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Original Article

Psychological capital, contract violation and medical doctors' retention in the Nigerian healthcare sector

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ABSTRACT

Introduction: The global healthcare sector is currently facing an unprecedented crisis, primarily attributed to the emigration of medical personnel especially from developing and under-developed countries to high-income nations. Among the countries most significantly impacted is Nigeria, which has recorded one of the highest numbers of migrating medical doctors globally. This situation has placed Nigeria in a considerably disadvantaged position, particularly given the substantial burden of disease prevalent in the country. Consequently, the moderating role of psychological capital (PsyCap) in the influence of contract violation and employee retention was examined in this study.

Methods: The study adopted cross-sectional research design and gathered data from a total of 362 medical doctors (resident doctors = 252; house officers = 110; Males = 56.6%; Females = 43.4%). Data were collected using employee retention scale, psychological contract violation (PCV) scale and psychological capital scale.

Results: The findings indicated that PCV had a significant and negative influence on the retention of medical doctors ($\beta = -.37$; $p < .01$). However, when moderated by PsyCap, PCV had a significant and positive influence on the retention of medical doctors ($\beta = .21$; $p < .01$).

Conclusion: Based on the findings, it was concluded that when medical doctors possess higher levels of PsyCap, it is strong enough to suppress the negative effect that PCV initially would have on their intention to remain committed to work with the medical institution in Nigeria. It was therefore recommended that medical doctors should be provided with interventions designed to enhance their psychological capital qualities (Resilience, hope, optimism, and self-efficacy).

Keywords: Brain drain, medical doctor, moderation, psychological capital, psychological violation, retention

Introduction

The global healthcare sector is facing a significant crisis due to high rates of migration among healthcare professionals. Most migrating practitioners come from low- and middle-income nations to wealthier countries, a phenomenon known as "brain drain".[1] Nigeria is notably affected, reporting one of the highest rates of migrating doctors globally.[1,2] Many doctors leave for better working conditions, higher pay, and improved career opportunities.[2]

According to a report by the World Health Organization, over 5,000 medical doctors left

Nigeria for developed countries from 2015 to 2022, making Nigeria the leading exporter of doctors in sub-Saharan Africa.[2] This "brain drain" has lowered the doctor-to-patient ratio to 1:5,000, about 1,000% less than the WHO recommendation of 1:600.[2] Consequently, Nigeria faces increased job demand, poorer healthcare quality, a greater disease burden, and higher mortality rates.

The reasons behind the exodus of medical doctors can be viewed from various perspectives, including inefficiencies in the healthcare system, low wages, inadequate healthcare infrastructure, and a lack of career advancement.[3] However, a more recent report identified additional factors, such as structural, psychological, and emotional dimensions, as determinants of a doctor's decision to leave or remain in the job.[4] The psychological contract is one of the psychological factors that refers to the perceived and unwritten expectations between an employee and an employer.[5]

Although unwritten, when either party fails to fulfil this expectation, it is perceived as a violation of the contract. This can lead to various undesirable organizational outcomes, such as diminished job commitment, job dissatisfaction, and ultimately, turnover.[6] It is undeniable that medical doctors in Nigeria frequently report feelings of betrayal, particularly by the government and other regulatory bodies within the healthcare system, primarily due to unmet promises regarding better working conditions and improved remuneration.[7] Ultimately, this serves as a deal breaker for many medical doctors, prompting them to migrate to countries that offer better terms, resulting in a scenario influenced by both push and pull factors.[8]

While the negative impact of psychological contract violation (PCV) on employee retention is well-documented, less is known about the factors that may mitigate this impact, especially in high-stress professions such as medicine.[9] This gap is particularly pronounced in low-resource countries, such as Nigeria, where institutional support is weak and healthcare workers often operate under duress. A potential moderating variable is psychological capital (PsyCap), a positive state characterized by hope, efficacy, resilience, and optimism.[10] PsyCap buffers against workplace stressors and enhances job satisfaction, performance, and retention.[11-13] However, its role in mitigating PCV effects among medical doctors in Nigeria is underexplored.

Having provided a background and rationale, this study examines how psychological capital moderates the impact of PCV on the retention of medical doctors in the Nigerian healthcare sector.

