and 69.00% in 2017. For Upper West, the figures showed 77.60% in 2015, 85.70% in 2016 and 87.60% in 2017 (Appendix A). The figures for Upper West Region concerning hospital admission rate were more alarming than those of Upper East Region.

Besides, the number of hospital beds in the health facilities of the two regions was relatively low. Upper East Region recorded 369 in 2016. The numbers increased in year 2017 to 1,363, probably due to intervention by government or interested organisations. For the Upper West Region, the number of hospital beds was 355 in 2016 and 1033 in 2017, confirming that these regions received a stock of new hospital beds within the year 2017, although they still fall short compared to the other regions in Ghana (Appendix B).

Furthermore, according to the Ghana Health Service (2018), the number of health facilities in these two regions was relatively low. The Upper East Regions had 255 chip compounds, 46 clinics, 10 hospitals, 55 health centres, and 2 maternity homes, making a total of 368 health facilities. In the Upper West Region, there were 256 chip compounds, 13 clinics, 12 hospitals, 71 health centres, 5 maternity homes and 4 polyclinics, making a total of 361 health facilities (Appendix C).

Even greater, the doctor population ratio for Upper East Region was high at one doctor to 26,489 population and that of the Upper West Region was one doctor to 14,821 population for the year 2017 (Appendix D), implying that the situation was heightened for Upper East Region than Upper

West Region. In addition, medical doctors in these two regions were relatively low, with the total number of medical doctors numbering 99 for Upper East Region and 152 for Upper West Region (Ghana Health Service, 2018).

## Population

Rubin and Babbie (2001) argue that a population is the theoretically specified aggregation of study elements. Malhotra (1996) advocates that the members or units of a population should possess material facts that is relevant to the study and the researcher. As such, for the purpose of this study, all medical doctors working in all the ten regions in Ghana, as at the time of the data was retrieved in 2019, formed the populations of this study. The total population of medical doctors within the ten regions of Ghana, as at 2019, was 4,108.

The breakdown of the population under the ten regions were as follows: Ashanti Region [815]; Brong Ahafo Region [268]; Central Region [312]; Eastern Region [244]; Greater Accra Region [1,582]; Northern Region [262]; Upper East Region [99]; Upper West Region [152]; Volta Region [236]; and, finally, Western Region [138]. Data were obtained from the Human Resource Division of Ghana Health Service Headquarters in Accra on Thursday, 15<sup>th</sup> August, 2019. The sampling frame for this study was the list of all medical doctors, either full time or part-time, working in the ten regions.

## Sampling Procedure and Sample Size

This study employed the simple one-stage cluster sampling approach, recommended by Waker and Poznyak (2018), which allowed a researcher to

select all elements within two or more clusters. Thus, the researcher selected the clusters (Upper East and Upper West Regions), which represented the primary sampling units from which sample elements (the medical doctors), who represent the secondary sampling units, were drawn. Consequently, the medical doctors working in the Upper East (n=99) and Upper West (152) Regions, numbering 251 formed the sample size for this study. The 251 medical doctors emanated from 26 healthcare units: 10 hospitals from the Upper East Region, as well as 12 hospitals and 4 Polyclinics from the Upper West Region.

The sample size of 251 satisfied the analytical technique adopted. According to Hair et al. (2018), the minimum sample size should be equal to or more than 10 times the largest number of indicators used to measure a single construct. In the case of this study, the largest number of indicators used to measure a single construct was 20 items of Job Satisfaction, hence, 10 times 20 was 200 and this figure was below the sample size of 251, hence, the chosen sample size of 251 was justified.

### Ethical Considerations

To begin, a written permission was sought from the Institutional Review Board of the University of Cape Coast on Monday, 26<sup>th</sup> of August, 2019. Ethical clearance was granted by the Board on the 13<sup>th</sup> of November, 2019 (Appendix E). Other ethical considerations were voluntary participation, right to privacy, anonymity and confidentiality of information. Regarding voluntary participation, every respondent was allowed to participate in the data collection exercise on his/her own free will. Also, the possible issues of

right to privacy were realised by allowing respondents to answer the questionnaires on their own and an appropriate medium was communicated for unclear questions to be attended to.

Furthermore, the issue of anonymity was attended to by restricting respondents from providing detailed information about themselves on the questionnaire in relation to names, contact numbers and personal addresses. Respondents were also assured that none of their identities would be leaked to the public domain nor used for purposes other than this study. Finally, the study ensured confidentiality of information by assuring respondents that all information provided would be kept confidential. They were also assured that none of the information provided would be used against them. Respondents were free to opt out or withdraw anytime from the research. No material reward was given to a respondent to induce participation.

### **Data Collection Instrument**

A structured questionnaire (Appendix F) was used as the instrument for data collection; therefore, data was sourced from a primary source. A questionnaire was used, because, in the view of Neelankavil (2007), it guarantees greater uniformity, consistency and objectivity in data collected. The questionnaire was self-administered due to the high educational level of medical doctors. A self-administered questionnaire refers to a questionnaire that has been designed specifically to be completed by a respondent, without the intervention of the researcher collecting the data. Because a self-administered questionnaire is completed without on-going feedback from the researcher, special care was taken in how the questions/statements were

worded and how the questionnaire was formatted in order to avoid measurement error (Lavrakas, 2008). Items in the questionnaire were written in simple sentences to avoid ambiguities.

The questionnaire was grouped into five sections (Section A to E) and it was made up of 104 items. The questionnaire was designed based on prior studies. ‘Section A’ collected data on psychological contract breach. It was an eight-factor instrument made up of 15 items sourced from the study by Conway and Briner (2005). The dimensions examined were: (a) pay, (b) advancement opportunities, (c) employee recognition, (d) fairness in rewards, (e) trust, (f) management support, (g) management involvement and influence, and (h) resource support. This scale was used, because, it had the highest dimensions, covering all contents of a psychological contract breach, unlike other scales in literature (Coyle-Shapiro & Kessler, 2000; Lester, Turnley, Bloodgood & Bolino, 1992; Psycones, 2006; Raeder, Wittekind, Inauen & Grote, 2009; Robinson & Morrison, 2000; Robinson & Rousseau, 1994; Rousseau, 2000).

More so, this scale was utilised because it was known to have demonstrated good psychometric properties in earlier studies, such as Shan (2012). Sample item was: ‘Limited materials and equipment are made available to me to perform my job’ (PCB01). The 15 items were anchored on a seven-point Likert-like scale with score 1 = least agreement to score 7 = strongest agreement. High score on this scale suggests high breach, while low score suggests low breach or psychological contract fulfilment. The original Cronbach Alpha for the scale was 0.86.

‘Section B’ looked at the organisational citizenship behaviour among the medical doctors. The Organisational Citizenship Behaviour Scale by Lee and Allen (2002) was employed for the present study. It was the most widely used. This scale contained two dimensions: organisational citizenship behaviour directed towards the individual (OCBI) and organisational citizenship behaviour directed towards the organisation (OCBO). The original Cronbach Alpha for the sub-scales were 0.83 and 0.88 respectively. The original Cronbach Alpha for the main scale was 0.86. The scale contained 16 items: eight items for each dimension. Sample item was: ‘Willingly give my time to help others who have work-related problems’ (OCB-I-2). The 16 items were anchored on a seven-point Likert-like scale with score 1 = never to score 7 = every time. High score on this scale suggests good organisational citizenship behaviour, while low score suggests bad organisational citizenship behaviour.

Subsequently, ‘Section C’ provided statements that related to the work attitudes of medical doctors. Three different work attitudes were considered in this study, namely job satisfaction, organisational commitment and job involvement. Regarding job satisfaction, this study employed the 20-item short-form of the Minnesota Satisfaction Questionnaire by University of Minnesota (1977) in measuring the job satisfaction among medical doctors for several reasons. First, responding to this questionnaire usually takes a shorter time to complete: between 15-20 minutes. This avoided the researcher from boring respondents with unnecessarily long questions.

Secondly, an overly long instrument may yield higher non-response rates. More importantly, the scale had a balance between length and

psychometric properties. The original Cronbach's Alpha for the scale was 0.98. Sample item was: 'I have the chance to do something that makes use of my abilities' (JST11). The 20 items were anchored on a seven-point Likert-type scale with score 1 = least agreement to score 7 = strongest agreement. High score on this scale suggests high level of job satisfaction, while low score suggests low level of job satisfaction.

Considering organisational commitment, Meyer and Allan's (1997) 19-item scale was used to measure organisational commitment of medical doctors, since it was the most frequently used by earlier researchers (Akbar et al., 2018; Ayoade et al., 2018; Clarke & Mahadi, 2017; Leephajaroen, 2016; Opoku Mensah, 2016; Yildiz, 2018). Sub-scales were affective commitment (seven items), continuance commitment (six items) and normative commitment (six items). Sample item was: 'I really feel as if the hospital's problems are my own' (OCT03). The original Cronbach's Alpha for the sub-scales were 0.70, 0.60, and 0.67 respectively. The original Cronbach Alpha for the main scale was 0.66. The 19 items were anchored on a seven-point Likert scale with score 1 = least agreement to score 7 = strongest agreement. High score on this scale suggested high level of organisational commitment, while low score suggested low level of organisational commitment among medical doctors.

The last dimension of work attitude considered in this study was job involvement. The 10-item scale developed by Kanungo (1982) was used in measuring job involvement among medical doctors. Sample item was: "The most important things that happen to me involve my present job" (JIV01). The original Cronbach Alpha for the scale was 0.86. The 10 items were

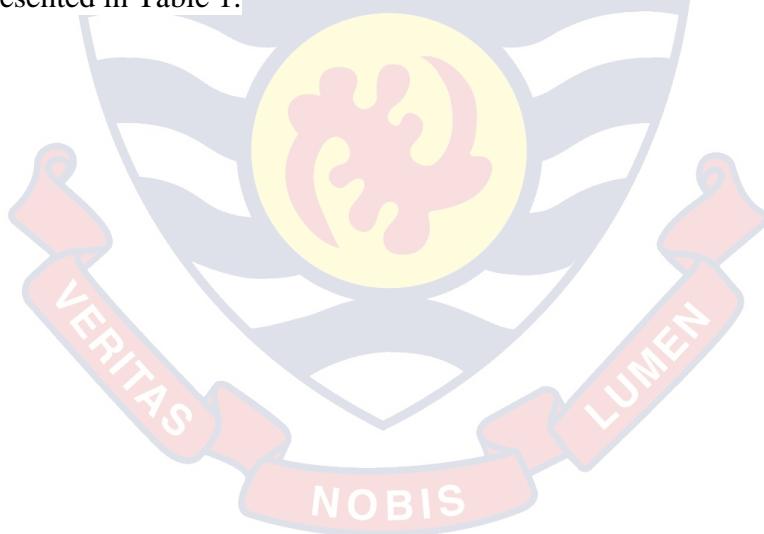
anchored on a seven-point Likert scale, with score 1 = least agreement to score 7 = strongest agreement. High score on this scale suggested high involvement, while low score suggested low involvement among medical doctors. The scale was chosen because it had a balance between length and psychometric properties.

'Section D' contained indicators that measured personality traits among medical doctors. The 20-item Mini-IPIP scales of the Big Five Factors of personality traits developed by Donnellan et al. (2006) was adopted for this study. Four items measured each of the Big Five Factors of personality. Sample item for 'Extraversion' was: 'I talk to a lot of different people at parties' (EXT3). Sample item for 'Agreeableness' was: 'I sympathise with others' feelings' (AGR1). Sample item for 'Conscientiousness' was: 'I stand for orderliness in my daily activities' (CON3). Sample item for 'Neuroticism' was: 'I get upset easily' (NEU3). Sample item for 'Openness to experience' was: 'I am interested in variety' (OPE3). The 20 items were anchored on a seven-point Likert scale with score 1 = least acceptance to score 7 = strongest acceptance.

The scale was used because of its balance between length and psychometric properties. According to Donnellan et al. (2006), though the scales are tiny, they are effective measures of the Big Five Factors of personality. The original Cronbach Alpha for the scale was: Mini-IPIP (0.88) and those of the sub-scales were Agreeableness (0.72), Conscientiousness (0.63), Neuroticism (0.75), and Openness to experience (0.67), and Extraversion (0.83). Last, but not least, 'Section E' of the questionnaire looked at the general information of respondents. The information sought were sex (1

= male; 0 = female), age (in years), employment type (1 = fulltime employment; 0 = part time), and the number of years worked with employer (in years).

These four demographics were used in this study as control variables of organisational citizenship behaviour, because, they have been employed in earlier related studies, such as van der Heuvel, (2012), Kuang-Man (2013), Niesen et al. (2018), and Quratalain, Khan, Crawshaw, Arain and Hameed (2018). This was done to prevent the results of this study from being affected by them. Sex and employment type were used as dummy variables. A summary of the variables used in the study, their expected sign, sources, number of items, scale type, Likert scale point, and scale format were presented in Table 1.



**Table 1: Variable Operationalization and Measurement**

Variable	Expected Sign	Source	Number of Items	Scale Type	Likert Scale Point	Scale Format
Psychological Contract Breach	PCB	Conway and Briner (2005)	15 items	Ordinal continuous	Seven-point	1=Least agreement to 7=strongest agreement
Organisational Citizenship Behaviour	OCB	Organisational Citizenship Behaviour Scale by Lee and Allen (2002)	16 items	Ordinal continuous	Seven-point	1=never to 7=every time
Job Satisfaction	JST	Minnesota Satisfaction Questionnaire (short-form) by University of Minnesota (1977)	20 items	Ordinal continuous	Seven-point	1=Least agreement to 7=strongest agreement
Organisational Commitment	OCT	Meyer and Allan's (1997)	19 items	Ordinal continuous	Seven-point	1=Least agreement to 7=strongest agreement
Job Involvement	JIV	Kanungo (1982)	10 items	Ordinal continuous	Seven-point	1=Least agreement to 7=strongest agreement
Personality Traits	PTS	Donnellan et al. (2006)	20 items	Ordinal continuous	Seven-point	1=Least acceptance to 7=strongest acceptance

## Common Method Variance

Because this study used self-reported questionnaire to collect data at the same time from the same participants, there was a risk that common method bias could present problems. As such, there was the need to cater for possible common method bias. Common method variance or bias refers to variance that is attributable to the measurement method rather than to the construct the measures represent (Nougarou, 2017). Podsakoff et al. (2003) recommend the use of different scale answering formats for different constructs.

Using different formats diminishes participants' likelihood to use previous responses to answer subsequent questions (when those can sound similar), thus, decreasing chances of the consistency motif (tendency for respondents to try to maintain consistency in their responses to questions) and item demand characteristic (when items may convey hidden cues as to how to respond to them). For instance, if a medical doctor is asked to rate statements on psychological contract breach, using an agreement scale, the response to those statements are likely to influence the response to other statements that may succeed. However, if one of the statements asks for 'agreement' and the other similar statement asks for a 'frequency', the respondent is less likely to think about the previous response when giving his/her new answer.

Moreover, while the instruction for the previous statement involves 'circling' the correct option, the subsequent ones require 'ticking' the correct option. This technique helps to distinguish between respondents that read before responding and those that do not (Podsakoff et al., 2003). Furthermore, it is imperative to make sure participants are convinced that they would stay

anonymous. In addition, it was also important to assure them that there were no right or wrong answers and to convince them that they should answer questions as honestly as possible.

The result is that respondents were less likely to edit their responses to be more socially desirable (tendency for respondents to attribute socially desirable traits, attitudes, and/or behaviours to someone they know and like, than to someone they dislike), to be more lenient, to be acquiescent (tendency for respondents to agree or disagree with questionnaire items independent of their content), or to respond according to how they thought the researcher wanted them to respond (Podsakoff et al., 2003). Reverse coded items were also employed. Kock (2015) argued that greater collinearity levels could likely lead to inflated path coefficients, signalling that the model could be contaminated by common method bias.

### Pre-Testing

A pre-test was conducted prior to the main study. The purpose of the pre-test was to fine-tune the questionnaire items and make them clearer and understandable so that participants do not have challenges during the main study. According to Pallant (2007), pre-tests are essential ahead of a main study for the following reasons. Firstly, they ensure that instructions, questions and scale items are clear. They further ensure that potential respondents understand questions and respond appropriately. Also, they help to identify and eliminate questions or items that may offend potential respondents. Lastly, the pre-testing was done to ensure the validity of the scales and, also, to make

sure the questionnaire was free of any cultural biases, since the scales were adapted from prior studies.

A pre-test was undertaken, using 30 medical doctors at Korle-Bu Teaching Hospital in Accra, Ghana's premier healthcare facility. The sample size for the pre-test conformed to Saunders, Lewis and Thornhill's (2007) minimum criteria of 10 for pre-test by students. Medical doctors at Korle-Bu Teaching Hospital were selected at the convenience of the researcher, with permission from the Medical Secretariat of the hospital. Draft copies of the instrument, which consisted of already existing scales were neatly packaged in brown envelopes with pens and were distributed to the medical doctors through the Medical Secretariat of the Hospital. The questionnaires were given to them and were expected to be collected in five days' time.

However, retrieving the questionnaires took almost three weeks. The variation in the time frame resulted from the busy schedules of the medical doctors. Of the 30 questionnaires issued to participants, 24 completed questionnaires were recovered. The pre-test revealed that some of the statements on the questionnaire were difficult to comprehend because of the use of jargons or phrases that were written in the western context. As such, these statements were paraphrased to make them clearer. For instance, "I am the life of a party" was replaced with "I am very lively and entertaining on social occasions" (EXT1). "Seldom feel blue" was also replaced by "I usually feel depressed or sad". Generally speaking, respondents spent about 1 hour in completing the questionnaire. Finally, none of the items on the questionnaire was dropped; however, the questionnaire format was changed, which reduced

the number of pages from 6 to 5. Details of the original Cronbach's Alpha before and after pre-testing were presented in Table 2.

**Table 2: Original and Current Cronbach's Alphas of Scales used before the Measurement Evaluation**

Scales	Details	Original	Cronbach's Alpha
		Cronbach's Alpha	After Pre-Testing
Psychological Contract Breach	15 items	0.86	0.89
Organisational Citizenship Behaviour	16 items	0.86	0.92
Job Satisfaction	20 items	0.98.	0.97
Organisational Commitment	19 items	0.66	0.83
Job Involvement	10 items	0.86	0.88
Personality Traits	20 items	0.88	0.93

Source: Field survey (2020)

### Data Collection Procedures

Copies of questionnaires, numbering 251, were neatly packaged in brown envelopes with pens and were administered to medical doctors through the Human Resource Division of Ghana Health Service Headquarters in Accra on Wednesday, 20th November, 2019, for onward submission to medical doctors via their Regional and District Health Directorates in the Upper East

and West Regions through an official and trusted medium, with the intention of collecting them later, after completion. Since medical doctors work under the supervision of the Ghana Health Service, it was expected that they would treat the questionnaire as official and grant it the necessary attention by making time to respond to it. The Human Resource Division was consulted, because, they were responsible for the general welfare, management, and well-being of medical doctors in Ghana.

Efforts were made to reach most of the medical doctors to get large data and to achieve a desired level of precision. First of all, follow-ups were made by making several phone calls and visits to the Human Resource Division of Ghana Health Service in Accra. In addition, the researcher visited the Regional and District offices in the Upper East and West Regions to speed up data collection and to reduce non-response rate. Through the Human Resource Division of Ghana Health Service Headquarters in Accra, the researcher retrieved completed questionnaires on Monday, 17<sup>th</sup> February, 2020.

Hence, data collection lasted for almost three months from the day the questionnaires were administered (20th November, 2019) to the day of retrieval (17<sup>th</sup> February, 2020). The variation in the timeframe for the pre-testing and the main survey was due to the fact that larger number of medical doctors were required to respond to the questionnaire in the main survey ( $n=251$ ), compared to the pre-testing ( $n=30$ ). Of the 251 questionnaires distributed, 218 questionnaires were retrieved, but, 4 were extremely incomplete (missing values  $>5\%$ ), hence they were rejected. The remaining 214 completed questionnaires were used for data processing and analysis.

Consequently, a response rate of 85.26% ( $214/251 \times 100\%$ ) was achieved. The non-response rate was 14.74% (100%-85.26%). Although the researcher provided contact details on the questionnaire in cases of clarifications, no respondent contacted the researcher, signalling that respondents likely understood the items on the questionnaire.

By clearly examining the completed questionnaires, it was evident that respondents carefully read the questions and responded accordingly, hence, there were no suspicious response patterns and less evidence of common method variance. The completed questionnaires were enveloped and kept in a safe: in a bookshelf in the researchers' room. After data entry, data coding and data cleaning; the data was stored on an external hard drive and a personal computer so that results can be reconstructed whenever the need arises.

### Factor Analysis

Before assessing the measurement and structural model, there was the need to conduct Correlation Matrix Test, Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO), and Bartlett Test of Sphericity. IBM SPSS Statistics Software for Windows, Version 24 was employed in conducting these tests. Correlation Matrix was computed in the first step. In line with Adam's (2018) recommendation, the significance values of the indicators should be lesser than 0.05 for one to say that they are correlating with others, because, they were measuring the same thing. The indicators that do not correlate with each other should be eliminated. Also, a correlation value of 0.3 is acceptable.

In the second step, the writer calculated the KMO of each variable. KMO values equivalent to 0.7 or above were considered acceptable for the dataset. Also, Bartlett's Test of Sphericity must be significant at 0.05. Finally, a minimum of four indicators should measure a single construct for one to confidently say that confirmatory factor analysis was appropriate for the data.

### **Reliability and Validity Tests Procedures**

Before hypotheses testing, the reliability and validity of the scales were checked, using indicator reliability, internal consistency reliability (composite reliability), convergent validity, and discriminant validity techniques for reflective measurement models. Smart PLS software version 2.0M.3 by Ringle, Wende and Will (2005) was utilised in conducting these tests. Indicator loadings should be approximately 0.6 or higher for them to be retained, in line with Hair, Tomas, Ringle and Sarstedt's (2014) guidelines. Jöreskog's (1971) composite reliability should be 0.7 or higher for them to be retained, as recommended by Bagozzi and Yi (1988). For convergent validity, the average variance extracted (AVE) should be 0.5 or higher to suggest that the latent variable explained more than half of its indicators' variance, as suggested by Bagozzi and Yi (1988).

For the assessment of discriminant validity, Fornell–Larcker criterion developed by Fornell and Larcker (1981) was recommended by Hair et al. (2014), as a preferred option over cross loading. Discriminant validity, using the Fornell-Larcker criterion at the construct level can be said to have been achieved if the square-root of the AVE is greater than the highest correlation between the latent variable and the other constructs. In Garson's (2016) view,

when Fornell–Larcker criterion is met, it suggests that the model has been appropriately specified.

The primary evaluation criteria for the structural model were the multicollinearity assessment,  $R^2$  measures, and inner model path coefficients sizes and significance. Therefore, in this study, the assessment of the structural model began with an assessment of possible multicollinearity among the exogenous latent variables, so that, according to Hair et al. (2018), it does not bias the regression results. Each set of exogenous latent variables in the model was checked for potential collinearity problem, using multiple regression tools of IBM SPSS Statistics, for Windows, version 24, as Smart PLS software does not provide these numbers. In Wong's (2013) perspective, as a rule of thumb, Variance Inflator Factor values above 5 are indicative of probable collinearity issues among the predictor constructs. Thus, this study followed this rule of thumb. Once collinearity was not an issue, the next step was to examine the  $R^2$  value of the endogenous construct(s).

In Shmueli and Koppius's (2011) words,  $R^2$  measures the variance, which is explained in endogenous constructs, and is, therefore, a measure of the model's explanatory power. Because the goal of the prediction-oriented PLS-SEM approach is to explain the endogenous latent variables' variance, the key target constructs' level of  $R^2$  should be high. As a guideline, Henseler, Ringle and Sinkovics (2009) advocated that the  $R^2$  values of 0.70, 0.50, and 0.20 can be considered substantial, moderate, and weak respectively. In the view of Sharma, Sarstedt, Shmueli, Kim and Thiele (2019), a substantial  $R^2$  indicates that the model fits the data collected and it reflects the overall

population. According to them, the same model would likely fit if used on another sample drawn from the same population.

Finally, the individual path coefficients of the PLS structural model were interpreted as standardized beta coefficients of ordinary least squares regressions. Just as with the indicators' weights and loadings, each path coefficient's significance was assessed by means of a bootstrapping procedure. Paths that were non-significant or show signs contrary to the hypothesised direction do not support a prior hypothesis, whereas significant paths showing the hypothesised direction empirically support the proposed causal relationship. Paths that obtained T-statistic values that were more than 1.96 were deemed significant.

## Data Processing and Analysis

To begin, the general information of respondents were analysed, using frequency tables by employing IBM SPSS Statistics, for Windows, version 24. Afterwards, the researcher tested for the normality of the data so as to inform the appropriate measure of central tendency and dispersion to be used for analysing the variables, using Kolmogorov-Smirnov test and Normal Q-Q Plots. After conducting correlation matrix test KMO, and Bartlest's test of sphericity will be computed. Subsequently, PLS-SEM was used as the analytical technique in assessing the measurement and structural model. PLS-SEM was chosen over Covariance-Based Structural Equations modeling for three important reasons.

First, the research objectives of this study sought to predict the variances in the endogenous latent constructs. Second, PLS-SEM was best

suited for testing complex models, containing several constructs and indicators, as in the case of this study. Thirdly, PLS-SEM was adopted due to its distributional assumption, which it shows high robustness in situations where the distribution of the data was substantially different from a bell-shaped curve. Smart PLS software version 2.0M.3 by Ringle, Wende and Will (2005) was used for the PLS-SEM Modeling. The PLS algorithm was run, using the default setting with Initial Weights set at 1.0, Maximum Iterations of 300 and an abort criterion of 1.0E-5.

Prior to analysing the measurement and structural model, the survey data were manually and carefully typed into Microsoft Office Excel version 2013 and saved as .xlsx format. The data set had a sample size of 214, without any missing values and invalid observations. To ensure that Smart PLS can import the Microsoft Excel properly, the names of the indicators (for instance, PCB01, PCB02, PCB03) were placed in the first row of the Microsoft Excel spreadsheet, and no ‘string’ value (for example, words or single dot) were used in other cells, as recommended by Wong (2013). Since Smart PLS does not take native Microsoft Excel file directly, the dataset was converted to .csv file format.

After testing for reliability and validity of the variables, the structural path was checked in bootstrapping for significance testing of both the inner and the outer model, as recommended by Hair, Ringle and Sarstedt (2011). Smart PLS software generated *T*-statistics for significance testing of both the inner and the outer model. The bootstrap of the 214 cases was run, using 5000 bootstrap samples, with no sign changes. According to Hair et al. (2014), the bootstrap result approximates the normality of the data. Therefore, using the

two-tailed *t*-test with a significant level of 5%, the path coefficient was said to be significant if the *T*-statistics was larger than 1.96.

A number of methods have been proposed for testing hypotheses about mediation. One way is by employing the causal steps strategy, popularized by Baron and Kenny (1986), in which the investigator estimates the paths of the model, using Ordinary Least Square regression or Structural Equation Modeling, and assesses the extent to which several criteria are met. Baron and Kenny's (1986) influential paper on mediation analyses stated three conditions that must be met in order to claim that mediation was occurring. Baron and Kenny (1986) argued that an independent variable (*X*) causes an intervening variable (*I*), which, in turn, causes the dependent variable (*Y*). Simply, for mediation: *X* must be significantly related to *I*; *I* must be significantly related to *Y*; the relationship between *X* and *Y* must diminish when *I* is in the model. In MacKinnon, Lockwood, Hoffman, West and Sheets's (2002) words, each of the three constructs must show evidence of a non-zero monotonic association with each other (the three variables must be significantly different from zero), and the relationship of *X* to *Y* must decrease substantially upon adding *I* as a predictor of *Y*.

Another commonly used approach for testing mediation effects is the Sobel (1982) test, which examines the relationship between the independent variable and the dependent variable compared with the relationship between the independent and the dependent variable, including the mediation construct. Yet, this test relies on distributional assumptions, which usually do not hold for the indirect effect ( $X \rightarrow I \rightarrow Y$ ). The multiplication of two normally distributed coefficients results in a non-normal distribution of the product.

Moreover, Hair et al. (2014) debate that the Sobel's test requires unstandardized path coefficients as input for the test statistic and it lacks statistical power.

As a consequence, Hair et al. (2014) recommends that, when testing mediation effects, researchers should rather follow steps proposed by Preacher and Hayes (2004, 2008) and bootstrap the sampling distribution of the indirect effect, which works for simple and multiple mediator models. Bootstrapping makes no assumptions about the shape of the variables' distribution or the sampling distribution of the statistics. This mediation approach is, therefore, perfectly suited for the PLS-SEM method. In addition, Hair et al. (2014) argue that the approach exhibits higher levels of statistical power compared with the Sobel's (1982) test.

Firstly, the direct effect ( $X \rightarrow Y$ ) should be significant if the mediator is not included in the model. In the view of Zhao, Lynch and Chen (2010), even though this is not a necessary condition, this kind of situation makes the mediator analysis much easier to understand and interpret. If the relationship is significant, the mediator may absorb some of this effect or the entire effect. The next is to proceed with the mediation analysis if there is a significant direct path relationship between the exogenous and endogenous latent variables and include the mediator construct in the PLS path model.

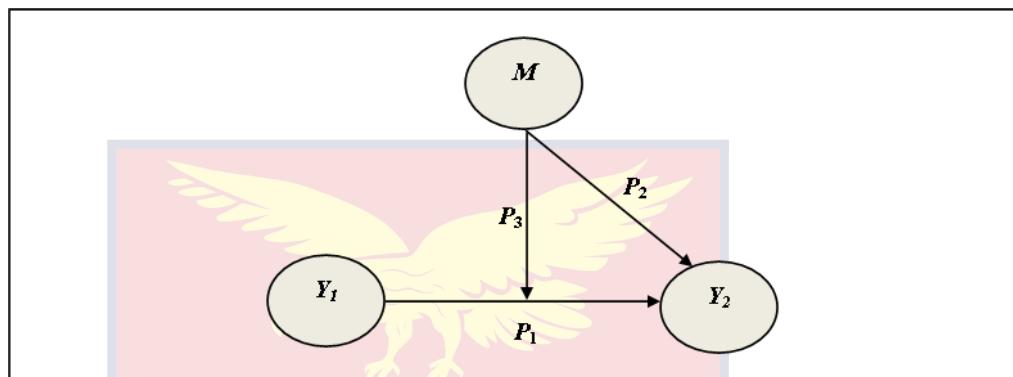
When adding the mediator, according to Hair et al. (2014), the indirect effect ( $X \rightarrow I \rightarrow Y$ ) must be significant. The significant of each individual path ( $X \rightarrow I$ ) and path ( $I \rightarrow Y$ ) is a necessary, but not sufficient condition. Only if the two paths tend out to be significant after the bootstrapping procedure has been run can the researcher assess if their product, which represents the

indirect effect (sufficient condition), is significant. The analyser concludes that the relationship through the ' $I$ ' mediator is significant if the  $T$ -statistics is greater than 1.96 (5% level of significance). The significant indirect effect is required to conclude that  $I$  mediate the relationship between  $X$  and  $Y$ . Hair et al. (2018) teach that, if the indirect effect is significant, then, the mediator absorbs some of the direct effect.

The next question is how much the mediator variable absorbs. The variance accounted for (VAF) determines the size of the indirect effect ( $X \rightarrow I^* (I \rightarrow Y)$ ) divided by the total effect  $\{(X \rightarrow Y) + (X \rightarrow I^* (I \rightarrow Y))\}$ . The total effect is calculated as the sum of the direct effect and the indirect effect. If the indirect effect is significant, but does not absorb any of the exogenous latent variables' effect on the endogenous variable, the VAF is rather low. In this situation, the VAF would be less than 20%, and one can conclude that almost no mediation took place. Contrariwise, when the VAF has very large outcomes of above 80%, one can assume that a full mediation has occurred. A situation in which the VAF is larger than 20%, but less than 80% can be characterised as partial mediation, in line with Preacher and Hayes's (2004, 2008) guidelines.

Concerning moderating effect, Hair et al. (2014) assume that the relationship between the two variables ( $Y_1$  and  $Y_2$ ) is not constant, but, depends on a moderator variable ( $M$ ), and this moderator variable may change the direction of the relationship. This type of moderation is called a two-way interaction, because, aside the endogenous variable ( $Y_2$ ), the moderator interacts with one other variable, the exogenous latent variable ( $Y_1$ ). As an illustration, a path coefficient may be positive for those observations that have

high value in the moderator variable, whereas the structural relationship may be negative for observations that have low value in the moderator variable. The path from  $Y_1$  to  $Y_2$  is called main effect, while path from  $Y_1$  to  $Y_2$  moderated by  $M$  is termed simple effect (Figure 3).



*Figure 3: Example of moderating effect*

Source: Adopted from Hair et al. (2014, p. 259)

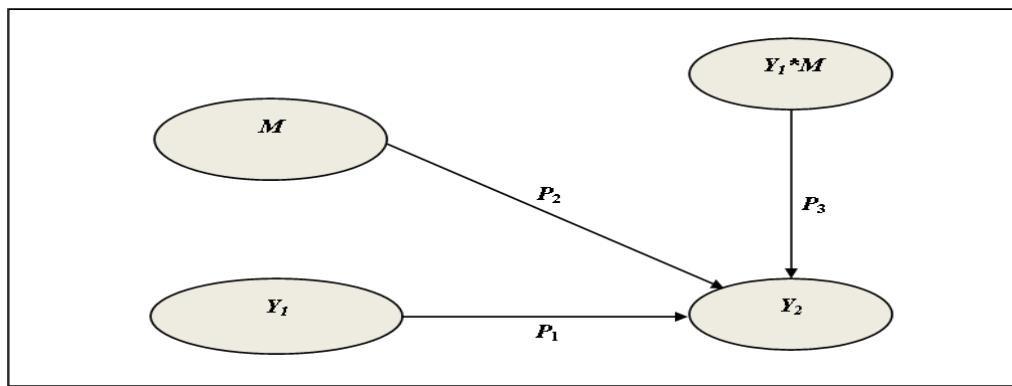
To be specific, the estimated value of  $P_1$  represents the strength of the relationship between  $Y_1$  and  $Y_2$  when the moderator variable  $M$  has a value of zero. Henseler and Fassott (2010) argue that, if the level of moderator variable is increased or decreased by one standard deviation unit, the simple effect ( $P_1$ ) is expected to change by the size of the moderator effect ( $P_3$ ). However, in order to achieve a mid-point, which shall serve as the base-line for the moderator, the mean or median split is employed. This is done by subtracting the latent variable's mean from each observation. Mean centering provides a reference point, which facilitates the interpretation of the effects.

Lastly, the researcher included the moderator variable's effect ( $P_2$ ) on the endogenous latent variable  $Y_2$ . This additional path is important to account for mean value changes in the endogenous latent variable. According to Hair

et al. (2014), if the path ( $P_2$ ) is omitted, the effect of  $M$  on the relationship between  $Y_1$  and  $Y_2$  (that is,  $P_3$ ) would be inflated.

