

Openness to experience moderates psychological contract breach–job satisfaction tie-in

Psychological
contract
breach

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Abstract

Purpose – This paper aims to assess the tie-in between psychological contract breach (PCB) and job satisfaction (JST) amongst medical doctors (MDs) working in two stress-prone regions of Ghana, and further analyses the moderating effect of openness to experience (OPE) on this tie-in.

Design/methodology/approach – Responses from 214 MDs were analysed. Questionnaires were self-administered. Research philosophy was positivism, research approach was quantitative, research design was explanatory and study design was cross-sectional. Test of normality, Kaiser-Meyer-Olkin measure of sampling adequacy and Bartlett's test of sphericity were applied. Both reflective measurement and structural models were assessed. Path coefficients were analysed using partial least squares (PLS) algorithm tool and moderation effect was conducted using the product indicator approach. Control variables were sex (*GEN1*), age (*GEN2*), employment type (*GEN3*) and tenure (*GEN1*). A significant level was set at 5%. Smart PLS 2.0 M3 software was used.

Findings – The analysts found support for a significant moderating effect of OPE on the tie between PCB and JST, such that the consequences of PCB on JST was minimised for MDs who scored high on OPE trait.

Practical implications – PCB, if not addressed, may lead MDs to be less satisfied with their jobs. In stress-prone health zones where PCB exists, MDs who are inspired, creative, self-sufficient, experimenting and visionary are more likely to be satisfied with their job.

Originality/value – This study offers health-care literature on the moderating role of OPE personality dimension on the bond between PCB and JST, using PLS-structural equations modelling, which is a superior and robust analytical tool.

Keywords Openness to experience, Psychological contract breach, Job satisfaction, Medical doctors, Human resource management, Management, Strategic management, Business administration

Paper type Research paper

Introduction

The concept of a psychological contract (PC) implies that there is an unwritten set of expectations operating at all times between every member of an organisation and the



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various managers and others in that organisation (Huy and Takahashi, 2018). Employers, on one hand, 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 and Greller, 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). This assertion is comparable to the 8th and 16th 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).

Gallup's State of the American Workplace Report (2017) upholds that employees need to be in an environment where there is mutual trust, recognition and respect for one another's efforts and results. Ghana National Healthcare Quality Strategy Report (2017) also pronounces 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 professionals to deliver high-quality care and be motivated to continuously improve quality. This pronouncement 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.

A PC is said to have been fulfilled when an organisation meets its obligations to an employee, from the employee's vantage and it serves to build upon the social exchange element (Karagonlar *et al.*, 2016), which are founded on trust, reciprocity and reward (Blau, 1964). When a PC is fulfilled, employees are likely to be satisfied with their jobs (Akinbobola and Zamani, 2018). This assertion is described by the social exchange theory (SET), one of the most applied conceptual paradigms for understanding workplace behaviour (Cropanzano *et al.*, 2017). Emanating from the SET, the psychological contract theory (PCT) advocates that employee perceptions of their contract are attributed to many individual or personal factors, including their personality traits (Peng *et al.*, 2016). As such, certain personality traits of individuals may ease the burden associated with a psychological contract breach (PCB).

Facts and figures obtained from Ghana Health Service appear to suggest strong PCB amongst medical doctors (MDs) working in the Upper East (UE) and Upper West (UW) regions, where severe regional inequalities exist in terms of the distribution of MDs, hospital admission rates, number of available hospital beds, available health facilities and doctor population ratio (Ghana Health Service, 2018). Specifically, the hospital admission rates for UE and UW regions have been relatively high for three years consistently, from 2015 to 2017 (Figure A1). Concomitantly, the number of hospital beds available to serve Ghanaians living in these two regions has been relatively low from 2016 to 2017 (Figure A2). In addition, the total number of health facilities, such as chip compounds, clinics and hospitals in these two regions have been comparably minimal from 2016 to 2017 (Figure A3). Even worse, the doctor population ratio for the two regions has been relatively high from 2011 to 2017, with UE Region topping the table by recording one doctor to 26,489 population for the year 2017 (Figure A4).

