




Testing a model of turnover intention: Lecturers at the University of Namibia



Authors:

Wesley R. Pieters^{1,2} 
Ebben van Zyl² 
Petrus Nel² 

Affiliations:

¹Department of Human Sciences, Psychology Section, Faculty of Humanities and Social Sciences, University of Namibia, Windhoek, Namibia

²Department of Industrial Psychology, Faculty of Economic and Management Sciences, University of the Free State, Bloemfontein, South Africa

Corresponding author:

Wesley Pieters,
wpieters@unam.na

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Orientation: Institutions of higher learning lose talented academics to other educational institutions or organisations within Namibia and other countries. In order for higher educational institutions to achieve academic excellence, they need competent and satisfied lecturers.

Research purpose: This study investigates the relationship between basic psychological need satisfaction, organisational commitment, job embeddedness, work engagement and turnover intention of lecturing staff.

Motivation for the study: Academic institutions neglect to facilitate changes with the needed support, impacting negatively lecturers' work-related attitudes and their intention to stay.

Research approach/design and method: A questionnaire was used to collect the data, and estimates of reliability, confirmatory factor analyses, goodness-of-fit statistics, Pearson's product-moment correlation and structural equation modelling (SEM) were applied to analyse the data ($n = 242$).

Main findings: Using SEM, four different paths were found in the model, which explained how the variables collectively impact turnover intention.

Practical/managerial implications: Lecturers should be included in decision-making, should work in a pleasant working environment and be given training opportunities to develop. In order to ensure that institutions reach their goals, job satisfaction needs to be assessed regularly to ensure that lecturers are satisfied, committed and willing to contribute to the success of the organisation.

Contribution/value-add: This study will add to the knowledge within Industrial/Organisational Psychology and guide interventions to retain lecturing staff at Namibian institutions of higher learning.

Keywords: basic psychological need satisfaction; organisational commitment; job embeddedness; work engagement; turnover intention.

Introduction

In order to maintain core institutional goals with regard to education, research and administration, careful human resource management is required to maintain successful academic leadership (Barkhuizen & Rothmann, 2006). To enhance performance, it is important to understand the workforce and find ways to strategically manage these significant human resources. Understanding what influences satisfaction and creates discontent amongst academics is critical when trying to cultivate and sustain these scarce resources. No academic institution can function without academics, which include lecturers, senior lecturers or professors (Wai, Dandar, Rodesevich, Brubaker, & Kuo, 2014). Considering how some disciplines need specialists or academics with vast experience, it is vital to develop academics and ensure that they will be able to effectively reach the goals of their tertiary institutions (Wai et al., 2014). Turnover is preceded by turnover intention.

Turnover intention can be defined as the intention of effective employees, which think about leaving their current organisation to work for another organisation (Mensele & Coetzee, 2014). It was noted that turnover intention is a strong antecedent of actual turnover (Medina, 2012). The intention to leave can be because of positive or negative changes within the organisation.

Zhao et al. (2012) emphasised that previous literature on turnover intention has focused mostly on job attitudes and job alternatives to explain turnover intention. Looking at the combined effect

of various variables, such as basic psychological need satisfaction, organisational commitment, job embeddedness and work engagement, this study attempts to explain turnover intention in more detail and add to the understanding thereof within Namibia.

Data were collected from lecturing staff working at the University of Namibia (UNAM). It is the largest and leading national institute of higher learning in Namibia, having also received a Golden Arrow award in 2006 for the best higher education institution in Namibia. In 2017, UNAM celebrated its 25th year of existence, educating students from 43 different countries around the world, having a student population of 24 759 and having graduated 37 085 students from different disciplines (www.unam.edu.na).

Purpose

This study aims to determine by means of a non-experimental research design whether basic psychological need satisfaction, organisational commitment, job embeddedness and work engagement have an effect on the turnover intention of lecturing staff at UNAM. Considering how institutions are changing and the impact on staff members, as explained by the literature, this study investigates how the turnover intention of lecturing staff is influenced by these variables.

Literature review

Turnover intention

Organisations constantly need new employees but fail to satisfy the needs of these employees (Sturges & Guest, 2001). Many tertiary institutions are employing recent graduates; these institutions do not know how to retain and keep these graduates committed and are likely to spend a large amount of money on the replacement and retraining of new academic staff members.