The study was grounded in the social exchange theory, as propounded by George Homans, a sociologist, in his 1958 essay "Social Behavior as an Exchange."[14] In the context of work settings, social exchange theory views the employment relationship between an employee and an employer as a social and economic exchange that enhances employee performance and commitment, particularly when employees perceive the rewards from employers as adequate and proportionate to their efforts or contributions to organizational productivity or performance. [15,16]. Based on social exchange theory, perceptions of fairness and equity are crucial for both parties. While obligations can be contractual, reciprocity is expected in return for job efforts.[17] When absent, either party may feel inequity, leading to poor organizational behavior. This perceived inequality in social exchange can lead to reduced effort and turnover.[18]

Studies explore the connection between PCV and workforce retention. The majority of these studies indicated that fulfilling psychological contracts enhances employee retention, while violating them increases turnover intentions.[19-27] However, this study focused on how PsyCap moderates the influence of PCV on the retention of medical doctors in Nigeria. This is because a positive link between PsyCap and retention is well-documented.[28,29] Based on these findings, the study proposes the following hypotheses:

H1: Psychological contract violation will significantly and negatively predict workforce

retention of medical doctors in the Nigerian healthcare sector.

H2: Psychological capital significantly moderates the relationship between psychological contract violation and workforce retention of medical doctors in the Nigerian healthcare sector.

Methods

The study employed a cross-sectional survey research design. It examined the moderating role of psychological capital in the relationship between contract violation and the retention of medical doctors. The independent variable is psychological contract violation, the dependent variable is employee retention, and the moderating role is psychological capital. The population of this study comprised medical doctors working in government-owned teaching hospitals across southwestern Nigeria. The region has a total of 4,901 medical doctors.[30]

The study sample consisted of resident medical doctors and house officers from one government-owned teaching hospital in each of the six states in the southwestern region. This selection was made because these hospitals house the highest number of resident doctors and house officers in their respective states. The Raosoft sample size calculator determined a sample size of 357, utilizing a 95% confidence level, a 5% margin of error, and a 50% response distribution. To address attrition, the researchers incorporated an additional 10% (n = 36), culminating in data collection from 393 physicians; nonetheless, only 362 replies were deemed genuine, yielding a 92% response rate.

The fieldwork was divided into two phases. In Phase 1, the researchers informed the Nigerian Association of Resident Doctors (NARD) executive body and house officers about the study's objective, aiming to gain access to resident doctors and house officers. The second phase involved data gathering. With permission from the regulatory body, the researchers created an online survey and shared it with NARD's executive members. The researchers also visited each teaching hospital, accompanied by two research assistants. While aiming for 392 responses, a total of 362 valid responses were collected and utilized for data analysis.

Data were gathered using a well-structured questionnaire divided into four sections: Sections A through D. Respondents were asked to self-report each item as it applied to them. The demographic information about the respondents included in this study was their gender, age, professional cadre, work experience, and marital status.

Employee retention was measured using an already existing 9-item scale.[31] It assesses employees' intentions to stay at their job, with responses on a 5-point Likert scale ranging from strongly disagree (1) to strongly agree (5). Items 7, 8, and 9 were reverse-scored. The scale's internal consistency was 0.82. Factor analysis yielded a determinant of 0.07 and a Kaiser-Meyer-Olkin measure of 0.828 ($p < .001$), as determined by Bartlett's test.[31] An example item is: "If it were up to me, I would be working for this company for the next five years". In this study, the scale was tested for reliability and yielded a coefficient of .80, with an internal consistency of 0.86.

Psychological contract violation was measured using an already existing 9-item scale to assess employees' perceptions of breaches by employers.[32] Responses were rated on a 5-point Likert scale, ranging from strongly disagree (1) to strongly agree (5). Items 1, 2, and 3 were reverse phrased. The developers reported an internal consistency of 0.89 and adequate discriminant validity, with coefficients ranging from 0.70 to 0.89. An example item is: "I have not received everything promised to me in exchange for my contributions." In this study, the reliability coefficient was 0.68, with an internal consistency (α) of 0.79.

Psychological capital was measured using an already existing 24-item scale.[10] The scale was designed to assess the extent to which individuals exhibit a range of psychological capital traits and abilities. It comprises four dimensions: Optimism, Resilience, Hope, and Self-efficacy. Responses to

the items were rated on a 5-point Likert scale ranging from SD – Strongly Disagree (1) to SA – Strongly Agree (5). The scale developers reported adequate internal consistency of 0.91 for the whole scale.[33] In this study, the scale had an internal consistency of 0.77 and a reliability coefficient of 0.80.

Descriptive and inferential statistics were utilized to analyze the collected data. Correlation analysis examines the link between variables,[34] was conducted to examine the relationship between the dependent variable (workforce retention), the independent variable (psychological contract violation), and the moderating variable (psychological capital). Regression analysis, used to examine the predictive power of an independent variable on a dependent variable,[35] was employed to test Hypothesis One through SPSS version 30. Hypothesis 2 was tested using structural equation modelling (SEM) through AMOS version 24.