This situation is not the same for their colleagues in the other regions of Ghana (Ghana Health Service, 2018). Meanwhile, little recognition is given to them for their efforts, as they are put on the same salary structure with their colleagues in the other regions (Larbi, 2015).

These unfair instances could lead to PCB amongst the MDs. PCB represents an organisation's failure to deliver on an expected obligation to an employee, which is either written or unwritten (Robinson and Rousseau, 1994). A PCB may eventually lead the MDs to show low levels of job satisfaction (JST). JST is 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 (Abdullah, 2018). The proposed negative effect of PCB on JST is explicated by the SET, which serves to establish reciprocal obligations from the employee to the employer (Blau, 1964). Essentially, an employee may demonstrate a low level of JST in response to unfavourable treatment in a PC and vice versa (Ko and Hur, 2014).

Christy and Duraisamy (2014) argue that having a low score on some personality dimensions can enlarge the burden associated with a PCB. This declaration is enlightened by the PCT (Rousseau and Wade-Benzoni, 1994), which advocates that employee perceptions of their contract are attributed to many factors, (Organ, 2018; Peng *et al.*, 2016), including their personality traits such as openness to experience (OPE). People who are opened to new experiences are naturally inspired, creative, self-sufficient, experimenting and visionary (Cattell and Mead, 2008). On the other side, people who score low on OPE tend to be more conventional in their problem-solving approach (Burch and Neil, 2008), narrow in interests, unanalytical and do not try to be explorative in finding new ways to solve a particular problem (Saucier *et al.*, 2000).

Yet, empirical literature addressing the moderating effect of OPE trait on the direct between PCB and JST is hard to find. One closely related study found in this area used a narrow personality trait, namely, intrinsic motivation as a moderating variable (Panagiotou, 2017) on this direct relationship, ignoring broad traits such as OPE. Furthermore, existing studies have paid less attention to the health-care sector. Even more, few analysts have used partial least squares-structural equations modelling (PLS-SEM), a superior and robust analytical technique in drawing their conclusions. To bridge these gaps in the literature, this paper sought to examine the moderating effect of OPE trait on the tie-in between PCB and JST amongst MDs working in the UE and UW regions of Ghana.

Literature review

Social exchange theory

The SET (Blau, 1964) is one of the most applied conceptual paradigms for understanding workplace behaviour. The SET advocates that favours are done with the intention that later returns will occur (Cropanzano *et al.*, 2017). The theory proposes that, if the organisation helps the employee out, the employee is more likely to do something in return for the organisation (Golden and Veiga, 2018). Fallon and Rice (2015) opine that employees will behave favourably within firms when they perceive that the organisation has having their best interests at heart, by offering them a safe working environment, working tools, equipment, focussed training, career development plans and new learning opportunities. When a PC is fulfilled, employees become happy (Roy and Konwar, 2019) and they become satisfied with their jobs (Antonaki and Trivellas, 2014). In this paper, the SET is used in explaining the proposed negative effect of PCB on JST. Therefore, the first hypothesis is put forward as follows:

H1. There is a negative and significant relationship between PCB and JST.

Psychological contract theory

The PCT, which originates from the SET, advocates that employee perceptions of their contract are attributed to many factors, including their personality traits (Peng *et al.*, 2016). As such, certain personality traits of individuals may ease or magnify the brunt associated with a PCB. In line with the PCT, Panagiotou (2017) finds that intrinsic motivation, a personal factor, leads employees to show a high level of JST at the workplace, despite a breach in their PC 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 PCB on workplace behaviour (Heffernan and Rochford, 2017). In this paper, the PCT is adapted in explaining the likely moderating effect of OPE in the direct relationship between PCB and JST. Consequently, the second hypothesis is formulated as follows:

H2. OPE will moderate the negative effect of PCB on JST.

Five-factor theory of personality

The five-factor theory (FFT) of personality, credited to Goldberg (1992), holds that individuals who display high scores on OPE personality dimension are likely to show positive workplace behaviour (Sedigh *et al.*, 2016). People who are opened to new experiences are naturally inspired, creative, self-sufficient, experimenting and visionary (Cattell and Mead, 2008). On the other side, people who score low on OPE tend to be more conventional in their problem-solving approach (Burch and Neil, 2008), narrow in interests, unanalytical and do not try to be explorative in finding new ways to solve a particular problem (Saucier *et al.*, 2000). Thus, in this paper, the FFT of personality is used in elucidating the proposed positive effect of OPE on JST, as part of the moderating effect in *H2*.