High staff turnover and brain drain have been identified as some of the major problems experienced by African universities. Skilled and competent academic staffs are leaving institutions of higher learning to work outside their country of birth and outside Africa (Nwadiani & Akpotu, 2002; Sawahel, 2016; Theron, Barkhuizen, & du Plessis, 2014).

Research has been conducted on turnover intention by different researchers and in different work specialisations. As indicated by Van Schalkwyk, Du Toit, Bothma and Rothmann (2010), with the ever-growing number of unemployed people and a high level of unskilled workforce, skills shortage remains a challenge for countries to compete regionally and globally. In order to have the best teaching, research and publication reputation, the university management needs to attract and retain the top talent. Qualified and experienced academics are vital for achieving strategic goals and it is very important to retain them (Bezuidenhout & Cilliers, 2011).

The difference between turnover intention and actual turnover needs to be noted. It is emphasised that the intention to leave is an effective predictor of actual turnover (Kassing, Piemonte, Goman, & Mitchell, 2012). Measuring turnover intention will give a clear picture of actual turnover in the future. Turnover intention is a voluntary occurrence when an employee contemplates leaving his or her current job for another, and in many instances it involves job hunting.

Basic psychological need satisfaction

Basic psychological needs can be defined by looking at three components, namely, the need for autonomy, relatedness and competence (Kovjanic, Schuh, & Jonas, 2013). The basic psychological needs have been explained by the self-determination theorists (Ryan & Deci, 2000) as comprising three components: autonomy, belongingness (relatedness) and competence (ABC). These components influence motivation.

Autonomy is concerned with the experience of choice and psychological freedom when carrying out an activity (Verstuyf, Vansteenkiste, Soenens, Boone, & Mouratidis, 2013). Belongingness or relatedness is the need to feel close, to be valued by people, as well as experience a sense of belonging with peers, family and the larger community (Verstuyf et al., 2013). Competence is defined as the act, 'know-how' and skills to effectively execute work duties within a specific work context (Grobler, Warnich, Carrell, Elbert, & Hatfield, 2011).

Organisational commitment

Organisational commitment relates to how the employee identifies with the organisation, how loyal he or she is towards the organisation and the involvement experienced within the organisation (Lok, Westwood, & Crawford, 2005). Organisational commitment is also a multidimensional variable.

Organisational commitment consists of continuance, normative and affective commitment (Meyer, Allen, & Smith, 1993). Continuance commitment can be attributed to employees' commitment owing to the cost associated with leaving the organisation being too high and, as a result, their intention to stay is strengthened. Some employees experience normative commitment, staying with the organisation owing to a perceived obligation to remain with the organisation based on other sacrifices undergone by the organisation on behalf of the employee. The type of commitment that employers would like to foster is affective commitment, where the employees stay with the organisation because they experience an emotional attachment towards it and want to actively contribute to its success (Meyer et al., 1993).

Job embeddedness

Job embeddedness, as developed by Mitchell, Holtom, Lee, Sablynski and Erez (2001), indicated that it is important to

look at why employees stay with an organisation. In this way the organisation can try and enhance these attitudes, and improve the working conditions that keep employees at the organisation.

Job embeddedness studies explore how employees fit into the organisation and community, their links (relationships with other people within the organisation and community) and the sacrifices (cost of leaving the job and community) (Holtom & Inderrieden, 2006; Mensele & Coetzee, 2014). The components of job embeddedness will be defined next.

Links can be defined as the formal and informal connections between the employee and institution or the employee and other people in the institution. Fit is the perceived compatibility or comfort with an organisation and community. Sacrifice can be defined by the perceived cost of material and psychological benefits that come with the job and when deciding to resign could result in the loss of these benefits (Holtom & Inderrieden, 2006).

Work engagement

Employees spend much time at work; however, being at work does not necessarily mean that they are contributing to the effectiveness of the organisation. It is not only important for employees to be present at work but also that they are engaged in their work. Work engagement is characterised by three constructs, namely, vigour, dedication and absorption (Bakker, Schaufeli, Leiter, & Taris, 2008). To understand work engagement better, the next section is aimed at defining each dimension.

Vigour is characterised by the feelings of perseverance, high levels of energy, mental flexibility, putting in extra effort in the work and employees who continue with their work task even when it might become difficult (Schaufeli, 2014; Stander & Rothmann, 2010). Dedication is related to being strongly involved in work, coupled with a sense of significance, enthusiasm, inspiration, challenge and pride (Bakker, 2011; Bakker & Demerouti, 2008; Schaufeli, 2014). Absorption refers to feelings of being engrossed in one's work, fully concentrated, happy, and where time passes quickly and the person finds it difficult to detach himself or herself from the work (Bakker & Demerouti, 2008; Schaufeli, 2014). Basic psychological needs such as satisfaction, organisational commitment, job embeddedness and work engagement are related to each other. The next section will discuss how the variables relate to turnover intention.

