

Psychological contract breach moderates job satisfaction–citizenship behaviour relationship

PCB moderates
JST–OCB
relationship

Samuel Koomson

Department of Management, University of Cape Coast, Cape Coast, Ghana

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Abstract

Purpose – This study finds out if a satisfied physician will show citizenship behaviour (OCB) in a work environment where psychological contract breach (PCB) exist.

Design/methodology/approach – Quantitative data from 214 physicians across 26 health-care units were analysed. Research philosophy was positivism, research design was explanatory and study design was cross-sectional. Preliminary tests were conducted. Reflective measurement and structural models were examined. PLS algorithm tool and bootstrapping procedure were utilised. Control variables were sex, age, employment type and tenure. A significant level was set at 5%. Smart PLS 2.0M3 software was employed.

Findings – The scientist found support for a significant moderating effect of PCB on the nexus between job satisfaction (JST) and OCB, such that PCB demoralised a satisfied physician in showing OCB. In contrast, a fulfilled psychological contract motivated satisfied physicians to exhibit OCB.

Practical implications – PCB, if not addressed, may lead satisfied physicians to show low OCB, which has devastating effects for health-care organisations and their patients. Creating balanced, fulfilled and harmonious relationship within physicians will transform the workplace into a more meaningful and purposeful atmosphere.

Originality/value – This study offers empirical health-care literature on the moderating effect of PCB, a psychosocial stressor, on the direct relationship between JST and OCB, integrating and lengthening the social exchange theory, resource-based theory and activation theory.

Keywords Work attitudes, Unfulfilled psychological contract, Discretionary behaviour, Partial least square-structural equation modelling

Paper type Research paper

Introduction

The notion of a psychological contract (PC) implies that there is an unwritten set of anticipations operating always between every member of an organisation and the various managers and others in that organisation (Huy and Takahashi, 2018). Employers, on the 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 offered assignments 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

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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 Healthcare Quality Strategy Report (2017) also asserts 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, especially in this era of Covid-19 (Nurunnabi *et al.*, 2020). This assertion 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 honoured or 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, reciprocation and reward (Blau, 1964). A PC is said to have been breached if an organisation fails to deliver on an expected obligation to an employee, which can either be written or unwritten (Robinson and Rousseau, 1994). When a PC is honoured or fulfilled, employees are likely to show high level of job satisfaction (JST). On the other hand, when a PC is in breach or unfulfilled, there is the tendency for employees to exhibit low level of JST (Opoku Mensah and Koomson, 2021). 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 negative relationship between psychological contract breach (PCB) and JST is described by the social exchange theory (SET), which one of the most applied conceptual paradigms for understanding workplace behaviour (Cropanzano *et al.*, 2017). According to the SET, when the organisation helps the employee out, the employee is likely to do something in return for the organisation. But, if the employee senses that the organisation does not have his/her best interest at heart, the employee is likely to show undesired attitudes (Organ, 2018), such low level of JST.

A satisfied employee presents benefits to co-workers and the organisation at large. To illustrate, Abdullah (2018) showed a direct positive effect of JST on OCB among teachers drawn from public vocational high schools in Indonesia. Koomson and Opoku Mensah (2020) also uncovered a direct positive connection between JST and OCB among medical doctors in Ghana. As such, it is said that ground-breaking transformations in organisations are a result of satisfied employees. The connection between JST and OCB is described the resource-based theory (RBT). The RBT regards a satisfied employee as a firm resource or asset which is able to generate value or competitive advantage by being rare and difficult to imitate by rival firms (Rezaei and Ortt, 2018). This competitive advantage converts to positive organisational outcomes, in the form of discretionary behaviour for the benefit of co-workers and the organisation itself.

The SET is also useful in explaining the negative relationship between PCB and OCB, such that when an employee's PC has been breached, he/she is unlikely to demonstrate OCB for the benefit of the employer/organisation. Organ (2018) educates that OCB is a free, voluntary and selfless interest for the good of others, such as organisation, clients/customers, clients' relatives or groups. In the healthcare sector in particular, Gupta (2019) puts forward that OCB exhibited by healthcare professionals has the potential of boosting the satisfaction of co-workers, patients, patients' friends and relatives.

