

# Psychological Contract Breach and Its Influence on the Job Embeddedness of Professional Nurses

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## Abstract

A shortage of professional nurses is a global concern, and employers of professional nurses in many countries, including South Africa, are losing them to lucrative international job opportunities, further exacerbating the problem. Traditionally, the migration of nurses is studied in the context of turnover and turnover intentions. With the aim of contributing to the knowledge on the retention of nurses, this study examined whether breach of the psychological contract predicts nurses' job embeddedness, as embeddedness has been found to increase intention to stay. A cross-sectional sample of 228 professional nurses was drawn from private hospitals in South Africa. Hierarchical regression and ANOVA were used to examine the relationship and group differences. The findings indicate that, after controlling for age, citizenship, and employment status, psychological contract breach negatively impacts job embeddedness. The implication for managers is that employers of professional nurses must honour their obligations and promises made to retain them as part of the retention strategy to stem this outflow and loss of expertise.

**Keywords:** job embeddedness; nursing shortages; psychological contract breach; retention; turnover



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## Introduction

The scarcity of professional nurses is a global concern (Brook et al. 2019; D’Emiljo and Preez 2017; De Oliveira et al. 2017; Monahan 2015), and creative solutions (D’Emiljo and Preez 2017) and successful interventions are needed to alleviate this problem (Brook et al. 2019). This shortage is of particular concern in rural areas (Fields et al. 2018), and authorities are not taking the necessary steps to address the shortages (Cottingham et al. 2011; Zinn et al. 2012). Causal factors of nursing shortages include burnout (Aiken et al. 2012; Van Bogaert et al. 2013), stress (Ball, Doyle, and Oocumma 2015; Koen, Van Eeden, and Wissing 2011), low job satisfaction (Delobelle et al. 2011; Lacher et al. 2015), the demanding nature of the work, low reward, and poor supervisor support (De Oliveira et al. 2017).

An estimated shortage of 40 000 nurses is predicted for Australia in the near future (Monahan 2015). By 2020, the demand for nurses in the USA will increase by 36% (Zinn et al. 2012). The European Commission is preparing for a shortage of 590 000 nurses in the European Union by 2020 (Flinkman, Isopahkala-Bouret, and Salanterä 2013). Canada estimates a shortage of 60 000 nurses by 2022 (Tomblin Murphy et al. 2012), while the USA estimates that the country’s shortage of nurses could reach 500 000 by 2025 (Zinn et al. 2012).

The problem of a shortage of nurses is exacerbated by poor retention rates, especially in developing countries, as nurses are being lured away with lucrative offers from wealthier nations. Africa faces significant challenges in healthcare (Ganga-Limando 2018) and capacity-building of nurses in sub-Saharan Africa (Ridge et al. 2018). Maphosa (2016) highlights the scarcity of nurses in South Africa as an urgent problem, which, if not addressed effectively, will have dire consequences for the South African healthcare system (Crush and Pendleton 2010). Statistics of nurse shortages provide evidence of the problem. In 2013, South Africa was in need of 44 780 nurses (Maphosa 2016). These statistics are cause for concern, as sufficient professional nurses is critical in ensuring patient safety (Saville et al. 2019).

Currently, hospitals globally are making use of a temporary solution to combat the nurse shortage, namely recruiting nurses internationally (Alonso-Garbayo and Maben 2009; Ronquillo et al. 2011). South Africa is also following this route by recruiting nurses from other countries, especially Ghana (Delucas 2014) and India (Rose 2009). However, recruiting migrant nurses is not a long-term solution, as these nurses follow lucrative offers, making it difficult for healthcare organisations to employ long-term retention strategies to ensure sufficient staff (Maphosa 2016).

Leadership plays an important role in the well-being of a sustained nursing workforce (Cummings et al. 2018), and action is needed to create long-term solutions that involve all stakeholders: workers, employers, and management (De Oliveira et al. 2017). It has been suggested that leaders of healthcare organisations should focus on controllable retention strategies, one of which is ensuring that the psychological contract between

organisations and their nurses is not breached. It was hypothesised in the present study that psychological contract breach negatively affects the job embeddedness of professional nurses, which, in turn, increases their intention to leave the organisation. The study gained further insight into this relationship by applying the demographic variables of age, citizenship, and employment status.