From Figure 3, the structural model with the moderator effect can be expressed as:  $Y_2 = (P_1 + P_3 * M) * Y_1 + P_2 * M \rightarrow$  Equation (1). To explain, the influence of  $Y_1$  on  $Y_2$  depends not only on the strength of the simple effect ( $P_1$ ), but also on the product of  $P_3$  and  $M$ . Integrating the moderator variable into the model, the researcher rewrites the equation as follows:  $Y_2 = P_1 * Y_1 + P_2 * M + P_3 * (Y_1 * M) \rightarrow$  Equation (2). Equation (2) shows that adding the moderator effect requires that the specification of the simple effect of the exogenous variable (that is,  $P_1 * Y_1$ ), the simple effect of the moderator variable (that is,  $P_2 * M$ ), and the product term  $P_3 * (Y_1 * M)$ , which is also called the interaction term. As such, the coefficient  $P_3$  expresses how the simple effect  $P_1$  changes when the moderator variable  $M$  is increased or decreased by one standard deviation.

Figure 4 illustrates the concept of an interaction term. It includes the interaction term as an additional latent variable covering the product of the exogenous latent variable  $Y_1$  and the moderator  $M$ . Because of this interaction, researchers, such as Hair et al. (2014) often refer to interaction effects when modeling moderator variables. In the opinion of Garson (2016), a moderating variable is an antecedent joint direct or indirect cause of two variables further down in the causal model.



*Figure 4: Interaction term in moderation*

Source: Adopted from Hair et al. (2014, p. 261).

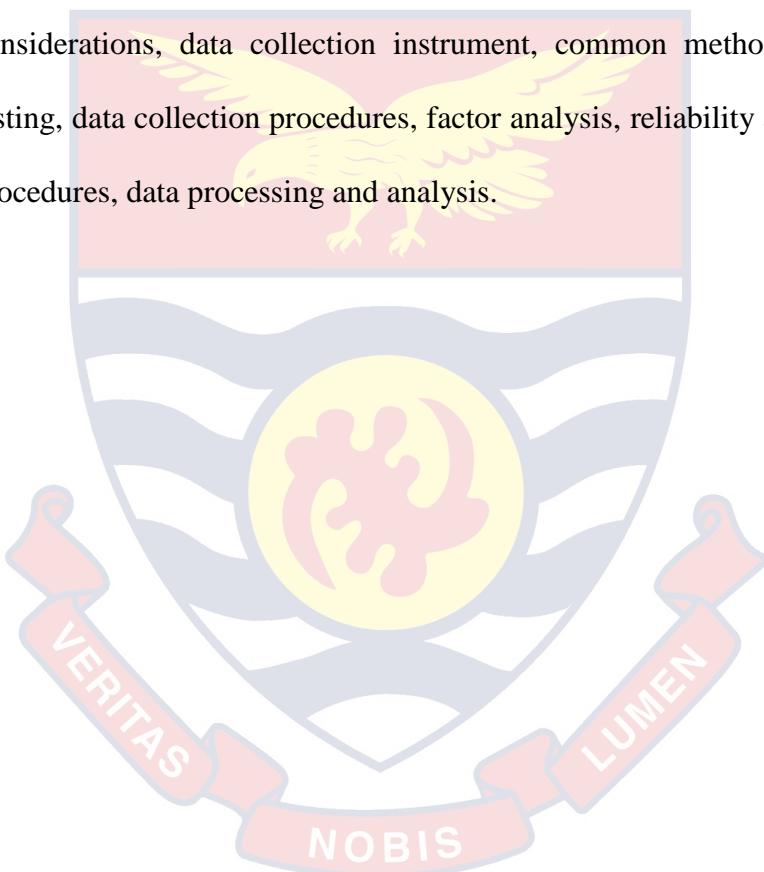
The product indicator approach was used for the moderation analysis, because, according to Hair et al. (2014), it is best suited for reflective models. Although the latent variable scores approach can also be used for analysing moderating effect in reflective measurement models, simulation studies by Chin (2010) suggests that the product indicator approach produces more accurate parameters than does the latent variable score approach. The product indicator approach involves multiplying each (mean-centered) indicator of the exogenous latent variable with each indicator of the moderator variable.

The product indicators become the indicators in the interaction term. To implement the product indicator approach, the researcher extended the original model by including the moderator variable. To do so, the researcher entered a new construct in the model, renamed it, and drew a path relationship from the newly added moderator construct to the target endogenous construct. Afterwards, the researcher assigned the indicators to the moderator construct. Subsequently, the interaction term was included in the model. Smart PLS software, according to Hair et al. (2014), offered an option to automatically include an interaction term with product indicators. Afterwards, the analyst

proceeded with the analysis by running the PLS-SEM algorithm, using the path weighting scheme, data metric (Mean=0, Var=1), maximum iteration of 300, abort criterion (1.0E-5), and initial weights of 1.0.

## Chapter Summary

This chapter looked at the research philosophy, research approach, research design, study design, study area, population, sample size, ethical considerations, data collection instrument, common method variance, pre-testing, data collection procedures, factor analysis, reliability and validity tests procedures, data processing and analysis.



## CHAPTER FOUR

### RESULTS AND DISCUSSION

#### **Introduction**

This study sought to assess the mediating role of work attitudes and moderating role of personality traits in the relationship between psychological contract breach and organisational citizenship behaviour among medical doctors in Ghana. First and foremost, this chapter presents and discusses the results of the general information of respondents. The chapter continues with a test of normality of the data collected to inform the appropriate measure of central tendency and dispersion to be used as descriptive statistics. Subsequently, the data collected is subjected to factor analysis using Correlation Matrix, Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy test, and Bartlett test of sphericity. Successively, the measurement and structural model are assessed, using PLS Algorithm, mediation and moderation analysis. IBM SPSS Software for Windows, version 24 and Smart PLS 2.0M.3 are the software utilised in analysing the data. Results are presented in tables and figures.

#### **General Information of Respondents**

In all, 214 valid responses were gathered and, therefore, used in the statistical analysis. Of the 214 respondents, males were 47.70% ( $n=102$ ) and females were 52.30% ( $n=112$ ), indicating that females were slightly more than males. Belasen and Frank (2012) argued that being a woman manager positively influenced the conscientious personality trait. Twum-Barima (2014) contended that gender was not a determinant of psychological contract

fulfilment employees in Ghana. Allen and Jang (2016) debated that females were better organisation citizens. With respect to the age of respondents, this study employed the age classifications recommended by Yarlagadda, Murthy and Prasad (2015), namely young adults ( $\leq 30$  years), middle-aged adults (31 to 50 years), and senior adults ( $>50$  years). The age of respondents were presented in Table 3.

**Table 3: General Information of Respondents**

Details		Frequency	Percentage
Sex	Males	102	47.70%
	Female	112	52.30%
Age	$\leq 30$ years	54	25.23%
	31 to 50 years	132	61.68%
	$>50$ years	28	13.08%
Employment type	Full-time	158	74%
	Part-Time	56	26%
Number of years worked with employer	$<5$ years	49	23%
	$>5$ years	165	77%

Source: Field survey (2020)

In line with Yarlagadda et al.'s (2015) age classification, 25.23% ( $n=54$ ) of the respondents were young adults, 61.68% ( $n=132$ ) were middle-aged adults, and 13.08% ( $n=28$ ) were senior adults, as shown in Table 3. Among the 54 young adults, 20 respondents were 30 years of age (Appendix

G). Within the middle-aged adults, 19 respondents were 35 years old, 18 respondents were 40 years of age, another 18 respondents were 45 years old, and 13 respondents were 50 years old. These details and many others were displayed in Appendix G. This finding imply that majority of the respondents were middle-aged adults. In other words, majority of the respondents were within the ages of 31 and 50 years, connoting that a vast majority of the respondents were matured hence putting them in a better position to make informed contributions to the present study. Bal et al. (2012) argued that older workers in the Netherlands reacted less intensely to psychological contract breach.

Regarding the employment type of respondents, majority were full-time workers ( $n=158$ , 74%) and the remaining were part-time workers ( $n=56$ , 26%), as depicted in Table 3. In the opinion of Jabeen et al. (2015), temporary workers are likely to make lesser contribution to an organisation and its competitiveness as these workers receive fewer inducements and are usually not considered for promotion and long-term employment. On the contrary, Niesen et al. (2018) debated that full-time employees spend more time at work, giving them more possibilities to exhibit good work attitudes and good organisational citizenship behaviour.

Finally, the writer wanted to know the number of years that the respondents have worked with their employer: organisational tenure. It came to light that, 49 respondents (23%) have worked with their employer for less than 5 years, and the remaining 165 respondents (77%) have worked with their employer for more than 5 years (Table 3). Of the 165 respondents who have worked with Ghana Health Service for more than 5 years, 37 respondents have

worked for 20 years, 27 respondents have worked for 15 years, 21 respondents have worked for 10 years, 15 respondents have worked for 2 years, etcetera (Appendix H). This finding suggested that majority of the respondents have worked with Ghana Health Service for a longer period. Niesen et al. (2018) argued that higher organisational tenure was positively related to better work-related behaviours.

### Test of Normality in the Data

The researcher tested the normality of the data collected for each of the constructs, using both the statistical method (Kolmogorov-Smirnov test) and graphical method (Normal Q-Q plot). The Kolmogorov-Smirnov test was preferred over Shapiro-Wilk test, since the dataset used in this study was larger than 50 elements: 214. The Kolmogorov-Smirnov test calculates the probability that the sample was drawn from a normal distribution. It requires the specification of a hypothesis statement, as shown below:

$H_0$ : The sample is not significantly different from a normally distributed data or the sample data is normally distributed.

$H_1$ : The sample is significantly different from a normally distributed data or the sample data is not normally distributed.

Regarding the decision rule, if the Kolmogorov-Smirnov Z test yields a significance level less than the alpha level (0.05), it means that the distribution is not normal. However, if the Kolmogorov-Smirnov Z test yields a significance level greater than the alpha level (0.05), it means that the

distribution is normal. As displayed in Table 4, the Kolmogorov-Smirnov Z test indicated that the significant values for all the ten constructs were less than the alpha level of 0.05, hence, the analyst rejected the null hypothesis in favour of the alternate and concluded that the datasets for psychological contract breach, organisational citizenship behaviour, job satisfaction, organisational commitment, job involvement, conscientiousness, agreeableness, extraversion, openness to experience, and neuroticism were significantly different from a normally distributed data.

**Table 4: Kolmogorov-Smirnov Test**

Kolmogorov-Smirnov <sup>a</sup>				
	Variables	Statistic	Df	Sig.
1	Psychological contract breach	.071	214	.010
2	Organisational citizenship behaviour	.091	214	.000
3	Job satisfaction	.141	214	.000
4	Organisational Commitment	.118	214	.000
5	Job involvement	.106	214	.000
6	Conscientiousness	.096	214	.000
7	Agreeableness	.122	214	.000
8	Extraversion	.111	214	.000
9	Openness to Experience	.198	214	.000
10	Neuroticism	.096	214	.000

Source: Field survey (2020)

Regarding the graphical method, the Normal Q-Q Plot, also called the Normality Probability Plot, was used as a test for normality of the data. The normal probability plot compares the observed values of the variable to the observations expected for a normal distributed variable. More precisely, a normal probability plot is a plot of the observed values of the variable versus the normal scores (that is, the observations expected for a variable having the standard normal distribution). In a normal probability plot, each observed value or score obtained is paired with its theoretical normal distribution, forming a linear pattern. If the sample is from a normal distribution, then the observed values or scores fall more or less in a straight line.

As shown in Appendix I, most of the observed values of psychological contract breach, organisational citizenship behaviour, job satisfaction, organisational commitment, job involvement, conscientiousness, agreeableness, extraversion, openness to experience, and neuroticism fell outside the straight line, indicating that the data on all the ten variables were not normally distributed. In other words, the distribution for all the variables departed substantially from a bell-shaped curve. These results confirmed the results of Kolmogorov-Smirnov Test in Table 4 and it informed the researcher to use the median as the measure of central tendency, and interquartile range as a measure of dispersion, although the mean was reported. This was, because, the median and interquartile range were not affected by extreme scores.

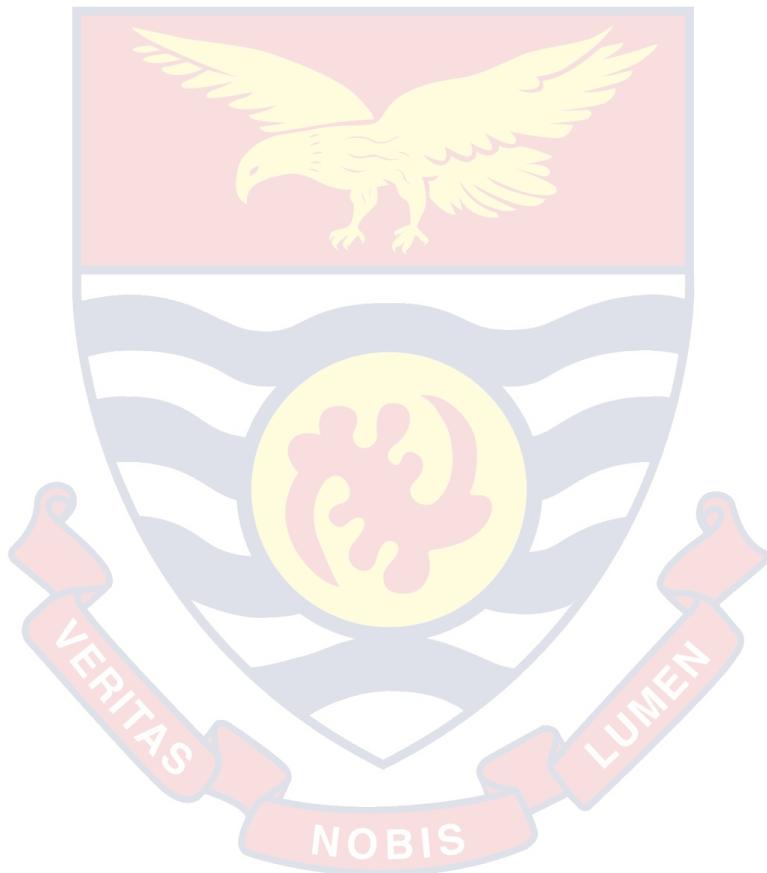
## Examining the Level of Psychological Contract Breach

This section sought to examine the level of psychological contract breach among medical doctors in the Upper East and West Regions of Ghana. In doing so, 15 indicators were measured on a seven-point Likert-type scale with score 1=least agreement, 2=less agreement, 3=little agreement, 4=moderate agreement, 5=strong agreement, 6=stronger agreement, and 7=strongest agreement. These scores were generalised based on respondents' level of agreement to each of the statements under "Psychological Contract Breach" on the questionnaire. Since the dataset on psychological contract breach was not normally distributed, median was used as the measure of central tendency, and interquartile range (IQR) was employed as the measure of dispersion. However, the mean was reported.

Observing Table 5, a majority of 8 out of the 15 indicators of psychological contract breach showed a median of 5, signalling strong agreement to psychological contract breach. 5 indicators showed a median of 4, indicating moderate agreement to psychological contract breach. The remaining 2 indicators showed a median of 2, suggesting less agreement to psychological contract breach. These findings suggest that majority of the respondents expressed their strong agreement to psychological contract breach, providing evidence of a strong psychological contract breach among the medical doctors working in the Upper East and West Regions of Ghana.

This outcome resembled the result of a study by Agarwal and Bhargava (2013) in India, wherein the authors showed that managerial employees had a strong perception that their psychological contract has been breached. Similarly, this finding was consistent to the result of a study by

Odhiambo (2015) in Kenya, where the author revealed low level of psychological contract fulfilment among public secondary school teachers. In like manner, this finding was identical to the research by Dantas and Ferreira (2015) in Portugal, in which the authors disclosed that employers had violated the psychological contract of nurses belonging to the Local Healthcare Unit.



**Table 5: Level of Psychological Contract Breach among Medical Doctors in the Upper East and West Regions of Ghana**

SRL	Indicators	Mean	Median	IQR	Skewness	Kurtosis
PCB01	Limited materials and equipment are made available to me to perform my job.	3.81	3.00	3.00	.325	-1.161
PCB02	There is little similarity between my abilities and the job I do.	3.79	3.00	2.00	.237	-.818
PCB03	Little recognition is given to me for my efforts in this health facility.	3.98	4.00	2.00	.257	-.764
PCB04	I am sure I have a stable and secure employment in this health facility. (R)	4.20	4.00	2.00	.128	-.701
PCB05	This health facility is less concerned with my long-term wellbeing.	4.23	4.00	2.00	-.067	-.872
PCB06	This health facility shows little concern to my welfare.	4.27	4.00	2.00	-.284	-.439
PCB07	This health facility rarely supports me in meeting increasingly higher goals.	4.33	4.00	3.00	-.223	-.574
PCB08	I trust in management in fulfilling their obligations to me. (R)	4.81	5.00	2.00	-.351	-.418

**Table 5, continued**

SRL	Indicators	Mean	Median	IQR	Skewness	Kurtosis
PCB09	Limited opportunities for promotion are available to me.	4.44	5.00	2.00	-.402	-.323
PCB10	This health facility scarcely supports me in attaining my highest level of performance.	4.45	5.00	3.00	-.489	-.585
PCB11	This health facility pays little attention to developing my skills.	4.50	5.00	3.00	-.327	-.730
PCB12	There is little similarity between my pay and that of others doing similar duties.	4.66	5.00	3.00	-.399	-.768
PCB13	I sense evidence of unfair performance evaluation or reward system.	4.53	5.00	2.00	-.407	-.391
PCB14	I am less likely to get support from management in my day-to-day activities.	4.64	5.00	2.00	-.430	-.426
PCB15	Top management rarely engage me in their decision making.	4.53	5.00	2.00	-.259	-.597

Source: Field survey (2020)

In a similar fashion, this finding can be likened to the earlier study by Hornuovo (2016) in Ghana, where the author uncovered that psychological contract violation among health workers in the Ashanti Region was moderately. Likewise, this finding compared well with the result of a study by Christy and Duraisamy (2016) in India, in which the investigators unveiled that the psychological contract breach among the information technology professionals was moderate. However, this finding challenged the study by Sarikaya and Kok (2017) in Turkey, wherein the researchers discovered low level of psychological contract breach among 93 research assistants of Pamukkale University.

Unlike Sarikaya and Kok's (2017) research, this finding agreed with the result of a study by Zupan et al. (2018) in Slovenia, in which the analysts found potential psychological contract breach situations among students. Furthermore, this finding resembled the result of a study by Sekyi et al. (2020) in the Upper West Region of Ghana, where the authors found that welfare benefits and working environment were determinants of healthcare professionals' retention.

The interquartile range (IQR) ranged from 2 to 3, connoting that respondents' responses to psychological contract breach were less variegated. Skewness ranged from .067 to .489 and kurtosis ranged from .323 to 1.161, confirming that the data on psychological contract breach was significantly different from a normally distributed data, because, some of the values were not closer to zero, as presented in Table 5.

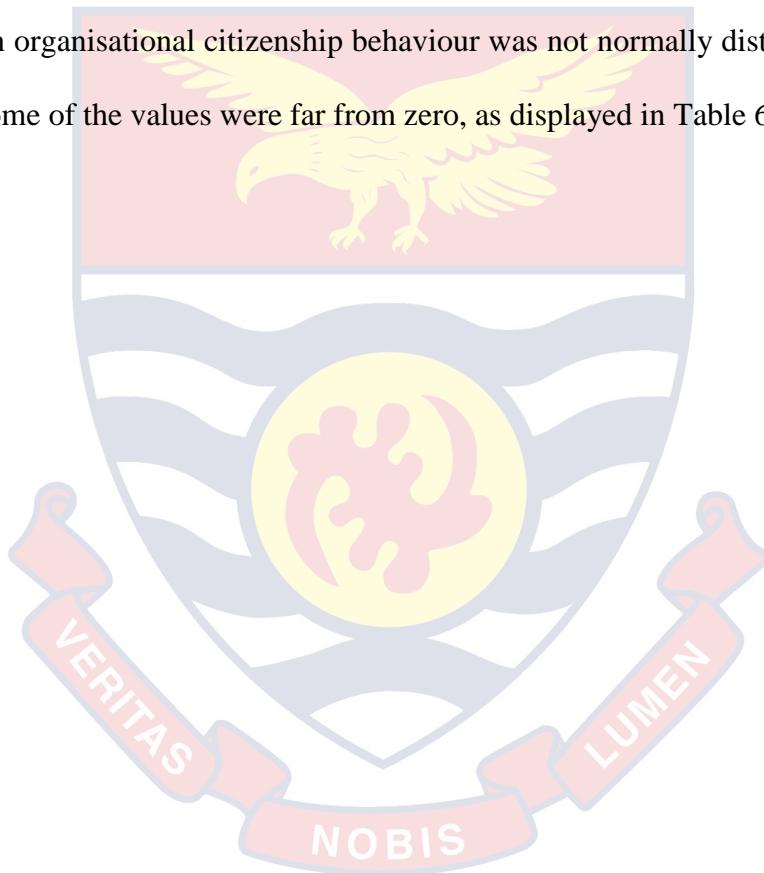
## Examining the Level of Organisational Citizenship Behaviour

This section sought to examine the level of organisational citizenship behaviour among medical doctors in the Upper East and West Regions of Ghana. As such, 16 indicators were measured on a seven-point Likert-type scale with score 1=never, 2=almost never, 3=occasionally, 4=a moderate, 5=often times, 6=almost every time, 7=every time. These scores were generalised based on respondents' ratings to each of the statements under "Organisational Citizenship Behaviour" on the questionnaire. Because the dataset on organisational citizenship behaviour was significantly different from a bell-shaped curve, median was used as the measure of central tendency, and interquartile range (IQR) was employed as the measure of dispersion, even though the mean was reported.

From Table 6, all the indicators showed a median of 3, denoting that organisational citizenship behaviour was occasionally offered by the medical doctors working in the Upper East and Upper West Regions of Ghana. This outcome seems dissimilar to the result of a study by Altuntas and Baykal (2014) in Europe, wherein the researchers found that nurses displayed high levels of organisational citizenship behaviour. It could be that those nurses worked in stress-free environments. However, this finding confirmed the result of a study by Dehghani et al. (2015) in Iran, in which the authors revealed low organisational citizenship behaviour among hospital staff at Hormozgan University of Medical Sciences. Like Altuntas and Baykal's (2014) research finding, this outcome challenged the result of a study by Mahmoud and Ibrahim (2016) in Egypt, wherein the investigators discovered that two-third of 413 nurses were good organisational citizens. The variations

in the citizenship behaviour of nurses and medical doctors could be explained by the fact that nurses and doctors play differed roles in the healthcare settings. Another reason could be that this study sought responses from medical doctors working in stress-prone zones in Ghana.

The interquartile range of organisational citizenship behaviour was 1, signalling that the responses were not wide-ranging. Skewness ranged from .036 to .468 and kurtosis ranged from .325 to 1.086, endorsing that the dataset on organisational citizenship behaviour was not normally distributed, because, some of the values were far from zero, as displayed in Table 6.



**Table 6: Level of Organisational Citizenship Behaviour among Medical Doctors in the Upper East and West Regions of Ghana**

SRL	Indicators	Mean	Median	IQR	Skewness	Kurtosis
OCB-I-1	Helping others who have been absent from work.	2.40	3.00	1.00	-.047	-1.086
OCB-I-2	Willingly give my time to help others who have work-related problems.	2.74	3.00	1.00	-.303	-.702
OCB-I-3	Adjusting my work schedule to accommodate other employees' requests for time off.	2.76	3.00	1.00	-.343	-.325
OCB-I-4	Going out of the way to make newer employees feel welcome in this health facility.	2.77	3.00	1.00	-.468	-.722
OCB-I-5	Showing genuine concern and courtesy toward co-workers, even under the most trying business or personal situations.	2.69	3.00	1.00	-.255	-.991
OCB-I-6	Giving up time to help others who have work or non-work problems.	2.63	3.00	1.00	-.143	-.727
OCB-I-7	Assisting others with their duties.	2.65	3.00	1.00	-.287	-.868

**Table 6, continued**

SRL	Indicators	Mean	Median	IQR	Skewness	Kurtosis
OCB-I-8	Sharing personal property with others to help their work.	2.64	3.00	1.00	-.102	-.768
OCB-O-1	Attending functions that are not required, but that help improve this health facility's image.	2.65	3.00	1.00	-.162	-.828
OCB-O-2	Keeping up with developments in this health facility.	2.62	3.00	1.00	-.165	-.768
OCB-O-3	Defending this health facility when other employees criticise it.	2.65	3.00	1.00	-.303	-.767
OCB-O-4	Showing pride when representing the organisation in public.	2.49	3.00	1.00	-.143	-.911
OCB-O-5	Offering ideas to improve the functioning of this health facility.	2.59	3.00	1.00	-.073	-.890
OCB-O-6	Expressing loyalty towards this health facility.	2.64	3.00	1.00	-.203	-.618
OCB-O-7	Taking actions to protect this health facility from potential problems.	2.64	3.00	1.00	-.167	-.778
OCB-O-8	Demonstrating concern about the image of this health facility.	2.52	3.00	1.00	-.036	-1.027

Source: Field survey (2020)

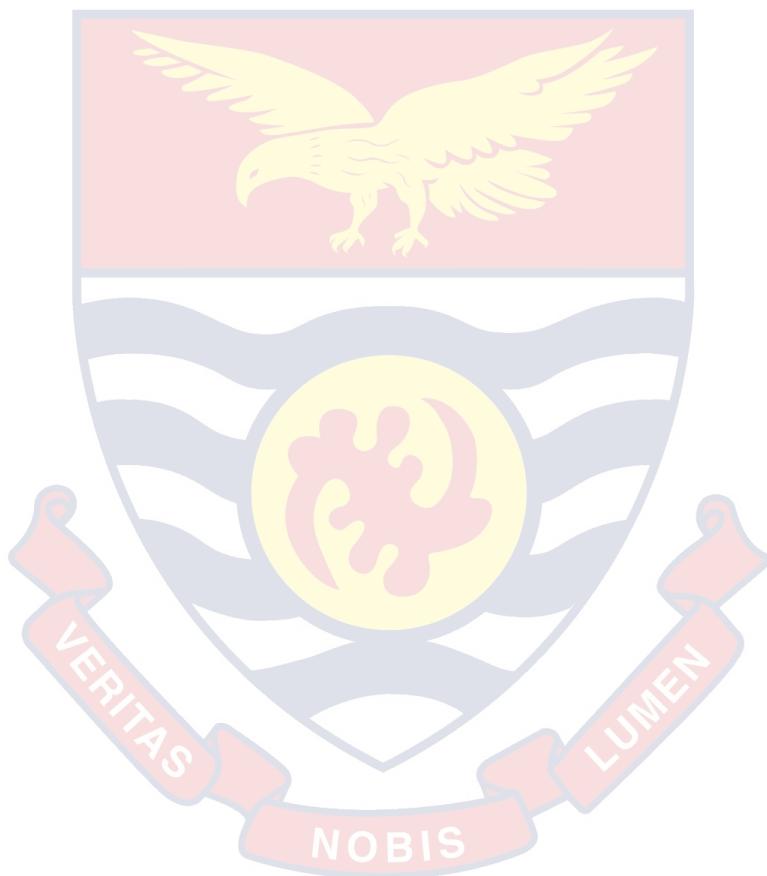
## Examining the Level of Job Satisfaction

This section sought to examine the level of job satisfaction among medical doctors in the Upper East and West Regions of Ghana. To achieve this, 20 indicators were measured on a seven-point Likert-type scale with score 1=least agreement, 2=less agreement, 3=little agreement, 4=moderate agreement, 5=strong agreement, 6=stronger agreement, and 7=strongest agreement. These scores were generalised based on respondents' level of agreement to each of the statements under "Job Satisfaction" on the questionnaire. Because the dataset for job satisfaction was not normally distributed, median was used as the measure of central tendency, and interquartile range (IQR) was employed as the measure of dispersion. However, the mean was reported.

As shown in Table 7, a majority of 18 out of the 20 indicators revealed a median of 3, implying that respondents expressed little agreement to job satisfaction, revealing that medical doctors in the Upper East and West Regions of Ghana were less satisfied with their job. In other words, there was low level of job satisfaction among these medical doctors. This finding reflected the result of an earlier study by Odhiambo (2015) in Kenya, in which the author revealed low level of job satisfaction among 180 public secondary school teachers in Gem district.

The interquartile range of job satisfaction was 1 to 2, indicating that the responses were not diverged. Skewness ranged from .005 to .579 and kurtosis ranged from .395 to 1.003, confirming that the dataset on job satisfaction was significantly different from a normally distributed data,

because, some of the values were not closer zero. This result was shown in Table 7.



**Table 7: Level of Job Satisfaction among Medical Doctors in the Upper East and West Regions of Ghana**

SRL	Indicators	Mean	Median	IQR	Skewness	Kurtosis
JST01	I am able to keep busy all the time.	2.55	3.00	1.00	-.177	-.941
JST02	I have the chance to work alone on the job.	2.69	3.00	1.00	-.225	-.915
JST03	I have the chance to do different things from time to time.	2.74	3.00	1.00	-.365	-.816
JST04	I don't have the chance to be 'somebody' in the community (R).	2.78	3.00	1.00	-.394	-.650
JST05	I am satisfied in the way my boss handles his/her workers.	2.57	3.00	1.00	-.083	-.778
JST06	I am satisfied in the competence of my supervisor in making decisions.	2.59	3.00	1.00	-.139	-.834
JST07	I am able to do things that don't go against my conscience.	2.64	3.00	1.00	-.273	-.576
JST08	I am satisfied in the way my job provides for steady employment.	2.55	3.00	1.00	-.039	-.758

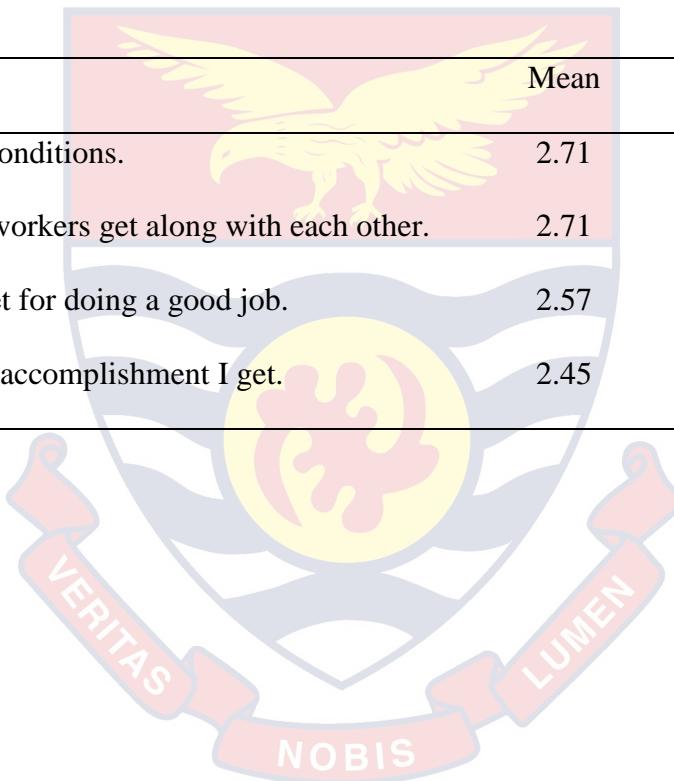
**Table 7, continued**

SRL	Indicators	Mean	Median	IQR	Skewness	Kurtosis
JST09	I have the chance to do things for other people.	2.42	2.00	1.00	-.005	-1.003
JST10	I have the chance to tell people what to do.	2.56	3.00	1.00	-.215	-.969
JST11	I have the chance to do something that makes use of my abilities.	2.77	3.00	1.00	-.275	-.726
JST12	I am not satisfied in the way policies are put into practice (R).	2.96	3.00	2.00	-.579	-.395
JST13	I am satisfied with my pay and the amount of work I do.	2.61	3.00	1.00	-.138	-.830
JST14	I have the chance for career advancement in my job.	2.56	3.00	1.00	-.257	-.891
JST15	I have the freedom to use my own judgment.	2.70	3.00	1.00	-.231	-.967
JST16	I have the chance to try my own methods of doing the job.	2.65	3.00	1.00	-.229	-.751

**Table 7, continued**

SRL	Indicators	Mean	Median	IQR	Skewness	Kurtosis
JST17	I am satisfied with the working conditions.	2.71	3.00	1.00	-.100	-.821
JST18	I am satisfied in the way my co-workers get along with each other.	2.71	3.00	1.00	-.292	-.586
JST19	I am satisfied with the praise I get for doing a good job.	2.57	3.00	1.00	-.124	-.920
JST20	I am satisfied with the feeling of accomplishment I get.	2.45	2.00	1.00	.076	-.716

Source: Field survey (2020)



## Examining the Level of Organisational Commitment

This section sought to examine the level of organisational commitment among medical doctors in the Upper East and West Regions of Ghana. To accomplish this, 19 indicators were measured on a seven-point Likert-type scale with score 1=least agreement, 2=less agreement, 3=little agreement, 4=moderate agreement, 5=strong agreement, 6=stronger agreement, and 7=strongest agreement. These scores were generalised based on respondents' level of agreement to each of the statements under "Organisational Commitment" on the questionnaire. Since the dataset for organisational commitment was significantly different from a bell-shaped curve, median was used as the measure of central tendency and interquartile range was employed as the measure of dispersion, although the mean was reported.

From Table 8, it can be observed that all the 19 items measuring organisational commitment revealed a median of 3, suggesting that respondents expressed little agreement to their commitment towards the organisation, implying that respondents were less committed to their organisation. Expressed another way, there was low level of organisational commitment among medical doctors in the Upper East and West Regions of Ghana. This result agreed with the finding of a study by Agarwal and Bhargava (2013) in India, wherein the authors revealed low level of affective commitment among managerial employees. Similarly, this result confirmed the finding of a systematic review by Setyowati et al. (2017) that, medical doctors generally consider organisational commitment as a low-level priority.