Beside the SET and the RBT, this study utilises the activation theory (ACT) in explaining the proposed moderating role of PCB in the direct relationship between JST and OCB, such that the direct positive relationship between JST and OCB is weakened by a high-PCB, but

strengthened by a fulfilled PC or low-PCB. The ACT (Gardner, 1986; Gardner and Cummings, 1988) holds that too much stress from the employer can damage an employee's ability to perform, particularly for complex and difficult task (Gardner, 1990), thereby negating the tendency of that employee to show discretionary behaviour. To this end, this study seeks to examine the direct relationship between JST and OCB among physicians in Ghana, and further test the moderating role of PCB on this direct relationship.

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Literature review

Resource-based theory (RBT)

The RBT regard a satisfied employee as a firm resource or asset which is able to generate value or competitive advantage by being rare and difficult to imitate by rival firms (Rezaei and Ortt, 2018). This competitive advantage converts to positive organisational outcomes. To illustrate, Abdullah (2018) showed a direct positive effect of JST on OCB among teachers drawn from public vocational high schools in Indonesia. Koomson and Opoku Mensah (2020) also uncovered a direct positive connection between JST and OCB among medical doctors in Ghana. In line with the result of earlier related studies and assumptions of the SET, the first hypothesis of this study is formulated as follows:

H1. JST has a positive and significant relationship with OCB.

Social exchange theory (SET)

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 return will occur (Croppanzano *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 the organisation as having their best interests at heart, by offering them safe working environment, working tools, equipment, focused training, career development plans, new learning opportunities and many more.

When employees' PC with their employer are fulfilled, they become happy (Roy and Konwar, 2019) and they are likely show positive workplace behaviour. However, when a PC is in breach, employees reciprocate by show undesirable behaviour. For instance, Koomson and Opoku Mensah (2020) tested the assumptions of the SET and found a negative effect of PCB on the JST of medical doctors in Ghana. Opoku Mensah and Koomson (2021) also utilised the SET and showed that an unfulfilled PC can lead to low OCB among health-care professionals in Ghana. Consequently, the SET provides understanding on the negative effect of PCB on JST, as well as the negative connection between PCB and OCB, which aids in understanding the moderating effect of PCB on the direct relationship between JST and OCB.

Activation theory (ACT)

The ACT (Gardner, 1986; Gardner and Cummings, 1988) assumes that too much stress caused by the employer can damage an employee's ability to perform, particularly for complex and difficult task (Gardner, 1990), thereby negating the tendency of that employee to show discretionary behaviour. According to the theory, employees would respond favourable and perform better when they are confronted with a moderate level of strain. At this level, employees would make full use of cognitive resources, which will bring positive impacts (Baer and Oldham, 2006). This study utilises the ACT in explaining the proposed moderating role of PCB, a form of psychosocial stressor (Khoshaim *et al.*, 2020), in the direct relationship between JST and OCB, such that the direct positive relationship between JST and OCB is weakened by a high-PCB, but strengthened by low-PCB or a fulfilled PC. This idea is backed

by earlier studies who have modelled PCB as a moderator in a few and different direct relationships.

For instance, [Addae et al. \(2006\)](#) revealed that media employees in Trinidad and Tobago with high affective commitment who perceived a PCB were more likely to think about quitting their jobs. [Paille et al. \(2014\)](#) found that PCB moderated the direct linkage between perceived organisational support and JST. [Paillé and Rainer \(2015\)](#) unveiled that PCB moderated the linkage between perceived organisational support and eco-initiatives among alumni of MBA programmes in a Canadian University. [Haque et al. \(2016\)](#) reported that PCB moderated the direct positive relationship between psychological capital and work engagement, as well as the direct negative relationship between psychological capital and burnout among doctors working in direct health-care units in Pakistan.

[Gupta et al. \(2016\)](#) showed that PCB moderated the connection between perceived organisational support and work engagement, as well as the nexus between perceived organisational support and OCB among nurses in India. [Erkutlu and Chafra \(2016\)](#) uncovered that high-PCB weakened the positive relationship between benevolent leadership and psychological well-being among five-star hotel employees in Turkey. [Santhanam et al. \(2017\)](#) disclosed that PCB moderated the nexus between human resource management practices and turnover intentions among frontline employees in Indian hospitality industry. With this in mind, the second hypothesis is formulated as follows:

- H2.* PCB will moderate the positive effect of JST on OCB, such that a satisfied physician who senses high-PCB will be less likely to demonstrate OCB than one who perceives low-PCB.

Conceptual framework

Underpinned by the SET, RBT and ACT, a conceptual framework is designed in [Figure 1](#) to describe the direct effect of JST on OCB ([Hypothesis 1](#)), and the moderating effect of PCB on this direct path ([Hypothesis 2](#)). JST serves as the exogenous latent variable, while OCB is used as the endogenous latent variable. PCB is modelled as a moderator in this study. Sex (*CTL1*), age (*CTL2*), employment type (*CTL3*) and tenure (*CTL4*) are used as control variables, with lessons from existing related studies.