## Literature Review

### **Job Embeddedness**

While the migration of nurses is generally studied in the context of turnover and turnover intentions, the present study focused on why they stay, with specific reference to job embeddedness. Job embeddedness is defined as a broad set of factors that influence an employee to remain with an organisation (Mitchell et al. 2001). Job embeddedness consists of two dimensions: on-the-job embeddedness (within the organisation) and off-the-job embeddedness (outside of the organisation) (Ghosh and Gurunathan 2015b; Halvorsen, Treuren, and Kulik 2015; Mitchell et al. 2001).

#### *On-the-Job Embeddedness*

On-the-job embeddedness refers to the degree to which an employee feels connected or attached to an organisation, also referred to as organisational embeddedness (Halvorsen, Treuren, and Kulik 2015). An employee who experiences organisational embeddedness would find it difficult to leave the organisation (Mitchell et al. 2001).

Lang, Kern, and Zapf (2016, 1548) posit that “employees embedded in their job and community do not search actively for a new job.” Organisational embeddedness consists of three dimensions: fit, links, and sacrifice (Ghosh and Gurunathan 2015a; Ng and Feldman 2014). Fit is the degree to which a person is satisfied with the organisation, the job, and the work environment (Ghosh and Gurunathan 2015b; Mitchell et al. 2001). Links refer to the number and depth of connections or involvement a person has with co-workers and work activities (Mitchell et al. 2001). Sacrifice refers to how willing an employee is to give up the aforementioned links (Mitchell et al. 2001; Ng and Feldman 2014).

#### *Off-the-Job Embeddedness*

Off-the-job embeddedness refers to embeddedness in a community through factors that keep an employee rooted in a community (Allen, Peltokorpi, and Rubenstein 2016; Mitchell et al. 2001). A study by Kulig et al. (2018) found that community embeddedness plays an important role in the retention of nurses in a healthcare organisation, which provided the rationale for using the construct in the present study.

### **Psychological Contract**

The psychological contract is the tacit understanding or agreement between an employee and employer (Dantas and Ferreira 2015), an unwritten contract that sets

certain expectations between the parties (Rousseau 1989; 1995). The psychological contract, together with the formal, written employment contract, constitutes the employment relationship. The psychological contract may contain verbal promises or undertakings, such as the organisation assuring a new employee of its commitment to furthering the education and skills of employees, or rewarding outstanding performance, without specific commitments regarding timing and extent. Should these expectations (formally agreed in writing or tacitly understood) not be met, the affected party will perceive this as breach of the psychological contract. The present study focused on psychological contract breach in the form of the organisation not keeping its verbal or implied promises or undertakings to the nurses.

Breach of the psychological contract has a negative effect on employees' attitudes, work outcomes, and behaviour towards the company. It is also associated with a negative effect on productivity, job performance (Conway and Briner 2005), job satisfaction (Robinson and Rousseau 1994; Rodwell and Ellershaw 2016; Rodwell and Gulyas 2013), the trust relationship (Robinson and Rousseau 1994), and organisational commitment (McCabe and Sambrook 2013; Robinson and Rousseau 1994; Rodwell and Ellershaw 2016), as well as an increase in absenteeism (Conway and Briner 2005). Previous research further indicated that breach of the psychological contract increases turnover intentions and actual turnover (Clinton and Guest 2014; Rodwell and Ellershaw 2016; Robinson and Rousseau 1994), as well as employees taking early retirement (Dantas and Ferreira 2015).

Healthcare professionals have been found to be sensitive to psychological contract breach (Bunderson 2001). Research among nurses, specifically, indicated that it leads to lower job satisfaction (McCabe and Sambrook 2013; Trybou et al. 2016). Research has also confirmed a converse relationship; when employers keep their promises, nurses experience higher job satisfaction and are more committed to both their organisation and the nursing profession (Rodwell and Gulyas 2013).

A literature search yielded no results of any studies on the relationship between psychological contract breach and job embeddedness; however, considering the literature on the constructs, it was postulated in the present study that psychological contract breach would negatively affect the job embeddedness of professional nurses.