Turnover intention, basic psychological need satisfaction, organisational commitment, job embeddedness and work engagement

Lack of satisfaction in terms of autonomy and relatedness (basic psychological need satisfaction) has a significant impact on employees' intention to leave (turnover intention)

(Rothmann, Diedericks, & Swart, 2013). When employees do not experience satisfaction in being able to influence their work roles and how to execute their duties, and do not have a sense of belonging to the organisation, they are more likely to want to leave.

Organisational commitment relates negatively to turnover intention. The more committed employees become, the lower the level of turnover intention (Kim, Im, & Hwang, 2015). Research has found a link between opportunities for career growth, organisational commitment and turnover intention (Nouri & Parker, 2013).

According to research conducted in South Africa, work engagement related negatively to turnover intention (Bothma & Roodt, 2013). Cole (2014) found a significant negative relationship between engagement and intention to leave.

According to the expectancy theory, human behaviour is goal directed and humans behave consciously, being aware of how their actions might have an impact on their goals (Lunenburg, 2011; Parijat & Bagga, 2014). The degree to which employees will be motivated will depend on how effectively the organisation provides the necessary resources to help employees attain those goals that they have set for themselves.

Research design

Research approach

This study used a quantitative research, cross-sectional design with a questionnaire to collect relevant information about the participants. The study looked at lecturing staff from all campuses of the UNAM across the country. The questionnaire was hand-delivered and participants completed the questionnaire in their spare time. The researchers collected the completed questionnaires a few days after distributing the questionnaires.

Participants

This study targeted all lecturing staff working at UNAM, making use of convenience sampling, meaning that all lecturers who were willing and available to participate were included in the study (Creswell, 2003).

The total number of academics employed at the UNAM is 771. This is not a true reflection of only the lecturing staff members (teaching) because it includes librarians, technicians, lab assistants, tutors and non-teaching academics. A total of 300 questionnaires were distributed, of which 242 questionnaires were completed (with a response rate of 81%) and thus included in the analyses.

The sample consisted of 242 lecturing staff members (114 men and 128 women); the rest of the details are presented in Table 1.

TABLE 1: Biographical details of the study participants.

Description	Frequency	Percentage
Sex		
Male	114	47.1
Female	128	52.9
Age (years)		
24–28	12	5.0
29–31	10	4.1
32–35	31	12.8
36–40	37	15.3
41–45	23	9.5
46–50	31	12.8
51 and older	97	40.1
Missing values	1	0.4
Tenure (UNAM)		
Less than 1 year	25	10.3
1–2 years	31	12.8
3–4 years	31	12.8
5–6 years	55	22.7
7–8 years	16	6.6
9 years and more	81	33.5
Missing values	3	1.2
Marital status		
Single	75	31.0
Married	148	61.2
Divorced	11	4.5
Widowed	8	3.3
Highest qualification obtained		
Honours degree	29	12.0
Master's degree	129	53.3
PhD	72	29.7
Postdoctoral	12	5.0
Rank		
Assistant lecturer	26	10.7
Lecturer	156	64.5
Senior lecturer	36	14.9
Associate professor	15	6.2
Full professor	9	3.7
Number of dependants		
None	56	23.1
1–2	100	41.3
3–4	66	27.3
5–6	12	5.0
7–9	5	2.1
10 and more	2	0.8
Missing values	1	0.4
Total	242	100

Measuring instruments

The *biographical questionnaire* was developed by the researchers. It was used to obtain information regarding lecturers' sex, age and tenure at UNAM, highest qualification obtained, marital status, number of dependants (children) and position within the institution.

The *Work-Related Basic Psychological Need Satisfaction Scale (W-BNS)* was developed by Van den Broeck, Vansteenkiste, De Witte and Lens (2008). This questionnaire consists of 16 items and uses a 5-point response scale (1 *strongly disagree* to 5 *strongly agree*). It assesses the need for autonomy, competence and relatedness or belonging. Rothmann et al.

(2013) found this instrument to be reliable within a South African context (autonomy 0.78, competence 0.82 and relatedness 0.86); similarly Pieters (2017) found an acceptable reliability for competence (0.83) and relatedness (0.96) in a Namibian context.