**Table 8: Level of Organisational Commitment among Medical Doctors in the Upper East and West Regions of Ghana**

SRL	Indicators	Mean	Median	IQR	Skewness	Kurtosis
OCT01	I am very happy being a member of this health facility.	2.65	3.00	1.00	-.224	-.1060
OCT02	I enjoy discussing about this health facility with people outside it.	2.67	3.00	1.00	-.258	-.833
OCT03	I really feel as if the health facility's problems are my own.	2.64	3.00	1.00	-.278	-.994
OCT04	I think that I could easily become attached to another health facility as I am to this one. (R)	2.74	3.00	1.00	-.419	-.663
OCT05	I do not feel like 'part of the family' at this health facility. (R)	2.61	3.00	1.00	-.135	-.966
OCT06	I do not feel 'emotionally attached' to this health facility.(R)	2.68	3.00	1.00	-.354	-.818
OCT07	This health facility has a great deal of personal meaning for me.	2.58	3.00	1.00	-.103	-.995
OCT08	I worry about the loss of investments I have made in this health facility.	2.65	3.00	1.00	-.225	-.908

**Table 8, continued**

SRL	Indicators	Mean	Median	IQR	Skewness	Kurtosis
OCT09	If I wasn't a member of this health facility, I would be sad because my life would be disrupted.	2.70	3.00	1.00	-.338	-.921
OCT10	I am loyal to this health facility because I have invested a lot in it, emotionally, socially, and economically.	2.75	3.00	2.00	-.263	-.964
OCT11	I often feel anxious about what I have to lose with this health facility.	2.75	3.00	2.00	-.247	-1.023
OCT12	Sometimes, I worry about what might happen if something was to happen to this health facility and I was no longer a member.	2.70	3.00	1.00	-.275	-.795
OCT13	I am dedicated to this health facility because I fear what I have to lose in it.	2.75	3.00	1.00	-.324	-.743
OCT14	I feel that I owe this health facility quite a bit because of what it has done for me.	2.78	3.00	2.00	-.399	-.776

**Table 8, continued**

SRL	Indicators	Mean	Median	IQR	Skewness	Kurtosis
OCT15	This health facility deserves my loyalty because of its treatment towards me.	2.69	3.00	1.00	-.261	-.692
OCT16	I feel I would be letting my co-workers down if I wasn't a member of this health facility.	2.70	3.00	1.00	-.165	-.873
OCT17	I am loyal to this health facility because my values are largely its values.	2.64	3.00	1.00	-.343	-.628
OCT18	This health facility has a mission that I believe in and am committed to.	2.61	3.00	1.00	-.229	-.690
OCT19	I feel it is 'morally correct' to dedicate myself to this health facility.	2.57	3.00	1.00	-.152	-1.036

Source: Field survey (2020)

The interquartile range of organisational commitment was 1 to 2, indicating that the responses were not varied. Skewness ranged from .103 to .419 and kurtosis ranged from .628 to 1.060, confirming that the data on organisational commitment was significantly different from a bell-shaped curve, because, some of the values were far from zero.

### Examining the Level of Job Involvement

This segment sought to examine the level of job involvement among medical doctors in the Upper East and West Regions of Ghana. To accomplish this, 10 indicators were measured on a seven-point Likert-like scale with score 1=least agreement, 2=less agreement, 3=little agreement, 4=moderate agreement, 5=strong agreement, 6=stronger agreement, and 7=strongest agreement. These scores were generalised based on respondents' level of agreement to each of the statements under "Job Involvement" on the questionnaire. Because the dataset for job involvement was significantly different from a bell-shaped curve, median was used as the measure of central tendency and interquartile range was employed as the measure of dispersion, although the mean was reported (Table 9).

**Table 9: Level of Job Involvement among Medical Doctors in the Upper East and West Regions of Ghana**

SRL	Indicators	Mean	Median	IQR	Skewness	Kurtosis
JIV01	The most important things that happen to me involve my present job.	2.61	3.00	1.00	-.088	-.959
JIV02	To me, my job is only a small part of who I am. (R)	2.68	3.00	1.00	-.257	-.848
JIV03	I am very much involved personally in my job.	2.49	3.00	1.00	-.128	-.996
JIV04	I live, eat and breathe my job.	2.48	3.00	1.00	-.162	-1.005
JIV05	Most of my interests are centred on my job.	2.76	3.00	2.00	-.271	-.942
JIV06	I have very strong ties with my present job, which would be very difficult to break.	2.79	3.00	2.00	-.453	-.773
JIV07	Usually, I feel detached from my job. (R)	2.76	3.00	1.00	-.364	-.760
JIV08	Most of my personal goals are job-oriented.	2.69	3.00	1.00	-.215	-.782
JIV09	I consider my job to be very central to my life.	2.68	3.00	1.00	-.355	-.774
JIV10	I like to be really involved in my job, most of the time.	2.50	3.00	1.00	-.018	-.810

Source: Field survey (2020)

Gleaning from Table 9, it can be observed that all the 10 indicators revealed a median of 3, connoting that the respondents expressed little agreement to job involvement, implying that respondents were less involved in their work. Thus, there was low level of job involvement among medical doctors in the Upper East and West Regions of Ghana. This revelation was comparable to the result of a research by Agarwal and Bhargava (2013) in India, in which the authors found low level of work engagement among managerial employees. The interquartile range of job involvement was 1 to 2, indicating that the responses were not varied. Skewness ranged from .018 to .453 and kurtosis ranged from .760 to 1.005, endorsing that the dataset on job involvement was significantly different from a normally distributed data, because, some of the values were not closer to zero.

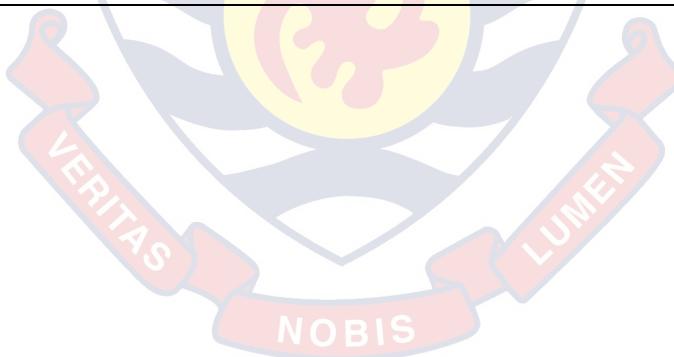
### Examining the Level of Conscientiousness

This section sought to examine the level of conscientiousness among medical doctors in the Upper East and West Regions of Ghana. To achieve this, four indicators were measured on a seven-point Likert-like scale with score 1=least acceptance, 2=less acceptance, 3=little acceptance, 4=moderate acceptance, 5=strong acceptance, 6=stronger acceptance, and 7=strongest acceptance. These scores were generalised based on respondents' level of acceptance to each of the statements under "Conscientiousness" on the questionnaire. Since the dataset for conscientiousness was not normally distributed, median was used as the measure of central tendency, and interquartile range (IQR) was employed as the measure of dispersion, although the mean was reported (Table 10).

**Table 10: Level of Conscientiousness among Medical Doctors in the Upper East and West Regions of Ghana**

SRL	Indicators	Mean	Median	IQR	Skewness	Kurtosis
CON1	I get chores done right away.	4.86	5.00	2.00	-.561	-.262
CON2	I often forget to put things back in their proper place. (R)	5.00	5.00	2.00	-.373	-.274
CON3	I stand for orderliness in my daily activities.	4.86	5.00	2.00	-.451	-.231
CON4	I make a mess of things (R).	5.03	5.00	2.00	-.301	-.636

Source: Field survey (2020)



From Table 10, it can be seen that all the four indicators revealed a median of 5.00, signalling that the respondents expressed strong acceptance to conscientiousness personality dimension, implying that respondents were more conscientious. Consequently, medical doctors in the Upper East and West Regions of Ghana scored high on conscientiousness personality dimension. This finding confirmed the assertion by McCrae and Costa (2010) that, medical doctors belonged to the social/helping occupations and, therefore, were generally expected to be dutiful, and role-conscious. The interquartile range of conscientiousness was 2, showing that the responses were not wide-ranging. Skewness ranged from .301 to .561 and kurtosis ranged from .231 to .638, confirming that the dataset on conscientiousness was significantly different from a normally distributed data, because, some of the values were far from zero.

### Examining the Level of Agreeableness

This segment sought to examine the level of agreeableness among medical doctors in the Upper East and West Regions of Ghana. For this purpose, four indicators were measured on a seven-point Likert-like scale with score 1=least acceptance, 2=less acceptance, 3=little acceptance, 4=moderate acceptance, 5=strong acceptance, 6=stronger acceptance, and 7=strongest acceptance. These scores were generalised based on respondents' level of acceptance to each of the statements under "Agreeableness" on the questionnaire. As the dataset for agreeableness was not normally distributed, median was used as the measure of central tendency and interquartile range

was employed as the measure of dispersion, however, the mean was reported (Table 11).

**Table 11: Level of Agreeableness among Medical Doctors in the Upper East and West Regions of Ghana**

SRL	Indicators	Mean	Median	IQR	Skewness	Kurtosis
AGR1	I sympathise with others' feelings.	5.40	5.00	1.00	.213	-1.155
AGR2	I am not interested in other people's problems (R).	5.27	5.00	1.00	.341	-.647
AGR3	I feel others' emotions.	5.38	5.00	1.00	.059	-.871
AGR4	I am not really interested in others (R).	5.44	5.00	1.00	.112	-1.063

Source: Field survey (2020)

From Table 11, it can be observed that all the four indicators showed a median of 5.00, indicating that the respondents expressed strong acceptance to agreeableness personality dimension, revealing that respondents were more agreeable. Hence, medical doctors in the Upper East and West Regions of Ghana scored high on agreeableness personality dimension. This finding can be likened to the pronouncement by McCrae and Costa (2010) that, medical doctors were generally expected to be accommodating, caring, attentive to

others, agreeable, self-less, and trusting. The interquartile range of agreeableness was 1, showing that the responses were not varied. Skewness ranged from .059 to .341 and kurtosis ranged from .647 to 1.155, endorsing that the data on agreeableness was significantly different from a bell-shaped curve, because, some of the values were not closer to zero.

### Examining the Level of Extraversion

This segment sought to examine the level of extraversion among medical doctors in the Upper East and West Regions of Ghana. In doing so, four indicators were measured on a seven-point Likert-type scale with score 1=least acceptance, 2=less acceptance, 3=little acceptance, 4=moderate acceptance, 5=strong acceptance, 6=stronger acceptance, and 7=strongest acceptance. These scores were generalised based on respondents' level of acceptance to each of the statements under "Extraversion" on the questionnaire. Because the dataset for extraversion was not normally distributed, median was used as the measure of central tendency and interquartile range was utilised as the measure of dispersion, even though the mean was reported (Table 12).

From Table 12, it can be seen that, three out of the four indicators of extraversion showed a median of 4.00, indicating that the respondents expressed moderate acceptance to extraversion personality dimension, revealing that respondents were moderately extraverted. Therefore, medical doctors in the Upper East and West Regions of Ghana were moderately extraverted. This finding can be compared to the declaration by McCrae and Costa (2010) that, medical doctors were generally expected to be extraverted.

The interquartile range of extraversion was 1 to 3, showing that the responses were not differed. Skewness ranged from .001 to .633 and kurtosis ranged from .331 to 1.083, endorsing that the data on extraversion was significantly different from a bell-shaped curve, because, some of the values were far from zero.

**Table 12: Level of Extraversion among Medical Doctors in the Upper East and West Regions of Ghana**

SRL	Indicators	Mean	Median	IQR	Skewness	Kurtosis
EXT1	I am very lively and entertaining on social occasions and I am good at mixing with people.	4.32	4.00	3.00	-.001	-.752
EXT2	I don't talk a lot (R).	3.99	4.00	1.00	.633	1.083
EXT3	I talk to a lot of different people at parties.	3.86	4.00	1.00	-.358	1.047
EXT4	I like to stay in the corner to avoid being noticed (R).	4.61	5.00	2.00	-.187	-.331

Source: Field survey (2020)

### Examining the Level of Openness to Experience

This section sought to examine the level of openness to experience among medical doctors in the Upper East and West Regions of Ghana. In doing so, four indicators were measured on a seven-point Likert-type scale with score 1=least acceptance, 2=less acceptance, 3=little acceptance, 4=moderate acceptance, 5=strong acceptance, 6=stronger acceptance, and 7=strongest acceptance. These scores were generalised based on respondents' level of acceptance to each of the statements under "Openness to experience" on the questionnaire. Because the dataset for openness to experience was not normally distributed, median was used as the measure of central tendency and interquartile range was utilised as the measure of dispersion, however, the mean was reported (Table 13).

From Table 13, it can be seen that, three out of the four indicators showed a median of 4.00, indicating that the respondents expressed moderate acceptance to openness to experience personality dimension, indicating that respondents were moderately opened to experiences. Therefore, medical doctors in the Upper East and West Regions of Ghana were moderately opened to experiences. This result can be likened to the statement by McCrae and Costa (2010) that, medical doctors were part of social/helping occupations and, therefore, were generally expected to be opened to change, sensitive to their inner thoughts, and experimenting.

**Table 13: Level of Openness to Experience among Medical Doctors in the Upper East and West Regions of Ghana**

SRL	Indicators	Mean	Median	IQR	Skewness	Kurtosis
OPE1	I have a powerful and clear imagination.	4.66	5.00	2.00	-.349	-.286
OPE2	I am not interested in abstract ideas (R).	4.12	4.00	1.00	-.975	1.535
OPE3	I am interested in variety.	4.11	4.00	1.00	-.538	1.896
OPE4	I do not have a good imagination (R).	4.08	4.00	1.00	-.407	1.637

Source: Field survey (2020)

The interquartile range of openness to experience ranged from 1 to 2, showing that the responses were not dispersed. Skewness ranged from .349 to .975 and kurtosis ranged from .286 to 1.896, confirming that the data on extraversion was significantly different from a bell-shaped curve, because, some of the values were not closer to zero (Table 13).

### Examining the Level of Neuroticism

This segment sought to examine the level of neuroticism among medical doctors in the Upper East and West Regions of Ghana. To achieve this, four indicators were measured on a seven-point Likert-type scale with score 1=least acceptance, 2=less acceptance, 3=little acceptance, 4=moderate acceptance, 5=strong acceptance, 6=stronger acceptance, and 7=strongest

acceptance. These scores were generalised based on respondents' level of acceptance to each of the statements under "Neuroticism" on the questionnaire. As the dataset for neuroticism was not normally distributed, median was used as the measure of central tendency and interquartile range was utilised as the measure of dispersion, although the mean was also reported.

From Table 14, it was observed that, three out of the four indicators showed a median of 3.00, indicating that the respondents expressed little acceptance to neuroticism personality dimension, implying that respondents were less neurotic or emotionally stable. Hence, medical doctors in the Upper East and West Regions of Ghana were emotionally stable. This finding agreed with the assertion by McCrae and Costa (2010) that, medical doctors were generally expected to be emotionally stable.

**Table 14: Level of Neuroticism among Medical Doctors in the Upper East and West Regions of Ghana**

SRL	Indicators	Mean	Median	IQR	Skewness	Kurtosis
NEU1	I have frequent mood swings.	2.42	2.00	1.00	.068	-1.100
NEU2	I am relaxed most of the time (R).	2.62	3.00	1.00	-.135	-.980
NEU3	I get upset easily.	2.73	3.00	1.00	-.194	-.748
NEU4	I usually feel depressed or sad.	2.91	3.00	1.00	-.489	-.185

Source: Field survey (2020)

On the contrary, this finding challenged the result of an earlier study by Kim et al. (2017) in South Korea, wherein the authors discovered that nurses were neurotic. The interquartile range of neuroticism was 1, showing that the responses on neuroticism were not divergent. Skewness ranged from .068 to .489 and kurtosis ranged from .185 to 1.100, confirming that the data on extraversion was significantly different from a bell-shaped curve, because, some of the values were far from zero (Table 14).

### Factor Analysis

This sub-division presented and discussed the results of Correlation Matrix, Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO), and Bartlett test of sphericity, using IBM SPSS Statistics Software for Windows, Version 24. First and foremost, the Correlation Matrix of all the variables was computed. The writer began with the calculation of the Correlation Matrix of psychological contract breach (PCB). From Appendix J, the correlation values of all the indicators were above the recommended benchmark of 0.3. Moreover, the significant values of all the 15 indicators were lesser than 0.05, indicating that the indicators were correlating with each other. Therefore, all the 15 indicators of psychological contract breach were retained.

Subsequently, the writer displayed the Correlation Matrix of organisational citizenship behaviour (OCB). From Appendix K, it was discovered that the significant values of all the 16 indicators were lesser than 0.05, indicating that the indicators were correlating with each other. Therefore, all the 16 indicators were retained. Appendix L presented the correlation matrix of job satisfaction (JST). As displayed in Appendix L, it was

discovered that the significant values of two indicators were greater than 0.05, namely JST12, and JST20. These indicators were removed. The remaining 18 indicators of job satisfaction passed the Correlation Matrix. Therefore, the variable job satisfaction was retained.

Appendix M showed the correlation matrix of organisational commitment (OCT). Observing Appendix M, it was discovered that the significant values of all the 19 indicators of organisational commitment were lesser than 0.05, indicating that the indicators were correlating with each other. Therefore, all the 19 indicators of organisational commitment were retained. Appendix N showed the correlation matrix of job involvement (JIV). As displayed in Appendix N, it was discovered that the significant values of all the 10 indicators of job involvement were lesser than 0.05. Therefore, all the 10 indicators of job involvement were also retained.

The correlation matrix of conscientiousness personality trait (CON) was presented in Appendix O. It was discovered that the significant values of all the four indicators were lesser than 0.05. To add, the correlation values of all the indicators were above the recommended benchmark of 0.3 (Appendix O). Therefore, all the four indicators of conscientiousness were retained. The correlation matrix of agreeableness personality trait (AGR) was presented in Appendix P. In Appendix P, it was discovered that the significant values of all the four indicators were lesser than 0.05. Besides, the correlation values of all the four indicators were above the recommended benchmark of 0.3. Hence, all the four indicators of agreeableness were retained.

The correlation matrix of extraversion personality trait (EXT) was displayed in Appendix Q. In Appendix Q, it was shown that the significant

values of all the four indicators were lesser than 0.05. Besides, the correlation values of all the four indicators of extraversion were above the recommended benchmark of 0.3. Thus, all the four indicators of extraversion were retained. The correlation matrix of openness to experience personality trait (OPE) was displayed in Appendix R. In Appendix R, it was disclosed that the significant values of all the four indicators were lesser than 0.05.

Consequently, all the four indicators of openness to experience were maintained. Finally, the correlation matrix of neuroticism personality trait (NEU) was presented in Appendix S. The writer found that the almost all the significant values of all the four indicators were greater than 0.05. In a similar fashion, majority of the correlation values of the four indicators of neuroticism were below the recommended benchmark of 0.3. Therefore, the variable of neuroticism was completely eliminated from further analysis.

After presenting and discussing the result of the Correlation Matrix, the writer continued with the presentation and discussion on Kaiser-Meyer-Olkin Measure of Sampling Adequacy, and Bartlett Test of Sphericity of all the nine that passed for Correlation Matrix. These nine variables were psychological contract breach, organisational citizenship behaviour, job satisfaction, organisational commitment, job involvement, conscientiousness, agreeableness, extraversion, and openness to experience. From Appendix T, it can be observed that the Kaiser-Meyer-Olkin Measure of Sampling Adequacy of all the nine variables were above the recommended threshold of 0.7.

In addition, Bartlett's test of sphericity was significant at 0.05 for all the nine variables. Therefore, the writer concluded that confirmatory factor analysis were appropriate for the dataset of psychological contract breach,

organisational citizenship behaviour, job satisfaction, organisational commitment, job involvement, conscientiousness, agreeableness, and extraversion, openness to experience, with the exception of neuroticism.

### Assessing Reflective Measurement Model

This segment presented and discussed the reliability and validity items that must be checked and reported when conducting PLS-SEM, using the reflective measurement model. The first variable considered was psychological contract breach, which was the target exogenous latent variable in this study. Regarding indicator reliability, the indicator loadings of all indicators measuring psychological contract breach met the minimum threshold of 0.6. The highest indicator loading was 0.8652 and the least was 0.6677. The composite reliability value of psychological contract breach was 0.953, which was larger than the cut-off of 0.7, so higher levels of internal consistency reliability was demonstrated by the variable. With respect to convergent validity, the AVE value of psychological contract breach was 0.5761, which passed the acceptable AVE of 0.5 or higher, so convergent validity was confirmed for this variable, as displayed in Table 15.

**Table 15: Initial and Final Measurement Model of Psychological Contract Breach**

Indicators	Loadings
Limited materials and equipment are made available to me to perform my job.	PCB01 0.8377
There is little similarity between my abilities and the job I do.	PCB02 0.8652
Little recognition is given to me for my efforts in this health facility.	PCB03 0.8366
I am sure I have a stable and secure employment in this health facility. (R)	PCB04 0.7157
This health facility is less concerned with my long-term wellbeing.	PCB05 0.8213
This health facility shows little concern to my welfare.	PCB06 0.7672
This health facility rarely supports me in meeting increasingly higher goals.	PCB07 0.7943
I trust in management in fulfilling their obligations to me. (R)	PCB08 0.7453
Limited opportunities for promotion are available to me.	PCB09 0.7055
This health facility scarcely supports me in attaining my highest level of performance.	PCB10 0.6677
This health facility pays little attention to developing my skills.	PCB11 0.7067
There is little similarity between my pay and that of others doing similar duties.	PCB12 0.7082
I sense evidence of unfair performance evaluation or reward system.	PCB13 0.7163
I am less likely to get support from management in my day-to-day activities.	PCB14 0.7244
Top management rarely engage me in their decision making.	PCB15 0.7395

Source: Field survey (2020)

The second variable considered was organisational citizenship behaviour, which was the target endogenous latent variable in this study. Regarding indicator reliability, an indicator measuring organisational citizenship behaviour was below the minimum threshold of approximately 0.6. This indicator was OCB-I-1. This indicator was, therefore, removed from the initial measurement model of organisational citizenship behaviour (Table 16). The removal of the indicator improved on the AVE value from 0.4579 to 0.4692, while maintaining both Composite Reliability and Cronbach Alpha values at approximately 0.9. The final model measurement model of organisational citizenship behaviour was shown in Table 17.

**Table 16: Initial Measurement Model of Organisational Citizenship Behaviour**

	Indicators	Loadings
AVE: 0.4579		
Composite Reliability: 0.9307		
Cronbach Alpha: 0.9209		
Helping others who have been absent from work.	OCB-I-1	0.5394
Willingly give my time to help others who have work-related problems.	OCB-I-2	0.7309
Adjusting my work schedule to accommodate other employees' requests for time off.	OCB-I-3	0.6874
Going out of the way to make newer employees feel welcome in this health facility.	OCB-I-4	0.7353
Showing genuine concern and courtesy toward co-workers, even under the most trying business or personal situations.	OCB-I-5	0.7484
Giving up time to help others who have work or non-work problems.	OCB-I-6	0.6945

**Table 16, continued**

<i>AVE: 0.4579</i>	<i>Composite Reliability: 0.9307</i>	<i>Cronbach Alpha: 0.9209</i>	Indicators	Loadings
Assisting others with their duties.			OCB-I-7	0.6645
Sharing personal property with others to help their work.			OCB-I-8	0.7295
Attending functions that are not required, but that help improve this health facility's image.			OCB-O-1	0.6872
Keeping up with developments in this health facility.			OCB-O-2	0.6680
Defending this health facility when other employees criticise it.			OCB-O-3	0.6308
Showing pride when representing the organisation in public.			OCB-O-4	0.6820
Offering ideas to improve the functioning of this health facility.			OCB-O-5	0.6962
Expressing loyalty towards this health facility.			OCB-O-6	0.6511
Taking actions to protect this health facility from potential problems.			OCB-O-7	0.6502
Demonstrating concern about the image of this health facility.			OCB-O-8	0.5991

Source: Field survey (2020)

**Table 17: Final Measurement Model of Organisational Citizenship****Behaviour**

<i>AVE: 0.4692 Composite Reliability: 0.9296 Cronbach Alpha: 0.9189</i>	Indicators	Loading
Willingly give my time to help others who have work-related problems.	OCB-I-2	0.7233
Adjusting my work schedule to accommodate other employees' requests for time off.	OCB-I-3	0.6849
Going out of the way to make newer employees feel welcome in this health facility.	OCB-I-4	0.7349
Showing genuine concern and courtesy toward co-workers, even under the most trying business or personal situations.	OCB-I-5	0.7511
Giving up time to help others who have work or non-work problems.	OCB-I-6	0.6987
Assisting others with their duties.	OCB-I-7	0.6652
Sharing personal property with others to help their work.	OCB-I-8	0.7295
Attending functions that are not required, but that help improve this health facility's image.	OCB-O-1	0.6896
Keeping up with developments in this health facility.	OCB-O-2	0.6683
Defending this health facility when other employees criticise it.	OCB-O-3	0.6288
Showing pride when representing the organisation in public.	OCB-O-4	0.6850
Offering ideas to improve the functioning of this health facility.	OCB-O-5	0.6973
Expressing loyalty towards this health facility.	OCB-O-6	0.6482
Taking actions to protect this health facility from potential problems.	OCB-O-7	0.6550
Demonstrating concern about the image of this health facility.	OCB-O-8	0.5989

Source: Field survey (2020)

The third variable considered was job satisfaction, which was used as mediator in this study. Regarding indicator reliability, two indicators measuring job satisfaction were below the minimum threshold of approximately 0.6. These indicators were JST04 and JST10. These indicators were, therefore, removed from the initial measurement model of job satisfaction (Table 18). The removal of the indicators improved on the AVE

value from 0.3975 to 0.4881, while marginally increasing both Composite Reliability and Cronbach Alpha values to 0.9296 and 0.9169 respectively. The final measurement model of job satisfaction was presented in Table 19.

**Table 18: Initial Measurement Model of Job Satisfaction**

Indicators	Loading
JST01	0.5628
JST02	0.6713
JST03	0.6702
JST04	0.4370
JST05	0.6586
JST06	0.6412
JST07	0.6390
JST08	0.5787
JST09	0.6974
JST10	0.5417
JST11	0.6960
JST13	0.7028
JST14	0.7311
JST15	0.6360
JST16	0.6159
JST17	0.6173
JST18	0.6051
JST19	0.5799

Source: Field survey (2020)

**Table 19: Final Measurement Model of Job Satisfaction**

Indicators	Loading
AVE: 0.4881	
Composite Reliability: 0.9296	
Cronbach Alpha: 0.9169	
I am able to keep busy all the time.	JST01 0.5580
I have the chance to work alone on the job.	JST02 0.6759
I have the chance to do different things from time to time.	JST03 0.6697
I am satisfied in the way my boss handles his/her workers.	JST05 0.6557
I am satisfied in the competence of my supervisor in making decisions.	JST06 0.6471
I am able to do things that don't go against my conscience.	JST07 0.6382
I am satisfied in the way my job provides for steady employment.	JST08 0.5863
I have the chance to do things for other people.	JST09 0.7005
I have the chance to do something that makes use of my abilities.	JST11 0.6866
I am satisfied with my pay and the amount of work I do.	JST13 0.7046
I have the chance for career advancement in my job.	JST14 0.7337
I have the freedom to use my own judgment.	JST15 0.6362
I have the chance to try my own methods of doing the job.	JST16 0.6173
I am satisfied with the working conditions.	JST17 0.6247
I am satisfied in the way my co-workers get along with each other.	JST18 0.6086
I am satisfied with the praise I get for doing a good job.	JST19 0.5740

Source: Field survey (2020)

The fourth variable considered was organisational commitment, which was also used as mediator in this study. Concerning indicator reliability, two indicators measuring organisational commitment were below the minimum threshold of approximately 0.6. These indicators were OCT05 and OCT06. These indicators were, therefore, removed from the initial measurement model of organisational commitment (Table 20). The removal of the indicators improved on the AVE value from 0.4186 to 0.4392, while maintaining both Composite Reliability and Cronbach Alpha values at approximately 0.9. The final measurement model of organisational commitment was shown in Table 21.

**Table 20: Initial Measurement Model of Organisational Commitment**

	Indicators	Loading
<i>AVE: 0.4186</i>		
<i>Composite Reliability: 0.9314</i>		
<i>Cronbach Alpha: 0.9224</i>		
I am very happy being a member of this health facility.	OCT01	0.6510
I enjoy discussing about this health facility with people outside it.	OCT02	0.7354
I really feel as if the health facility's problems are my own.	OCT03	0.7436
I think that I could easily become attached to another health facility as I am to this one. (R)	OCT04	0.6048
<del>I do not feel like 'part of the family' at this health facility. (R)</del>	OCT05	0.5255
<del>I do not feel 'emotionally attached' to this health facility. (R)</del>	OCT06	0.5460
This health facility has a great deal of personal meaning for me.	OCT07	0.6481

**Table 20, continued**

AVE: 0.4186	Composite Reliability: 0.9314	Cronbach Alpha: 0.9224	Indicators	Loading
I worry about the loss of investments I have made in this health facility.			OCT08	0.6577
If I wasn't a member of this health facility, I would be sad because my life would be disrupted.			OCT09	0.6962
I am loyal to this health facility because I have invested a lot in it, emotionally, socially, and economically.			OCT10	0.6570
I often feel anxious about what I have to lose with this health facility.			OCT11	0.6424
Sometimes, I worry about what might happen if something was to happen to this health facility and I was no longer a member.			OCT12	0.7144
I am dedicated to this health facility because I fear what I have to lose in it.			OCT13	0.6842
I feel that I owe this health facility quite a bit because of what it has done for me.			OCT14	0.6447
This health facility deserves my loyalty because of its treatment towards me.			OCT15	0.6495
I feel I would be letting my co-workers down if I wasn't a member of this health facility.			OCT16	0.6350
I am loyal to this health facility because my values are largely its values.			OCT17	0.5893
This health facility has a mission that I believe in and am committed to.			OCT18	0.6228
I feel it is 'morally correct' to dedicate myself to this health facility.			OCT19	0.6001

Source: Field survey (2020)

**Table 21: Final Measurement Model of Organisational Commitment**

<i>AVE: 0.4392</i>	<i>Composite Reliability: 0.9299</i>	<i>Cronbach Alpha: 0.9203</i>	Indicators	Loading
I am very happy being a member of this health facility.		OCT01	0.6501	
I enjoy discussing about this health facility with people outside it.		OCT02	0.7320	
I really feel as if the health facility's problems are my own.		OCT03	0.7363	
I think that I could easily become attached to another health facility as I am to this one. (R)		OCT04	0.5895	
This health facility has a great deal of personal meaning for me.		OCT07	0.6358	
I worry about the loss of investments I have made in this health facility.		OCT08	0.6571	
If I wasn't a member of this health facility, I would be sad because my life would be disrupted.		OCT09	0.7022	
I am loyal to this health facility because I have invested a lot in it, emotionally, socially, and economically.		OCT10	0.6605	
I often feel anxious about what I have to lose with this health facility.		OCT11	0.6529	
Sometimes, I worry about what might happen if something was to happen to this health facility and I was no longer a member.		OCT12	0.7212	
I am dedicated to this health facility because I fear what I have to lose in it.		OCT13	0.6916	
I feel that I owe this health facility quite a bit because of what it has done for me.		OCT14	0.6484	
This health facility deserves my loyalty because of its treatment towards me.		OCT15	0.6631	

**Table 21, continued**

AVE: 0.4392	Composite Reliability: 0.9299	Cronbach Alpha: 0.9203	Indicators	Loading
I feel I would be letting my co-workers down if I wasn't a member of this health facility.			OCT16	0.6562
I am loyal to this health facility because my values are largely its values.			OCT17	0.6111
This health facility has a mission that I believe in and am committed to.			OCT18	0.6293
I feel it is 'morally correct' to dedicate myself to this health facility.			OCT19	0.6064

Source: Field survey (2020)

The fifth variable considered was job involvement, which also served as mediator in this study. Concerning indicator reliability, two indicators measuring job involvement were below the minimum threshold of approximately 0.6. These indicators were JIV02 and JIV07. These indicators were, therefore, removed from the initial measurement model of job involvement (Table 22). The removal of the indicators improved on the AVE value from 0.4372 to 0.4885, while maintaining both Composite Reliability and Cronbach Alpha values at approximately 0.89 and 0.87 respectively. The final measurement model of job involvement was shown in Table 23.

**Table 22: Initial Measurement Model of Job Involvement**

AVE: 0.4372	Composite Reliability: 0.8932	Cronbach Alpha: 0.8708	Indicator	Loading
The most important things that happen to me involve my present job.			JIV01	0.6727
<del>To me, my job is only a small part of who I am. (R)</del>			JIV02	0.4101
I am very much involved personally in my job.			JIV03	0.6883
I live, eat and breathe my job.			JIV04	0.6714
Most of my interests are centred on my job.			JIV05	0.7550
I have very strong ties with my present job, which would be very difficult to break.			JIV06	0.7267
<del>Usually, I feel detached from my job. (R)</del>			JIV07	0.5134
Most of my personal goals are job-oriented.			JIV08	0.7098
I consider my job to be very central to my life.			JIV09	0.6600
I like to be really involved in my job, most of the time.			JIV10	0.6990

Source: Field survey (2020)

**Table 23: Final Measurement Model of Job Involvement**

<i>AVE: 0.4885</i>		
<i>Composite Reliability: 0.8956</i>		
<i>Cronbach Alpha: 0.8706</i>	Indicators	Loading
The most important things that happen to me involve my present job.	JIV01	0.6754
I am very much involved personally in my job.	JIV03	0.6925
I live, eat and breathe my job.	JIV04	0.6696
Most of my interests are centred on my job.	JIV05	0.7545
I have very strong ties with my present job, which would be very difficult to break.	JIV06	0.7239
Most of my personal goals are job-oriented.	JIV08	0.7088
I consider my job to be very central to my life.	JIV09	0.6661
I like to be really involved in my job, most of the time.	JIV10	0.7024

Source: Field survey (2020)

The sixth variable considered was conscientiousness, which served as a moderator in this study. Regarding indicator reliability, the indicator loadings of all indicators measuring conscientiousness met the minimum threshold of 0.6. The highest indicator loading was 0.8641 and the least was 0.8201. Composite reliability value of conscientiousness was 0.9111, which was larger than the cut-off of 0.7, so higher levels of internal consistency reliability was demonstrated by the variable. Considering convergent validity, the AVE value of conscientiousness was 0.7195, which passed the acceptable AVE of 0.5 or

higher, so convergent validity was established for this variable, as exhibited in Table 24.

**Table 24: Initial and Final Measurement Model of Conscientiousness**

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*AVE: 0.7195*

*Composite Reliability: 0.9111*

*Cronbach Alpha: 0.8710*

Indicator Loading

I get chores done right away.	CON1	0.8641
I often forget to put things back in their proper place. (R)	CON2	0.8600
I stand for orderliness in my daily activities.	CON3	0.8478
I make a mess of things (R).	CON4	0.8201

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Source: Field survey (2020)

The seventh variable considered was agreeableness, which served as a moderator in this study. Regarding indicator reliability, the indicator loadings of all indicators measuring agreeableness met the minimum threshold of 0.6. The highest indicator loading was 0.8163 and the least was 0.6539. Composite reliability value of agreeableness was 0.8381, which was larger than the cut-off of 0.7, so higher levels of internal consistency reliability was demonstrated by this variable. Considering convergent validity, the AVE value of agreeableness was 0.5657, which passed the acceptable AVE of 0.5 or higher, so convergent validity was established for this variable, as exhibited in Table 25.

**Table 25: Initial and Final Measurement Model of Agreeableness**

AVE: 0.5657		
<i>Composite Reliability: 0.8381</i>		
<i>Cronbach Alpha: 0.7519</i>	Indicator	Loading
I sympathise with others' feelings.	AGR1	0.8163
I am not interested in other people's problems (R).	AGR2	0.7753
I feel others' emotions.	AGR3	0.7535
I am not really interested in others (R).	AGR4	0.6539

Source: Field survey (2020)

The eighth variable considered was extraversion, which also served as a moderator in this study. Concerning indicator reliability, two indicators measuring extraversion loaded very poorly. These indicators were EXT02 and EXT03. These indicators were, therefore, removed from the initial measurement model of extraversion (Table 26). The removal of the indicators improved on the indicator loadings of the other two remaining indicators. To illustrate, EXT01 improved from 0.5319 to 0.9244, and EXT04 improved from 0.3724 to 0.8374. Even more, the AVE value increased from 0.5982 to 0.7778. Furthermore, Composite Reliability increased marginally from 0.8542 to 0.8748, while maintaining Cronbach Alpha value at approximately 0.7. The final measurement model of extraversion was shown in Table 27.