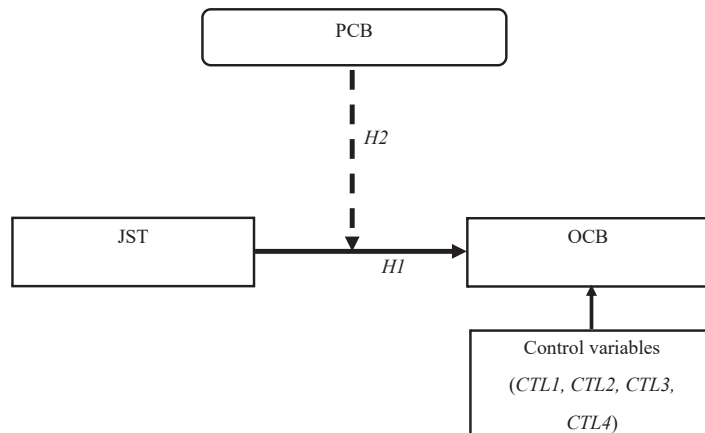


Figure 1.
Conceptual framework

Source(s): Author’s construct

Methodology

The study employed the positivist philosophical paradigm, which believes in an objective reality. Research approach was quantitative and research design was explanatory. The cross-sectional study design was used. The target population consisted of all physicians working in the UE ($n = 99$) and UW ($n = 152$) Regions, making a total of 251 physicians. A sampling frame, which comprised all the physicians who were available and reachable within the time of data collection, was constructed. A census was employed. A 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 the use of multiple scale formats and reverse-coded items. The questionnaire was made up of 55 items.

Section “A” considered 15 items that measured PCB among the physicians, which were sourced from the study by Conway and Briner (2005). PCB was measured on a 7-point Likert-type interval scale ranging from 1: *least agreement* to 7 = *strongest agreement*. Section “B” covered JST among physicians. The 20-item short form of the Minnesota Satisfaction Questionnaire (MSQ) by University of Minnesota (1977) was utilised, which was anchored on a seven-point Likert-type interval scale with score 1 = *least agreement* to 7 = *strongest agreement*. Section “C” of the instrument considered OCB among physicians. The OCB Scale by Lee and Allen (2002), comprising of 16 items was utilised. This scale was anchored on a seven-point Likert-type interval scale with score 1 = *never* to 7 = *every time*. Finally, Section “D” of the questionnaire looked at the background 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 (in years), as used in earlier studies (Koomson and Opoku Mensah, 2020; Opoku Mensah and Koomson, 2021).

Of the 251 physicians targeted, 218 responded to the instrument. Of the 218 questionnaires retrieved, 4 were extremely incomplete (missing values > 5%), hence they were rejected. The remaining 214 completed questionnaires were used for data processing and analysis. In the end, a response rate of 85% was attained. The non-response rate was 15%. The data collected were subjected to Kolmogorov–Smirnov Test, Kaiser–Meyer–Olkin (KMO) 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. Moderation test was conducted using the product indicator approach. Control variables were sex (CTL1), age (CTL2), employment type (CTL3) and tenure (CTL4). A significant level was set at 5%. IBM SPSS Statistics Software for windows, version 24 and Smart PLS 2.0M.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

Background information of respondents

Table 1 shows the background information of respondents, regarding their sex, age, employment type and number of years worked with employer.

Test of normality

The Kolmogorov–Smirnov Z test suggested that the data set for all the three constructs were not normally distributed, as evident from the p -values in Table 2.

Descriptive statistics

Since the data for all the three constructs were not normally distributed, median was used as the measure of central tendency and interquartile range (IQR) was employed as the measure

PRR	Details	Frequency	Percentage
Table 1. Background information of respondents	<i>Sex</i>		
	Males	102	47.70
	Female	112	52.30
	<i>Age</i>		
	≤30 years	54	25.23
	31–50 years	132	61.68
	>50 years	28	13.08
	<i>Employment type</i>		
	Full-time	158	74
	Part-time	56	26
	<i>Number of years worked with employer</i>		
	<5 years	49	23
	>5 years	165	77

	SN	Variables	Statistic	Kolmogorov–Smirnov	
				Df	Sig.
Table 2. Kolmogorov–Smirnov test	1	PCB	0.071	214	0.010
	2	JST	0.113	214	0.000
	3	OCB	0.091	214	0.000

of dispersion, although the mean was reported. 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 suggested that majority of the respondents expressed their strong agreement to PCB, providing evidence of a high-PCB among the physicians working in the UE and UW Regions of Ghana. The IQR ranged from 2 to 3, signifying that their responses to PCB were less dispersed. 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 a normally distributed data, as revealed in [Table 3](#). This result justified the use of PLS-SEM, which has been deemed suitable even for skewed distributions.