Conceptual framework

Grounded in the SET, PCT and FFT of personality, a conceptual framework is drawn in Figure 1 to explain the direct effect of PCB on JST (*H1*) and the moderating effect of OPE on this direct path (*H2*). PCB serves as the exogenous latent variable while JST is used as the endogenous latent variable. OPE trait is modelled as a moderator. Sex (*GEN1*), age (*GEN2*), employment type (*GEN3*) and tenure (*GENI*) are used as basic controls, with lessons from existing related studies.

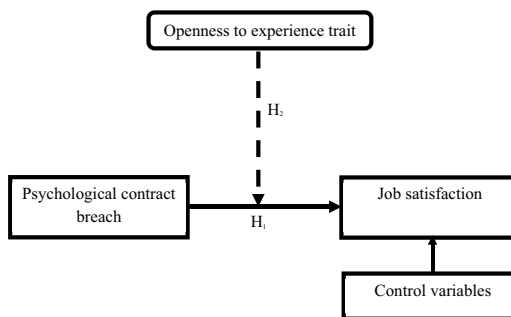


Figure 1.
Conceptual
framework

Source: Authors' construct based on literature reviewed

Method

The study used the positivist philosophical paradigm, which believes in an objective reality. The research approach was quantitative and the research design was explanatory. The cross-sectional study design was used. The target population consisted of all MDs working in the UE ($n = 99$) and UW ($n = 152$) regions, making a total of 251 MDs. A sampling frame, which comprised all the MDs who were available and reachable within the time of data collection was constructed. A census was used because, in the opinion of [Israel \(2013\)](#), it is suitable for smaller populations, such as 200 thereabout. A semi-structured questionnaire was used for data collection, hence a primary source of data was solicited. The questionnaire was designed to cater for common method variance using the recommendations made by [Podsakoff et al. \(2003\)](#), such as using multiple scale formats.

The questionnaire was made up of 43 items. Section “A” considered 15 items that measured PCB amongst the MDs, which were sourced from the study by [Conway and Briner \(2005\)](#) because it had the highest dimensions covering areas such as pay, advancement opportunities, employee recognition, fairness in rewards, trust, management support, management involvement and influence and resource support. Sample item included: limited materials and equipment are made available to me to perform my job (*PCB01*). PCB was measured on a seven-point Likert-type interval scale ranging from 1: least agreement, 2: less agreement, 3: little agreement, 4: moderate agreement, 5: strong agreement, 6: stronger agreement, to 7 = strongest agreement.

Section “B” covered JST amongst MDs. The 20-item short form of the Minnesota Satisfaction Questionnaire by the [University of Minnesota \(1977\)](#) was used to measure JST amongst MDs, which were anchored on a seven-point Likert-type interval 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. The sample item was: “I have the chance to do something that makes use of my abilities” (*JS11*). The scale was used because of its balance between length and psychometric properties.

Section “C” of the instrument considered OPE trait amongst MDs, comprising of four items sourced from [Donnellan et al. \(2006\)](#), which were anchored on a seven-point Likert-type interval 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. The sample item for “OPE” was: I am interested in variety (*OPE3*). The scale was used because of its balance between length and psychometric properties. Finally, “Section D” 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 = full-time employment; 0 = part-time) and the number of years worked (in years), as used in previous studies ([Niesen et al., 2018](#); [Quratulain et al., 2018](#)).

The questionnaire was pre-tested at Korle-Bu Teaching Hospital: Ghana’s premier health-care facility located in Accra. Questionnaires were distributed via the Ghana Health Service headquarters in Accra for onward submission to the regional health offices in the UE and UW regions to be delivered to MDs in their respective health facilities. In addition, the researchers visited the health facilities of the two regions to speed up data collection and avoid a high non-response rate. Of the 251 MDs targeted, 218 MDs responded to the instrument. Of the 218 questionnaires retrieved, four 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% was attained. The non-response rate was 15%.