Zhang, Fried, and Griffeth (2012) reported that the dimensions of job embeddedness decrease turnover amongst certain cultural groups, while employment status (permanent or temporary employment) may influence the decision to leave an employer—temporary employees may be more likely to leave than those permanently employed (Boswell et al. 2012). A literature review yielded no results regarding the effect of employment status on job embeddedness. No previous research could be found on whether citizenship (of the host country) plays a role in how employees perceive their psychological contract or whether they experience a breach of this contract. A literature

review did not indicate whether employment status influences the perception of professional nurses regarding a breach of the psychological contract.

Age seems to play a role in how nurses perceive their psychological contracts (Dantas and Ferreira 2015; McCabe and Sambrook 2013; Rodwell and Gulyas 2013). Younger nurses are more sensitive than older ones to breach of their psychological contracts (Bal et al. 2008). Older employees view their psychological contracts as more malleable (Ng and Feldman 2009). The reason could be that older workers develop a higher tolerance for changes to their psychological contract, or do not want to go through the effort of changing jobs when they are nearing retirement. However, Reitz (2014) found that older nurses are less likely than younger ones to continue in their current jobs. Other authors posit that older workers experience a breach of the psychological contract less intensely in terms of their job satisfaction and job performance (Bal et al. 2013; Ng and Feldman 2009). Dantas and Ferreira (2015) report that a breach of the psychological contract among nurses close to retirement age leads to decreased organisational performance, early retirement, demotivation, and denial of their professional status.

The nursing profession has a challenge to ensure the job embeddedness of professional nurses and it is not clear whether psychological contract breach plays a role in this regard.

## Research Questions

1. Does psychological contract breach influence nurses' job embeddedness?
2. Does psychological contract breach influence nurses' job embeddedness, whilst controlling for the effects of the variables of age, citizenship, and employment status?
3. Are there group differences related to age, citizenship, and employment status regarding job embeddedness?

## Aim

The aim of the study was to determine whether breach of the psychological contract by the employer influences the job embeddedness of nurses. Thereafter, the aim was to investigate the specific influence of certain variables on this relationship, namely age, citizenship of the host country, and employment status (permanent or temporary).

## Objective

The objective of the study was to contribute to research literature by introducing a model of the prediction of psychological contract breach on job embeddedness. An understanding of the relationship may offer insight into how psychological contract breach can influence employee retention (Reitz and Anderson 2011).

## Research Method

The study followed a quantitative approach, and the design was cross-sectional and ex post facto.

### Sampling Strategy

A purposive sample of professional nurses was drawn from five selected hospitals. The sample was homogenous in nature (hospitals part of one medical care company, in the Free State and Northern Cape). The final sample consisted of 228 respondents (34 men and 194 women), of which 86% were South African and 14% non-South African citizens. Questionnaires were only available in English. The respondents from foreign countries were proficient in English, and therefore able to complete the questionnaire. The ages of the respondents ranged from 29 years or younger (14%), 30–39 years (30%), 40–49 years (24%), 50–59 years (23%), and 60 years and older (9%). Most respondents held a diploma (77.6%) or bachelor's degree (18.4%); nine individuals did not specify their qualifications (3.9%). Regarding employment status, 79.8% were permanent staff and 20.2% were temporary staff. The population group of participants were 27.2% Black African, 46.9% White, 0.4% Asian, 10.5% Coloured, and 14.9% Indian.

### Measuring Instruments

Psychological contract breach was measured using an instrument developed by Robinson and Morrison (2000). The questionnaire was used to evaluate respondents' perception of the fulfilment of obligations of the psychological contract by the employer (Robinson 1996; Rousseau 1989). The instrument consists of five items (3 of which are reverse-scored). Responses were captured on a five-point Likert scale ranging from strongly agree to strongly disagree. The following is a sample item: "Almost all the promises made by my employer during recruitment have been kept so far." A Cronbach alpha coefficient of .794 was obtained, indicating that the instrument is reliable. Following exploratory factor analysis, no items were removed due to low communalities.