**Table 26: Initial Measurement Model of Extraversion**

AVE: 0.5982		
<i>Composite Reliability: 0.8542</i>		
<i>Cronbach Alpha: 0.7983</i>	Indicator	Loading
I am very lively and entertaining on social occasions		
and I am good at mixing with people.	EXT01	0.5319
<del>I don't talk a lot (R).</del>	EXT02	0.1983
<del>I talk to a lot of different people at parties.</del>	EXT03	0.1189
I like to stay in the corner to avoid being noticed (R).	EXT04	0.3724

Source: Field survey (2020)

**Table 27: Final Measurement Model of Extraversion**

AVE: 0.7778		
<i>Composite Reliability: 0.8748</i>		
<i>Cronbach Alpha: 0.7225</i>	Indicator	Loading
I am very lively and entertaining on social occasions		
and I am good at mixing with people.	EXT01	0.9244
I like to stay in the corner to avoid being noticed (R).	EXT04	0.8374

Source: Field survey (2020)

The last variable considered was openness to experience, which also served as a moderator in this study. Concerning indicator reliability, an indicator measuring openness to experience loaded very poorly. This indicator was OPE01. As a consequence, this indicator was removed from the initial

measurement model of openness to experience (Table 28). The removal of the indicator improved on the indicator loadings of the three remaining indicators. For instance, OPE02 improved from 0.5247 to 0.7394, OPE03 improved from 0.4754 to 0.7069, and OPE04 increased from 0.7510 to 0.8113. Even greater, the AVE value increased from 0.2737 to 0.5682. In addition, Composite Reliability increased from 0.4622 to 0.7974, while maintaining Cronbach Alpha value at 0.6. The final measurement model of openness to experience was shown in Table 29.

**Table 28: Initial Measurement Model of Openness to Experience**

	Indicator	Loading
AVE: 0.2737		
Composite Reliability: 0.4622		
Cronbach Alpha: 0.6972		
I have a powerful and clear imagination.	OPE04	0.1710
I am not interested in abstract ideas (R).	OPE02	0.5247
I am interested in variety.	OPE03	0.4754
I do not have a good imagination (R).	OPE04	0.7510

Source: Field survey (2020)

**Table 29: Final Measurement Model of Openness to Experience**

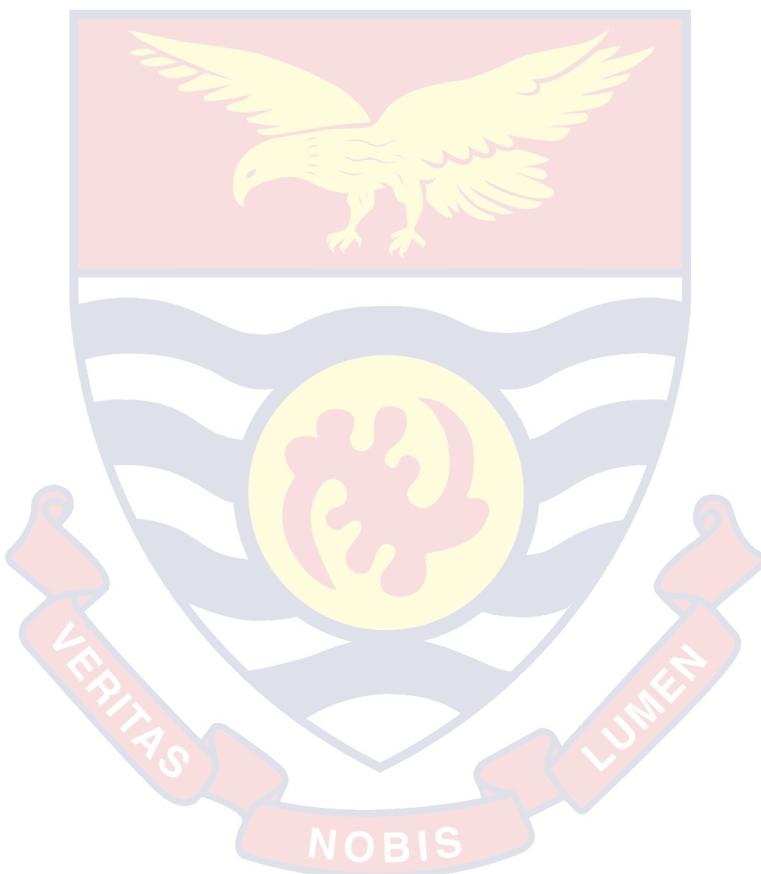
<i>AVE: 0.5682</i>		
<i>Composite Reliability: 0.7974</i>		
<i>Cronbach Alpha: 0.6290</i>	Indicator	Loading
I am not interested in abstract ideas (R).	OPE2	0.7394
I am interested in variety.	OPE3	0.7069
I do not have a good imagination (R).	OPE4	0.8113

Source: Field survey (2020)

The final stage of the assessment of the reflective measurement model was to assess the discriminant validity of the constructs. Observing from Table 36, the latent variable agreeableness' (AGR) average variance extracted was revealed to be 0.5657 hence its square root became 0.7521. This number was larger than all the correlation values in the column of agreeableness, namely 0.4412, 0.4684, -0.5783, -0.6062, -0.5081, -0.6053, -0.1118, and 0.2710. The latent variable conscientiousness' (CON) average variance extracted was found to be 0.7195, therefore, its squared root became 0.8482. This number was larger than all the correlation values in the column of conscientiousness, namely 0.6136, -0.3021, -0.3011, -0.3077, -0.2441, -0.2582, and 0.3643. In addition, the number 0.8482 was greater than the number in the row of conscientiousness, which was 0.4412 (Table 30).

The latent variable extraversion's (EXT) average variance extracted was known to be 0.7778, therefore, its squared root became 0.8819. Likewise, this number was larger than the correlation value of -0.4327, -0.4511, -0.4142, -0.3903, 0.2275, and 0.5153 in column of extraversion. Moreover, the number

0.8819 was larger than 0.4648 and 0.6136 in the row of extraversion. The latent variable job involvement's (JIV) average variance extracted was computed to be 0.4885 hence its square root was 0.6989. This number was larger than all the correlation values in the column of job involvement, namely 0.6394, 0.6698, 0.6335, 0.1220, and -0.3434. The number 0.6989 was equally greater than all the three numbers in the row of job involvement, namely -0.5783, -0.3021, and -0.4327 (Table 30).



**Table 30: Fornell-Larcker Criterion**

	AGR	CON	EXT	JIV	JST	OCB	OCT	OPE	PCB
AGR	<b>0.7521</b>								
CON	0.4412	<b>0.8482</b>							
EXT	0.4684	0.6136	<b>0.8819</b>						
JIV	-0.5783	-0.3021	-0.4327	<b>0.6989</b>					
JST	-0.6026	-0.3011	-0.4511	0.6394	<b>0.6986</b>				
OCB	-0.5081	-0.3077	-0.4142	0.6698	0.6774	<b>0.6850</b>			
OCT	-0.6053	-0.2441	-0.3903	0.6335	0.6190	0.6572	<b>0.6627</b>		
OPE	-0.1118	0.2582	0.2275	0.1220	0.0883	0.0829	0.0821	<b>0.7538</b>	
PCB	0.2710	0.3643	0.5153	-0.3434	-0.3757	-0.4028	-0.3280	0.1975	<b>0.7590</b>

Note: Values in bold diagonal are values of the squared root of the AVE

Source: Field survey (2020)

The latent variable job satisfaction's (JST) average variance extracted was estimated to be 0.4881 hence its square root was computed to be 0.6986. This digit was larger than all the four numbers in the column of job satisfaction, namely 0.6774, 0.6190, 0.0883, and -0.3757. In a similar fashion, the digit 0.6986 was larger than all the four numbers on the row of job satisfaction, namely -0.6026, -0.3011, -0.4511, and 0.6394. The latent variable organisational citizenship behaviour's average variance extracted was calculated to be 0.4692, therefore, its square root was computed to be 0.6850. This number was greater than all the three numbers in the column of organisational citizenship behaviour, namely 0.6572, 0.0829, and -0.4028. In the same way, this number was larger than the numbers on the row of organisational citizenship behaviour, namely -0.5081, -0.3077, -0.4142, 0.6698, and 0.6774 (Table 30).

The latent variable organisational commitment's (OCT) average variance extracted was revealed as 0.4392, therefore, its square root was estimated to be 0.6627. This number was greater than all two numbers in the column of organisational commitment, namely 0.0821, and -0.3280. In like manner, this digit was larger than all the five numbers on the row of organisational commitment, namely -0.6053, -0.2441, -0.3903, 0.6335, 0.6190, and 0.6572. The latent variable openness to experience's (OPE) average variance extracted was calculated to be 0.5682, and its square root was estimated at 0.7538. This number was greater than the number in the column of openness to experience (0.1975), and the seven numbers on the row of openness to experience, namely -0.1118, 0.2582, 0.2275, 0.1220, 0.0883, 0.0829, and 0.0821 (Table 30).

Last, but not least, the latent variable psychological contract breach's (PCB) average variance extracted was calculated to be 0.5761, consequently, its square root was 0.7590. This number was greater than all the eight numbers on the row of psychological contract breach, namely 0.2710, 0.3643, 0.5153, -0.3434, -0.3757, -0.4028, -0.3280, and 0.1975 (Table 30). Therefore, overall, discriminant validity was deemed to have been well established. Put in another way, the model has been appropriately specified.

### Assessing Reflective Structural Model

As the measurement model assessment was satisfactory, the next step in evaluating PLS-SEM results was to assess the structural model. The structural model looked at the relationships between the exogenous and endogenous latent variables. The standard assessment criteria which were considered were multicollinearity assessment, coefficient of determination ( $R^2$ ), and inner model path coefficient sizes and significance.

### Multicollinearity assessment

Assessment of the structural model began with an assessment of possible multicollinearity between the exogenous latent variables so that it does not bias the PLS algorithm results. As evident from Table 31, there was no multicollinearity among the independent or exogenous latent variables of psychological contract breach, openness to experience, organisational commitment, job satisfaction, job involvement, extraversion, conscientiousness, and agreeableness, as the Variance Inflator Factor (VIF) values were lower than 5, and the Tolerance level were higher than 0.2.

**Table 31: Multicollinearity Test**

Model	Collinearity Statistics		
	Tolerance	VIF	
1 (Constant)			
Psychological contract breach	.687	1.456	
Openness to experience	.809	1.236	
Organisational commitment	.300	3.331	
Job satisfaction	.292	3.428	
Job involvement	.373	2.682	
Extraversion	.465	2.148	
Conscientiousness	.553	1.809	
Agreeableness	.484	2.064	

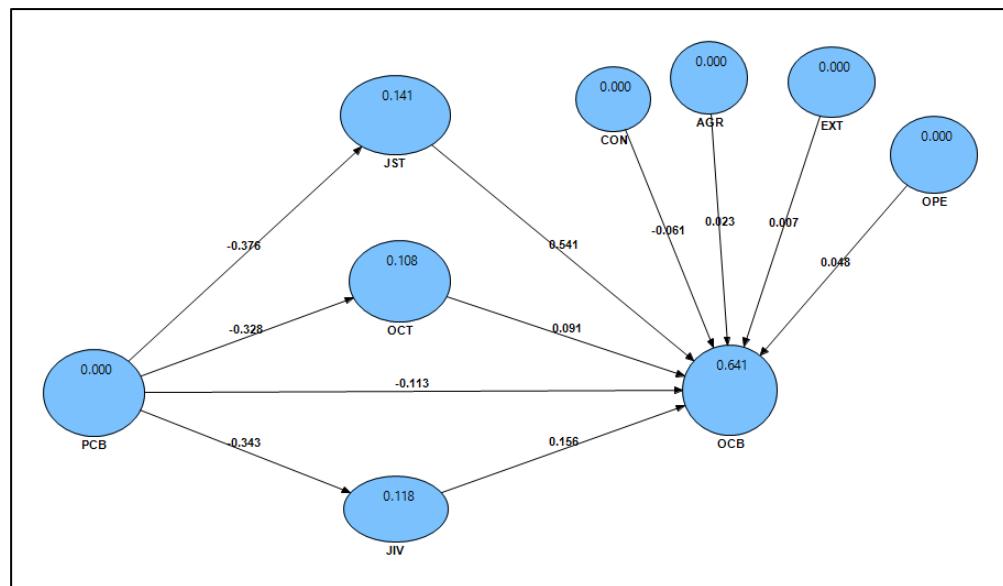
a. Dependent Variable: OCB

Source: Field survey (2020)

### Coefficient of determination

Once collinearity was not an issue, the next step was to examine the  $R^2$  value of the target endogenous construct, which was organisational citizenship behaviour (OCB). As depicted in Figure 5, the coefficient of determination,  $R^2$ , was 0.641 for the organisational citizenship behaviour endogenous latent variable, implying that the eight exogenous latent variables (psychological contract breach, job satisfaction, organisational commitment, job involvement, conscientiousness, agreeableness, extraversion, and openness to experience) substantially explained 64.1% of the variance in organisational citizenship behaviour. This percentage was very close to 70.0%, therefore, the  $R^2$  of

organisational citizenship behaviour was considered to be substantial. This outcome implied that the model fitted the data collected and it reflected the overall population. The same model would likely fit if used on another sample drawn from the same population.



*Figure 5: Structural model of psychological contract breach, job satisfaction, organisational commitment, job involvement, conscientiousness, agreeableness, extraversion, and openness to experience.*

Source: Field survey (2020)

Furthermore, psychological contract breach explained 14.1% of the variance in job satisfaction. Job satisfaction acted as both endogenous and exogenous latent variable: a mediator, therefore, it was placed in the centre of the model. It was considered an endogenous variable, since it had an arrow pointing from another latent variable: psychological contract breach to it. In a similar fashion, organisational commitment served as both endogenous and exogenous latent variable: another mediator, hence, it was located in the centre

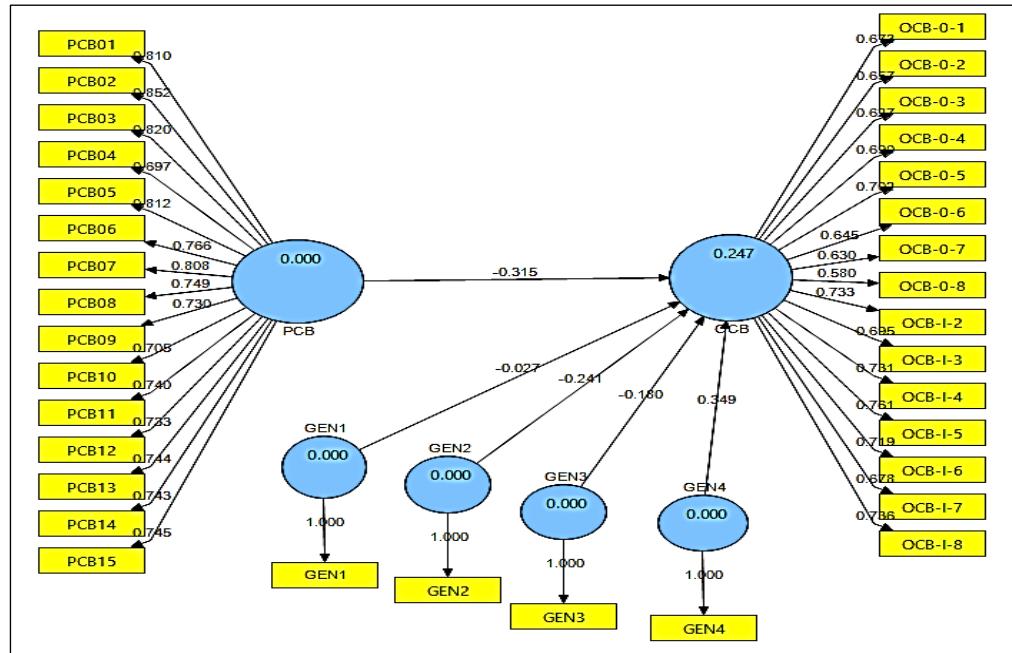
of the model. Organisational commitment was considered an endogenous variable, since it had an arrow pointing from another latent variable: psychological contract breach to it, as demonstrated in Figure 5.

Likewise, job involvement performed as both endogenous and exogenous latent variable: another mediator, hence, it was positioned in the centre of the model. It was considered an endogenous variable, because it had an arrow pointing from another latent variable: psychological contract breach to it. Moreover, the inner model suggested that job satisfaction had the strongest effect on organisational citizenship behaviour with a path coefficient of 0.541, followed by job involvement with a path coefficient of 0.156, then, psychological contract breach, recording a path coefficient of 0.113, and, finally, organisational commitment, with a path coefficient of 0.091 (Figure 5).

### **Relationship between Psychological Contract Breach and Organisational Citizenship Behaviour**

The first hypothesis of this thesis postulates a significant negative relationship between psychological contract breach and organisational citizenship behaviour among medical doctors working in the Upper East and Upper West Regions of Ghana. PLS-SEM was employed. Responses from 214 medical doctors were utilised. After controlling for sex (GEN1), age (GEN2), employment type (GEN3) and organisational tenure (GEN4), the path coefficient between psychological contract breach to organisational citizenship behaviour was found to be negative (-0.315), consistent to expectation (Figure

6), and the t-statistics of this relationship was 5.395, which was larger than 1.96 (Figure 7), making this negative relationship significant.



*Figure 6: Path coefficient of direct path of psychological contract breach and organisational citizenship behaviour*

Source: Field survey (2020)



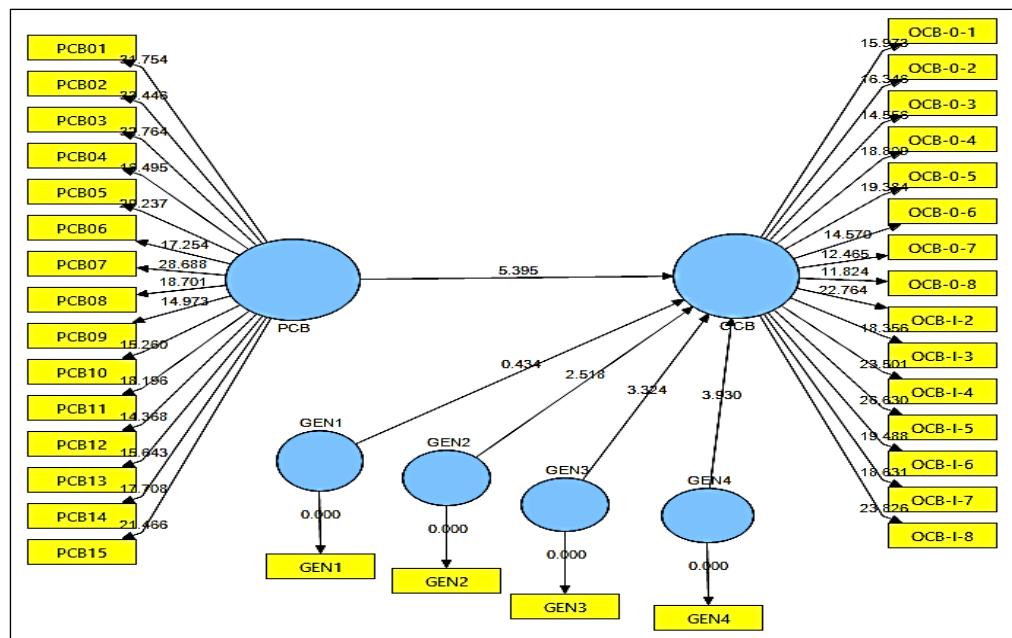


Figure 7: T-statistics of direct path of psychological contract breach and organisational citizenship behaviour

Source: Field survey (2020)

Therefore, the writer rejects the null hypothesis in favour of the alternate and states that, there is a negative and significant relationship between psychological contract breach and organisational citizenship behaviour among medical doctors in the Upper East and Upper West Regions of Ghana, consistent to expectation. The explanation of the negative significant relationship is that the psychological contract breach caused the medical doctors to show low citizenship behaviours at the workplace. This finding was consistent to the result of an earlier study by Francisco (2015) in Legazpi City in the Philippines, wherein the author found that faculty employees' perceptions of a psychological contract breach negatively affected their organisational citizenship behaviour.

Similarly, this finding agreed with the result of a research by Christy and Duraisamy (2016) in Chennai in India, in which the authors disclosed that psychological contract breach negatively predicted organisational citizenship behaviour among information technology employees. In like manner, this finding compared well with the result of a study by Niesen et al. (2018) in the Region of Brussel in Belgium, where the investigator uncovered that psychological contract breach was negatively associated with innovative work behaviours among employees from an industrial organisation. Equally, this finding confirmed result of a study by Haryadi et al. (2018) in Indonesia and Malaysia, wherein the researchers discovered that psychological contract influenced organisational citizenship behaviour among banking sector employees.

In a similar fashion, this finding mirrored the result of a research by Ahmad and Zafar (2018) in Pakistan, in which the authors declared that psychological contract fulfilment and psychological contract type contributed to the variability in organisational citizenship behaviour among employees and supervisors of four-star and five-star hotels. Identically, this finding resembled the result of a study by Shen et al. (2019) in China, wherein the researchers unveiled that psychological contract breach was negatively related to organisation-directed citizenship behaviour among 312 employees and 86 supervisors of a pharmaceutical manufacturing company.

Likewise, this finding conformed to the result of an earlier study by Chahar (2019) in Uttarakhand State in India, in which the author revealed that different element of psychological contract strongly predicted organisational citizenship behaviour among employees of academic organisations. Finally,

this finding confirmed the proposition of social exchange theory which held that, when employees perceive that their employer has breached their psychological contract they reciprocate by indulging in activities that are less beneficial to their organisation or employer.

### **Mediating Role of Job Satisfaction in the Relationship between Psychological Contract Breach and Organisational Citizenship Behaviour**

The second hypothesis of this thesis postulates a mediating effect of job satisfaction in the relationship between psychological contract breach and organisational citizenship behaviour among medical doctors in the Upper East and Upper West Regions of Ghana. PLS-SEM was employed. Responses from 214 medical doctors were utilised. After controlling for sex, age, employment type and organisational tenure, the result showed a negative relationship between psychological contract breach and job satisfaction (-0.368), while a positive relationship was recorded for the path linking job satisfaction to organisational citizenship behaviour (0.697), as presented in Figure 8. These findings only held, however, when these two paths were found to be significant, after running the bootstrapping procedure with 214 bootstrap cases and 5000 samples, using no sign changes option.

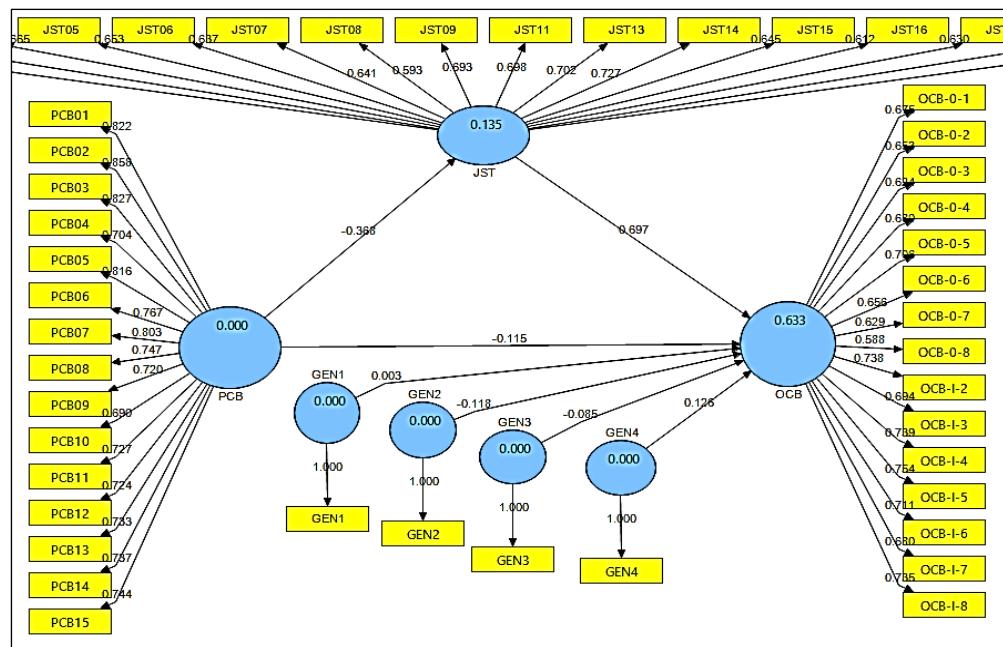
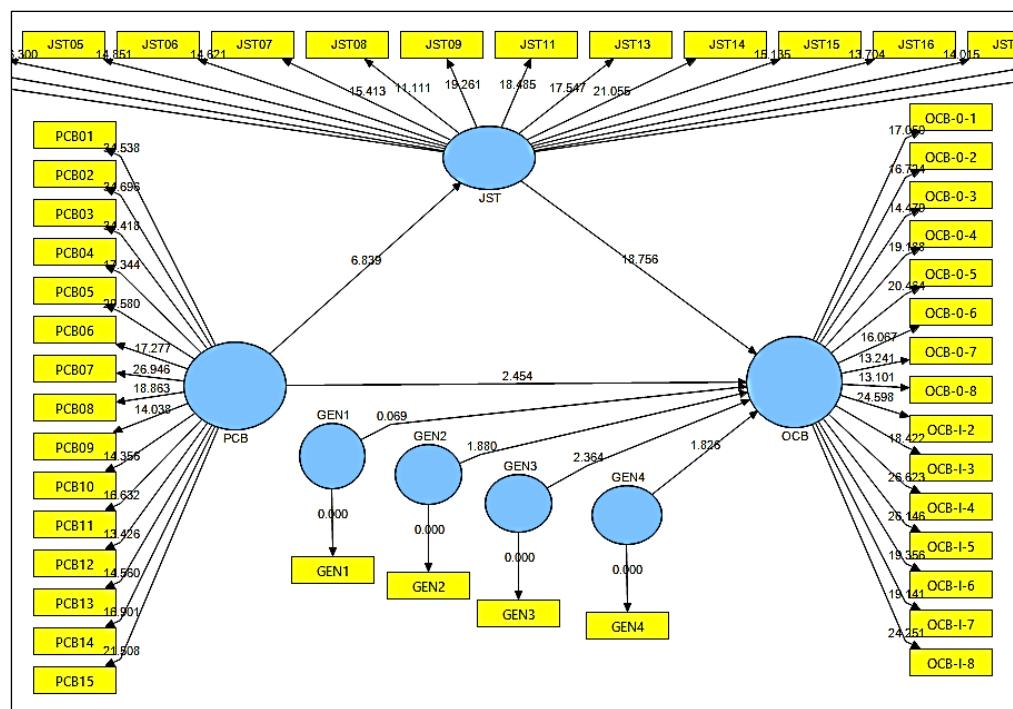


Figure 8: Path coefficients of the mediating role of job satisfaction in the relationship between psychological contract breach and organisational citizenship behaviour

Source: Field survey (2020)

From Figure 9, the result showed that the two paths linking psychological contract breach to job satisfaction, and job satisfaction to organisational citizenship behaviour were statistically significant at 5%. The t-statistic for the path linking psychological contract breach to job satisfaction was 6.839 and the path connecting job satisfaction to organisational citizenship behaviour recorded a t-statistic of 18.756.



*Figure 9: T-statistics of the mediating role of job satisfaction in the relationship between psychological contract breach and organisational citizenship behaviour*

Source: Field survey (2020)

The statistically positive relationship between psychological contract breach and job satisfaction among medical doctors in the Upper East and West Regions in Ghana was parallel to the result of a study by Odhiambo (2015) in Gem district in Kenya, in which the researchers revealed that an improvement in the psychological contract fulfilment by a public secondary school directly improved job satisfaction among the teachers.

On the contrary, this finding challenged to the result of a study by Oppenheim (2018) in the United States of America, wherein psychological contract type did not contribute to the variability in employee satisfaction with work arrangement among working adults. Finally, this finding confirmed the

proposition of social exchange theory which held that, when employees perceive that their employer has breached their psychological contract, they reciprocate by showing low levels of job satisfaction.

On the other hand, the positive significant relationship between job satisfaction and organisational citizenship behaviour among medical doctors in the Upper East and West Regions in Ghana confirmed the result of an earlier study by Abdullah (2018) in Indonesia, wherein the researcher revealed a direct positive effect of job satisfaction on organisational citizenship behaviour among teachers drawn from public vocational high schools. In contrast, the positive significant relationship between job satisfaction and organisational citizenship behaviour disconfirmed to the result of a research by Oppenheim (2018) in the United States of America, in which employee satisfaction with work arrangement did not contribute to the variability in organisational citizenship behaviour among working adults. Lastly, this finding agreed with the assumption of social exchange theory which held that employees who are less satisfied with their job were less likely to be organisational citizens at the workplace.

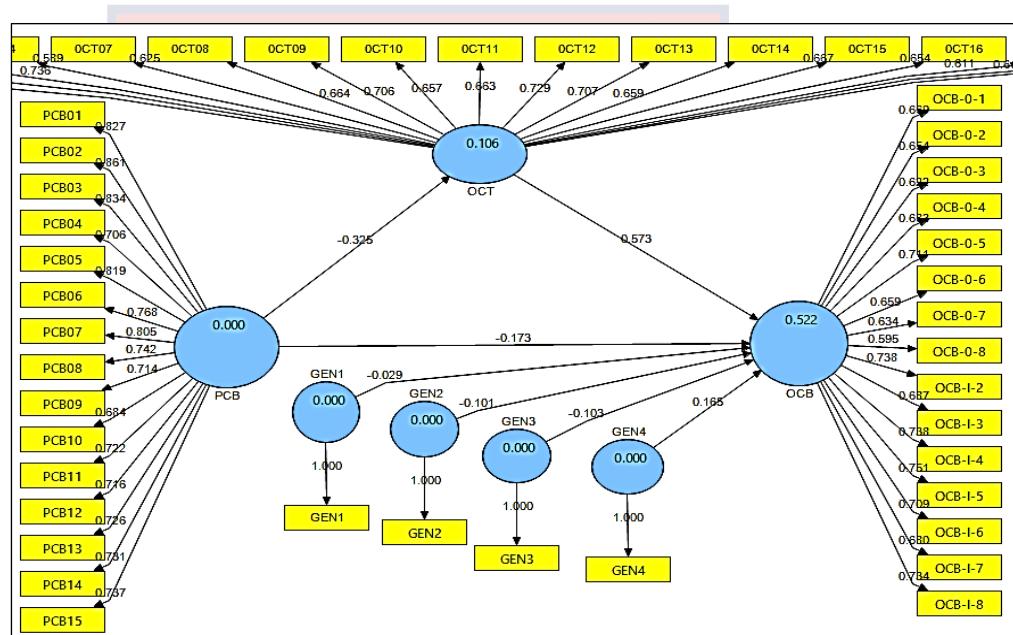
Subsequently, using path coefficient values of Figure 6 and Figure 8, the variance accounted for (VAF) was computed to be 63.49%  $[(0.315 - 0.115)/0.315 * 100\%]$ . This percentage fell within the range of 20% to 80%, hence the writer rejects the null hypothesis in favour of the alternate and asserts that job satisfaction partially mediates the relationship between psychological contract breach and organisational citizenship behaviour among medical doctors working in the Upper East and Upper West Regions of Ghana. The explanation of this mediating effect is that the psychological

contract breach resulted to low job satisfaction among the medical doctors which, in turn, led them to show to low citizenship behaviour at the work setting. This finding compared well with the result of a research by Islam et al. (2014) in Malaysia, where the authors discovered that job satisfaction successfully mediated the effect of psychological empowerment on turnover intentions among Malay-Chinese working in the banking and insurance sector. Likewise, this finding was identical to the result of an earlier study by Christy and Duraisamy (2016) in Chennai in India, in which the investigators revealed that psychological well-being partially mediated the connection between psychological contract breach and organisational citizenship behaviour among information technology sector employees. Lastly, this finding confirmed the affective events theory, which assumed that events at the workplace often evoke emotional reactions among employees. It was through these affective experiences that employees' attitudes and behaviours were influenced.

### **Mediating Role of Organisational Commitment in the Relationship between Psychological Contract Breach and Organisational Citizenship Behaviour**

The third hypothesis of this thesis postulates a mediating effect of organisational commitment in the relationship between psychological contract breach and organisational citizenship behaviour among medical doctors in the Upper East and Upper West Regions of Ghana. PLS-SEM was employed. Responses from 214 medical doctors were utilised. After controlling for sex, age, employment type and organisational tenure, the result showed a negative relationship between psychological contract breach and organisational

commitment (-0.325), while a positive relationship was recorded for the path linking organisational commitment to organisational citizenship behaviour (0.573), as presented in Figure 10. These results only held, however, when these two paths were found to be significant, after running the bootstrapping procedure with 214 bootstrap cases and 5000 samples, using no sign changes option.

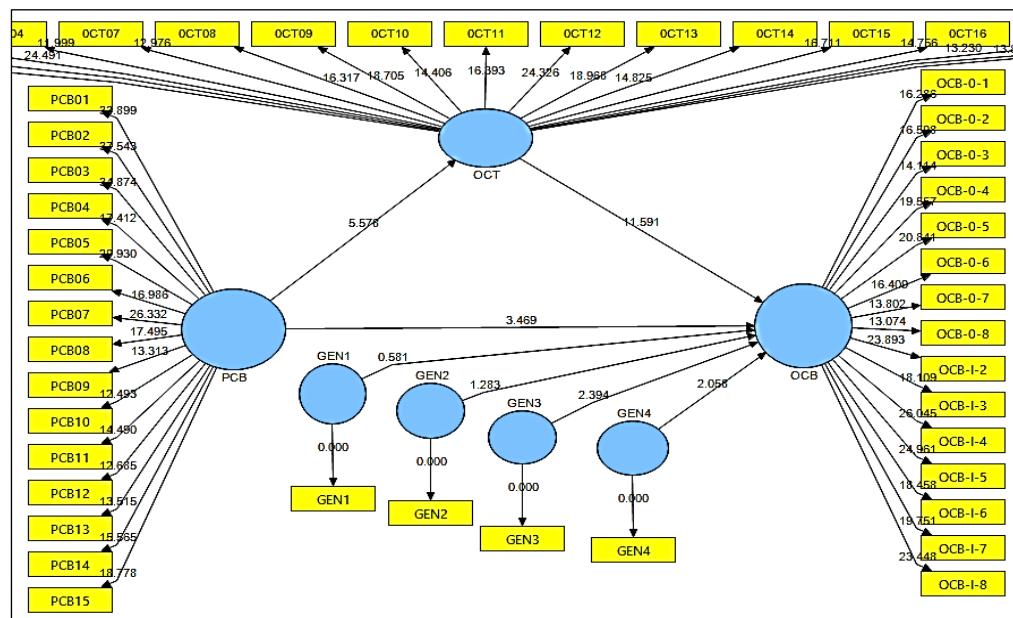


*Figure 10:* Path coefficients of the mediating role of organisational commitment in the relationship between psychological contract breach and organisational citizenship behaviour

Source: Field survey (2020)

Observing Figure 11, the result showed that the two paths linking psychological contract breach to organisational commitment, and organisational commitment to organisational citizenship behaviour were statistically significant at 5%. The t-statistic for the path linking psychological

contract breach to organisational commitment was 5.576, and the path connecting organisational commitment to organisational citizenship behaviour recorded a t-statistic of 11.591.