First and foremost, the general information of respondents was analysed using frequencies and percentages. Prior to presenting the descriptive statistics, a test of normality

was undertaken using Kolmogorov–Smirnov test to inform the appropriate measure of central tendency and dispersion to be used. Subsequently, the data collected were subjected to the Kaiser-Meyer-Olkin measure of sampling adequacy test and Bartlett Test of Sphericity. Then, reliability and validity tests were run using the guidelines recommended by [Hair et al. \(2014\)](#), namely, indicator reliability, internal consistency reliability, convergent validity and discriminant validity. A moderation test was conducted using the product indicator approach. Control variables were sex (*GEN1*), age (*GEN2*), employment type (*GEN3*) and tenure (*GEN4*). A significant level was set at 5%. IBM SPSS Statistics Software for windows, version 24 and Smart PLS 2.0.M.3 by [Ringle et al. \(2005\)](#) were used to analyse the data. 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. The bootstrap of the 214 cases was run, using 5,000 bootstrap samples, with no sign changes.

Results

General information of respondents: Of the 214 respondents, men were 47.70% ($n = 102$) and women were 52.30%, insinuating that the women were slightly more than the men. With respect to the age of respondents, this study adopted the age classification recommended by [Yarlagadda et al. \(2015\)](#), namely, young adults (≤ 30 years), middle-aged adults (31 to 50 years) and senior adults (> 50 years). In line with this age classification, 25.23% ($n = 54$) were young adults, 61.68% ($n = 132$) were middle-aged adults and 13.08% ($n = 28$) were senior adults. This finding implies that the majority of the respondents were middle-aged adults. In other words, the majority of the respondents were between 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 this paper.

Regarding the employment type of MDs, the majority were full-time workers ($n = 158$, 74%) and the remaining were part-time workers ($n = 56$, 26%). Finally, the researcher wanted to know the number of years that the respondents have worked with their employers. 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 the employer for more than 5 years. 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 and 21 respondents have worked for 10 years. This finding suggests that the majority of the respondents have worked with Ghana Health Service for a longer period.

Test of normality: Kolmogorov–Smirnov Z test indicated that the p -values for all the three variables, namely, *PCB*, *JST* and *OPE* were less than the alpha level of 0.05, hence, the analyst rejected the null hypothesis in favour of the alternative hypothesis and concluded that the data sets for *PCB*, *JST* and *OPE* were not normally distributed.

Descriptive statistics: As the data for all three variables were not normally distributed, the median was used as the measure of central tendency and interquartile range (IQR) was used as the measure of dispersion. It is observed that 8 out of the 15 indicators of *PCB* showed a median of 5: strong agreement, 5 indicators showed a median of 4: moderate agreement; and the remaining 2 indicators showed a median of 2: less agreement. This finding suggests that the majority of the respondents expressed their strong agreement to *PCB*, providing evidence of a strong *PCB* amongst the MDs working in the UE and UW regions of Ghana. The IQR ranged from 2 to 3, connoting that their responses to *PCB* were less variegated. Skewness ranged from 0.067 to 0.489 and kurtosis ranged from 0.323 to 1.161, confirming that the data on *PCB* were significantly different from normally distributed data.

Considering JST, 18 out of the 20 items revealed a median of 3: little agreement, implying that respondents were less satisfied with their job. The IQR of JST was 1 to 2, indicating that the responses did not diverge. Skewness ranged from 0.005 to 0.579 and kurtosis ranged from 0.395 to 1.003, confirming that the data on JST were significantly different from normally distributed data.

For OPE, 3 out of the 4 items revealed a median of 4: moderate acceptance, denoting that those respondents moderately accepted that they were opened to new experiences: they were moderately inspired, visionary, creative, experimenting and self-sufficient. The IQR of OPE ranged from 1 to 2, indicating that the responses were less varied. Skewness ranged from 0.349 to 0.975 and kurtosis ranged from 0.286 to 1.896, confirming that the data on OPE were significantly different from normally distributed data.