Considering JST, 12 out of the 20 items showed a median of 3: *little agreement*, 6 items showed a median of 4: *moderate agreement* and 2 items showed a median of 5: *strong agreement*. This result suggested that respondents were less satisfied with their work, as majority of the indicators revealed a median of 3, implying *little agreement* to JST indicators. The IQR of JST was 1–2, indicating that the responses were not dispersed. Skewness ranged from 0.018 to 0.453 and kurtosis ranged from 0.760 to 1.005, confirming that the data on JST were not normally distributed. This result justified the use of PLS-SEM, which has been deemed suitable even for skewed distributions. These results are displayed in [Table 4](#).

From [Table 5](#), 10 out of the 16 indicators of OCB showed a median of 3: *occasionally*, denoting that OCB was occasionally offered by the physicians, since majority of the indicators revealed a median of 3. The interquartile range of OCB was 1, signalling that the responses were not wide-ranging. Skewness ranged from 0.036 to 0.468 and kurtosis ranged from 0.325 to 1.086, endorsing that the dataset on OCB was not normally distributed, because, some of the values were far from zero, as displayed in [Table 5](#). This finding also justified the use of PLS-SEM, which has been deemed suitable even for skewed distributions.

SRL	Mean	Median	IQR	Skewness	Kurtosis
PCB01	3.81	3.00	3.00	0.325	-1.161
PCB02	3.79	3.00	2.00	0.237	-0.818
PCB03	3.98	4.00	2.00	0.257	-0.764
PCB04	4.20	4.00	2.00	0.128	-0.701
PCB05	4.23	4.00	2.00	-0.067	-0.872
PCB06	4.27	4.00	2.00	-0.284	-0.439
PCB07	4.33	4.00	3.00	-0.223	-0.574
PCB08	4.81	5.00	2.00	-0.351	-0.418
PCB09	4.44	5.00	2.00	-0.402	-0.323
PCB10	4.45	5.00	3.00	-0.489	-0.585
PCB11	4.50	5.00	3.00	-0.327	-0.730
PCB12	4.66	5.00	3.00	-0.399	-0.768
PCB13	4.53	5.00	2.00	-0.407	-0.391
PCB14	4.64	5.00	2.00	-0.430	-0.426
PCB15	4.53	5.00	2.00	-0.259	-0.597

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Table 3.
Descriptive statistics of
psychological contract
breach

SRL	Mean	Median	IQR	Skewness	Kurtosis
JST01	3.61	4.00	1.00	-0.088	-0.959
JST02	2.68	3.00	1.00	-0.257	-0.848
JST03	3.49	4.00	1.00	-0.128	-0.996
JST04	2.48	3.00	1.00	-0.162	-1.005
JST05	2.76	3.00	2.00	-0.271	-0.942
JST06	2.79	3.00	2.00	-0.453	-0.773
JST07	3.76	4.00	1.00	-0.364	-0.760
JST08	2.69	3.00	1.00	-0.215	-0.782
JST09	2.68	3.00	1.00	-0.355	-0.774
JST10	2.50	3.00	1.00	-0.018	-0.810
JST11	4.57	5.00	2.00	-0.271	-0.942
JST12	4.71	5.00	2.00	-0.453	-0.773
JST13	2.68	3.00	1.00	-0.257	-0.848
JST14	2.48	3.00	1.00	-0.162	-1.005
JST15	2.76	3.00	2.00	-0.271	-0.942
JST16	2.79	3.00	2.00	-0.453	-0.773
JST17	2.69	3.00	1.00	-0.215	-0.782
JST18	3.61	4.00	1.00	-0.088	-0.959
JST19	3.49	4.00	1.00	-0.128	-0.996
JST20	3.76	4.00	1.00	-0.364	-0.760