A preliminary analysis was essential to determine if the data is sufficient or suitable for parametric statistics. The data underwent tests for means, standard deviations, skewness, and kurtosis. While means and standard deviations help understand the data distribution, skewness and kurtosis assess its suitability for parametric analyses.[36] As shown in Table 1, all skewness and kurtosis values are below 3, indicating the data's normal distribution, making it appropriate for parametric tests.[37]

Table 1: Mean, Standard Deviation, Skewness, and Kurtosis of the variables

Variable	M	SD	Skewness	Kurtosis
Measured on an interval scale				
Retention	2.50	0.91	.22	-1.14
Psychological contract violation	3.62	0.75	-.22	-1.18
Psychological capital	2.40	0.71	-.14	-1.63

The research procedure, including primary data collection from human participants, followed the ethical standards of the institutional research committee and the 1964 Helsinki Declaration. Before data collection, the researchers obtained ethics approval from the Biomedical Sciences Research Ethics Committee at the University of the Western Cape, South Africa, with reference number BM23/9/5, which was approved on 7 November 2023. The research ethics certificate supported gaining respondents' access and trust, enabling their participation in the study. Throughout the research, ethical considerations were strictly observed.

Alongside acquiring ethical approval for the study, the tenets of secrecy, voluntary participation, beneficence, and non-maleficence were strictly adhered to. Participants provided a written agreement before responding to the survey questions. Responses from participants were maintained in confidentiality within protected files and emails, accessible solely to the researchers who possess the password. No distinctive form of identification, including name, email, or other personal details, was mandated from participants. The collected data was encrypted using a password known solely to the researchers.

All subjects provided informed consent prior to the commencement of the primary study. The consent was incorporated in the questionnaire following an explanation of the study's goal, the participants' rights, and the handling of their data. All data collected spanned approximately two months (10 November 2023 - 15 March 2024). Every measure was taken to ensure anonymity, confidentiality, and the safety of participants throughout the research process.

Results

Table 2 illustrates the socio-demographic distribution of medical practitioners in relation

to employee retention. The gender distribution revealed that 205 (56.6%) of the physicians were male. A total of 265 physicians (73.2%) were aged between 25 and 34 years. Regarding professional status, 252 medical doctors (69.6%) were residents. A total of 104 individuals (28.7%) have two years of work experience, 92 individuals (25.4%) have three years, 77 individuals (21.3%) have four years, 50 individuals (13.8%) have five years, and 35 individuals (9.7%) have one year of experience. The remaining four individuals (1.1%) have six years of professional experience. Finally, 184 (50.8%) of the medical doctors were single.

Table 2: Socio-demographic distribution

SN	Variables	Frequency (%) (n = 362)
1	Gender	
	Male	205(56.5)
	Female	157(43.4)
2	Age	
	25-34 years	265(73.2)
	35-44 years	97(26.8)
3	Professional status	
	Residency	252(69.6)
	House officer	110(30.4)
4	Years of working experience	
	One	35(9.7)
	Two	104(28.7)
	Three	92(25.4)
	Four	77(21.3)
	Five	50(13.8)
	Six	4(1.1)
5	Marital Status	
	Single	184(50.8)
	Married	166(45.9)
	Separated	5(1.4)
	Divorced	4(1.1)
	Widowed	3(0.8)

Table 2 illustrates a significant negative correlation between employee retention and the breach of the psychological contract ($r = -0.58$, $p < 0.01$). This link is inverse, indicating that an increase in psychological contract breach is correlated with a decrease in employment retention intention among medical practitioners.

The correlation between the moderating variable (psychological capital) and the dependent variable (employee retention) was positive ($r = 0.52$; $p < 0.01$). This suggests that the desire to stay rises

with an increase in the psychological capital of medical doctors. Moreover, a substantial correlation exists between the independent variable (Psychological contract violation) and the moderating variable (Psychological capital) ($r = -0.33$; $p < 0.01$). The association is negative, indicating that increased psychological capital correlates with a diminished impression of contract violations among physicians. The findings demonstrate that the correlations among the variables are significant, with no indication of multicollinearity, as all correlation coefficients remain below 0.80. Based on this, the variables and the results qualify for a moderation analysis.[38]

Table 2: Correlation: PCV, PsyCap and retention

SN	Variables	Retention	PCV	PsyCap
1	Retention	-		
2	Psychological contract violation	-.58**	-	
3	Psychological capital	.52**	-.33**	-

** ***Significant at 0.01; * Significant at 0.05***

The first hypothesis posited that psychological contract violation would significantly impact the retention of resident doctors and house officers. This was analyzed using linear regression, with the results presented in Table 4. It is shown that psychological contract violation was a significant predictor of employee retention, $F (1, 360) = 179.86$, $p < 0.01$. At 33% variance, psychological contract violation showcases a strong influence on the retention of resident doctors and house officers, $R = .58$, $R^2 = 0.33$. The direction of the beta value, $\beta = -0.58$, reveals that the more medical doctors perceive their contract as being violated, the lower their intention to remain in their job. The hypothesis is therefore accepted as it was confirmed.