KMO and Bartlett test of sphericity: Regarding PCB, the inter-correlations between the indicators were less than 0.05, implying that the indicators were correlated with each other. KMO was 0.93, which was above the minimum of 0.50. Bartlett's test was highly significant and based on this finding, it is confident to say that factor analysis was appropriate for this data. With respect to JST, the inter-correlations between the indicators were less than 0.05, implying that the indicators were correlated with each other. KMO was 0.90, which was above the minimum of 0.50. Bartlett's test was highly significant at 5% and based on this finding, it is confident to say that reliability and validity test was appropriate for this data. Considering OPE, the inter-correlations between the indicators were less than 0.05, suggesting that the indicators were correlated with each other. KMO was 0.68, which was above the minimum of 0.50. Bartlett's test was highly significant and based on this finding, it is confident to say that reliability and validity test was appropriate for this data.

Reliability and validity tests: Regarding indicator reliability, the indicator loadings for all items measuring PCB met the minimum threshold of 0.6 or higher. However, some of the indicators of JST (*JST04*, *JST08*, *JST12*, *JST18* and *JST20*) and OPE (*OPE01* and *OPE03*) variables were below this minimum threshold. These seven items were therefore deleted. The remaining indicators provided assurance of indicator reliability. Composite reliability values for all three variables were larger than the cut-off of 0.7, so higher levels of internal consistency reliability have been demonstrated by all three reflective latent variables. With respect to convergent validity, all the average variance extracted (AVE) values passed the acceptable AVE of 0.5 or higher, so convergent validity was confirmed. For discriminant validity, all the indicators loaded higher with their associated constructs than the remaining constructs. Therefore, discriminant validity was deemed to have been well-established or the model has been appropriately specified.

Relationship between PCB and JST: Consistent with expectations, the result showed a negative and significant relationship between PCB and JST amongst MDs working in the UE and UW regions of Ghana. The path coefficient was -0.297 (Figure 2) and the *t*-statistics was 5.499 (Figure 3).

This paper, therefore, found that PCB led the MDs to show a low level of JST. This finding is identical to the study by Antonaki and Trivellas (2014) in Greek, where the researchers discovered a strong negative impact of specific PCB aspects on JST amongst 262 bank employees.

Moderating role of OPE in PCB–JST tie-in: As shown in Figure 4, the interaction term PCB*OPE had a negative effect on JST, as expected. The interpretation of the negative interaction term was that, at the middle of OPE, the relationship between PCB and JST had a value of 0.343. At a high level of OPE, that is when OPE is increased by one SD point, the relationship between PCB and JST decreased by the size of the interaction effect and obtained the value of $0.343 - 0.219 = 0.124$.