Table 4.
Descriptive statistics of
job satisfaction

KMO and Bartlett test of sphericity

The KMO and Bartlett test of sphericity for the three constructs are shown in [Table 6](#). Based on the findings, 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 some of the indicators measuring PCB, JST and OCB were below the minimum threshold of 0.6. These indicators were PCB01, PCB02, PCB11, PCB12, PCB13, JST4, JST8, JST9, JST10, JST12, JST13, JST14, JST15, JST16, JST17, JST18, JST19, JST20, OCB-O-1, OCB-O-2, OCB-O-3, OCB-O-7, OCB-O-8, OCB-I-1,

PRR

SRL	Mean	Median	IQR	Skewness	Kurtosis
OCB-I-1	3.40	4.00	1.00	-0.047	-1.086
OCB-I-2	2.74	3.00	1.00	-0.303	-0.702
OCB-I-3	3.76	4.00	1.00	-0.343	-0.325
OCB-I-4	3.77	4.00	1.00	-0.468	-0.722
OCB-I-5	2.69	3.00	1.00	-0.255	-0.991
OCB-I-6	3.63	4.00	1.00	-0.143	-0.727
OCB-I-7	2.65	3.00	1.00	-0.287	-0.868
OCB-I-8	2.64	3.00	1.00	-0.102	-0.768
OCB-O-1	3.65	4.00	1.00	-0.162	-0.828
OCB-O-2	2.62	3.00	1.00	-0.165	-0.768
OCB-O-3	2.65	3.00	1.00	-0.303	-0.767
OCB-O-4	2.49	3.00	1.00	-0.143	-0.911
OCB-O-5	2.59	3.00	1.00	-0.073	-0.890
OCB-O-6	1.64	2.00	1.00	-0.203	-0.618
OCB-O-7	2.64	3.00	1.00	-0.167	-0.778
OCB-O-8	2.52	3.00	1.00	-0.036	-1.027

Table 5.
Descriptive statistics of citizenship behaviour

Variable	KMO and Bartlett's test of sphericity		
PCB	Kaiser–Meyer–Olkin measure of sampling adequacy		0.929
	Bartlett's test of sphericity	Approx. Chi-square	2694.731
		Df	105
JST	Bartlett's test of sphericity	Sig.	0.000
		Approx. Chi-square	1729.791
	Df	190	
OCB	Bartlett's test of sphericity	Sig.	0.000
		Approx. Chi-square	1640.583
	Df	120	
		Sig.	0.000

Table 6.
KMO measure of sampling adequacy and Bartlett's test of sphericity

OCB-I-2, OCB-I-3, OCB-I-4 and OCB-I-8. These indicators were therefore deleted from the model. The remaining indicators provided assurance of indicator reliability. Composite reliability values for all the three variables were larger than the cut-off of 0.7, so higher levels of internal consistency reliability were demonstrated by all three reflective latent constructs. With respect to convergent validity, all the average variance extracted (AVE) values passed the acceptable AVE of 0.5, so convergent validity was confirmed. The indicators reliability, composite reliability and convergent reliability of PCB, JST and OCB are shown in [Tables 7–9](#) respectively.

Regarding discriminant validity, all the indicators loaded higher with their associated constructs than the remaining constructs, as shown in [Table 10](#). To illustrate, the latent variable PCB's average variance extracted was calculated to be 0.5059, consequently, its square root was 0.7113. This number was greater than the two numbers on the row of PCB, namely -0.6764 and -0.6912. The latent variable JST's average variance extracted was computed to be 0.5555 hence its square root was 0.7453. This number was larger than the correlation value in the column of JST, namely 0.6630 and -0.6764. The latent variable OCB's average variance extracted was known to be 0.5623 therefore its squared root became 0.7499. This number was also larger than the correlation value of -0.6912 in the column of OCB, as

AVE: 0.5059
 Composite reliability: 0.9108
 Cronbach alpha: 0.8914

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	Loadings
PCB03	0.7247
PCB04	0.7708
PCB05	0.7438
PCB06	0.7244
PCB07	0.7260
PCB08	0.6596
PCB09	0.6352
PCB10	0.6972
PCB14	0.7497
PCB15	0.6694

Table 7.
 Final reflective
 measurement model of
 psychological contract
 breach

AVE: 0.5555
 Composite reliability: 0.8974
 Cronbach alpha: 0.8673

	Loading
JST01	0.7656
JST02	0.7292
JST03	0.7300
JST05	0.7585
JST06	0.7523
JST07	0.7517
JST11	0.7293

Table 8.
 Final measurement
 model of job
 satisfaction

AVE: 0.5623
 Composite reliability: 0.8849
 Cronbach alpha: 0.8436

	Loading
OCB-O-4	0.7081
OCB-O-5	0.7844
OCB-O-6	0.6921
OCB-I-5	0.7679
OCB-I-6	0.7883
OCB-I-7	0.7530

Table 9.
 Final measurement
 model of citizenship
 behaviour

	JST	OCB	PCB
JST	<i>0.7453</i>		
OCB	0.6630	<i>0.7499</i>	
PCB	-0.6764	-0.6912	<i>0.7113</i>

Note(s): Values in italics diagonal are values of the squared root of the AVE

Table 10.
 Fornell-Larcker
 criterion

well as the correlation value of 0.6630 in the row of OCB. Thus, discriminant validity was deemed to have been well established. Simply, the model has been appropriately specified.