*Figure 11: T-statistics of the mediating role of organisational commitment in the relationship between psychological contract breach and organisational citizenship behaviour*

Source: Field survey (2020)

The statistically positive relationship between psychological contract breach to organisational commitment among medical doctors in the Upper East and West Regions of Ghana can be likened to the result of an initial study by Maia and Bastos (2015) in Brazil, in which the investigator found that psychological contract fulfilment positively related to affective organisational commitment among recruits in Autonomous Federal Government Agency. In the same way, this finding compared well with the result of a research by

Jabeen et al. (2015) in UAE, in which the researchers uncovered that psychological contract fulfilment was positively related to organisational commitment among company employees.

In a similar fashion, this finding was consistent to the result of an earlier study by Maycock and Amasi (2016) in Nigerian, where the researchers disclosed a negative relationship between psychological contract violation and employee commitment among banking sector employees. Similarly this finding conformed to a research by Hazrati (2017) in Dubai, in which the analyst found that psychological contract breach negatively predicted affective commitment among employees of Bank Melli Iran. Equally, this finding seemed identical to the research by Agbozo et al. (2018) in Ghana, where the authors discovered that teaching and non-teaching employees' commitment to a public university depended on the fulfilment of the perceived expectations by management. Finally, this finding confirmed the proposition of social exchange theory which held that when employees feel that their psychological contract has been breached by their employer, they exhibit low levels of organisational commitment.

On the other hand, the statistically negative relationship between organisational commitment and organisational citizenship behaviour among medical doctors in the Upper East and West Regions of Ghana was in consonance with the result of a research by Leephajaroen (2016) in Thailand, where the investigator disclosed that components of organisational commitment which positively and significantly affected organisational citizenship behaviour were continuance commitment and affective commitment, after drawing samples from support staff at Ubon Ratchathani

Rajabhat University. In a similar fashion, this finding confirmed the result of an earlier study by Anggraeni et al. (2017), wherein the investigators revealed that citizenship behaviour was positively influenced by organisational commitment among 150 Indonesian young entrepreneurs. Last, but not least, this finding confirmed the principle of social exchange theory which held that employees who were less committed to their job were less likely to indulge in activities that were of benefit to co-workers, clients, and employer.

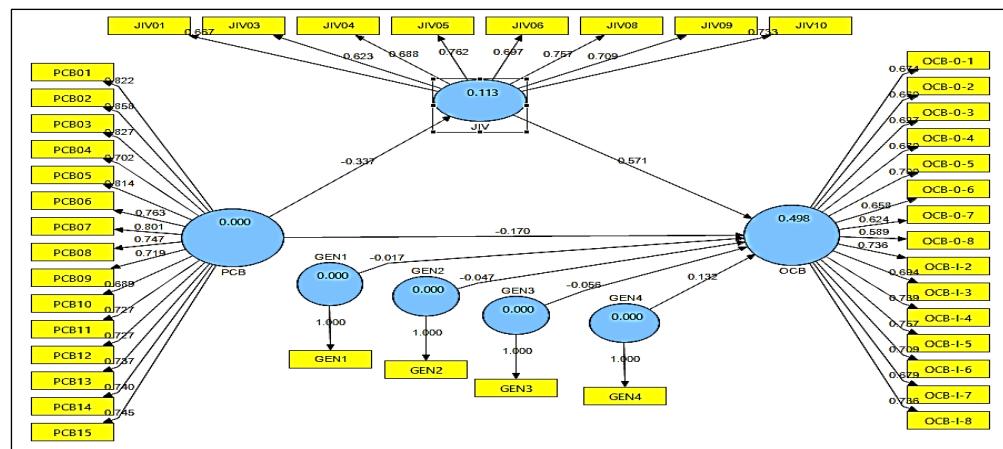
Afterwards, using path coefficient values from Figure 6 and Figure 10, the variance accounted for (VAF) was computed to be 45.08% [(0.315-0.173)/0.315\*100%]. This percentage fell within the range of 20% to 80%, therefore, the writer rejects the null hypothesis in favour of the alternate and declares that organisational commitment partially mediates the relationship between psychological contract breach and organisational citizenship behaviour among medical doctors in the Upper East and Upper West Regions of Ghana. The explanation of this mediating effect is that the psychological contract breach resulted to low organisational commitment among the medical doctors which, in turn, led them to show to low citizenship behaviour at the work setting. This finding resembled the result of an earlier study by Islam et al. (2013) in Malaysia, where the investigators showed that affective and normative commitment performed the role of mediators between perceived organisational support and employees' turnover intentions among banking sector employees in Malaysia.

Likewise, this finding compared well with the result of an initial study by Christy and Duraisamy (2016) in Chennai in India, where the researchers discovered that psychological well-being partially mediated the connection

between psychological contract breach and organisational citizenship behaviour among employees belonging to information technology companies. Equally, this finding was identical to the result of a previous study by Islam et al. (2018) in Pakistan, in which the authors disclosed that organisational commitment mediated the relationship between perceived organisational support and turnover intention among nurses. Finally, this finding endorsed the affective events theory, which assumed that events at the workplace often evoke emotional reactions among employees. It was through these affective experiences that employees' attitudes and behaviours were influenced.

### **Mediating Role of Job Involvement in the Relationship between Psychological Contract Breach and Organisational Citizenship Behaviour**

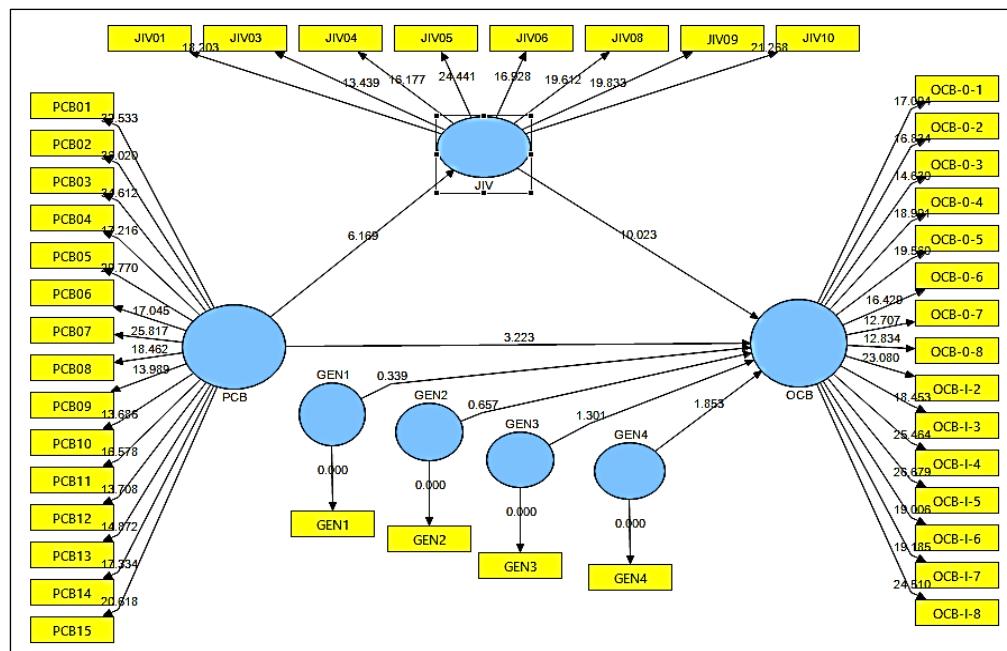
The four hypothesis of this thesis proposes a mediating effect of job involvement in the relationship between psychological contract breach and organisational citizenship behaviour among medical doctors in the Upper East and Upper West Regions of Ghana. PLS-SEM was employed. Responses from 214 medical doctors were utilised. After controlling for sex, age, employment type and organisational tenure, the results revealed a negative relationship between psychological contract breach and job involvement (-0.337), while a positive relationship was recorded for the path linking job involvement to organisational citizenship behaviour (0.571), as presented in Figure 12.



*Figure 12: Path coefficients of the mediating role of job involvement in the relationship between psychological contract breach and organisational citizenship behaviour*

Source: Field survey (2020)

These results only held, however, when these two indirect paths were found to be significant, after running the bootstrapping procedure with 214 bootstrap cases and 5000 samples, using no sign changes option. As depicted in Figure 12, the result showed that the two paths linking psychological contract breach to job involvement, and job involvement to organisational citizenship behaviour were statistically significant at 5%. The t-statistic for the path linking psychological contract breach to job involvement was 6.169, and the path connecting job involvement to organisational citizenship behaviour recorded a t-statistic of 10.023.



*Figure 13: T-statistics of the mediating role of job involvement in the relationship between psychological contract breach and organisational citizenship behaviour*

Source: Field survey (2020)

Thus, this study found that job involvement partially mediated the direct negative relationship between psychological contract breach and organisational citizenship behaviour among medical doctors working in the Upper East and West Regions of Ghana. The explanation of this mediating effect is that the psychological contract breach resulted to low job involvement among the medical doctors which, in turn, led them to show to low citizenship behaviour at the workplace. The significant negative relationship between psychological contract breach and job involvement among medical doctors in the Upper East and West Regions of Ghana can be likened to the result of a prior study by Agarwal and Bhargava (2013) in India, in which the authors discovered that managerial employees had a strong perception that their

psychological contract has been breached, resulting in their low work engagement. In contradiction, this finding disconfirmed with the result of a research by Ugwu (2013) in North-Central Region in Nigeria, wherein the author showed that psychological contract breach was not negatively related to work engagement.

Like Agarwal and Bhargava's (2013) research finding, this finding was identical to the result of an earlier study by Moore (2014) in the United States, where the researcher found that psychological contract fulfilment positively related to employee engagement and predicted 49.9% of the variance in employee engagement among retail chain employees. Equally, this finding confirmed the research by Malik and Khalid (2016) in Lahore in Pakistan, in which the investigator found a negative relationship between psychological contract breach and work engagement among employees in private and public sector banks.

However, consistent to Ugwu's (2013) research finding, this finding locked horns with the result of a study by Akinbobola and Zamani (2018) in Abuja of Nigeria, wherein the researchers uncovered that psychological contract fulfilment did not independently predict job involvement among employees of public and private organisations. Finally, this finding was in line with the tenets of the social exchange theory that, when employees perceive that their psychological contract has been breached, they reciprocate by showing low level of job involvement.

On the other hand, the significant positive relationship between job involvement and organisational citizenship behaviour among medical doctors in the Upper East and West Regions of Ghana was similar to the result of an

earlier study by van der Heuvel (2012) in the Netherlands, in which the author discovered that work engagement positively predicted attitudes towards change among employees. In a similar fashion, this finding was parallel to the research by Christy and Duraisamy (2016) in Chennai in India, in which the authors disclosed that psychological well-being positively predicted organisational citizenship behaviour among employees belonging to information technology companies. Last, but not least, this finding followed the assumptions of the social exchange theory that stipulated that employees who were less involved in their job were less likely to engage in activities that promoted the growth of others, including their co-workers, clients, and employer.

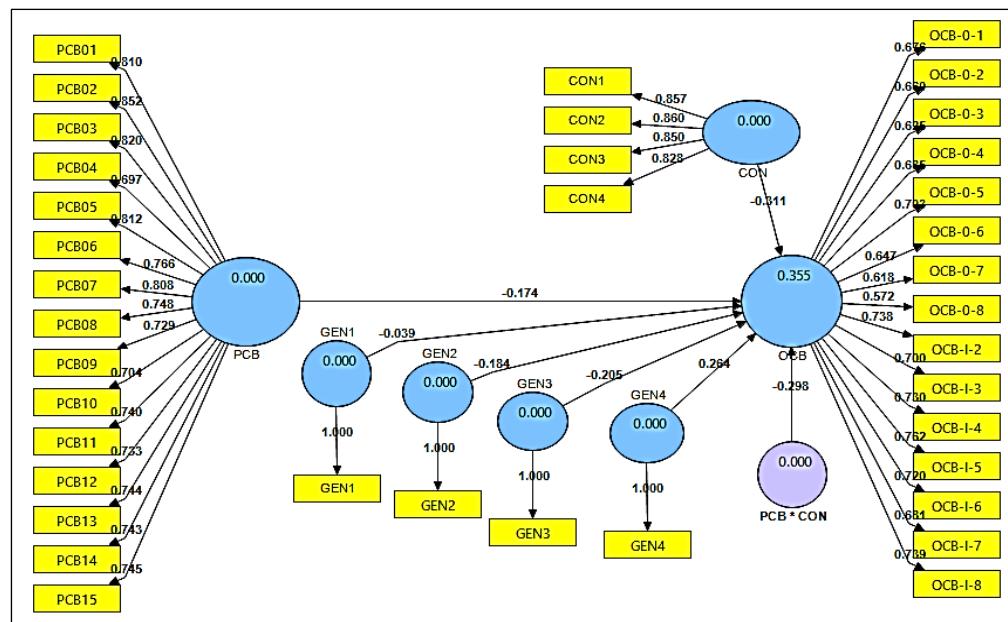
Successively, using path coefficient values from Figure 6 and Figure 12, the variance accounted for (VAF) was computed to be 46.03% [(0.315-0.170)/0.315\*100%]. This percentage fell within the range of 20% to 80%, therefore, the writer rejects the null hypothesis in favour of the alternate and pronounces that job involvement partially mediates the relationship between psychological contract breach and organisational citizenship behaviour among medical doctors in the Upper East and Upper West Regions of Ghana. This finding looked similar to the result of a study by Malik and Khalid (2016) in Pakistan, in which the analysts revealed that work engagement partially mediated the relationship between psychological contract breach and turnover intentions among employees in private and public sector banks of Lahore.

Equally, this finding resembled the result of an earlier study by Christy and Duraisamy (2016) in Chennai in India, where the researchers unveiled that psychological well-being partially mediated the connection between

psychological contract breach and organisational citizenship behaviour among employees belonging to information technology companies. Finally, this finding confirmed the affective events theory, which assumed that events at the workplace often evoke emotional reactions among employees. It was through these affective experiences that employees' attitudes and behaviours were influenced.

### **Moderating Role of Conscientiousness in the Connection between Psychological Contract Breach and Organisational Citizenship Behaviour**

The fifth hypothesis of this research project postulates a moderating role of conscientiousness trait in the connection between psychological contract breach and organisational citizenship behaviour among medical doctors in the Upper East and Upper West Regions of Ghana. PLS-SEM was employed. Responses from 214 medical doctors were utilised. After controlling for sex, age, employment type and organisational tenure, it was revealed in Figure 14 that, the interaction term PCB\*CON had a negative effect on organisational citizenship behaviour, as predicted. The interpretation of the negative interaction term was that, at an average level of conscientiousness, the relationship between psychological contract breach (PCB) and organisational citizenship behaviour (OCB) had a value of 0.174.

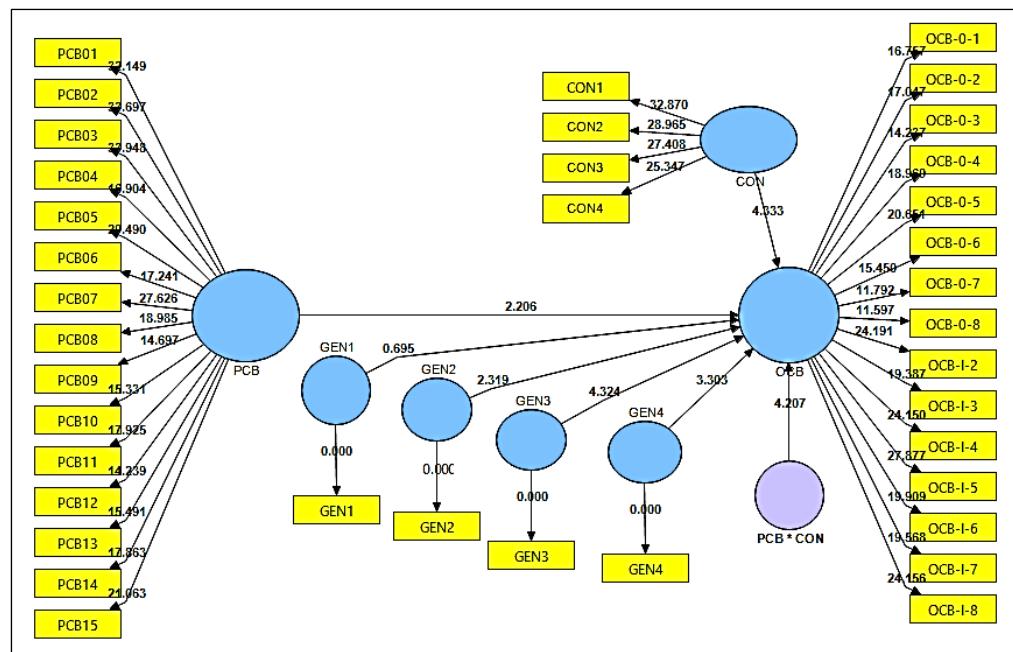


*Figure 14: Path coefficients of the moderating role of conscientiousness in the relationship between psychological contract breach and organisational citizenship behaviour*

Source: Field survey (2020)

At a high level of conscientiousness (CON), that is, when CON is increased by one standard deviation point, the relationship between psychological contract breach and organisational citizenship behaviour decreased by the size of the interaction effect and obtained the valued of  $0.174 - 0.298 = -0.124$ . Thus, given a high score on conscientiousness trait, psychological contract breach decreased its importance in explaining organisational citizenship behaviour among medical doctors in the Upper East and Upper West Regions of Ghana. In other words, in the context of a breach in the psychological contract, medical doctors who scored high on conscientiousness were more likely to be good organisational citizens.

However, this outcome only held when the interaction term PCB\*CON was found to be significant at 5%. The t-statistics of the negative interaction term of psychological contract breach and conscientiousness trait was greater than 1.96 (4.207), as displayed in Figure 15.



*Figure 15: T-statistics of the moderating role of conscientiousness in the relationship between psychological contract breach and organisational citizenship behaviour*

Source: Field survey (2020)

In essence, the writer rejects the null hypothesis in favour of the alternate and declares that conscientiousness trait moderates the relationship between psychological contract breach and organisational citizenship behaviour among medical doctors in the Upper East and West Regions of Ghana, and in the direction expected. The explanation of this moderation effect is that the negative consequences of psychological contract breach and organisational

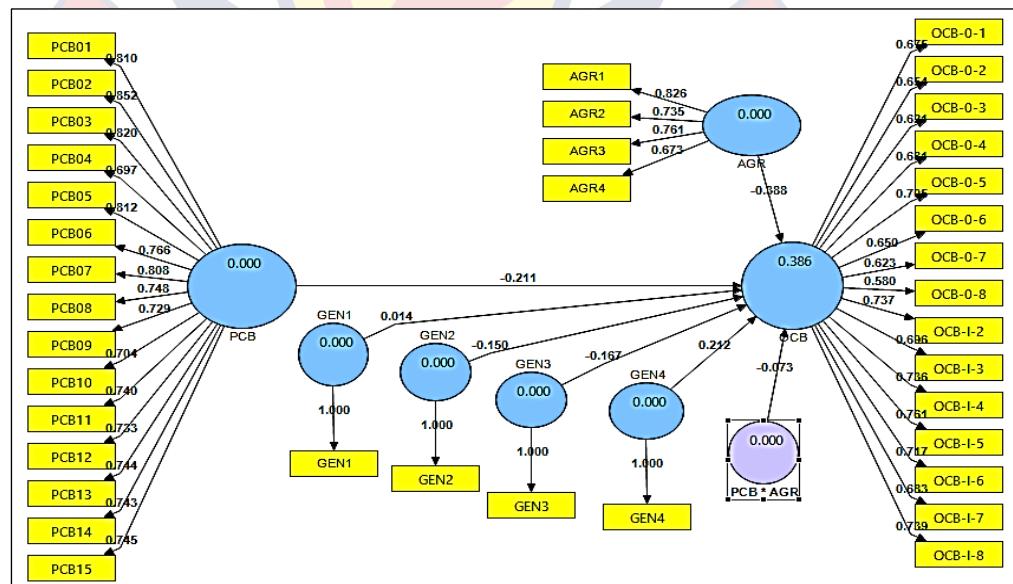
citizenship behaviour is minimised for medical doctors who score high on conscientiousness, but intensified for those who score low on conscientiousness. This finding confirmed the psychological contract theory, which argued that the personality trait of individuals can ease or magnify the strain associated with a psychological contract breach.

This finding also endorsed the social exchange theory, which proposed that organisational citizenship behaviour can result from dispositional traits, such as an individual's propensity to be conscientious: hardworking, organised, persistent, disciplined, and highly motivated. Equally, this finding mirrored the result of an earlier study by Jafri (2014) in Asia, wherein the author disclosed that employees who were by nature conscientious were less likely to be affected by breach in their psychological contract, after drawing samples from colleges of Royal University of Bhutan.

In like manner, this finding resembled the result of a research by Francisco (2015) in the Philippines, in which the researcher revealed that locus of control, a personality variable that referred to how strongly people believed they had control over situations and experiences that affect their lives, influenced the effect of psychological contract breach on faculty employees' tendency to be organisational citizens in six different private educational institutions in Legazpi City. Equally, this finding compared well with the study by Panagiotou (2017), wherein the investigator discovered that intrinsic motivation worked as a moderator between psychological contract breach and intention turnover among employees from three different sectors, namely banking, hotels, and human resource consultancy in the Netherlands, Cyprus, Greece, and Spain.

## Moderating Effect of Agreeableness Trait in the Connection between Psychological Contract Breach and Organisational Citizenship Behaviour

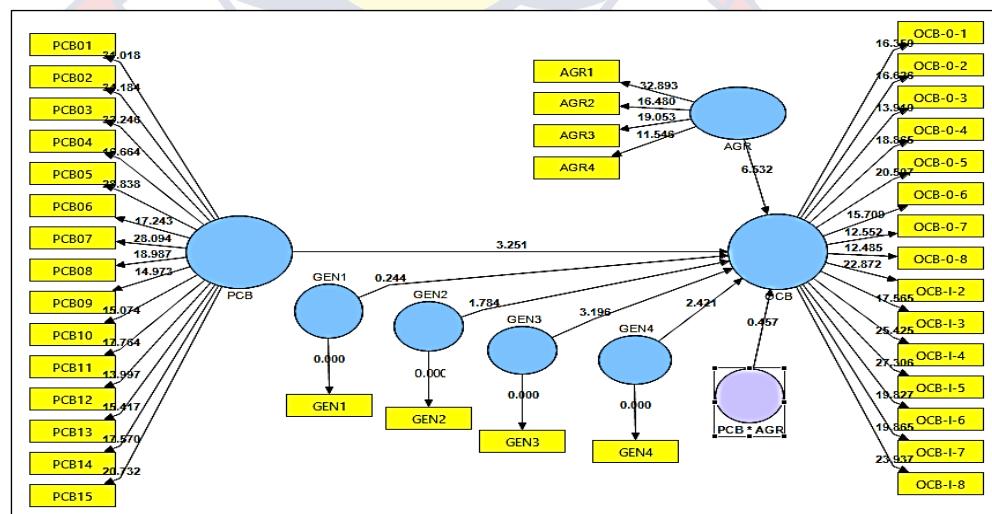
The sixth hypothesis of this research project postulates a moderating effect of agreeableness trait in the connection between psychological contract breach and organisational citizenship behaviour among medical doctors in the Upper East and Upper West Regions of Ghana. PLS-SEM was employed. Responses from 214 medical doctors were utilised. After controlling for sex, age, employment type and organisational tenure, it was shown in Figure 16 that, the interaction term PCB\*AGR had a negative effect on organisational citizenship behaviour, as expected. The interpretation of the negative interaction term was that, at a medium level of agreeableness, the connection between psychological contract breach (PCB) and organisational citizenship behaviour (OCB) had a value of 0.211.



*Figure 16: Path coefficients of the moderating effect of agreeableness in the connection between psychological contract breach and organisational citizenship behaviour*

Source: Field survey (2020)

At a high level of agreeableness (AGR), that is, when AGR is increased by one standard deviation point, the connection between psychological contract breach and organisational citizenship behaviour decreased by the size of the interaction effect and obtained the valued of  $0.211 - 0.073 = 0.138$ . Therefore, given a high score on agreeableness trait, psychological contract breach reduced its importance in explaining organisational citizenship behaviour among medical doctors working in the Upper East and Upper West Regions of Ghana. Simply, during a breach in the psychological contract, medical doctors who score high on agreeableness were more likely to be good organisational citizens. However, this outcome only held when the interaction term PCB\*AGR was found to be significant at 5%. The t-statistics of the negative interaction term of psychological contract breach and agreeableness trait was lesser than 1.96 (0.457), as displayed in Figure 17.



*Figure 17: T-statistics of the moderating effect of agreeableness in the connection between psychological contract breach and organisational citizenship behaviour*

Source: Field survey (2020)

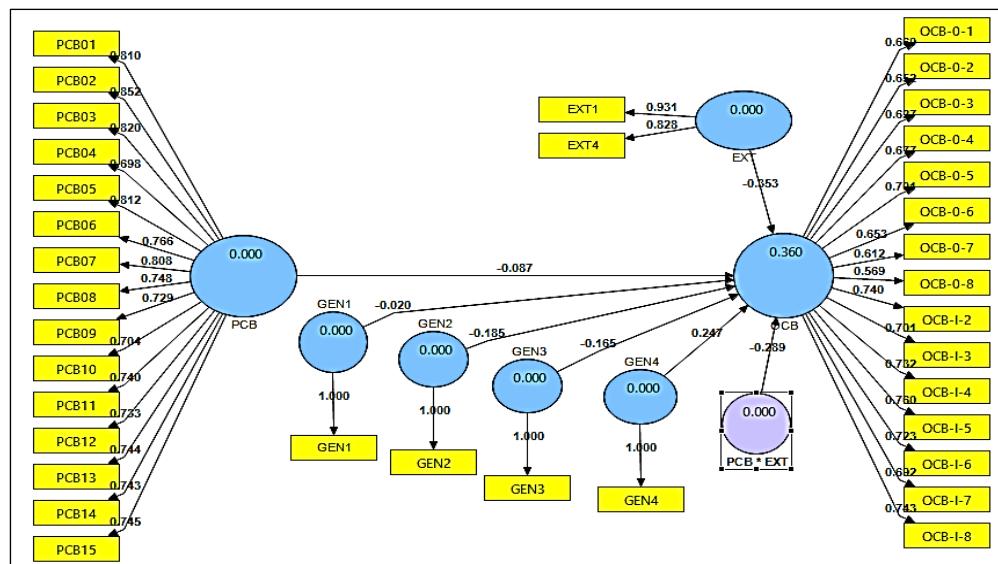
Necessarily, the alternate hypothesis was rejected and pronounced that agreeableness trait does not moderate the connection between psychological contract breach and organisational citizenship behaviour among medical doctors in the Upper East and West Regions of Ghana. This finding suggested that agreeableness trait is less relevant in explaining individual differences in response to psychological contract breach among the medical doctors within the Upper East and Upper West Regions of Ghana. This finding compared well with the result of an initial study by Panagiotou (2017), wherein the investigator discovered that agreeableness did not work as a moderator between psychological contract breach and intention turnover among employees from three different sectors, namely banking, hotels, and human resource consultancy in the Netherlands, Cyprus, Greece, and Spain.

However, this finding contrasted the result of a research by Jafri (2014) in Asia, wherein the author disclosed that employees who were by nature agreeable were less likely to be affected by breach in their psychological contract, after drawing samples from colleges of Royal University of Bhutan. Likewise, this finding opposed a research by Ishaq and Shamsher (2016) in Pakistan, in which the researchers revealed that low revenge attitude weakened the relationship between psychological contract breach and work place deviant behaviours among employees of Higher Education Commission Islamabad. Likewise, this finding disconfirmed the result of a study by Heffernan and Rochford (2017), in which the authors uncovered that, perceptions of social networks reduced the effect of a psychological contract breach on turnover intentions among officers in the Irish Defence Forces.

Equally, this finding challenged the psychological contract theory, which argued that the personality trait individuals can ease or magnify the strain associated with a psychological contract breach. In the same way, this finding disputed the social exchange theory, which proposed that organisational citizenship behaviour can result from dispositional traits, such as an individual's propensity to be agreeable: accommodating, helpful, caring, cooperative, sympathetic, forgiving, and trusting. Probably, other traits like conscientiousness greatly propelled medical doctors to be good or bad organisational citizens, in the context of the breach

### **Moderating Role of Extraversion Trait in the Relationship between Psychological Contract Breach and Organisational Citizenship Behaviour**

The seventh hypothesis of this research project proposed a moderating role of extraversion trait in the relationship between psychological contract breach and organisational citizenship behaviour among medical doctors in the Upper East and Upper West Regions of Ghana. PLS-SEM was employed. Responses from 214 medical doctors were utilised. After controlling for sex, age, employment type and organisational tenure, it was revealed in Figure 18 that, the interaction term  $PCB^*EXT$  had a negative effect on organisational citizenship behaviour, contrary to expectation. The interpretation of the negative interaction term was that, at the middle of extraversion, the relationship between psychological contract breach (PCB) and organisational citizenship behaviour (OCB) had a value of 0.087.

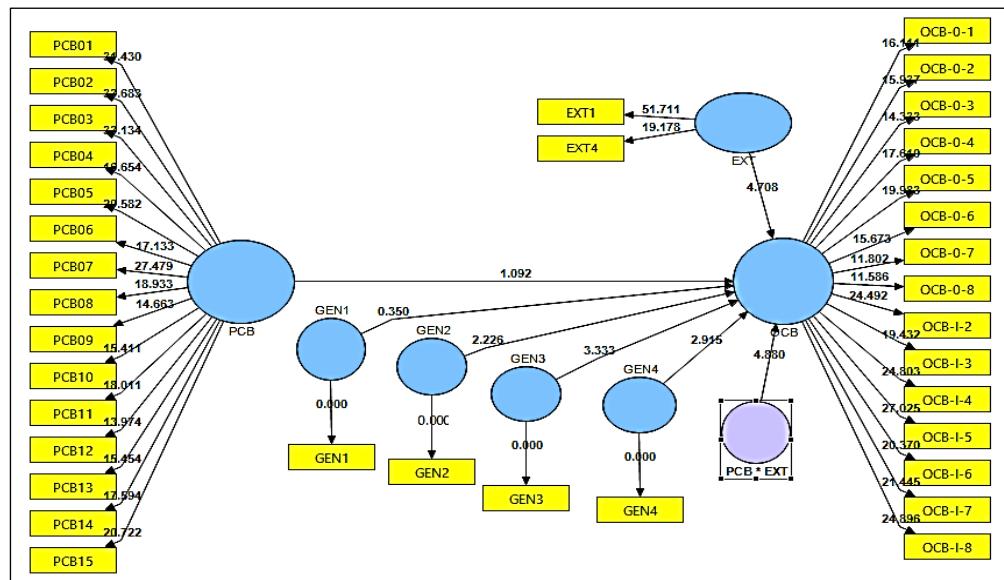


*Figure 18: Path coefficients of the moderating role of extraversion in the relationship between psychological contract breach and organisational citizenship behaviour*

Source: Field survey (2020)

At a high level of extraversion (EXT), that is, when EXT is increased by one standard deviation point, the relationship between psychological contract breach and organisational citizenship behaviour decreased by the size of the interaction effect and obtained the valued of  $0.087-0.289 = -0.202$ . Hence, given a high score on extraversion trait, psychological contract breach reduced its importance in explaining organisational citizenship behaviour among medical doctors working in the Upper East and Upper West Regions of Ghana. Put another way, in the context of a breach in the psychological contract, medical doctors who scored high on extraversion were more likely to be good organisational citizens. Yet, this finding only held if the interaction term PCB\*EXT was found to be significant at 5%. The t-statistic of the

negative interaction term of psychological contract breach and extraversion trait was larger than 1.96 (4.880), as shown in Figure 19.



*Figure 19: T-statistics of the moderating role of extraversion in the relationship between psychological contract breach and organisational citizenship behaviour*

In essence, the researcher rejects the null hypothesis in favour of the alternate and states that extraversion trait moderates the relationship between psychological contract breach and organisational citizenship behaviour among medical doctors in the Upper East and West Regions of Ghana, but not in the direction expected. The explanation of this moderation effect is that the negative consequences of psychological contract breach and organisational citizenship behaviour is minimised for medical doctors who were extroverted, but intensified for those who were introverted. This finding conformed to the psychological contract theory, which argued that the personality trait individuals can ease or magnify the strain associated with a psychological

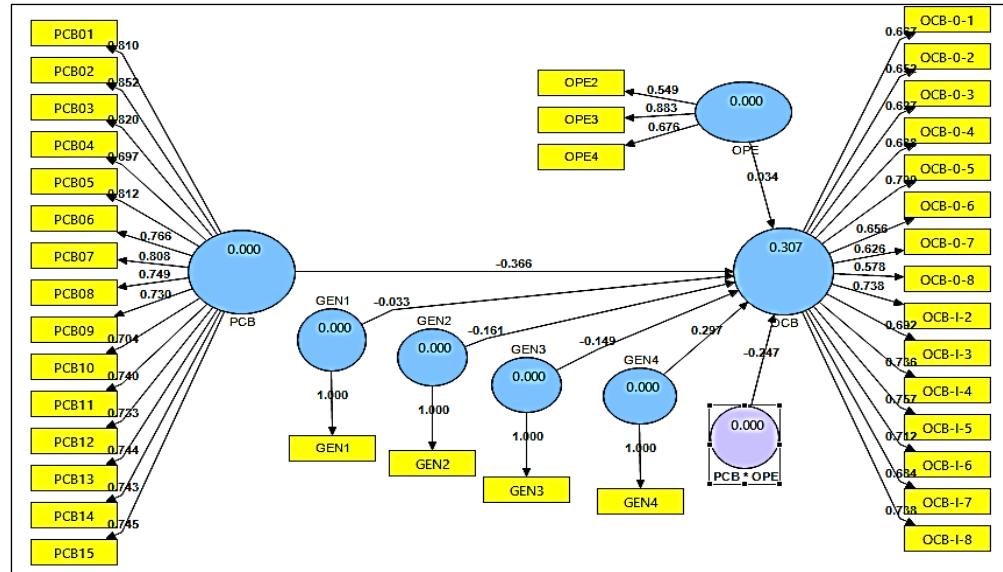
contract breach. Likewise, this finding confirmed the social exchange theory, which proposed that organisational citizenship behaviour can result from dispositional traits, such as an individual's propensity to be extraverted: outgoing, social, energetic, enthusiastic, assertive, talkative, ambitious, and fun-loving.

Similarly, this finding resembled the result of a previous study by Raja et al. (2004) in Pakistan, wherein the authors revealed that extraversion moderated the relationship between perceptions of contract breach and feeling of contract violation among employees working in five well-established private and public sector organisations. In a similar fashion, this result was identical to the research by Jafri (2014) in Asia, wherein the author revealed that employees who were naturally extraverted were affected by breach in their psychological contract, after drawing samples from colleges of Royal University of Bhutan.