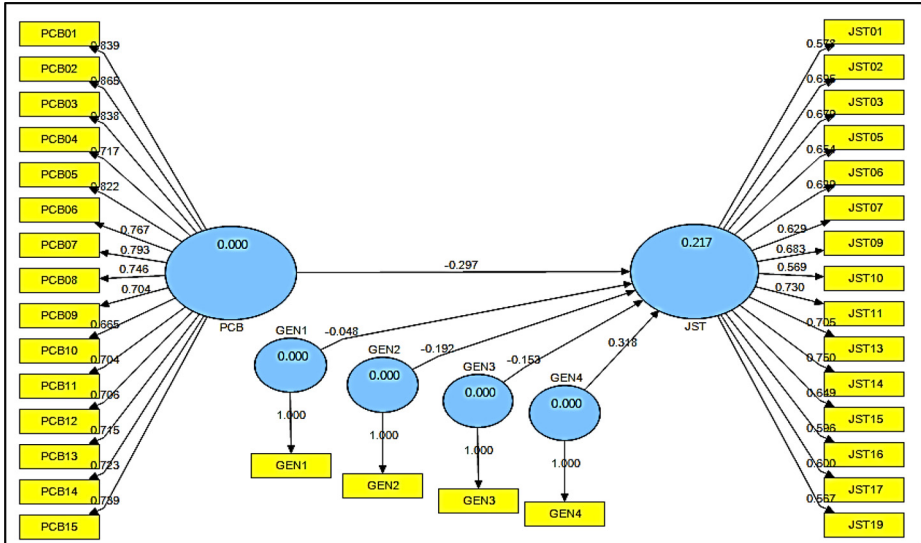


Figure 2.
Coefficient of path
linking PCB to JST

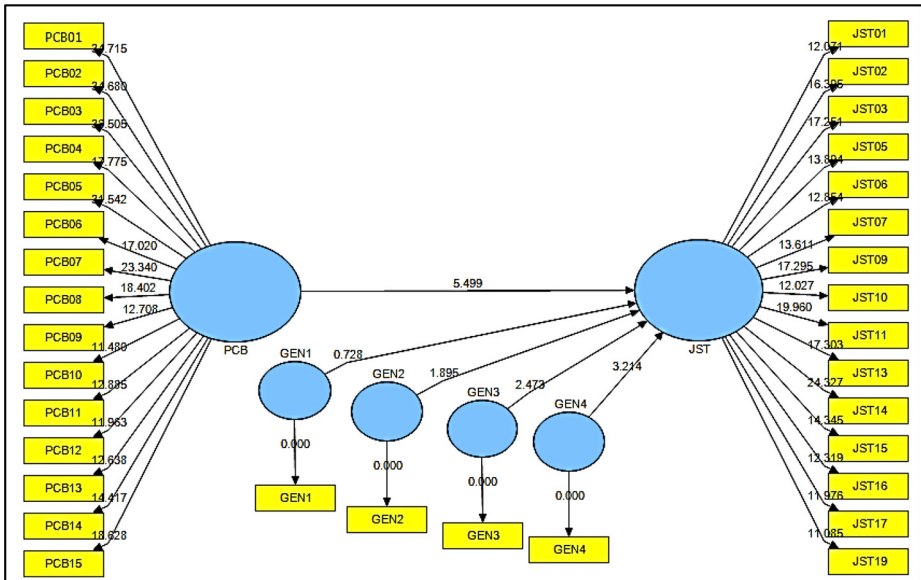


Figure 3.
T-statistic of path
linking PCB to JST

Accordingly, given a high score on OPE trait, PCB reduced its importance in explaining JST amongst MDs working in the UE and UW regions of Ghana. Simply, during a breach in the PC, MDs who are more OPE (more inspired, self-sufficient, creative, experimenting and visionary) are more likely to be satisfied with their work. On the other side, in the occurrence of a breach in a PC, MDs who are less opened to new experiences (more conventional in their

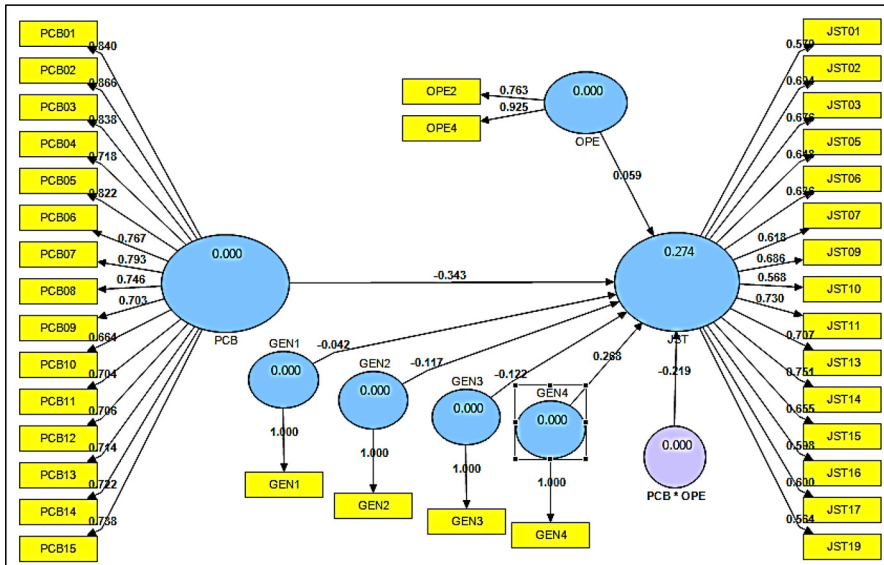


Figure 4. Path coefficients of the moderating effect of OPE trait

problem-solving approach, narrow in interests, unanalytical and do not try to be explorative in finding new ways to solve a particular problem) are less likely to be satisfied with their work. This conclusion holds, however, when the interaction term PCB*OPE is found to be significant at 5%. From Figure 5, the *t*-statistics of the negative interaction term of PCB and