Multicollinearity test

There was also the need to assess the possible multicollinearity among the exogenous latent constructs, so that, according to [Hair et al. \(2018\)](#), it does not bias the regression results. Each set of exogenous latent construct 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 (VIF) values above 5 are indicative of probable collinearity issues among the predictor constructs. Thus, this study followed this rule of thumb. The results of the multicollinearity are displayed in [Table 11](#). As evident from [Table 11](#), there was no multicollinearity among the independent or exogenous latent constructs of PCB and JST, as the VIF values were lower than 5, and the tolerance level was higher than 0.2.

R-square measure

Once collinearity was not an issue, the next step was to examine the R^2 value of the endogenous construct(s). As a guideline, [Henseler et al. \(2009\)](#) advocates that the R^2 values of 0.70, 0.50 and 0.20 can be considered substantial, moderate and weak. As depicted in [Figure 2](#), the coefficient of determination (R^2) was 0.952 for the OCB endogenous latent construct, implying that the two exogenous latent constructs (PCB and JST) substantially explained 95.2% of the variance in OCB. This percentage was even greater than 70.0%, therefore, the R^2 of OCB was considered to be substantial. This outcome implied that the model fit 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.

Hypothesis 1. Relationship between JST and OCB

As hypothesised, the result showed a positive and significant relationship between JST and OCB among physicians working in the UE and UW Regions of Ghana, after controlling for *CTL1*, *CTL2*, *CTL3* and *CTL4*. The path coefficient was 0.924 ([Figure 3](#)) and *t*-statistics was 64.543 ([Figure 4](#)), which was greater than 1.96.

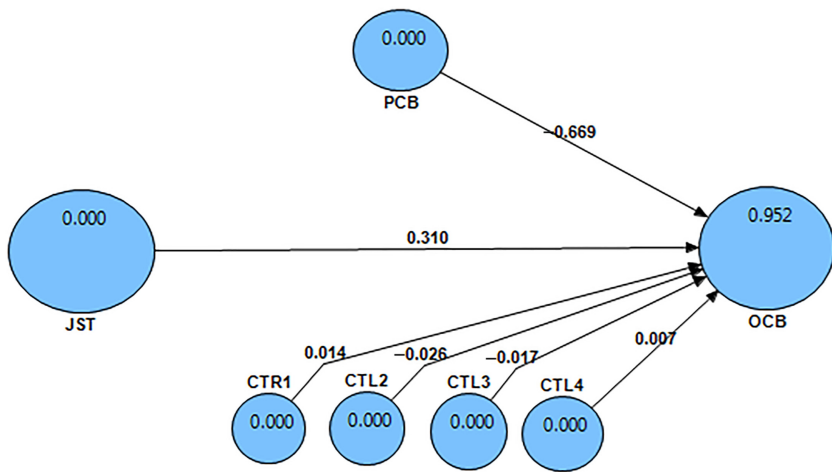
This study therefore found that the low level of JST among physicians working in the UE and UW Regions of Ghana led them to show low discretionary behaviours, revealing a positive and significant relationship between the two constructs. This result compares well with the finding of the research by [Abdullah \(2018\)](#) in Indonesia, in which the authors showed a direct positive effect of JST on OCB among teachers drawn from public vocational high schools in Indonesia. This result extends the RBT and compares well with existing studies.