### **Moderating Role of Openness to Experience Trait in the Connection between Psychological Contract Breach and Organisational Citizenship Behaviour**

The eighth hypothesis of this thesis postulates a moderating role of openness to experience trait in the connection between psychological contract breach and organisational citizenship behaviour among medical doctors in the Upper East and Upper West Regions of Ghana. PLS-SEM was employed. Responses from 214 medical doctors were utilised. After controlling for sex, age, employment type and organisational tenure, it was discovered in Figure 20 that, the interaction term PCB\*OPE had a negative effect on organisational

citizenship behaviour, consistent to anticipation. The interpretation of the negative interaction term was that, at the average level of openness to experience, the connection between psychological contract breach (PCB) and organisational citizenship behaviour (OCB) obtained a value of 0.366.



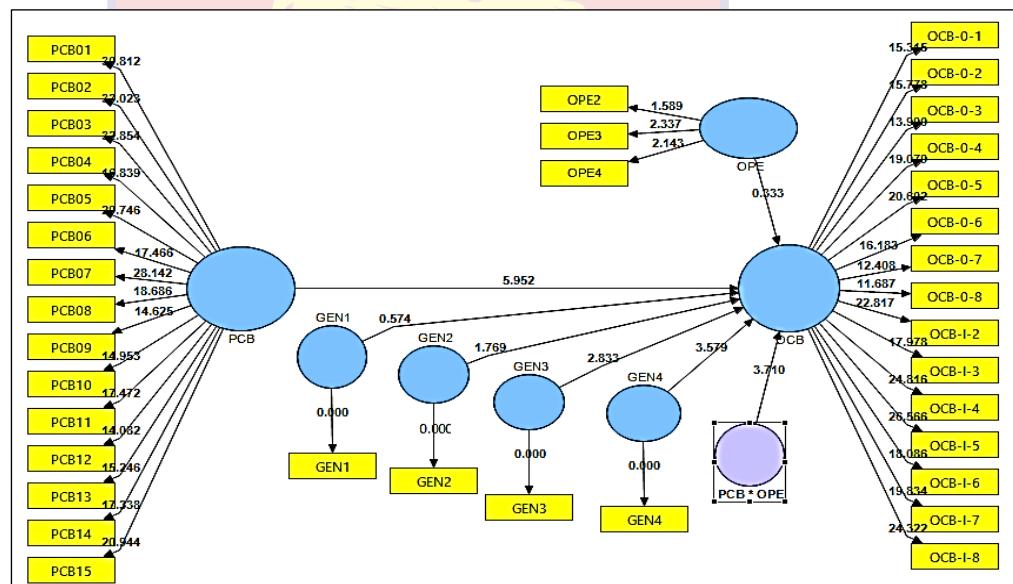
*Figure 20: Path coefficients of the moderating role of openness to experience in the connection between psychological contract breach and organisational citizenship behaviour*

Source: Field survey (2020)

At a high level of openness to experience (OPE), that is, when OPE was increased by one standard deviation point, the connection between psychological contract breach and organisational citizenship behaviour decreased by the size of the interaction effect and had the value of  $0.366 - 0.247 = 0.119$ . Therefore, given a high score on openness to experience trait, psychological contract breach reduced its importance in explaining

organisational citizenship behaviour among medical doctors working in the Upper East and Upper West Regions of Ghana.

Put another way, in the context of a breach in the psychological contract, medical doctors who scored high on openness to experience were more likely to be good organisational citizens. However, this finding only held when the interaction term PCB\*OPE was found to be significant at 5%. The t-statistic of the negative interaction term of psychological contract breach and extraversion trait was larger than 1.96 (3.710), as shown in Figure 21.



*Figure 21: T-statistics of the moderating role of openness to experience in the connection between psychological contract breach and organisational citizenship behaviour*

Source: Field survey (2020)

Principally, the writer rejects the null hypothesis in favour of the alternate and states that openness to experience trait moderates the relationship between psychological contract breach and organisational citizenship

behaviour among medical doctors in the Upper East and West Regions of Ghana, and in the direction expected. The explanation of this moderation effect is that the negative consequences of psychological contract breach and organisational citizenship behaviour is minimised for medical doctors who score high on openness to experience, but intensified for those who score low on openness to experience.

This finding conformed to the psychological contract theory, which argued that the personality trait individuals can ease or magnify the strain associated with a psychological contract breach. Likewise, this finding confirmed the social exchange theory, which proposed that organisational citizenship behaviour can result from dispositional traits, such as an individual's propensity to be opened to experiences, particularly by being imaginative and independent.

In a similar fashion, this result was identical to the research by Jafri (2014) in Asia, wherein the author revealed that openness to experience was negatively related to a breach of psychological contract, after drawing samples from colleges of Royal University of Bhutan. Equally, this finding can be likened to the result of a research by a study by Francisco (2015) in the Philippines, in which the author demonstrated that locus of control, a personality variable that referred to how strongly people believed they have control over situations and experiences that affected their lives, influenced the effect of psychological contract breach on faculty employees' tendency to be organisational citizens, using responses drawn from six different private educational institutions in Legazpi City.

## Moderating Role of Neuroticism Trait in the Connection between Psychological Contract Breach and Organisational Citizenship Behaviour

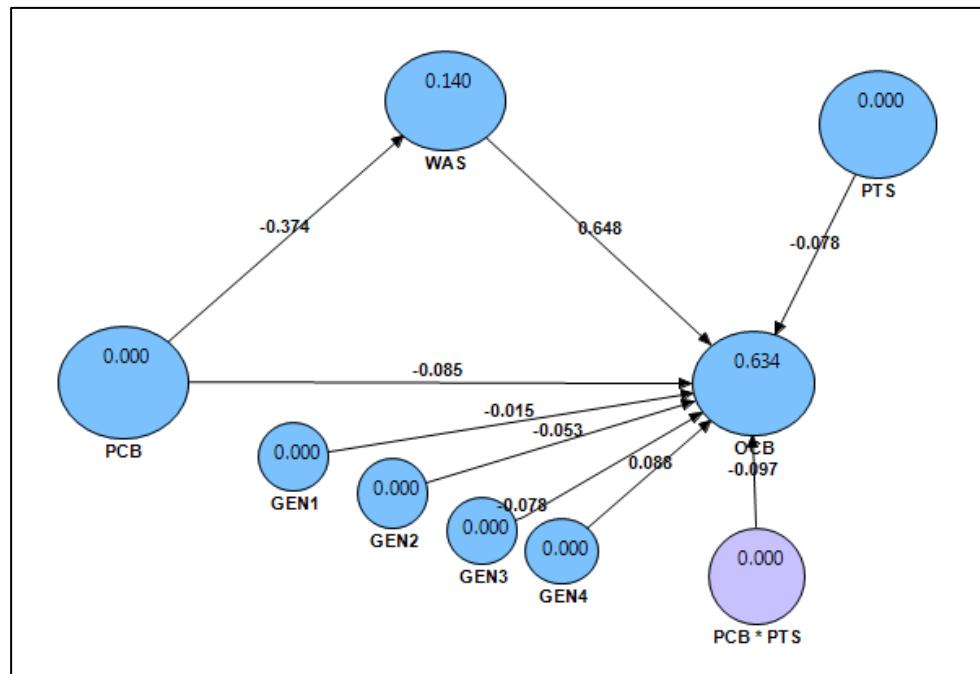
The ninth hypothesis of this research project postulated a moderating role of neuroticism trait in the connection between psychological contract breach and organisational citizenship behaviour among medical doctors in the Upper East and Upper West Regions of Ghana. However, the latent variable of neuroticism did not make it through the factor analysis stage. Therefore, this hypothesis was ignored.

### Composite Results

Generally, the researcher sought to address the overall purpose of the study by assessing the mediating role of work attitudes and moderating role of personality traits in the direct relationship between psychological contract breach and organisational citizenship behaviour among the sampled medical doctors in Ghana. This result was necessary to give a generic meaning to the work. With lessons from the individual results above, only hypotheses that were significant were included in this composite reflective structural model.

Therefore, agreeableness and neuroticism traits were removed from the model; while psychological contract breach, job satisfaction, employees' organisational commitment, job involvement, conscientiousness, extraversion, and openness to experiences were retained. By doing so, the researcher was developing a model to address the purpose of this study. PLS-SEM was employed. Responses from 214 medical doctors were utilised. Figure 22 showed the path coefficients among the four composite variables, namely

psychological contract breach (PCB), organisational citizenship behaviour (OCB), work attitudes (WAS), and personality traits (PTS).

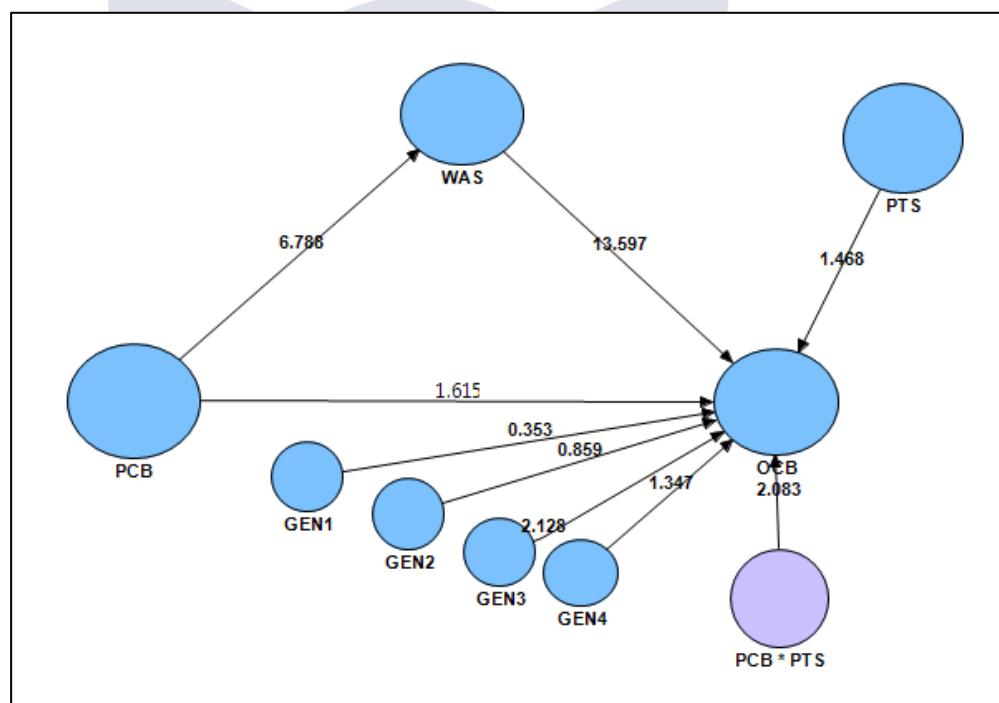


*Figure 22: Path coefficients of composite results of psychological contract breach, organisational citizenship behaviour, work attitudes and personality traits.*

Source: Field survey (2020)

From Figure 22, the path coefficients suggested that, as expected, psychological contract breach obtained a negative effect on organisational citizenship behaviours, implying that the unmet expectations of the sampled medical doctors led them to show less citizenship behaviour, as enshrined in the social exchange theory. Also, the unfulfilled expectations of the sample medical doctors resulted in undesirable work attitudes, which consequently stifled their indulgence in citizenship acts, as proposed by the affective events theory.

Finally, the result showed that the adverse effect of the medical doctors' unfulfilled expectations on citizenship behaviour was minimised for those who display high score on conscientiousness, extraversion, and openness to experience personality traits, all put together, as enshrined in the psychological contract theory. These findings, however, was supported only if the relationship among these four variables were significant. The t-statistics of the paths, as shown in Figure 23, indicated that all the relevant paths under consideration ( $\text{PCB} \rightarrow \text{WAS}$ ;  $\text{WAS} \rightarrow \text{OCB}$ ;  $\text{PCB} * \text{PTS} \rightarrow \text{OCB}$ ) were above the threshold of 1.96, after accounting for the basic controls (GEN1, GEN2, GEN3, GEN4), implying that the above results were supported.



*Figure 23: T-statistics of the composite results of psychological contract breach, organisational citizenship behaviour, work attitudes, and personality traits.*

Source: Field survey (2020)

## Summary of Key Findings

The findings of this study were several. However, this section presented the summary of key findings the emerged from this study based on the hypotheses formulated. Regarding the first hypothesis, this study discovered a negative and significant relationship between psychological contract breach and organisational citizenship behaviour among medical doctors working in the Upper East and Upper West Regions of Ghana, consistent to expectation. This result implied that the unfulfilled expectations of the medical doctors led them to display low citizenship behaviour in their health facilities. Concerning the second hypothesis, this study found that job satisfaction partially mediated the relationship between psychological contract breach and organisational citizenship behaviour among medical doctors working in the Upper East and Upper West Regions of Ghana, as expected. This finding suggested that the unmet expectations resulted in low job satisfaction of the medical doctors, which, in turn, decreased their citizenship behaviour.

With respect to third hypothesis, this study uncovered that organisational commitment partially mediated the relationship between psychological contract breach and organisational citizenship behaviour among medical doctors working in the Upper East and Upper West Regions of Ghana, as envisaged. This finding implied that the unfulfilled expectations decreased the level of organisational commitment of the medical doctors, and this consequently reduced their citizenship behaviour. In line with the fourth hypothesis, this study showed that job involvement partially mediated the relationship between psychological contract breach and organisational

citizenship behaviour among medical doctors working in the Upper East and Upper West Regions of Ghana, as expected. This result suggested that the unmet expectations resulted in low job involvement of the medical doctors, which subsequently decreased their citizenship behaviour. Regarding the fifth hypothesis, this thesis revealed that conscientiousness trait moderated the relationship between psychological contract breach and organisational citizenship behaviour among medical doctors in the Upper East and West Regions of Ghana, and in the direction expected. This finding implied that the negative effect of the unfulfilled expectations on citizenship behaviour was minimised for medical doctors who were more conscientious than those who were less conscientious.

Concerning the sixth hypothesis, this research project found that agreeableness trait did not moderate the connection between psychological contract breach and organisational citizenship behaviour among medical doctors in the Upper East and West Regions of Ghana. This result suggested that agreeableness trait was less important in explaining individual differences in response to unmet expectations of the sampled medical doctors in Ghana. Considering the seventh hypothesis, this study unveiled that extraversion trait moderated the relationship between psychological contract breach and organisational citizenship behaviour among medical doctors in the Upper East and West Regions of Ghana, but not in the direction expected. This finding implied that the negative effect of the unmet expectations on citizenship behaviour was reduced for medical doctors who were extroverted than those who were introverted.

In line with the eighth hypotheses, this thesis revealed that openness to experience trait moderated the relationship between psychological contract breach and organisational citizenship behaviour among medical doctors in the Upper East and West Regions of Ghana, and in the direction expected. This finding implied that the negative effect of the unfulfilled expectations on citizenship behaviour was minimised for medical doctors who were more opened to new experiences than those who were less opened to new experiences. However, the ninth hypothesis was ignored due to the inability of neuroticism trait to pass factor analysis stage. The summary of these key findings were shown in Table 32.

**Table 32: Summary of Key Findings**

Hypotheses	Remarks	Interpretation
H <sub>1</sub> :	Supported	The unfulfilled expectations of the medical doctors led them to display low citizenship behaviour.
H <sub>2</sub> :	Supported	The unmet expectations resulted in low job satisfaction of the medical doctors, which, in turn, decreased their citizenship behaviour.
H <sub>3</sub> :	Supported	The unfulfilled expectations decreased the level of organisational commitment of the medical doctors, and this consequently reduced their citizenship behaviour.
H <sub>4</sub> :	Supported	The unmet expectations resulted in low job involvement of the medical doctors, which subsequently decreased their citizenship behaviour.

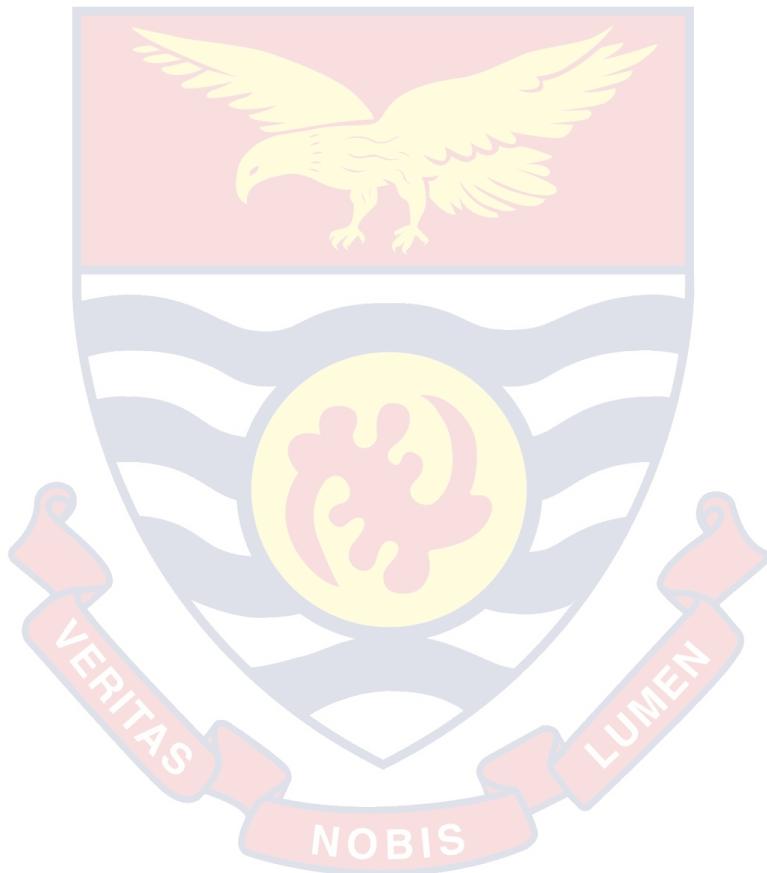
**Table 32, continued**

Hypotheses	Remarks	Interpretation
H <sub>5</sub> :	Supported	The negative effect of the unfulfilled expectations on citizenship behaviour was minimised for medical doctors who were more conscientious than those who were less conscientious.
H <sub>6</sub> :	Not Supported	Agreeableness trait was less important in explaining individual differences in response to unmet expectations of the sampled medical doctors in Ghana.
H <sub>7</sub> :	Supported	The negative effect of the unmet expectations on citizenship behaviour was reduced for medical doctors who were extroverted than those who were introverted.
H <sub>8</sub> :	Supported	The negative effect of the unfulfilled expectations on citizenship behaviour was minimised for medical doctors who were more opened to new experiences than those who were less opened to new experiences.
H <sub>9</sub> :	Ignored*	The neuroticism latent variable did not pass factor analysis stage. Thus, this hypothesis was ignored.

### Chapter Summary

First and foremost, this chapter presented and discussed the results of the general information of respondents. The chapter continued with a test of normality of the data collected to inform the appropriate measure of central tendency and dispersion to be used as descriptive statistics. Subsequently, the data were subjected to factor analysis, using Correlation Matrix, Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy, and Bartlett test of

sphericity. Successively, the measurement and structural model were assessed. IBM SPSS Software for Windows, version 24 and Smart PLS 2.0M.3 were utilised in analysing the data. Results were presented in tables and figures.



## CHAPTER FIVE

### SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

#### Introduction

This study sought to assess the mediating role of work attitudes and the moderating role of personality traits in the relationship between psychological contract breach and organisational citizenship behaviour among medical doctors in Ghana. This chapter presents a summary of the study, including major findings derived from the study. The conclusions arrived at and recommendations arising from the findings were also stated. The chapter ends with suggestions for further research.

#### Summary of the Study

This study sought to assess the mediating role of work attitudes and the moderating role of personality traits in the relationship between psychological contract breach and organisational citizenship behaviour among medical doctors in Ghana, with focus on those working in the Upper East and West Regions of Ghana for justifiable reasons. Nine hypotheses were formulated. The first hypothesis postulated a significant negative relationship between psychological contract breach and organisational citizenship behaviour among medical doctors in the Upper East and Upper West Regions of Ghana. The second hypothesis proposed that job satisfaction mediates the relationship between psychological contract breach and organisational citizenship behaviour among medical doctors in the Upper East and Upper West Regions of Ghana.

The third hypothesis presumed that organisational commitment mediates the relationship between psychological contract breach and organisational citizenship behaviour among medical doctors in the Upper East and Upper West Regions of Ghana. The fourth hypothesis assumed that job involvement mediates the nexus between psychological contract breach and organisational citizenship behaviour among medical doctors in the Upper East and Upper West Regions of Ghana. The fifth hypothesis presupposed that conscientiousness trait moderates the connection between psychological contract breach and organisational citizenship behaviour among medical doctors in Upper East and Upper West Regions of Ghana.

The sixth hypothesis espoused that agreeableness trait moderates the connection between psychological contract breach and organisational citizenship behaviour among medical doctors in Upper East and Upper West Regions of Ghana. The seventh hypothesis excogitated that extraversion trait moderates the connection between psychological contract breach and organisational citizenship behaviour among medical doctors in Upper East and Upper West Regions of Ghana. The eighth hypothesis guessed that openness to experience trait moderates the connection between psychological contract breach and organisational citizenship behaviour among medical doctors in Upper East and Upper West Regions of Ghana. The ninth hypothesis postulates that neuroticism trait moderates the connection between psychological contract breach and organisational citizenship behaviour among medical doctors in Upper East and Upper West Regions of Ghana.

The study was situated within the positivism philosophical paradigm, quantitative research approach, explanatory research design, and cross-

sectional study design. The study was conducted in the Upper East and Upper West Regions of Ghana. Ethical clearance was applied and granted by University of Cape Coast Institutional Review Board before data collection. Other ethical considerations were voluntary participation, right to privacy, anonymity and confidentiality of information. In addition, no material reward was given to a respondent to induce participation. A structured questionnaire was the instrument for data collection and it was self-administered. It was designed to cater off for common method bias, by using use of different scale answering formats for different constructs, making it anonymous, among others.

Upper East and West Regions of Ghana formed the study area of this study. The study used the simple one-stage cluster sampling approach to select 251 medical doctors working in the Upper East and West Regions of Ghana to serve as sample size for this study. Of the 251 questionnaires distributed, 218 questionnaires were retrieved, but, 4 were extremely incomplete (missing values >5%), hence they were rejected. The remaining 214 completed questionnaires were used for data processing and analysis. Consequently, a response rate of 85.26% (214/251\*100%) was achieved. The non-response rate was 14.74% (100%-85.26%). The data were analysed using IBM SPSS for windows, version 23 and Smart PLS software.

The findings were organised in the order of the hypotheses formulated. Regarding the first hypothesis, this study discovered a negative and significant relationship between psychological contract breach and organisational citizenship behaviour among medical doctors working in the Upper East and Upper West Regions of Ghana, consistent to expectation. This result implied

that the unfulfilled expectations of the medical doctors led them to display low citizenship behaviour in their health facilities. Concerning the second hypothesis, this study found that job satisfaction partially mediated the relationship between psychological contract breach and organisational citizenship behaviour among medical doctors working in the Upper East and Upper West Regions of Ghana, as expected. This finding suggested that the unmet expectations resulted in low job satisfaction of the medical doctors, which, in turn, decreased their citizenship behaviour.

With respect to third hypothesis, this study uncovered that organisational commitment partially mediated the relationship between psychological contract breach and organisational citizenship behaviour among medical doctors working in the Upper East and Upper West Regions of Ghana, as envisaged. This finding implied that the unfulfilled expectations decreased the level of organisational commitment of the medical doctors, and this consequently reduced their citizenship behaviour. In line with the fourth hypothesis, this study showed that job involvement partially mediated the relationship between psychological contract breach and organisational citizenship behaviour among medical doctors working in the Upper East and Upper West Regions of Ghana, as expected. This result suggested that the unmet expectations resulted in low job involvement of the medical doctors, which subsequently decreased their citizenship behaviour.

Regarding the fifth hypothesis, this thesis revealed that conscientiousness trait moderated the relationship between psychological contract breach and organisational citizenship behaviour among medical doctors in the Upper East and West Regions of Ghana, and in the direction

expected. This finding implied that the negative effect of the unfulfilled expectations on citizenship behaviour was minimised for medical doctors who were more conscientious than those who were less conscientious.

Concerning the sixth hypothesis, this research project found that agreeableness trait did not moderate the connection between psychological contract breach and organisational citizenship behaviour among medical doctors in the Upper East and West Regions of Ghana. This result suggested that agreeableness trait was less important in explaining individual differences in response to unmet expectations of the sampled medical doctors in Ghana. Considering the seventh hypothesis, this study unveiled that extraversion trait moderated the relationship between psychological contract breach and organisational citizenship behaviour among medical doctors in the Upper East and West Regions of Ghana, but not in the direction expected. This finding implied that the negative effect of the unmet expectations on citizenship behaviour was reduced for medical doctors who were extroverted than those who were introverted.

In line with the eighth hypotheses, this thesis revealed that openness to experience trait moderated the relationship between psychological contract breach and organisational citizenship behaviour among medical doctors in the Upper East and West Regions of Ghana, and in the direction expected. This finding implied that the negative effect of the unfulfilled expectations on citizenship behaviour was minimised for medical doctors who were more opened to new experiences than those who were less opened to new experiences. However, the ninth hypothesis was ignored due to the inability of neuroticism trait to pass factor analysis stage.

## Conclusions

This study sought to assess the mediating role of work attitudes and the moderating role of personality traits in the relationship between psychological contract breach and organisational citizenship behaviour among medical doctors in Ghana, with focus on those working in the Upper East and West Regions for justifiable reasons. With respect to hypothesis 1, this study concluded that psychological contract breach among medical doctors working in the Upper East and West Regions of Ghana led them to be bad organisational citizens. In relation to hypothesis 2, this study settled that job satisfaction reduced the effect of a psychological contract breach on the medical doctors' tendency to be show bad organisational citizenship behaviour.

Regarding hypothesis 3, this study deduced that organisational commitment lessened the effect of a psychological contract breach on the medical doctors' tendency to be bad organisational citizens. With respect to hypothesis 4, this study established that job involvement reduced the effect of a psychological contract breach on the medical doctors' tendency to be bad organisational citizens. Concerning the hypothesis 5, this study settled that, at a high level of conscientiousness, psychological contract breach reduced its importance in explaining the organisational citizenship behaviour among medical doctors working in the Upper East and West Regions of Ghana. On the other hand, at a low level of conscientiousness, psychological contract breach increased in importance in describing the organisational citizenship behaviour among medical doctors working in the Upper East and West Regions of Ghana.

With respect to hypothesis 6, this study settled that the moderating role of agreeableness trait in the relationship between psychological contract breach and organisational citizenship behaviour was inconclusive. Regarding hypothesis 7, this study concluded that, at a high level of extraversion, psychological contract breach reduced its importance in elucidating the organisational citizenship behaviour among medical doctors working in the Upper East and West Regions of Ghana. On the other hand, at a low level of extraversion, psychological contract breach increased in importance in explaining the organisational citizenship behaviour among medical doctors working in the Upper East and West Regions of Ghana.

Considering hypothesis 8, this study concluded that, at a high level of openness to experience, psychological contract breach reduced its importance in explaining the organisational citizenship behaviour among medical doctors working in the Upper East and West Regions of Ghana. On the other hand, at a low level of openness to experience, psychological contract breach increased in importance in describing the organisational citizenship behaviour among medical doctors working in the Upper East and West Regions of Ghana. . However, the writer could not conclude on the ninth hypothesis due to the inability of data on neuroticism trait to pass factor analysis stage.

## **Recommendations**

After assessing the mediating role of work attitudes and moderating role of personality traits in the relationship between psychological contract breach and organisational citizenship behaviour among medical doctors in Ghana, it was appropriate to make recommendations to improve the existing

situation. With respect to hypothesis 1, this study recommends managers of Ghana Health Service to appreciate that, one of their key roles is to manage expectations, which means clarifying what they believe medical doctors should achieve, the competencies they should possess, and the values they should uphold, particularly at the time of employment, where promises and commitments are made. Managing these expectation would help reduce future breaches. A fulfilled psychological contract, although uneasy to achieve, is a necessity for a continuing, harmonious relationship between the medical doctors and Ghana Health Service.

Concerning hypothesis 2, this study recommends managers of Ghana Health Service to consider improving the level of job satisfaction among medical doctors working in the Upper East and Upper West Regions of Ghana, such as improving upon their welfare needs, providing study leave, sponsorship for further training, and safe working environment so as to boost organisational citizenship behaviour among them. Considering hypothesis 3, this study recommends managers of Ghana Health Service to consider improving the level of organisational commitment among medical doctors working in the Upper East and Upper West Regions of Ghana, such as providing study leave, sponsorship for further training, provision of quality schools of their children, job security, adequate remuneration, and comfortable or safe working environment so as to boost organisational citizenship behaviour among them.

Regarding hypothesis 4, this study recommends managers of Ghana Health Service to consider improving the level of job involvement among medical doctors working in the Upper East and Upper West Regions of

Ghana, such as providing nice and safe working environment, encouraging flexibility and developing a focused culture, showing gratitude to employees, encouraging collaboration, and promoting honesty so as to boost organisational citizenship behaviour among them so as to boost organisational citizenship behaviour among them.

Concerning hypothesis 5, this study recommends that before newly trained medical doctors in Ghana are posted, upon successfully serving as house officers for two years, they should be subjected to a conscientious personality test so that those who fall short can be groomed to catch-up in order to increase their propensities to be good organisational citizens, in case a psychological contract breach occur work. For already practicing medical doctors, managers of Ghana Health Service should encourage and motivate them to be more conscientious: task loving, highly motivated, disciplined, persistent and dutiful.

Regarding hypothesis 7, this study recommends that before newly trained medical doctors in Ghana are posted, especially those dispatched to stress-prone zones, they should be subjected to an extraversion personality test so that those who fall short can be groomed to catch-up in order to increase their propensities to be good organisational citizens, in case a psychological contract breach occur work. For already practicing medical doctors, managers of Ghana Health Service should encourage and motivate them to be extraverts: outgoing, social, energetic, enthusiastic, assertive, ambitious, and fun-loving.

Concerning hypothesis 8, this study recommends that before newly trained medical doctors in Ghana are posted, especially those assigned to stress-prone zones, they should be subjected to an extraversion personality test

so that those who fall short can be groomed to catch-up in order to increase their propensities to be good organisational citizens, in case a psychological contract breach occurs at work. For already practicing medical doctors, managers of Ghana Health Service should encourage and motivate them to be extraverts: outgoing, social, energetic, enthusiastic, assertive, ambitious, and fun-loving.

Generally, this study recommends that Ghana Health Services should consider fulfilling the expectations of medical doctors operating in stress-prone healthcare zones to boost their level of job satisfaction, commitment and involvement at the health setting to foster their citizenship behaviour. In addition, Ghana Health Service should groom medical doctors working in stress-prone healthcare zones to be more conscientious, extroverted and opened to new experiences to improve their ability to be organisational citizens to the benefit of co-workers, patients and the healthcare facility as a whole.

### Suggestions for Further Research

As this study's data could not support the moderating role of neuroticism trait in the relationship between psychological contract breach and organisational citizenship behaviour, further research is needed to address this model. Furthermore, a longitudinal study, using the same variables used in this study is recommended for further research, as it will provide the opportunity for data to be collected more than one point in time, making it more complex, powerful, and capturing changes.

The social exchange theory identifies a number of narrow personality traits, which were not within the purview of this thesis. Some examples of these narrow trait are need for achievement, need for cognition, adversity quotient, perceived self-fulfilment, equity sensitivity, kindness or benevolence, negative reciprocity beliefs, revenge attitude, social network (social status and local ties/connectedness), emotional regulation strategies, self-control, self-esteem, internal locus of control, emotional intelligence, and spiritual intelligence. Further researchers could consider moderating these narrow traits on the relationship between psychological contract breach and organisational citizenship behaviour among medical doctors.

The mediating role of psychological contract violation in the nexus between psychological contract breach and organisational citizenship behaviour among medical doctors is also worthy of empirical investigation. The mediating role of emotional exhaustion in the nexus between psychological contract breach and organisational citizenship behaviour can also be investigated. Additionally, further research can model the effect of psychological contract breach on job stress in terms of medical matters, such as heart disease, gastroenteritis, sleep disorders and other possible accidents, and their subsequent effect on rate of absence from work and job displacement. Psychological contract violation could also be used as a mediator in the connection between psychological contract breach and job stress.

To add, upcoming studies could concentrate on the moderating role of each of the Big Five personality dimensions on the relationship between psychological contract fulfilment and work engagement. The mediating role of

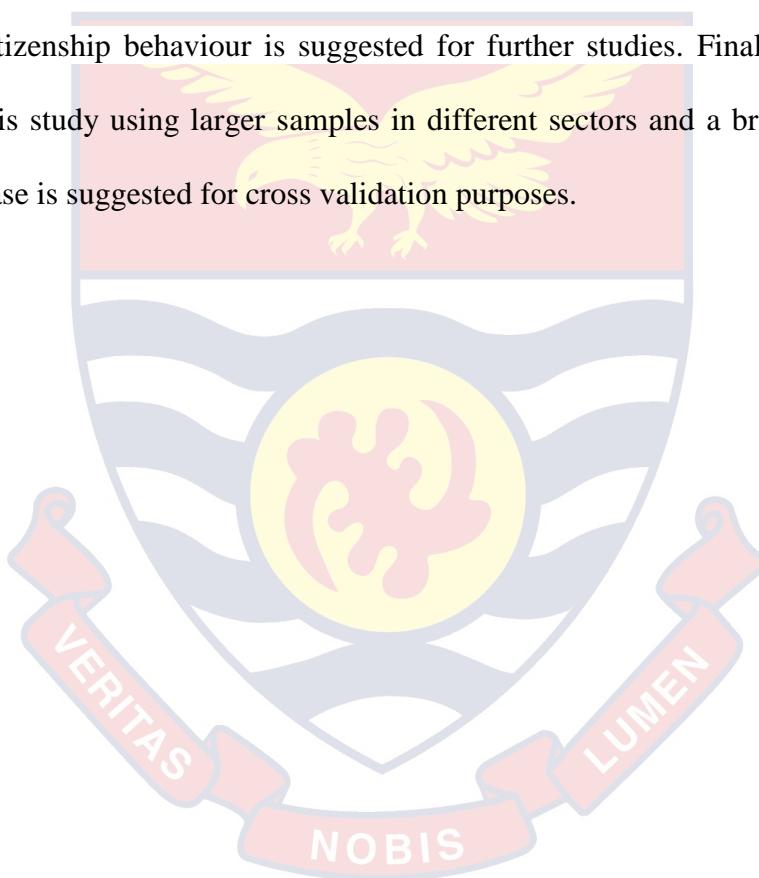
job satisfaction in the linkage between psychological contract fulfilment and work engagement is also worthy of examination, because, an engaged employee uses discretionary effort voluntarily without being asked, which is can be likened to organisational citizenship behaviour. As a novelty, organisation identification, which is another employee attitude, could be used as a mediator in the connection between psychological contract breach and organisational citizenship behaviour among medical doctors. The moderating role of Big Five personality dimensions on the nexus between psychological contract breach and organisational identification can also be modelled by forthcoming researchers.