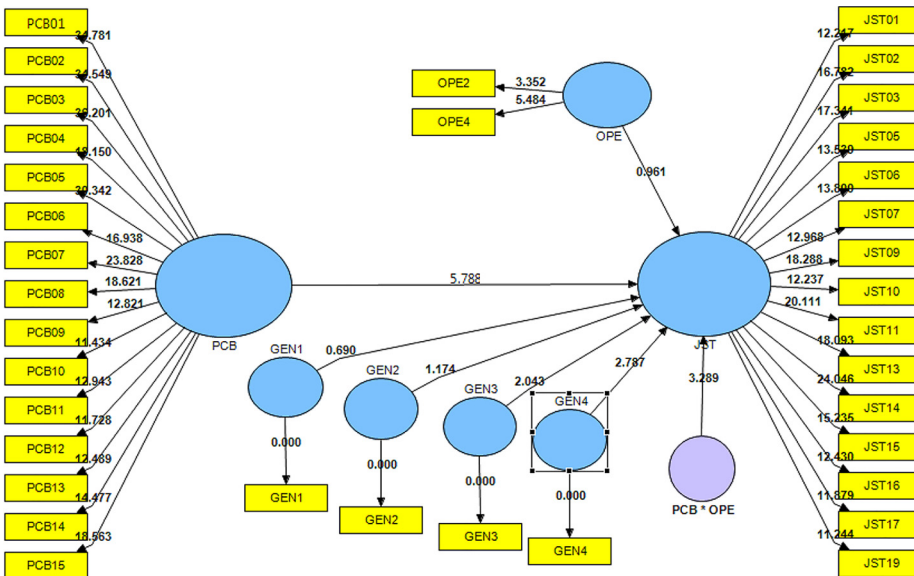


Figure 5. *T*-statistics of the moderating role of OPE trait

OPE trait (PCB*OPE) was greater than 1.96 (3.289). This revelation indicated that OPE worked as a moderator in the relationship between PCB and JST.

Therefore, the analysts found support for a significant moderating effect of OPE on the bond between PCB and JST amongst MDs working in the UE and UW regions of Ghana. This result resembles the research by Panagiotou (2017), in which the author showed that intrinsic motivation moderated the relationship between PCB and JST amongst 162 employees from three different sectors (banking, hotels, human resource consultancy) in The Netherlands, Cyprus, Greece and Spain.

Conclusions

This paper concludes that MDs operating in the UE and UW regions of Ghana are bedevilled with breaches in their PC. In addition, this paper settles that PCB may have a devastating effect on the behaviour of MDs at the workplace. Finally, this paper concludes that, during a breach in the PC, MDs who score high on OPE are more likely to be satisfied with their jobs. On another hand, the negative effect of PCB on JST can be amplified amongst MDs who display low scores on OPE.

Recommendations

This paper recommends that managers of health-care organisations, such as Ghana Health Service should encourage practising MDs to be more inspired, creative, self-sufficient, experimenting and visionary as it could propel them to be satisfied with their jobs despite a breach in their PC. In addition, before newly-trained MDs are posted, there is the need for OPE personality test to be conducted to influence where they should be posted. This is also to ensure that all those who score low on OPE can be groomed to catch up to increase their propensities to be satisfied with their jobs because PCB seems inevitable at the workplace.

Practicality and/or research implications: PCB, if not addressed, may lead MDs to be less satisfied with their jobs. In stress-prone health zones where PCB exists, MDs who are naturally inspired, creative, self-sufficient, experimenting and visionary are more likely to be satisfied with their job. On the contrary, the negative effect of PCB on JST may be worsened for MDs who are less inspired, creative, self-sufficient, experimenting and visionary. Further studies could consider moderating other broad personality dimensions on the PCB–JST relationship.