The Job Embeddedness Questionnaire (Mitchell et al. 2001) measures six aspects of job embeddedness. The questionnaire consists of 40 items, measured on a five-point Likert scale in six subscales, namely Organisational Fit, Community Fit, Organisational Links, Community Links, Organisational Sacrifice, and Community Sacrifice. Examples of items are the following: "I like the members of my work group" (Organisational Fit), "I love the place where I live" (Community Fit), "How long have you worked for this company?" (Organisational Links), "Are you currently married?" (Community Links), "I would sacrifice a lot if I left this job" (Organisational Sacrifice), and "Leaving this community would be very hard" (Community Sacrifice). Explanatory factor analysis of the Job Embeddedness Questionnaire yielded a three-factor solution, namely Organisational sacrifice, Organisational fit, and Community fit. A Cronbach alpha

coefficient of .931 was obtained for the three factors combined to measure job embeddedness, indicating acceptable reliability.

### **Procedure**

Nursing managers received a letter of approval from the higher education and training manager of the private hospital to participate in the study. Approval by the Department of Health was not required, as these were private hospitals. Visits to the hospitals were pre-arranged with the nursing managers, either per electronic mail or telephonically. The nursing managers arranged the availability of nurses to participate in the study. Consent was sought from each respondent. Each hospital was visited for a period of two days, during which respondents completed the paper-based questionnaires. It was not possible to administer online questionnaires, as not all respondents had access to a computer. Respondents placed the completed questionnaires in a sealed envelope and inserted these through a slot into a postbox placed at each facility. Only questionnaires received in sealed envelopes were processed. The researcher received 239 completed questionnaires; however, only 228 were usable. The remaining 11 were discarded due to missing data.

### **Statistical Analysis**

The first research question related to the relationship between psychological contract breach and job embeddedness, with consideration of the variables, was measured by means of regression analysis. Hierarchical regression analysis was conducted for the second research question to determine the effects of age (as a continuous variable), citizenship, and employment status on job embeddedness as the independent variable. The third research question considered the differences in job embeddedness with consideration of three demographic variables. The mean differences for citizenship and employment status were tested using t-tests, and the differences between age groups were determined using one-way analysis of variance (ANOVA). Only age showed a significant difference regarding job embeddedness, and only the results of the ANOVA are reported.

### **Ethical Considerations**

Ethical clearance for the study was obtained from the Ethical Committee of the University of Johannesburg. The head office and nursing managers of the hospitals also gave permission to conduct the research. Respondents were informed of the aim of the research and assured of anonymity and had to sign a consent form to participate. They were also informed that participation was voluntary, and that they could withdraw from the study at any time. No information that could identify a respondent was requested. The cleaned-up data (following questionnaires checked for completeness at the end of each session, and excluding questionnaires with missing values on the constructs) were stored on a password-protected electronic file, and results were reported to those hospitals and respondents who had requested feedback.

## Results

The results of the descriptive statistics and correlations of the variables are presented in Table 1. The results showed a statistically significant negative association between psychological contract breach and job embeddedness.

**Table 1:** Pearson moment correlation between all the variables

	<b>Job embeddedness</b>	<b>Age</b>	<b>Employment status</b>	<b>Citizen status</b>	<b>Breach</b>
Job embeddedness					
Age	.194*				
Employment status	.054	.008			
Citizen status	.010	.407**	.521**		
Breach	-.546**	-.020	-.047	.041	
M	3.38	42.36	0.80	0.86	2.29
SD	0.68	11.82	0.40	0.35	0.86

\* Correlation is significant at the 0.01 level

\*\* Correlation is significant at the 0.001 level

The first and second research questions, the effect of the variables on job embeddedness as an independent variable (not considering psychological contract breach), was answered by conducting hierarchical regression analysis to measure job embeddedness. The results are summarised in Table 2.



**Table 2:** Hierarchical regression analysis of the effects of all variables on job embeddedness as a dependent variable

Model		Unstandardised coefficients		Standardised coefficients	T	Sig.	Correlations		
		B	Std. error	Beta			Zero-order	Partial	Part
1	(Constant)	3.285	.186		17.663	.000			
	Age	.015	.004	.261	3.543	.000	.194	.230	.230
	Employment status	.233	.133	.138	1.755	.081	.054	.116	.114
	Citizen status	-.323	.168	-.166	-1.924	.056	.012	-.128	-.125
2	(Constant)	4.311	.188		22.901	.000			
	Age	.013	.004	.223	3.595	.000	.194	.234	.196
	Employment status	.131	.112	.078	1.173	.242	.054	.078	.064
	Citizen status	-.189	.142	-.097	-1.338	.182	.012	-.089	-.073
	Breach	-.423	.043	-.534	-9.750	.000	-.546	-.547	-.531