Table 4: Linear regression: PCV on retention

Variable	B	SE B	β	t	p
Constant	4.20	.18		22.84	< .01
Psychological contract violation	-.57	.04	-.58	-13.41	< .01
N = 362, R = .58, R^2 = .33, F (1, 360) = 179.86, p < .01					

Figure 1 and Table 5 present the results of structural equation modelling regarding the moderating role of psychological capital in the influence of psychological contract violation on the retention of resident doctors and house officers. First, to ascertain the fit of the model, the Chi-square value and fit indices indicated a good fit: $X^2 = (4) = 29.32$, RMSEA = 0.110, GFI = 0.903. It is further shown that psychological contract violation had a significant and negative link to the retention of medical doctors ($\beta = -.37$; $p < .01$). This implies that the higher the perceived contract violation of medical doctors, the lower their intention to remain on the job. Also, it is shown that psychological capital had a significant influence on intention to stay on the job among medical doctors ($\beta = .46$; $p < .01$). The direction of the influence is positive, which means that the higher the psychological capital of medical doctors, the higher the retention possibility of medical doctors. However, when moderated by psychological capital, the influence of psychological contract violation was positive ($\beta = .21$; $p < .01$), confirming the moderating capacity of psychological capital among medical doctors.

Table 5: Standardized parameters estimates on path analysis

Parameters	Estimate	SE	p
Retention < ---Psychological contract violation	-.37	.04	< .01
Retention < ---Psychological capital	.46	.04	< .01
Retention < ---PCV * PsyCap	.21	.05	< .01

NB: PCV - Psychological Contract Violation, PsyCap - Psychological Capital

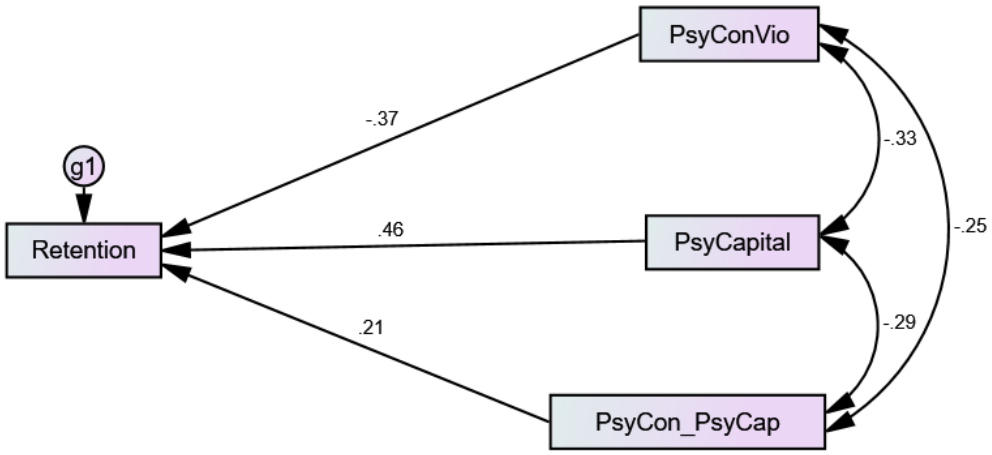

Figure 1: SEM diagram on the moderating role of PsyCap on the relationship between PCV and retention

Discussion

The study explored the moderating role of psychological capital in the influence of PCV on the retention of medical doctors in the Nigerian healthcare sector. The findings revealed that perceived violation of contract by medical doctors contributed to an increased intention to leave their jobs. In other words, when medical doctors perceive that their employers do not honor their terms of employment, they tend to diminish their effort, which ultimately leads to their disinterest in working with the employer. The source of the perceived contract violation stems from the employer's failure to implement a salary increase, regardless of whether the agreement was verbal or written between the two parties. It also arises from the employer's failure to promote or provide resources that enable the effective functioning of the medical doctor. The findings indicate that when medical doctors feel their employer does not reciprocate their efforts, they are likely to plan their exit from the job.