Further research could also consider modeling the moderating role of negative reciprocity beliefs in the linkage between psychological contract breach and organisational citizenship behaviour among medical doctors. The interactive effect of personality traits on the relationship between psychological contract breach and employee physical health, as well as mental health is also worthy of investigation. Forthcoming studies could examine the significant differences in psychological contract among permanent (regular) and contract/temporary medical doctors. Also, hearsay evidence suggests that psychological contract may be somewhat different among employees in smaller firms, where employer-employee relations are much more direct. This idea connotes the need for research to test this assumption.

The mediating role of trust in the relationship between psychological contract breach and organisational citizenship behaviour among medical doctors can also be investigated. The moderating role of the Big Five personality dimensions on the nexus between perceived organisational support

and organisational citizenship behaviour is also missing in the literature, warranting investigation by upcoming researchers. In the same way, the mediating role of job satisfaction, employees' organisational commitment and job involvement in the relationship between perceived organisational support and organisational citizenship behaviour is worth exploring.

Also, how the Big-Five personality factors interact with each other to moderate the link between psychological contract breach and organisational citizenship behaviour is suggested for further studies. Finally, replication of this study using larger samples in different sectors and a broader geographic base is suggested for cross validation purposes.



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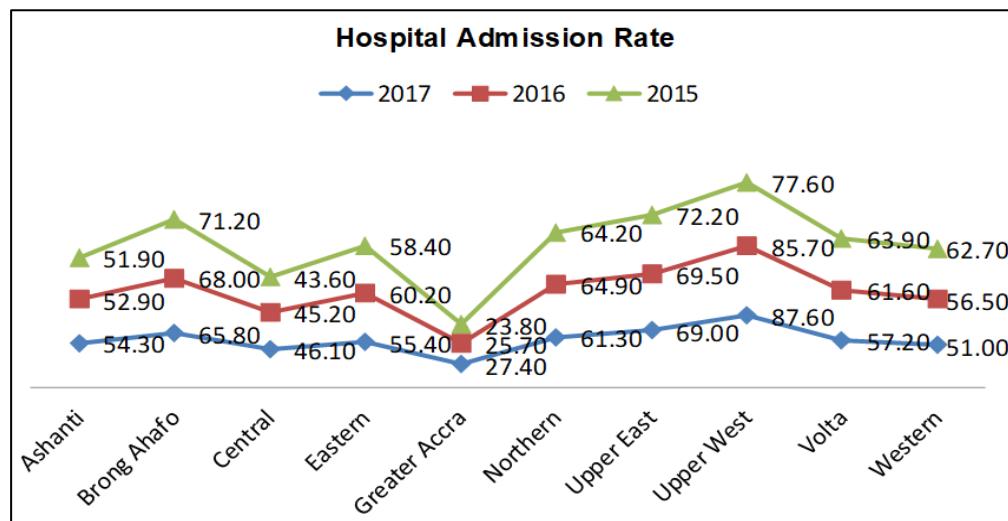
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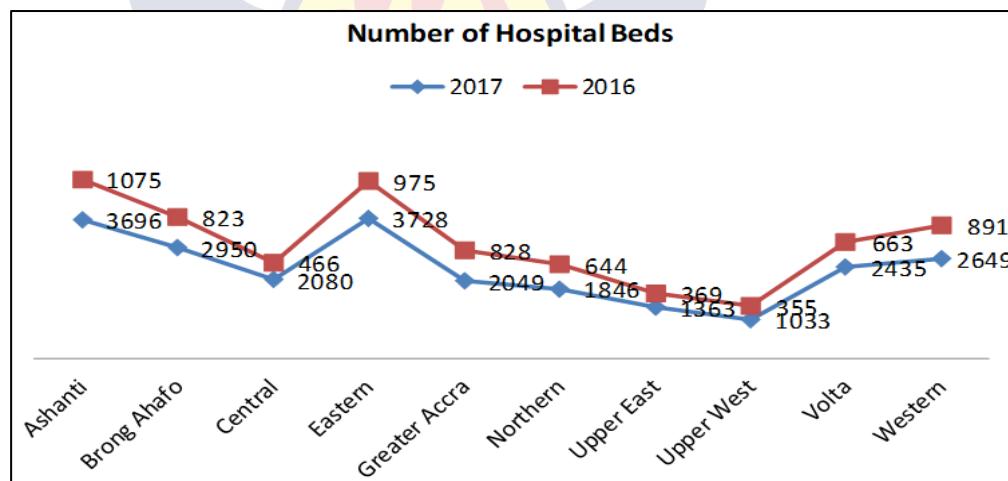
## APPENDICES

### Appendix A: Hospital Admission Rates by Region



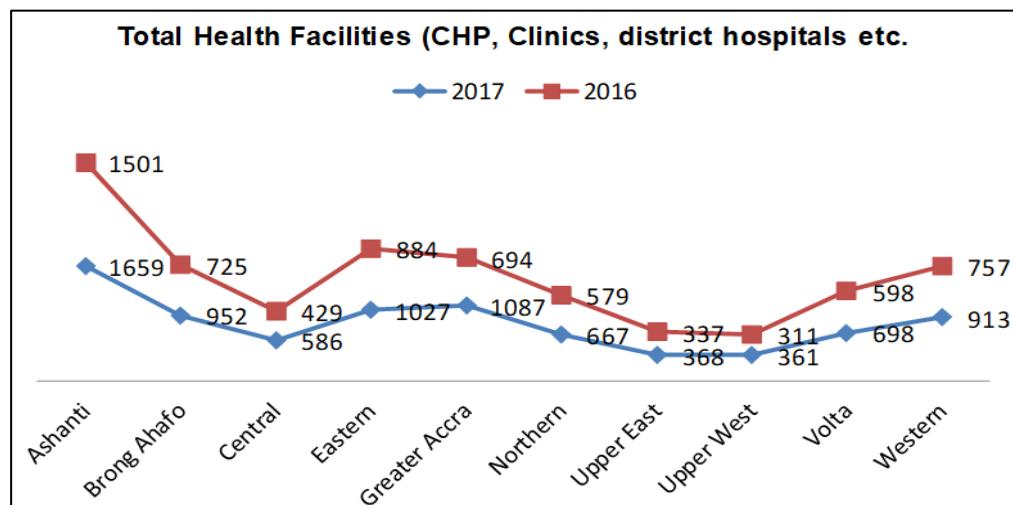
Source: Ghana Health Service (2018)

### Appendix B: Number of Hospital Beds by Region



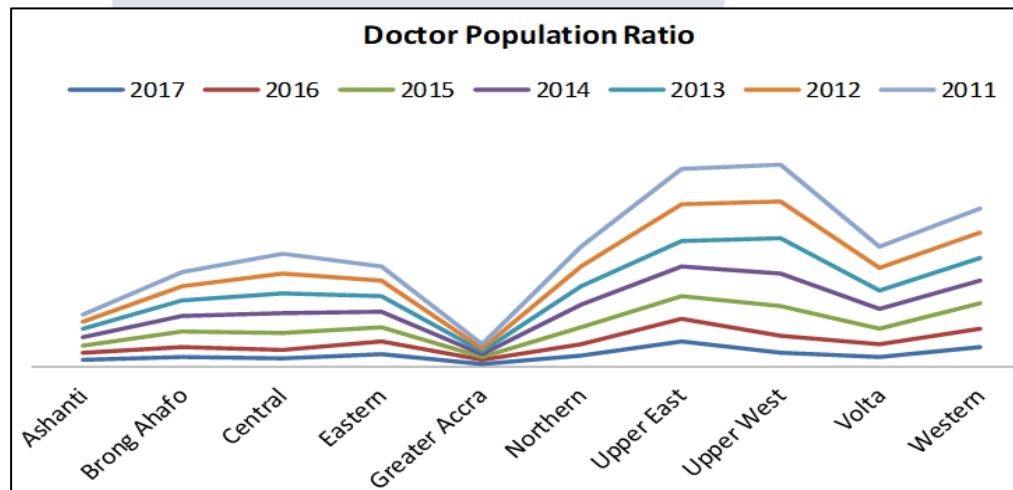
Source: Ghana Health Service (2018)

### Appendix C: Total Health Facilities by Region



Source: Ghana Health Service (2018)

### Appendix D: Doctor Population Ratio by Regions



Source: Ghana Health Service (2018)

Appendix E: Letter of Ethical Clearance

<p style="text-align: center;"><b>UNIVERSITY OF CAPE COAST</b> <b>INSTITUTIONAL REVIEW BOARD SECRETARIAT</b></p> <p>TEL: 0558093143 / 0508878309 / 0244207814 E-MAIL: <a href="mailto:ir@ucc.edu.gh">ir@ucc.edu.gh</a> OUR REF: UCC/IRB/A/2016/558 YOUR REF: OMB NO: 0990-0279 IORG #: IORG0009096</p> <p>C/O Directorate of Research, Innovation and Consultancy</p> <p></p> <p>Mr. Samuel Koomson Department of Management Studies University of Cape Coast.</p> <p>Dear Mr. Koomson,</p> <p><b>ETHICAL CLEARANCE – ID (UCCIRB/CHLS/2019/29)</b></p> <p>The University of Cape Coast Institutional Review Board (UCCIRB) has granted <b>Provisional Approval</b> for the implementation of your research protocol titled <b>Psychological Contract Breach and Organisational Citizenship Behaviour: Role of Work Attitudes and Personality Traits among Medical Doctors in Ghana</b>. This approval is valid from 13<sup>th</sup> November, 2019 to 12<sup>th</sup> November, 2020. You may apply for a renewal subject to submission of all the required documents that will be prescribed by the UCCIRB.</p> <p>Please note that any modification to the project must be submitted to the UCCIRB for review and approval before its implementation. You are required to submit periodic review of the protocol to the Board and a final full review to the UCCIRB on completion of the research. The UCCIRB may observe or cause to be observed procedures and records of the research during and after implementation.</p> <p>You are also required to report all serious adverse events related to this study to the UCCIRB within seven days verbally and fourteen days in writing.</p> <p>Always quote the protocol identification number in all future correspondence with us in relation to this protocol.</p> <p>Yours faithfully,</p> <p></p> <p>Samuel Asiedu Owusu, PhD UCCIRB Administrator</p> <p>ADMINISTRATOR INSTITUTIONAL REVIEW BOARD UNIVERSITY OF CAPE COAST</p>	
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Appendix F: Questionnaire for Medical Doctors

**Psychological Contract Breach and Organisational Citizenship Behaviour: The Role of Work Attitudes and Personality Traits among Medical Doctors in Ghana**

Dear Respondent,

My name is Samuel Koomson, a PhD Student at the Department of Management, School of Business, University of Cape Coast. This study forms part of the requirement for the award of my PhD Degree in Business Administration and it seeks to assess *the influence of psychological contract breach on organisational citizenship behaviour: Exploring the mediating role of work attitudes and the moderating role of personality traits among medical doctors in Ghana.*

I am writing to ask for your help with my research. I would be grateful if you could spare about 1 hour of your time to answer these questions for the research, with all honesty. There is no right or wrong answer. Your questionnaire is strictly anonymous and will only be read and used by myself. Participation is voluntary. In the event that anything is published from this research, no information supplied will be identifiable to you since only aggregated data will be reported in this study.

It is expected that the findings of this research will have implications for the well-being of medical doctors through policy formulation and management support in your health facility. I would be very grateful if I could get the

completed questionnaire within a week. If you need any clarification on this questionnaire, its nature or its purpose, or you wish to be informed on the results of the study, do not hesitate to contact me on 024-438-5551 or email: *samuel.koomson@stu.ucc.edu.gh, skoomson68@gmail.com*. Thank you for your valuable time and input.

## Questionnaire

### Section A: Psychological Contract Breach

Psychological Contract Breach represents your employer's failure to deliver on its expected obligations or promises made to you, mostly unwritten. Please indicate your *level of agreement* with each of the following statements that relate to psychological contract breach, by **circling** the appropriate number, on the scale: *1=least agreement, 2=less agreement, 3=little agreement, 4=moderate agreement, 5=strong agreement, 6=stronger agreement, 7=strongest agreement.*

PCB01	Limited materials and equipment are made available to me to perform my job.	1	2	3	4	5	6	7
PCB02	There is little similarity between my abilities and the job I do.	1	2	3	4	5	6	7
PCB03	Little recognition is given to me for my efforts in this health facility.	1	2	3	4	5	6	7
PCB04	I am sure I have a stable and secure employment in this health facility. (R)	1	2	3	4	5	6	7

PCB05	This health facility is less concerned with my long-term wellbeing.	1	2	3	4	5	6	7
PCB06	This health facility shows little concern to my welfare.	1	2	3	4	5	6	7
PCB07	This health facility rarely supports me in meeting increasingly higher goals.	1	2	3	4	5	6	7
PCB08	I trust in management in fulfilling their obligations to me. (R)	1	2	3	4	5	6	7
PCB09	Limited opportunities for promotion are available to me.	1	2	3	4	5	6	7
PCB10	This health facility scarcely supports me in attaining my highest level of performance.	1	2	3	4	5	6	7
PCB11	This health facility pays little attention to developing my skills.	1	2	3	4	5	6	7
PCB12	There is little similarity between my pay and that of others doing similar duties.	1	2	3	4	5	6	7
PCB13	I sense evidence of unfair performance evaluation or reward system.	1	2	3	4	5	6	7
PCB14	I am less likely to get support from management in my day-to-day activities.	1	2	3	4	5	6	7
PCB15	Top management rarely engage me in their decision making.	1	2	3	4	5	6	7

## Section B: Organisational Citizenship Behaviour

Organisational Citizenship Behaviour is a behaviour that is free, voluntary and selfless for the good of others: co-workers, patients, patients' relatives, friends, relatives, government and so on. These behaviour are not explicitly recognised by formal reward systems, but are combined to promote efficiency and effectiveness in your health facility.

Please indicate how often you perform the following behaviours that relate to organisational citizenship behaviour, by **ticking** the appropriate number, on the scale: *1=never, 2=almost never, 3=occasionally, 4=a moderate, 5=often times, 6=almost every time, 7=every time.*

OCB-I-1	Helping others who have been absent from work.	1	2	3	4	5	6	7
OCB-I-2	Willingly give my time to help others who have work-related problems.	1	2	3	4	5	6	7
OCB-I-3	Adjusting my work schedule to accommodate other employees' requests for time off.	1	2	3	4	5	6	7
OCB-I-4	Going out of the way to make newer employees feel welcome in this health facility.	1	2	3	4	5	6	7
OCB-I-5	Showing genuine concern and courtesy toward co-workers, even under the most trying business or personal situations.	1	2	3	4	5	6	7
OCB-	Giving up time to help others who have work	1	2	3	4	5	6	7

I-6	or non-work problems.							
OCB-I-7	Assisting others with their duties.	1	2	3	4	5	6	7
OCB-I-8	Sharing personal property with others to help their work.	1	2	3	4	5	6	7
OCB-O-1	Attending functions that are not required, but that help improve this health facility's image.	1	2	3	4	5	6	7
OCB-O-2	Keeping up with developments in this health facility.	1	2	3	4	5	6	7
OCB-O-3	Defending this health facility when other employees criticise it.	1	2	3	4	5	6	7
OCB-O-4	Showing pride when representing the organisation in public.	1	2	3	4	5	6	7
OCB-O-5	Offering ideas to improve the functioning of this health facility.	1	2	3	4	5	6	7
OCB-O-6	Expressing loyalty towards this health facility.	1	2	3	4	5	6	7
OCB-O-7	Taking actions to protect this health facility from potential problems.	1	2	3	4	5	6	7
OCB-O-8	Demonstrating concern about the image of this health facility.	1	2	3	4	5	6	7

### Section C: Work Attitudes

Work Attitudes evaluate your job by expressing how you feel towards beliefs about and attachment to your job. It involves job satisfaction (JST), commitment towards your organisation (OCT), and job involvement (JIV).

Please indicate your *level of agreement* with each of the following statements that relate to work attitudes, by **circling** the appropriate number, on the scale:

*1=least agreement, 2=less agreement, 3=little agreement, 4=moderate agreement, 5=strong agreement, 6=stronger agreement, 7=strongest agreement.*

<i>Employee job satisfaction</i>							
<i>On my present job, ...</i>							
JST01	I am able to keep busy all the time.	1	2	3	4	5	6 7
JST02	I have the chance to work alone on the job.	1	2	3	4	5	6 7
JST03	I have the chance to do different things from time to time.	1	2	3	4	5	6 7
JST04	I don't have the chance to be 'somebody' in the community (R).	1	2	3	4	5	6 7
JST05	I am satisfied in the way my boss handles his/her workers.	1	2	3	4	5	6 7
JST06	I am satisfied in the competence of my supervisor in making decisions.	1	2	3	4	5	6 7
JST07	I am able to do things that don't go against my conscience.	1	2	3	4	5	6 7

JST08	I am satisfied in the way my job provides for steady employment.	1	2	3	4	5	6	7
JST09	I have the chance to do things for other people.	1	2	3	4	5	6	7
JST10	I have the chance to tell people what to do.	1	2	3	4	5	6	7
JST11	I have the chance to do something that makes use of my abilities.	1	2	3	4	5	6	7
JST12	I am not satisfied in the way policies are put into practice (R).	1	2	3	4	5	6	7
JST13	I am satisfied with my pay and the amount of work I do.	1	2	3	4	5	6	7
JST14	I have the chance for career advancement in my job.	1	2	3	4	5	6	7
JST15	I have the freedom to use my own judgment.	1	2	3	4	5	6	7
JST16	I have the chance to try my own methods of doing the job.	1	2	3	4	5	6	7
JST17	I am satisfied with the working conditions.	1	2	3	4	5	6	7
JST18	I am satisfied in the way my co-workers get along with each other.	1	2	3	4	5	6	7
JST19	I am satisfied with the praise I get for doing a good job.	1	2	3	4	5	6	7
JST20	I am satisfied with the feeling of accomplishment I get.	1	2	3	4	5	6	7

<i>Employee affective commitment</i>								
OCT01	I am very happy being a member of this health facility.	1	2	3	4	5	6	7
OCT02	I enjoy discussing about this health facility with people outside it.	1	2	3	4	5	6	7
OCT03	I really feel as if the health facility's problems are my own.	1	2	3	4	5	6	7
OCT04	I think that I could easily become attached to another health facility as I am to this one. (R)	1	2	3	4	5	6	7
OCT05	I do not feel like 'part of the family' at this health facility. (R)	1	2	3	4	5	6	7
OCT06	I do not feel 'emotionally attached' to this health facility.(R)	1	2	3	4	5	6	7
OCT07	This health facility has a great deal of personal meaning for me.	1	2	3	4	5	6	7
<i>Employee continuance commitment</i>								
OCT08	I worry about the loss of investments I have made in this health facility.	1	2	3	4	5	6	7
OCT09	If I wasn't a member of this health facility, I would be sad because my life would be disrupted.	1	2	3	4	5	6	7
OCT10	I am loyal to this health facility because I have invested a lot in it, emotionally, socially, and economically.	1	2	3	4	5	6	7

OCT11	I often feel anxious about what I have to lose with this health facility.	1	2	3	4	5	6	7
OCT12	Sometimes, I worry about what might happen if something was to happen to this health facility and I was no longer a member.	1	2	3	4	5	6	7
OCT13	I am dedicated to this health facility because I fear what I have to lose in it.	1	2	3	4	5	6	7
<i>Employee normative commitment scale items</i>								
OCT14	I feel that I owe this health facility quite a bit because of what it has done for me.	1	2	3	4	5	6	7
OCT15	This health facility deserves my loyalty because of its treatment towards me.	1	2	3	4	5	6	7
OCT16	I feel I would be letting my co-workers down if I wasn't a member of this health facility.	1	2	3	4	5	6	7
OCT17	I am loyal to this health facility because my values are largely its values.	1	2	3	4	5	6	7
OCT18	This health facility has a mission that I believe in and am committed to.	1	2	3	4	5	6	7
OCT19	I feel it is 'morally correct' to dedicate myself to this health facility.	1	2	3	4	5	6	7
<i>Employee job involvement</i>								
JIV01	The most important things that happen to me involve my present job.	1	2	3	4	5	6	7

JIV02	To me, my job is only a small part of who I am. (R)	1	2	3	4	5	6	7
JIV03	I am very much involved personally in my job.	1	2	3	4	5	6	7
JIV04	I live, eat and breathe my job.	1	2	3	4	5	6	7
JIV05	Most of my interests are centred on my job.	1	2	3	4	5	6	7
JIV06	I have very strong ties with my present job, which would be very difficult to break.	1	2	3	4	5	6	7
JIV07	Usually, I feel detached from my job. (R)	1	2	3	4	5	6	7
JIV08	Most of my personal goals are job-oriented.	1	2	3	4	5	6	7
JIV09	I consider my job to be very central to my life.	1	2	3	4	5	6	7
JIV10	I like to be really involved in my job, most of the time.	1	2	3	4	5	6	7

#### Section D: Personality Traits

Personality Traits are the structures and propensities inside a person that explain his or her characteristic patterns of thought, emotion and behaviour.

Please indicate your *level of acceptance* with each of the following statements that relate to personality traits, by **ticking** the appropriate number, on the scale: *1=least acceptance, 2=less acceptance, 3=little acceptance, 4=moderate acceptance, 5=strong acceptance, 6=stronger acceptance, 7=strongest acceptance.*

<i>Extraversion trait</i>								
EXT1	I am very lively and entertaining on social occasions and I am good at mixing with people.	1	2	3	4	5	6	7
EXT2	I don't talk a lot (R).	1	2	3	4	5	6	7
EXT3	I talk to a lot of different people at parties.	1	2	3	4	5	6	7
EXT4	I like to stay in the corner to avoid being noticed (R).	1	2	3	4	5	6	7
<i>Agreeableness trait</i>								
AGR1	I sympathise with others' feelings.	1	2	3	4	5	6	7
AGR2	I am not interested in other people's problems (R).	1	2	3	4	5	6	7
AGR3	I feel others' emotions.	1	2	3	4	5	6	7
AGR4	I am not really interested in others (R).	1	2	3	4	5	6	7
<i>Conscientiousness trait</i>								
CON1	I get chores done right away.	1	2	3	4	5	6	7
CON2	I often forget to put things back in their proper place. (R)	1	2	3	4	5	6	7
CON3	I stand for orderliness in my daily activities.	1	2	3	4	5	6	7
CON4	I make a mess of things (R).	1	2	3	4	5	6	7
<i>Neuroticism trait</i>								
NEU1	I have frequent mood swings.	1	2	3	4	5	6	7
NEU2	I am relaxed most of the time (R).	1	2	3	4	5	6	7
NEU3	I get upset easily.	1	2	3	4	5	6	7

NEU4	I usually feel depressed or sad.	1	2	3	4	5	6	7
<i>Openness to experience trait</i>								
OPE1	I have a powerful and clear imagination.	1	2	3	4	5	6	7
OPE2	I am not interested in abstract ideas (R).	1	2	3	4	5	6	7
OPE3	I am interested in variety.	1	2	3	4	5	6	7
OPE4	I do not have a good imagination (R).	1	2	3	4	5	6	7

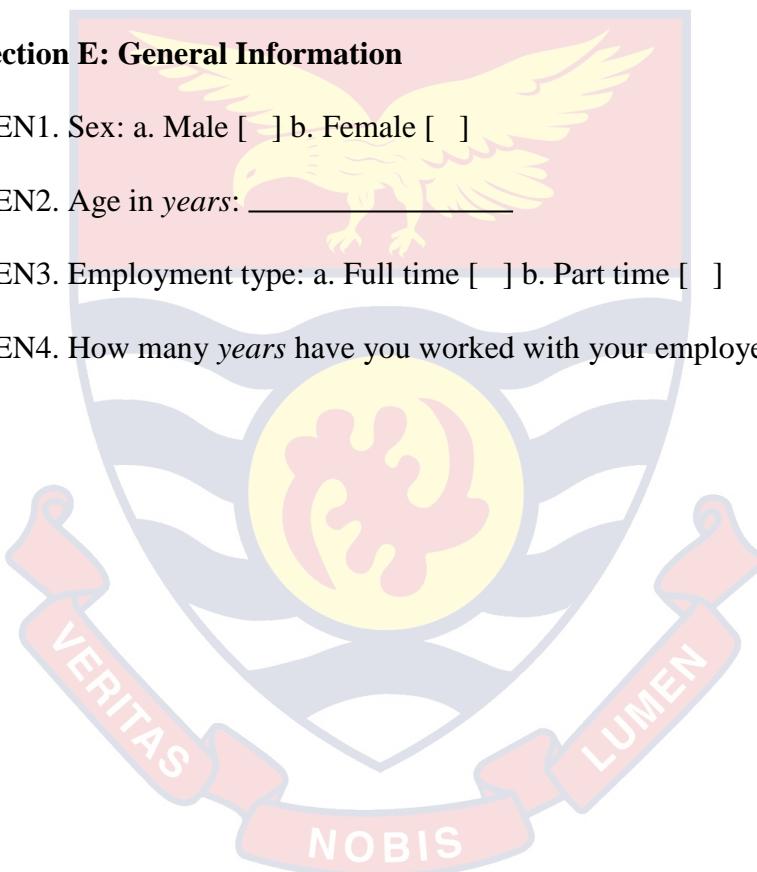
#### Section E: General Information

GEN1. Sex: a. Male [ ] b. Female [ ]

GEN2. Age in years: \_\_\_\_\_

GEN3. Employment type: a. Full time [ ] b. Part time [ ]

GEN4. How many years have you worked with your employer? \_\_\_\_\_



## Appendix G: Detailed Age Distribution of Respondents

Age in years	Frequency	Percentage
22	1	.5%
23	1	.5%
24	5	2.3%
25	4	1.9%
26	4	1.9%
27	8	3.7%
28	5	2.3%
29	6	2.8%
30	20	9.3%
31	5	2.3%
32	4	1.9%
33	3	1.4%
34	9	4.2%
35	19	8.9%
36	1	.5%
38	1	.5%
39	4	1.9%
40	18	8.4%
41	5	2.3%
42	6	2.8%
43	6	2.8%
44	6	2.8%
45	18	8.4%
46	5	2.3%
47	1	.5%
48	7	3.3%
49	2	.9%
50	13	6.1%
51	4	1.9%
53	6	2.8%
54	5	2.3%
55	9	4.2%
56	1	.5%
58	1	.5%
59	1	.5%
Total	214	100.0%

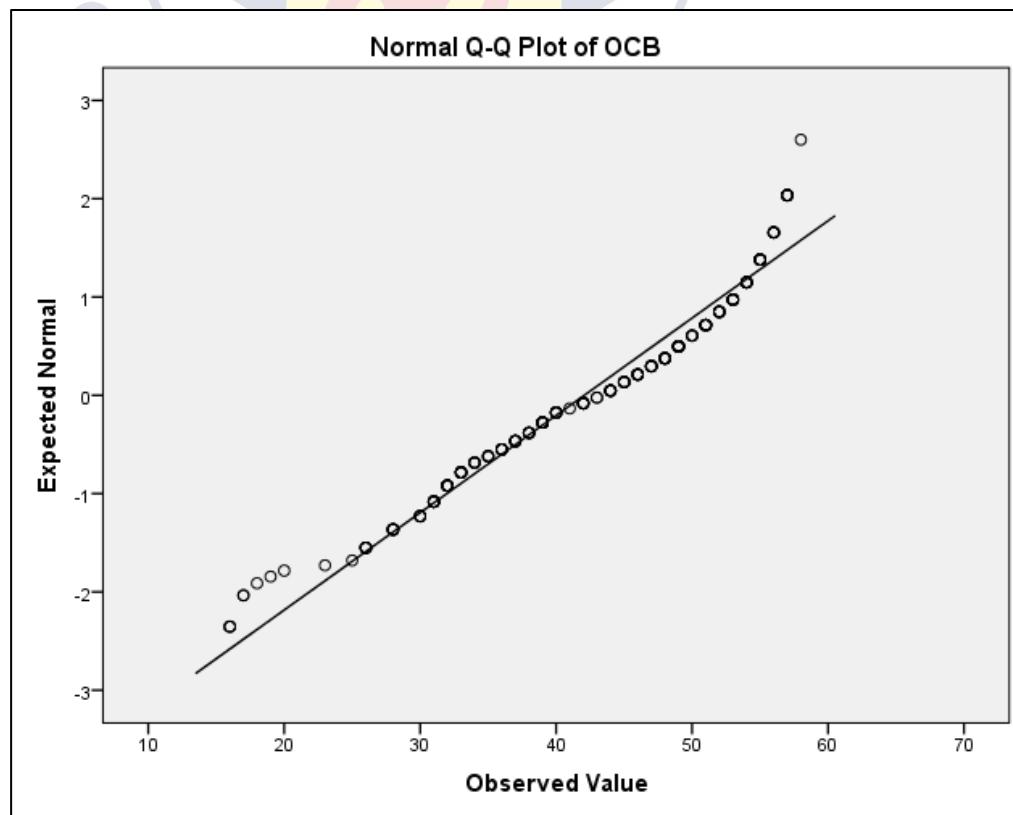
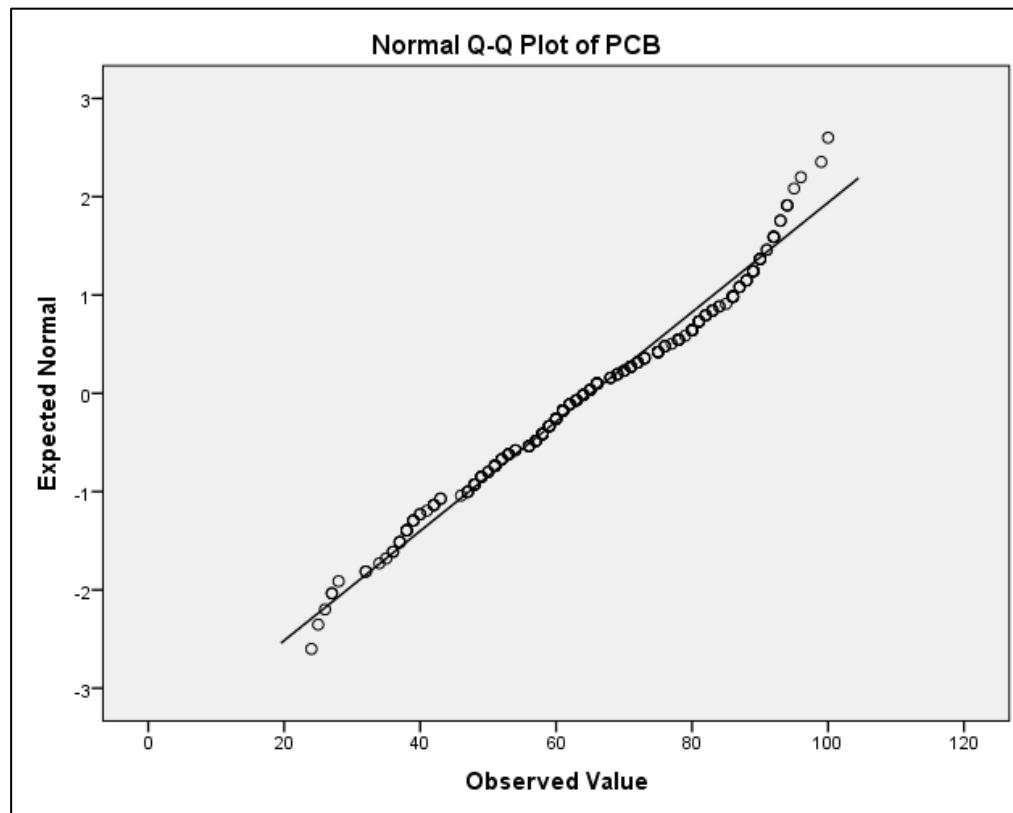
Source: Field Survey (2020)

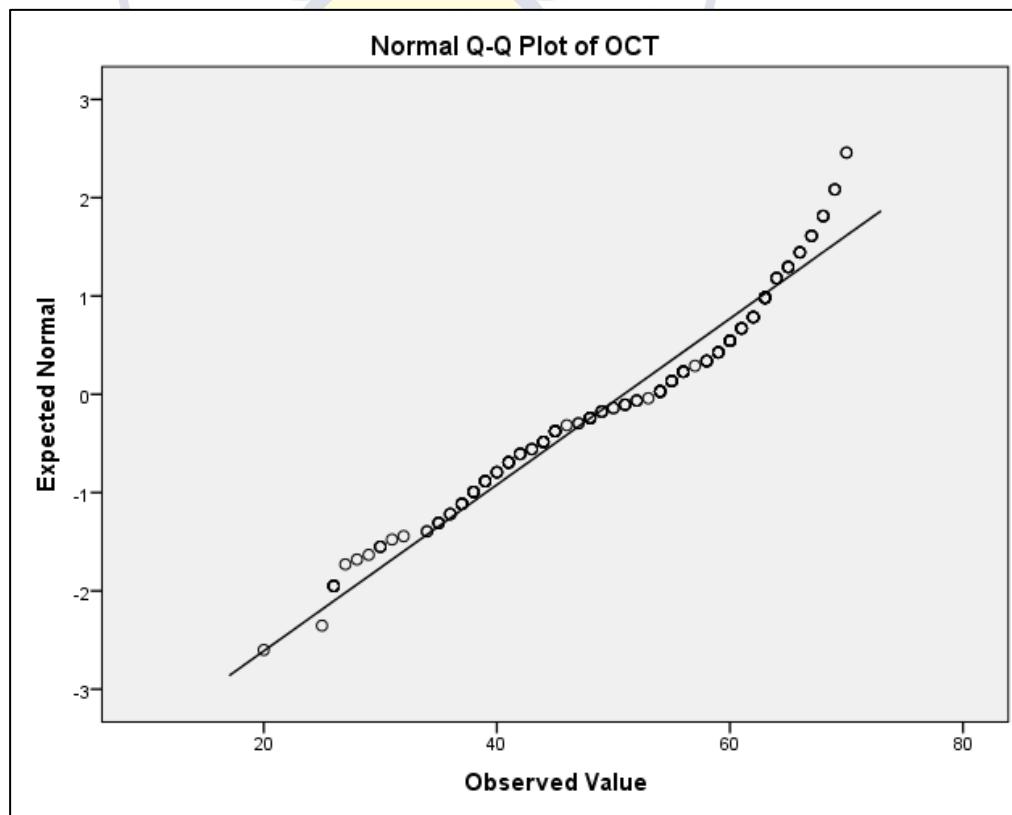
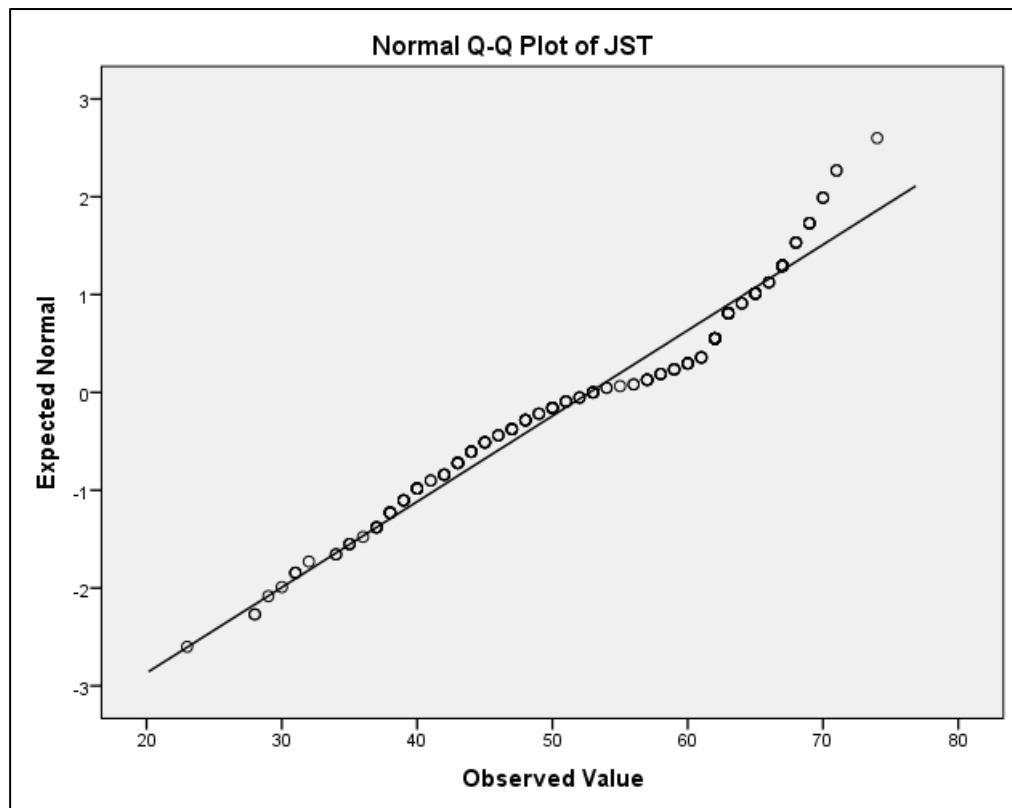
Appendix H: Details of Respondents' Number of Years Worked with Employer