The demographical variables were entered in Step 1, which explained 6% of the variance in job embeddedness. In Step 2, psychological contract breach was entered into the equation, which explained 28% of variance in job embeddedness after controlling for age, employment status, and citizenship. Psychological contract breach had a statistically significant negative relationship with job embeddedness ( $\beta = -.534$ ;  $p < .001$ ). In the final model, only age ( $\beta = .223$ ;  $p < .001$ ) as a control variable was statistically significant compared to employment status and citizenship.

The third research question related to the differences in the relationship between psychological contract breach and job embeddedness regarding the demographic variables age and citizenship. The only statistically significant difference was found between the age groups of 50–59 and 30–39 years ( $p < .05$ ) (See Tables 3 and 4).

**Table 3:** ANOVA results for the different age groups' job embeddedness

	Sum of squares	Df	Mean square	F	Sig.	Eta squared
Between groups	4.652	3	1.551	3.426	.018	.04
Within groups	92.339	204	.453			
Total	96.992	207				

**Table 4:** Post hoc test (Tukey HSD) for different age groups' job embeddedness

Age (4 categories)		Mean	Mean difference	Std. error	Sig.
29 years and younger	30 to 39 years	3.6356	.14117	.14389	.760
	40 to 49 years	3.8589	-.08212	.15009	.947
	50 to 59 years	4.0225	-.24568	.15062	.363
30 to 39 years	29 years and younger	3.6356	-.14117	.14389	.760
	40 to 49 years	3.8589	-.22330	.12224	.264
	<b>50 to 59 years</b>	4.0225	<b>-.38685*</b>	<b>.12288</b>	<b>.010</b>
40 to 49 years	29 years and younger	3.6356	.08212	.15009	.947
	30 to 39 years	3.8589	.22330	.12224	.264
	50 to 59 years	4.0225	-.16356	.13009	.591
50 to 59 years	29 years and younger	3.6356	.24568	.15062	.363
	<b>30 to 39 years</b>	3.8589	<b>.38685*</b>	<b>.12288</b>	<b>.010</b>
	40 to 49 years	4.0225	.16356	.13009	.591

Table 3 shows the eta squared as .04, which can be considered a relatively small effect size (Cohen 1988). Table 4 shows that the age group 50–59 years was found to perceive higher (mean = 4.014) levels of job embeddedness than the other groups. The age group 30–39 years had the lowest job embeddedness (mean = 3.6356); thus, this age group

did not perceive high levels of job embeddedness. No statistically significant differences were found for employment status or citizenship.

## Discussion

The first research question concentrated on the relationship between psychological contract breach and job embeddedness. A significant negative relationship was found between psychological contract breach and job embeddedness; thus, the greater the breach is, the lower the job embeddedness of nurses will be. This result supports the argument that breach is associated with negative outcomes such as turnover intent (Clinton and Guest 2014; Rodwell and Ellershaw 2016), early retirement (Dantas and Ferreira 2015), and lower job satisfaction (McCabe and Sambrook 2013; Trybou et al. 2016). No previous research was found on the effect of psychological contract breach on job embeddedness. This result was however expected, as previous studies have indicated that psychological contract breach increases turnover (Clinton and Guest 2014; Rodwell and Ellershaw 2016) and turnover intentions (Clinton and Guest 2014; Robinson and Rousseau 1994). Psychological contract breach is also related to a decrease in productivity, poorer job performance, an increase in absenteeism (Conway and Briner 2005), lower job satisfaction (Robinson and Rousseau 1994; Rodwell and Ellershaw 2016; Rodwell and Gulyas 2013), less trust (Robinson and Rousseau 1994), and lower organisational commitment (McCabe and Sambrook 2013; Robinson and Rousseau 1994; Rodwell and Ellershaw 2016). Although the focus of the present study was not on measuring turnover or turnover intentions, the concept of job embeddedness has shifted the traditional way of thinking from why employees leave to what makes them want to stay (Mitchell et al. 2001). The findings therefore may inform organisations' retention strategies. The results of the present study show that fulfilling the psychological contract may make a significant contribution to retention of staff by increasing their job embeddedness.