Hypothesis 2. Moderating role of PCB in JST–OCB

Model	Tolerance	Collinearity statistics	VIF
1 (Constant)			
PCB	0.687		1.456
JST	0.292		3.428

Table 11. Multicollinearity test

Note(s): a. Dependent variable: OCB



PCB moderates
JST-OCB
relationship

Figure 2.
Structural model of
JST, OCB and PCB

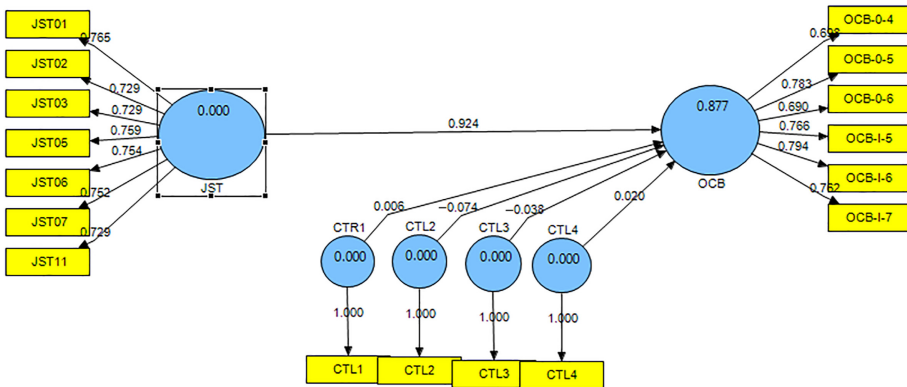


Figure 3.
Path coefficient of path
linking JST to OCB

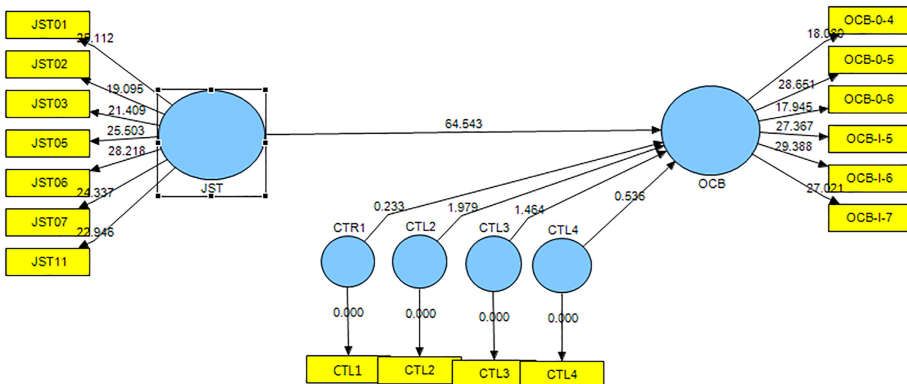


Figure 4.
T-statistics of path
linking JST to OCB

As shown in Figure 5, the interaction term JST*PCB had a negative effect on OCB, as hypothesized. The interpretation of the negative interaction term was that, at a moderate PCB, the relationship between JST and OCB obtained a value of 0.074. At a high level of PCB, that is, when PCB is increased by one standard deviation point, the relationship between JST and OCB is decreased by the size of the interaction effect and had the value of $0.074 - 0.039 = 0.035$.

Therefore, given a high score on PCB, JST reduced its importance in explaining OCB among physicians working in the UE and UW Regions of Ghana. On the contrary, given a low score on PCB or high psychological contract fulfilment, JST increased its importance in explaining OCB among physicians working in the UE and UW Regions of Ghana. This finding holds, however, when the interaction term JST*PCB is revealed to be significant at 5%. From Figure 6, the *t*-statistics of the negative interaction term of JST and PCB (JST*PCB) was greater than 1.96 (2.677). This discovery suggested that PCB worked as a moderator in the relationship between JST and OCB.

Therefore, the scientist found support for a significant moderating effect of PCB on the connection between JST and OCB among physicians working in the UE and UW Regions of Ghana. This result lengthens the ACT and resembles the findings of existing literature.

Conclusions

This study concludes that PCB may have disturbing effect on the level of JST of physicians, and also stifle their tendency to be organisational citizens. Of importance, this study establishes that satisfied physicians are demoralised to show OCB in an environment where high-PCB is present. On another hand, in the context of psychological contract fulfilment or low-PCB, satisfied physicians are motivated to display OCB.