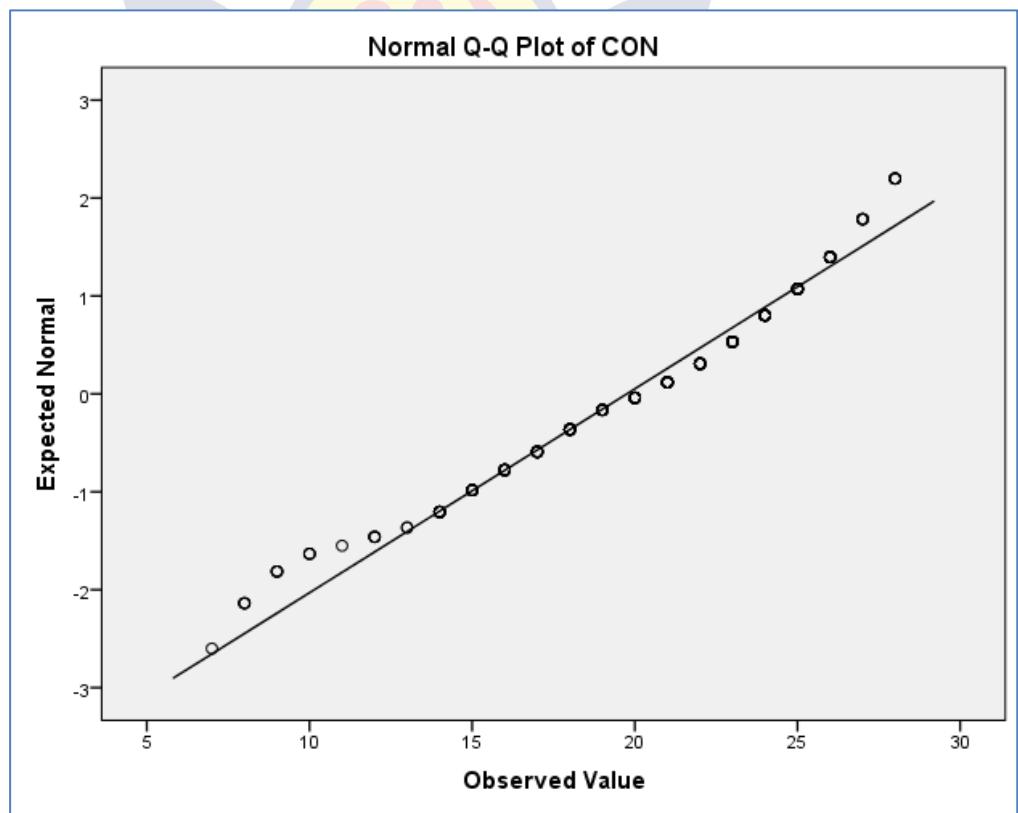
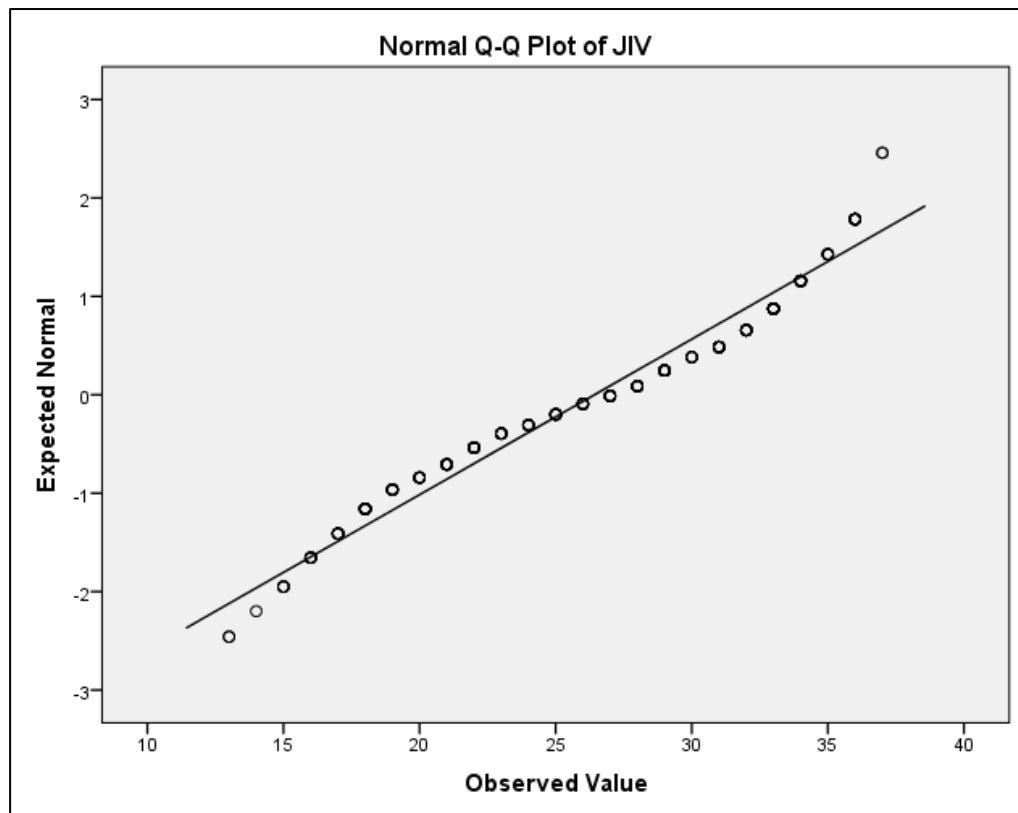
Number of Years Worked with Employer	Frequency	Percentage
0.75	3	1.4%
1	8	3.7%
10	21	9.8%
11	9	4.2%
12	6	2.8%
13	6	2.8%
14	1	.5%
15	27	12.6%
16	4	1.9%
17	2	.9%
18	4	1.9%
2	15	7.0%
2.5	2	.9%
20	37	17.3%
21	4	1.9%
22	1	.5%
23	2	.9%
24	1	.5%
25	4	1.9%
3	11	5.1%
30	1	.5%
33	1	.5%
4	10	4.7%
5	11	5.1%
6	9	4.2%
7	4	1.9%
8	7	3.3%
9	3	1.4%
Total	214	100.0%

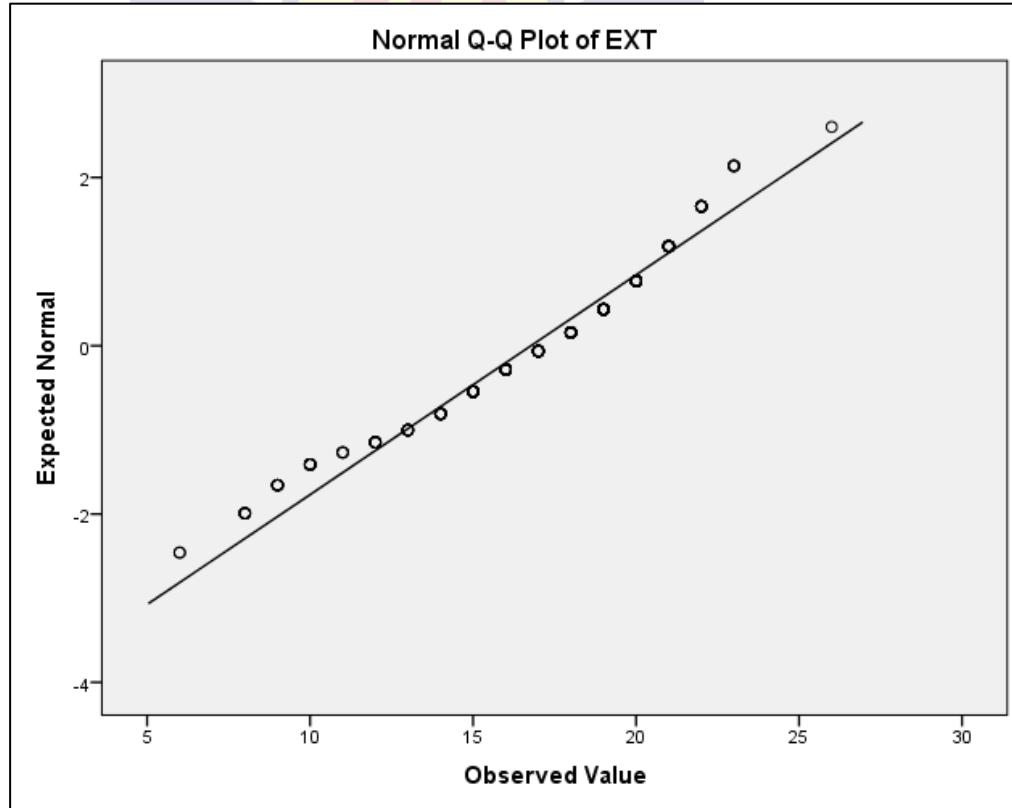
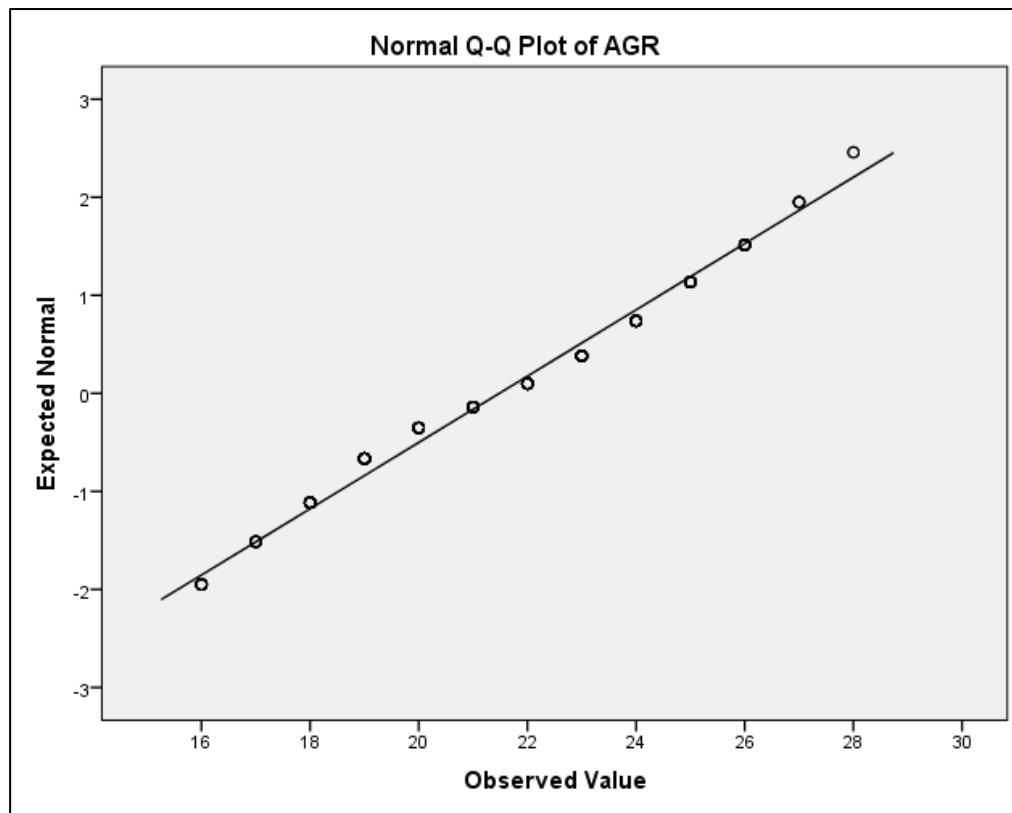
Source: Field Survey (2020)

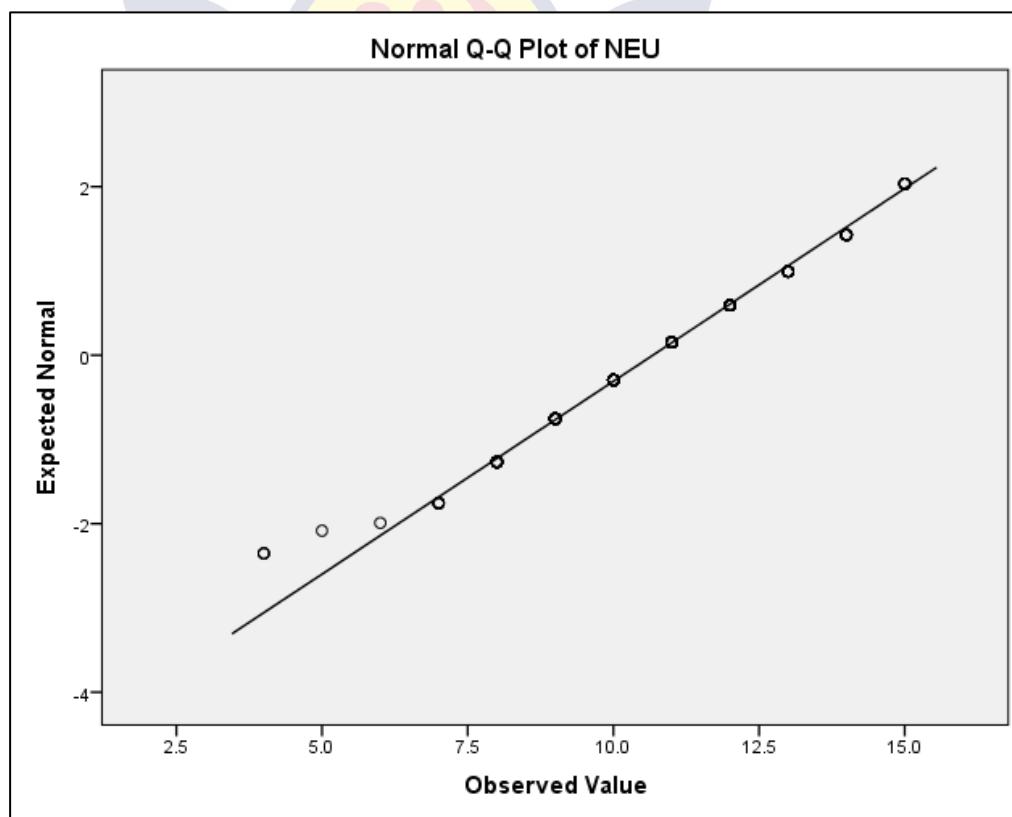
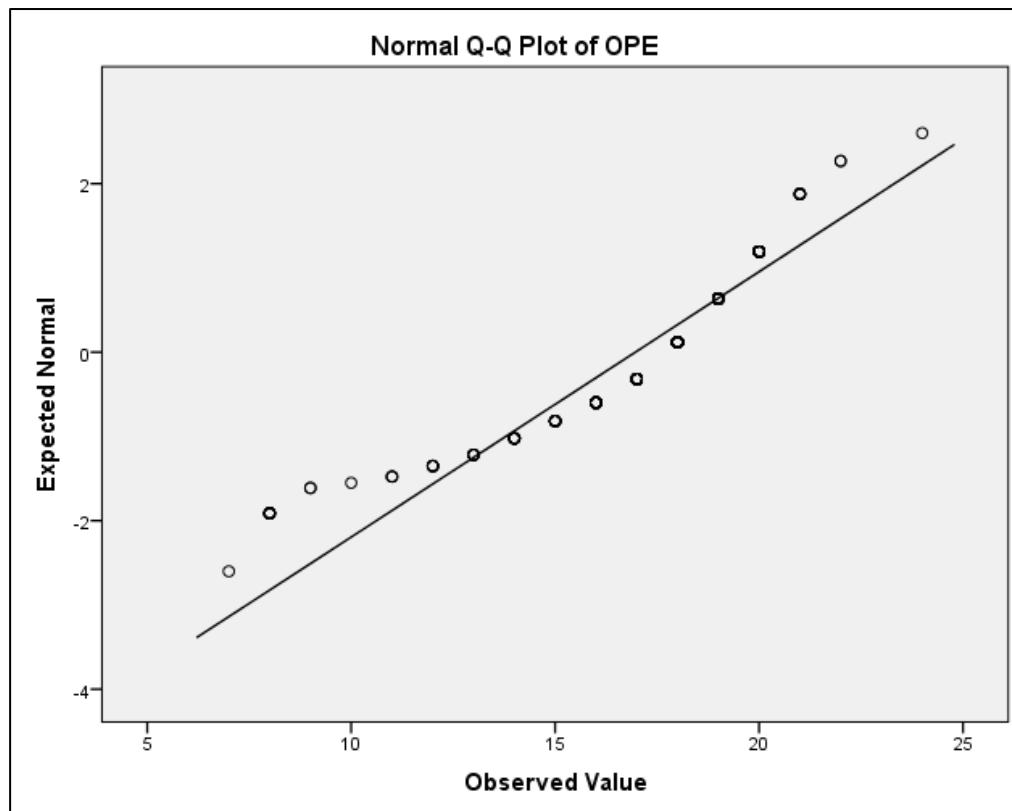
Appendix I: Normal Q-Q Plots











Appendix J: Correlation Matrix of Psychological Contract Breach

	PCB01	PCB02	PCB03	PCB04	PCB05	PCB06	PCB07	PCB08	PCB09	PCB10	PCB11	PCB12	PCB13	PCB14	PCB15	
Correlation	PCB01	1.000	.804	.746	.605	.656	.586	.564	.525	.432	.399	.415	.473	.456	.503	.572
	PCB02	.804	1.000	.726	.574	.672	.596	.647	.551	.543	.502	.534	.543	.547	.555	.585
	PCB03	.746	.726	1.000	.616	.725	.636	.640	.573	.489	.407	.454	.422	.497	.487	.516
	PCB04	.605	.574	.616	1.000	.634	.537	.499	.589	.434	.368	.404	.334	.307	.323	.400
	PCB05	.656	.672	.725	.634	1.000	.697	.665	.601	.499	.446	.510	.493	.493	.496	.502
	PCB06	.586	.596	.636	.537	.697	1.000	.733	.572	.499	.514	.494	.461	.492	.489	.501
	PCB07	.564	.647	.640	.499	.665	.733	1.000	.555	.634	.647	.613	.538	.547	.544	.521
	PCB08	.525	.551	.573	.589	.601	.572	.555	1.000	.616	.458	.510	.505	.548	.541	.595
	PCB09	.432	.543	.489	.434	.499	.499	.634	.616	1.000	.676	.691	.649	.615	.548	.492
	PCB10	.399	.502	.407	.368	.446	.514	.647	.458	.676	1.000	.791	.658	.635	.580	.565
	PCB11	.415	.534	.454	.404	.510	.494	.613	.510	.691	.791	1.000	.730	.661	.633	.557
	PCB12	.473	.543	.422	.334	.493	.461	.538	.505	.649	.658	.730	1.000	.821	.713	.597
	PCB13	.456	.547	.497	.307	.493	.492	.547	.548	.615	.635	.661	.821	1.000	.770	.621
	PCB14	.503	.555	.487	.323	.496	.489	.544	.541	.548	.580	.633	.713	.770	1.000	.754
	PCB15	.572	.585	.516	.400	.502	.501	.521	.595	.492	.565	.557	.597	.621	.754	1.000

Source: Field survey (2020)

## Appendix J, continued

	PCB01	PCB02	PCB03	PCB04	PCB05	PCB06	PCB07	PCB08	PCB09	PCB10	PCB11	PCB12	PCB13	PCB14	PCB15
Sig. (1-tailed)	PCB01	1.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
	PCB02	.000	1.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
	PCB03	.000	.000	1.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
	PCB04	.000	.000	.000	1.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
	PCB05	.000	.000	.000	.000	1.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
	PCB06	.000	.000	.000	.000	.000	1.000	.000	.000	.000	.000	.000	.000	.000	.000
	PCB07	.000	.000	.000	.000	.000	.000	1.000	.000	.000	.000	.000	.000	.000	.000
	PCB08	.000	.000	.000	.000	.000	.000	.000	1.000	.000	.000	.000	.000	.000	.000
	PCB09	.000	.000	.000	.000	.000	.000	.000	.000	1.000	.000	.000	.000	.000	.000
	PCB10	.000	.000	.000	.000	.000	.000	.000	.000	.000	1.000	.000	.000	.000	.000
	PCB11	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	1.000	.000	.000	.000
	PCB12	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	1.000	.000	.000
	PCB13	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	1.000	.000
	PCB14	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	1.000	.000
	PCB15	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	1.000

Source: Field survey (2020)

Appendix K: Correlation Matrix of Organisational Citizenship Behaviour (Sig. 1-tailed)

	OCB-I-1	OCB-I-2	OCB-I-3	OCB-I-4	OCB-I-5	OCB-I-6	OCB-I-7	OCB-I-8	OCB-O-1	OCB-O-2	OCB-O-3	OCB-O-4	OCB-O-5	OCB-O-6	OCB-O-7	OCB-O-8
Sig. (1-tailed)																
OCB-I-1	1.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.001	.000
OCB-I-2	.000	1.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
OCB-I-3	.000	.000	1.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
OCB-I-4	.000	.000	.000	1.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
OCB-I-5	.000	.000	.000	.000	1.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
OCB-I-6	.000	.000	.000	.000	.000	1.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
OCB-I-7	.000	.000	.000	.000	.000	.000	1.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
OCB-I-8	.000	.000	.000	.000	.000	.000	.000	1.000	.000	.000	.000	.000	.000	.000	.000	.000
OCB-O-1	.000	.000	.000	.000	.000	.000	.000	.000	1.000	.000	.000	.000	.000	.000	.000	.000
OCB-O-2	.000	.000	.000	.000	.000	.000	.000	.000	.000	1.000	.000	.000	.000	.000	.000	.000
OCB-O-3	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	1.000	.000	.000	.000	.000	.000
OCB-O-4	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	1.000	.000	.000	.000	.000

Source: Field survey (2020)

Appendix K, continued

	OCB-I-1	OCB-I-2	OCB-I-3	OCB-I-4	OCB-I-5	OCB-I-6	OCB-I-7	OCB-I-8	OCB-O-1	OCB-O-2	OCB-O-3	OCB-O-4	OCB-O-5	OCB-O-6	OCB-O-7	OCB-O-8
Sig. (1-tailed)	OCB-O-5	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	1.000	.000	.000	.000
	OCB-O-6	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	1.000	.000	.000
	OCB-O-7	.001	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	1.000	.000
	OCB-O-8	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	1.000

Source: Field survey (2020)

NOBIS

Appendix L: Correlation Matrix of Job Satisfaction (Sig. 1-tailed)

	JST01	JST02	JST03	JST04	JST05	JST06	JST07	JST08	JST09	JST10	JST11	JST12	JST13	JST14	JST15	JST16	JST17	JST18	JST19	JST20
JST01	1.000	.000	.000	.001	.000	.000	.000	.000	.000	.000	.001	.000	.000	.000	.000	.000	.000	.000	.000	.000
JST02	.000	1.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
JST03	.000	.000	1.000	.000	.000	.000	.000	.000	.000	.000	.006	.000	.000	.000	.000	.000	.000	.000	.000	.001
JST04	.001	.000	.000	1.000	.000	.000	.000	.001	.015	.000	.000	.001	.000	.001	.001	.000	.000	.000	.000	.021
JST05	.000	.000	.000	.000	1.000	.000	.000	.000	.000	.000	.004	.000	.000	.000	.000	.000	.000	.000	.000	.000
JST06	.000	.000	.000	.000	.000	1.000	.000	.000	.000	.000	.016	.000	.000	.000	.000	.000	.000	.000	.000	.000
JST07	.000	.000	.000	.000	.000	.000	1.000	.000	.000	.000	.001	.000	.000	.000	.000	.000	.000	.000	.000	.000
JST08	.000	.000	.000	.000	.000	.000	.000	1.000	.000	.007	.000	.002	.000	.000	.000	.000	.000	.001	.000	.000
JST09	.000	.000	.000	.001	.000	.000	.000	.000	1.000	.000	.008	.000	.000	.000	.000	.000	.000	.000	.000	.000
JST10	.000	.000	.000	.015	.000	.000	.007	.000	.000	1.000	.000	.004	.000	.000	.000	.000	.000	.001	.000	.000
JST11	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	1.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
JST12	<del>.004</del>	<del>.000</del>	<del>.006</del>	<del>.000</del>	<del>.004</del>	<del>.016</del>	<del>.001</del>	<del>.002</del>	<del>.008</del>	<del>.004</del>	<del>.000</del>	<del>1.000</del>	<del>.000</del>	<del>.000</del>	<del>.000</del>	<del>.000</del>	<del>.029</del>	<del>.003</del>	<del>.003</del>	<del>.221</del>
JST13	.000	.000	.000	.001	.000	.000	.000	.000	.000	.000	.000	1.000	.000	.000	.000	.000	.000	.000	.000	.000
JST14	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	1.000	.000	.000	.000	.000	.000	.000	.000
JST15	.000	.000	.000	.001	.000	.000	.000	.000	.000	.000	.000	.000	.000	1.000	.000	.000	.000	.000	.000	.000
JST16	.000	.000	.000	.001	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	1.000	.000	.000	.000	.000	.000
JST17	.000	.000	.000	.000	.000	.000	.000	.000	.001	.000	.029	.000	.000	.000	.000	1.000	.000	.000	.000	.000
JST18	.000	.000	.000	.000	.000	.000	.001	.000	.000	.000	.003	.000	.000	.000	.000	.000	1.000	.000	.000	.000
JST19	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.003	.000	.000	.000	.000	.000	.000	1.000	.000	.000
JST20	<del>.000</del>	<del>.000</del>	<del>.001</del>	<del>.021</del>	<del>.000</del>	<del>.000</del>	<del>.000</del>	<del>.000</del>	<del>.000</del>	<del>.000</del>	<del>.221</del>	<del>.000</del>	<del>.000</del>	<del>.000</del>	<del>.000</del>	<del>.000</del>	<del>.000</del>	<del>.000</del>	<del>.000</del>	<del>1.000</del>

Source: Field survey (2020)

NOBIS



Appendix M: Correlation Matrix of Organisational Commitment (Sig. 1-tailed)

	OCT0 1	OCT0 2	OCT0 3	OCT0 4	OCT0 5	OCT0 6	OCT0 7	OCT0 8	OCT0 9	OCT1 0	OCT1 1	OCT1 2	OCT1 3	OCT1 4	OCT1 5	OCT 1	OCT1 7	OCT1 8	OCT1 9
	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	1	7	8	9
OCT0 1	1.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
OCT0 2	.000	1.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
OCT0 3	.000	.000	1.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
OCT0 4	.000	.000	.000	1.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.002	.000	.000
OCT0 5	.000	.000	.000	.000	1.000	.000	.000	.000	.000	.000	.001	.000	.000	.000	.000	.004	.034	.000	.000
OCT0 6	.000	.000	.000	.000	.000	1.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.015	.018	.000	.000
OCT0 7	.000	.000	.000	.000	.000	.000	1.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
OCT0 8	.000	.000	.000	.000	.000	.000	.000	1.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
OCT0 9	.000	.000	.000	.000	.000	.000	.000	.000	1.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Appendix M, continued

	OCT0 1	OCT0 2	OCT0 3	OCT0 4	OCT0 5	OCT0 6	OCT0 7	OCT0 8	OCT0 9	OCT1 0	OCT1 1	OCT1 2	OCT1 3	OCT1 4	OCT1 5	OCT 1	OCT1 7	OCT1 8	OCT1 9
OCT1 0	.000	.000	.000	.000	.000	.000	.000	.000	.000	1.000	.000	.000	.000	.000	.000	.000	.000	.000	
OCT1 1	.000	.000	.000	.000	.001	.000	.000	.000	.000	.000	1.000	.000	.000	.000	.000	.000	.000	.000	.000
OCT1 2	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	1.000	.000	.000	.000	.000	.000	.000	.000
OCT1 3	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	1.000	.000	.000	.000	.000	.000	.000
OCT1 4	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	1.000	.000	.000	.000	.000	.000
OCT1 5	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	1.000	.000	.000	.000	.000
OCT1 6	.000	.000	.000	.000	.004	.015	.000	.000	.000	.000	.000	.000	.000	.000	.000	1.000	.000	.000	.000
OCT1 7	.000	.000	.000	.002	.034	.018	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	1.000	.000	.000
OCT1 8	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	1.000	.000	.000
OCT1 9	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	1.000	.000

Source: Field survey (2020)

**Appendix N: Correlation Matrix of Job Involvement**

	JIV01	JIV02	JIV03	JIV04	JIV05	JIV06	JIV07	JIV08	JIV09	JIV010
Sig. (1-tailed)	JIV01	1.000	.000	.000	.000	.000	.000	.000	.000	.000
	JIV02	.000	1.000	.000	.000	.000	.000	.004	.015	.002
	JIV03	.000	.000	1.000	.000	.000	.001	.000	.000	.000
	JIV04	.000	.000	.000	1.000	.000	.000	.000	.000	.000
	JIV05	.000	.000	.000	.000	1.000	.000	.000	.000	.000
	JIV06.	.000	.000	.000	.000	.000	1.000	.000	.000	.000
	JIV07	.000	.000	.001	.000	.000	.000	1.000	.000	.000
	JIV08	.000	.004	.000	.000	.000	.000	.000	1.000	.000
	JIV09	.000	.015	.000	.000	.000	.000	.000	.000	1.000
	JIV10	.000	.002	.000	.000	.000	.000	.000	.000	1.000

Source: Field survey (2020)

Appendix O: Correlation Matrix of Conscientiousness

		CON1	CON2	CON3	CON4
Correlation	CON1	1.000	.615	.695	.545
	CON2	.615	1.000	.593	.755
	CON3	.695	.593	1.000	.563
	CON4	.545	.755	.563	1.000
Sig. (1-tailed)	CON1	1.000	.000	.000	.000
	CON2	.000	1.000	.000	.000
	CON3	.000	.000	1.000	.000
	CON4	.000	.000	.000	1.000

Source: Field survey (2020)

Appendix P: Correlation Matrix of Agreeableness Personality Trait

		AGR1	AGR2	AGR3	AGR4
Correlation	AGR1	1.000	.440	.444	.395
	AGR2	.440	1.000	.455	.530
	AGR3	.444	.455	1.000	.322
	AGR4	.395	.530	.322	1.000
Sig. (1-tailed)	AGR1	1.000	.000	.000	.000
	AGR2	.000	1.000	.000	.000
	AGR3	.000	.000	1.000	.000
	AGR4	.000	.000	.000	1.000

Source: Field survey (2020)

Appendix Q: Correlation Matrix of Extraversion Personality Trait

		EXT1	EXT2	EXT3	EXT4
Correlation	EXT1	1.000	.512	.473	.566
	EXT2	.512	1.000	.495	.452
	EXT3	.473	.495	1.000	.487
	EXT4	.566	.452	.487	1.000
Sig. (1-tailed)	EXT1	1.000	.000	.000	.000
	EXT2	.000	1.000	.000	.000
	EXT3	.000	.000	1.000	.000
	EXT4	.000	.000	.000	1.000

Field survey (2020)

Appendix R: Correlation Matrix of Openness to Experience

		OPE1	OPE2	OPE3	OPE4
Sig. (1-tailed)	OPE1	1.000	.000	.000	.001
	OPE2	.000	1.000	.000	.000
	OPE3	.000	.000	1.000	.000
	OPE4	.001	.000	.000	1.000

Source: Field survey (2020)

Appendix S: Correlation Matrix of Neuroticism

		NEU1	NEU2	NEU3	NEU4
Correlation	NEU1	1.000	.090	.096	-.051
	NEU2	.090	1.000	.118	.091
	NEU3	.096	.118	1.000	.449
	NEU4	-.051	.091	.449	1.000
Sig. (1-tailed)	NEU1	1.000	.095	.080	.229
	NEU2	.095	1.000	.042	.092
	NEU3	.080	.042	1.000	.000
	NEU4	.229	.092	.000	1.000

Source: Field survey (2020)

Appendix T: Kaiser-Meyer-Olkin Measure of Sampling Adequacy and Bartlett's Test of Sphericity

Variable	KMO and Bartlett's Test of Sphericity		
PCB	Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.929
	Bartlett's Test of Sphericity	Approx. Chi-Square	2694.731
		Df	105
		Sig.	.000
OCB	Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.906
	Bartlett's Test of Sphericity	Approx. Chi-Square	1640.583
		Df	120
		Sig.	.000
JST	Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.897
	Bartlett's Test of Sphericity	Approx. Chi-Square	1729.791
		Df	190
		Sig.	.000

**Appendix T, continued**

Variable	KMO and Bartlett's Test of Sphericity		
OCT	Kaiser-Meyer-Olkin Measure of Sampling Adequacy	.906	
	Bartlett's Test of Sphericity	Approx. Chi-Square	1992.145
		Df	171
		Sig.	.000
JIV	Kaiser-Meyer-Olkin Measure of Sampling Adequacy	.886	
	Bartlett's Test of Sphericity	Approx. Chi-Square	711.370
		Df	45
		Sig.	.000
CON	Kaiser-Meyer-Olkin Measure of Sampling Adequacy	.768	
	Bartlett's Test of Sphericity	Approx. Chi-Square	447.348
		Df	6
		Sig.	.000
AGR	Kaiser-Meyer-Olkin Measure of Sampling Adequacy	.741	
	Bartlett's Test of Sphericity	Approx. Chi-Square	194.514
		Df	6
		Sig.	.000
EXT	Kaiser-Meyer-Olkin Measure of Sampling Adequacy	.784	
	Bartlett's Test of Sphericity	Approx. Chi-Square	248.169
		Df	6
		Sig.	.000
OPE	Kaiser-Meyer-Olkin Measure of Sampling Adequacy	.701	
	Bartlett's Test of Sphericity	Approx. Chi-Square	155.584
		Df	6
		Sig.	.000

Source: Field survey (2020)

Appendix U: Similarity Index Report