The study further found (with the second research question) that age was the only variable that had a significant effect on the relationship between psychological contract breach and job embeddedness. Neither employment status nor citizenship had a statistically significant effect on the prediction of job embeddedness.

The third research question focused on the effect of age, citizenship, and employment status on job embeddedness. Only age showed a significant effect on this relationship: a small effect for the age group 50–59 years and a large effect for the age group 30–39 years. This result shows that older professional nurses are more likely to experience higher levels of job embeddedness despite the presence of psychological contract breach. This may be because older nurses may be more established in their jobs and communities, making it more likely that they will stay with their employers. They may also be less likely to take the risk of relocating or pursuing jobs abroad because they have long-standing and deep connections within their communities.

The results are aligned with the argument of Bal et al. (2008) that younger people are more sensitive to a breach, and Ng and Feldman's (2009) view that older employees are less sensitive to psychological contract breach. These results are in contrast with Reitz's (2014) finding that older nurses are less likely than younger ones to remain with an employer when they experience a breach of the psychological contract. More research is needed to gain clarity in this regard. However, the present study's finding that older nurses, especially those close to retirement, may prefer to stay with an employer to avoid the upheaval of changing employers and losing pension benefits, but may then show decreased performance, become demotivated, and opt for early retirement, is aligned with the opinion of Dantas and Ferreira (2015).

## Limitations and Recommendations for Future Research

A limitation of the study is that the data were gathered only from a sample of private hospitals. When considering the significant number of nurses in the public sector (government hospitals and municipal and provincial clinics), the results cannot be regarded as representative of the broader professional nursing population in South Africa. The use of non-probability (purposive) sampling can be regarded as another limitation, as random sampling may yield a sample of respondents with different views. It is suggested that future studies obtain data from government hospitals, as a significant proportion of nurses works in this sector. Aside from government healthcare institutions, large numbers of nurses work in doctors' private practices and pharmacies, and future research should also include these nurses to gain a better understanding of the phenomenon under study. When respondents do not specify their professional qualification (in this case 3.9% of the participants), it remains a grey area as to whether they were professional nurses or nursing assistants/nurse aids.

In the present study, only age, employment status, and citizenship were used as variables in the examination of the relationship between psychological contract breach and job embeddedness. Future research could consider entering variables such as psychological contract violation, intention to quit, and organisational commitment, organisational culture, and work identity into the equation to determine their effects on job embeddedness.

Professional nurses' relationship status and family responsibilities may be of special importance, as the concept of job embeddedness includes off-the-job aspects. It is therefore suggested that future studies utilise on-the-job and off-the-job embeddedness as discrete dependent variables. This may provide better insight into how psychological contract breach affects these dimensions of nurses' job embeddedness.

The present study focused on the effect of psychological contract breach on job embeddedness. Future research could investigate the effect of fulfilment of the psychological contract on job embeddedness.

## Implications for Employers

Employers of nurses and industry stakeholders (investors, shareholders, sponsors, and business partners) should be aware that professional nurses are sensitive to their psychological contracts being fulfilled, and that a breach of this contract may lead to nurses leaving the organisation. Retention strategies to build capacity in nursing in sub-Saharan Africa and developing countries that cannot afford to lure nurses with lucrative packages should therefore include fulfilment of the psychological contract they enter with their nurses.

## Conclusion

Returning to the aim of the study, psychological contract breach has a negative effect on the job embeddedness of professional nurses. It was also found that older professional nurses experience higher levels of job embeddedness compared to younger nurses. Considering that South Africa already has a shortage of nurses and that wealthier countries are luring professional nurses due to a worldwide shortage of nurses, thereby causing a loss of local expertise, it is important that organisations in this industry pay heed to fulfilling the psychological contract they enter into with nurses as part of their retention strategy.

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## Competing Interests

The authors declare that they have no financial or personal relationships that may have inappropriately influenced them in writing this article.

## Author's Contribution

The first author conducted the research project. All authors contributed to the conceptualisation and writing of the article.

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