Recommendations

This study recommends that managers of health-care organisations should consider improving the level of JST among physicians working in stress-prone health zones, such as improving upon their welfare needs, providing study leave, sponsorship for further training

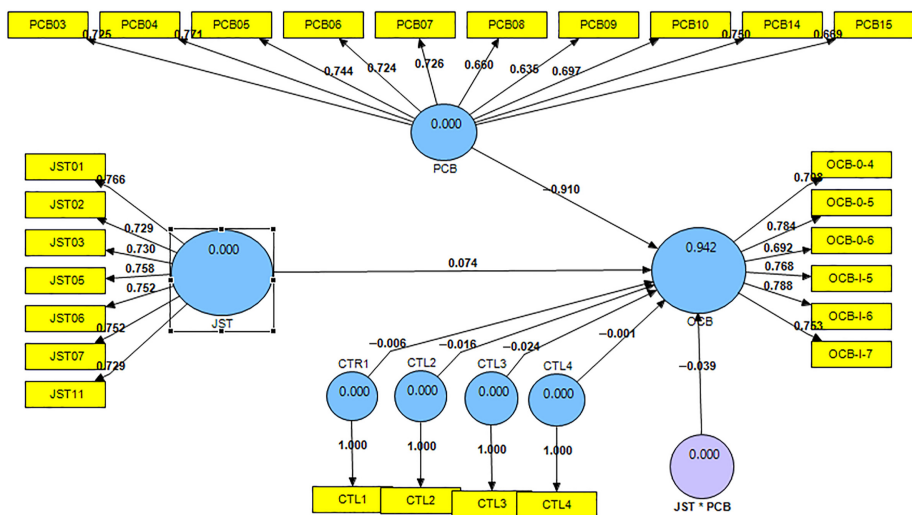


Figure 5. Path coefficients of the moderating role of PCB on JST-OCB relationship

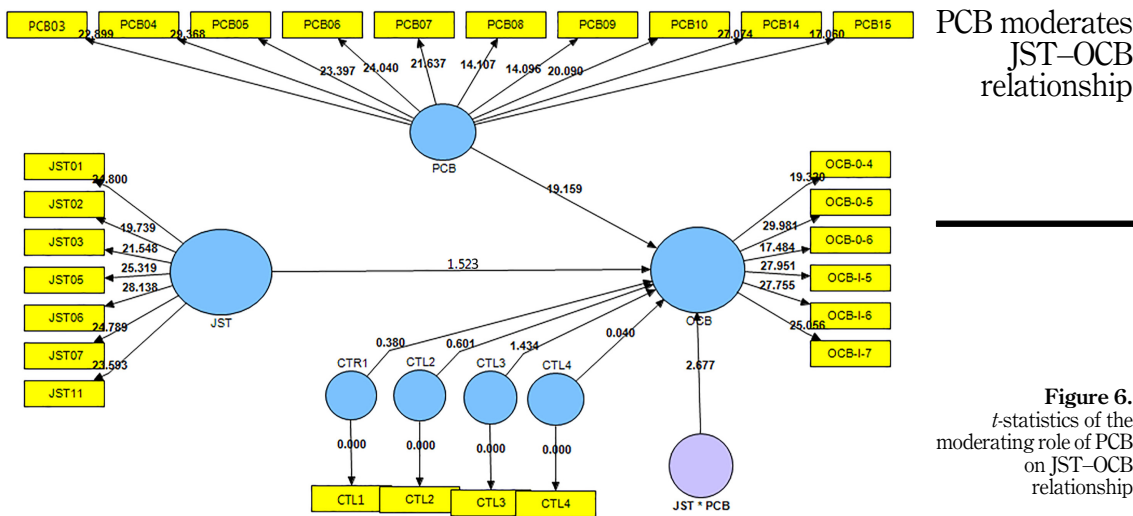


Figure 6.
t-statistics of the moderating role of PCB on JST-OCB relationship

and safe working environment so as to boost organisational citizenship behaviour among them. This research also recommends that managers of health-care organisations, particularly Ghana Health Service should improve on their PC with physicians working in stress-prone health zones, as it has the tendency to enhance JST of physicians, and increase their tendency to be organisational citizens.

Besides, managers of health-care organisations must appreciate that, one of their key roles is to manage expectations of physicians, which means clarifying what they believe physicians 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 expectations would help reduce future breaches. A fulfilled or balanced PC, although uneasy to achieve, can strengthen a satisfied physician to show OCBs, which presents remarkable benefit to co-workers, patients and the health-care organisation at large.

Practicality and/or research implications

PCB, if not tackled, may lead physicians to show low levels of OCB, which has adverse implications for health-care organisations and their patients. Building a balanced, fulfilled and harmonious relationship with physicians will transform the workplace into a more meaningful and purposeful atmosphere. This research thickens the essence of shaping a PC, 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.

Originality/value

This paper is original, fresh and unique as it offers empirical health-care literature on the moderating effect of PCB, a psychosocial stressor, on the direct relationship between JST and OCB, by integrating and lengthening three critical theories, namely the SET, RBT and ACT.

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Corresponding author

Samuel Koomson can be contacted at: skoomson68@gmail.com