In relation to the findings, a study into the role of psychological contract breach in employee retention within the healthcare sector supports the first hypothesis of the current study.[26,39] The study revealed that psychological contract violation significantly and negatively influenced the workforce retention of healthcare workers.[39] Specifically, those healthcare workers perceiving a high level of psychological contract breach reported a lower intention to remain than their counterparts with a low level of perceived psychological contract violation.

This study also found that psychological capital significantly moderated the relationship between psychological contract violation and the retention of resident doctors and house officers. It is inferred that medical doctors who perceive a breach in their working relationship with the organization remain in their roles, particularly when they possess higher levels of the qualities of PsyCap which

includes; resilience, hope, self-efficacy, and optimism. In other words, medical doctors who can cope with challenges and bounce back from setbacks do not regard the breach in the contractual agreement as a determinant of their working status at their place of work.

While there is a scarcity of previous studies on the moderating role of psychological capital in the relationship between psychological contract violation and workforce retention, Some researchers reported that psychological capital dimensions—hope, resilience, optimism, and self-efficacy—significantly moderated the relationship between psychological contract breach and work alienation.[28,40] Additionally, in a study on turnover intention, which is the direct opposite of workforce retention, it was found that a significant relationship exists between psychological contract violation and turnover intentions, such that the higher the perceived psychological contract violation, the higher the turnover intention.

Conclusion

This study's findings yield two crucial conclusions that enhance the discussion on workforce retention among medical professionals in Nigeria. Firstly, it is concluded that psychological contract violation is detrimental to medical practitioners' decision to stay employed. This indicates that when healthcare professionals see unmet obligations or unfulfilled commitments from their employers, their likelihood of leaving their existing roles increases. This findings within the Nigerian medical sector underscores the necessity of correcting apparent contractual disparities to reduce attrition risks. Secondly, it is concluded that psychological capital mitigated the negative influence of psychological contract breach on retention intentions of medical doctors. Psychological capital, which includes resilience, optimism, self-efficacy, and hope, acts as a protective factor, reducing the negative impact of perceived contract violations on physicians' will to remain.

Recommendations

Having presented the findings and conclusions, some recommendations were made in a bid to increase the retention of resident doctors and house officers.

Firstly, it is recommended that the Ministry of Health at federal, state, and local levels should prioritize a systematic and periodic review of medical doctors' terms of engagement. This process must include an urgent reassessment of existing labor laws governing the medical profession to address critical concerns such as working hours, hazard allowances, remuneration, and other essential benefits.

It is also recommended that a thorough evaluation of contractual breaches with medical doctors should be done. This should be followed by corrective measure. This would not only increase the intention to remain, but also restore confidence in governmental health institutions.

Following the positive moderating role of psychological capital, it is recommended that the services of professional psychologists should be recruited to facilitate psychological interventions or training for medical doctors aimed at enhancing self-efficacy, hope, optimism, and resilience as they pertain to practice in Nigeria. Any of these dimensions could lead to an increased interest in sustaining employment within the field.

Further, it is recommended that psychological workshops on fostering resilience, adaptability, and creativity in medical doctors should be introduced. Such initiatives would significantly contribute to the development of a mentally robust medical doctor who is inclined to excel and remain in their position, irrespective of adverse circumstances. Additionally, the sense of loyalty to the nation can be leveraged to maximize the potential of medical doctors.

Finally, all relevant agencies should adopt this model both practically and creatively, as it encourages medical doctors to remain engaged in their work. Further studies could be conducted to evaluate the model in various ways.

Limitations

The research presents several limitations. The study was conducted among medical doctors in teaching institutions, excluding those in other medical settings such as general hospitals, speciality hospitals, or maternity hospitals. This may provide generalisability concerns, as the results are unlikely to be applicable in contexts dissimilar to those utilised in this study.

The researcher noted a social desirability bias throughout the data collection process. Some medical practitioners were curious about what their responses would be used for but refrained from voicing their concerns. Consequently, they endeavoured to react in a socially acceptable way to avert such consequences. To address this, it was consistently conveyed to the respondents that their answers would remain personal and anonymous; therefore, their responses would be secure and only accessible to the researcher without any identifiable markers. Subsequent studies should incorporate both quantitative and qualitative methodologies. This will facilitate the integration of information from each technique to enhance one another. For example, the results from qualitative research may enhance the outcomes of hypothesis testing.

Competing interests

The authors have no competing interests to declare that are relevant to the content of this article.

Data accessibility statement

All the raw data, in the form of SPSS for this research can be found in *https://osf.io/mb2xg*

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