Originality/value

This paper is original as it offers empirical health-care literature on the moderating effect of OPE personality dimension on the bond between PCB and JST, using PLS-SEM, which is a superior and robust analytical tool in drawing conclusions. Moreover, this paper stands because it integrates three theories (SET, PCT and FFT of personality) in addressing this complex model.

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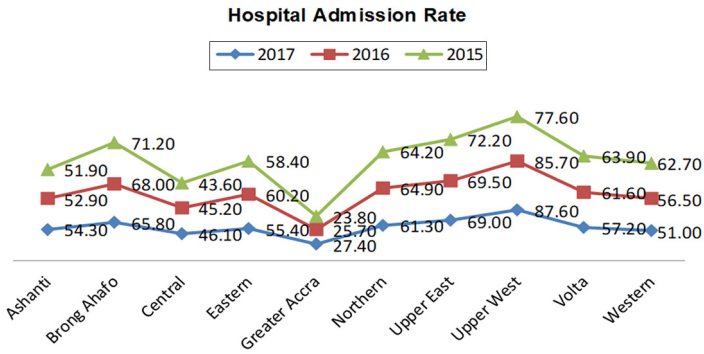


Figure A1. Hospital admission rates by region

Source: Ghana Health Service (2018)

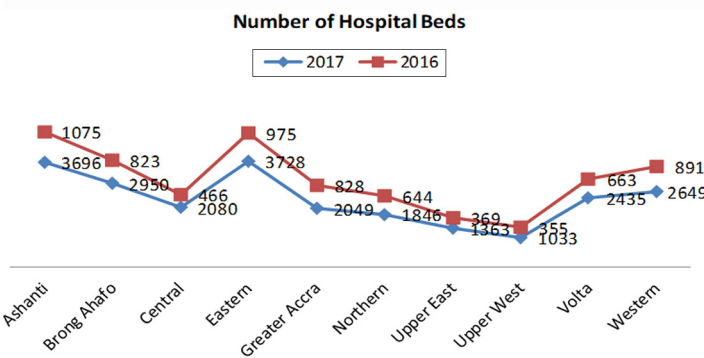
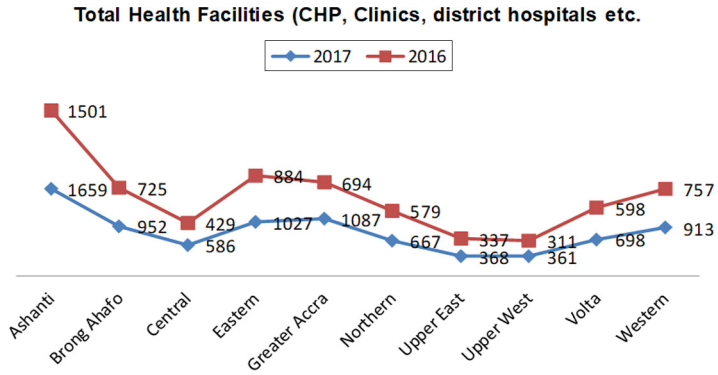


Figure A2. Number of hospital beds by region

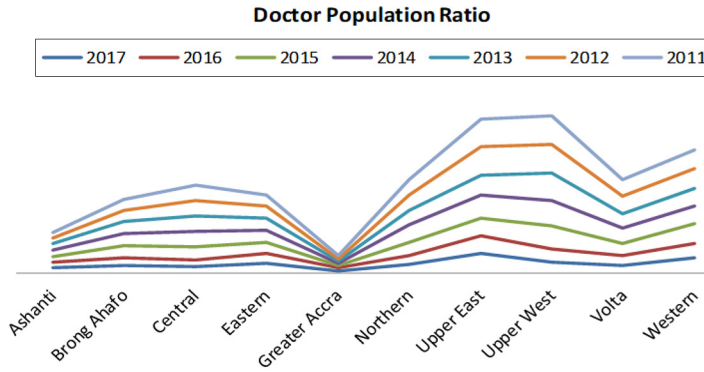
Source: Ghana Health Service (2018)

Figure A3.
Total health facilities
by region



Source: Ghana Health Service (2018)

Figure A4.
Doctor population
ratio by regions



Source: Ghana Health Service (2018)

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