The *Organisational Commitment Questionnaire (OCQ)* was developed by Allen and Meyer (1990) to assess employees' level of commitment to the organisation in these different categories and has been used. This questionnaire consisted of 24 items (eight items for each scale). The version developed in 1997 only made use of 18 items (six items for each scale). Organisational commitment was measured by using the organisational commitment questionnaire, consisting of 18 items (Brown, 2003). This instrument has been used within the Namibian context and recorded acceptable levels of reliability (affective commitment 0.71, normative commitment 0.71 and continuance commitment 0.71) (Pieters, 2015).

The *Job Embeddedness Scale (JES)* was developed by Mitchell et al. (2001). It focuses on three components, namely, organisational links, organisational fit and organisational sacrifice (on the job and within the community). It is a self-report instrument measuring links, fit and sacrifice. The questionnaire has a 6-point response scale, from 1 (*strongly disagree*) to 6 (*strongly agree*). Ferreira and Coetzee (2013) recorded Cronbach's alpha of 0.84 for organisational fit, 0.77 for organisational links and 0.87 for organisational sacrifice. This study will only be focusing on the community dimension of job embeddedness. It was also noted that the organisational dimensions (fit, links and sacrifice) are better predictors of employee retention when compared with the community dimensions (fit, links and sacrifice) (Takawira, 2012).

The *Utrecht Work Engagement Scale (UWES)* was developed by Schaufeli and Bakker (2004). This questionnaire includes three scales, namely, vigour, dedication and absorption. This is a self-report questionnaire with a response scale ranging from 0 (*never*) to 7 (*always*), with 17 items across the different dimensions. The UWES has been used in the Namibian context and recorded Cronbach's alphas of acceptable standards (0.78, 0.89 and 0.91) (Janik, 2012).

The *Turnover Intention Scale (TIS – six items)* developed by Bothma and Roodt (2013) was used to measure turnover intention. This instrument measures employees' intention to either stay with the organisation or leave the organisation. It uses a 7-point response scale, ranging from 1 (*never/to no extent*) to 7 (*most of the time/to a large extent*). Bothma and Roodt (2013) used the shortened version (TIS-6) and found a Cronbach's alpha of 0.80.

Data analysis

As part of the *descriptive statistics*, frequency distribution was used to present the results regarding the number and percentage of participants per variable and in each category

regarding the sex, age, tenure, marital status, number of children and rank/position.

Inferential statistics help with establishing relationships amongst variables and to draw conclusions. In this study, estimates of reliability, goodness-of-fit statistics and Pearson's product-moment correlation was used to analyse the data (SPSS, 2016). Pearson's product-moment correlation was used to determine the relationship between variables and is presented by r .

Goodness-of-fit can be defined as the degree to which the results obtained in the survey can be relied on to make projections correctly and also how well it matches the expected outcome based on literature/hypothesised distribution (Urda, 2010). Hu and Bentler (1999) suggested using the two-index presentation strategy. This would include making use of a combination of fit statistics to assess goodness-of-fit more effectively. The following goodness-of-fit statistics have been applied: Satorra–Bentler chi-square (S-B χ^2), standardised root mean residual (SRMR), root mean square error of approximation (RMSEA) and comparative fit index (CFI).

Confirmatory factor analysis is a way to specify which factors load onto a specific factor; this is usually strongly guided by theory and literature (Templin, 2011). The measurement models for this study were tested by using Mplus version 7.4 (Muthen & Muthen, 2015). After specifying these models, each model will be tested by looking at the goodness-of-fit statistics. Confirmatory factor analysis is also regarded as a deductive process, testing hypotheses from theory. It also allows for second-order latent variable examination and allows for testing hypotheses related to construct validity.

In this study, variance-based structural equation modelling (SEM) was employed using SmartPLS (computer software) to evaluate the accuracy of the proposed theoretical model. Structural equation modelling has also been referred to as a combination of exploratory factor analysis and multiple regression (Schreiber, Stage, King, Nora, & Barlow, 2006). Making use of partial least squares (PLS) will allow for exploration and prediction (Henseler, Ringle, & Sinkovics, 2009).

Ethical considerations

Ethical clearance to conduct the study was obtained from the University of the Free State (clearance No. UFS-HSD2015/0562).

Results

Descriptive statistics and correlations

The Cronbach's alpha and correlations were analysed and are reported in Table 2. Most of the variables are positively related with each other (basic psychological need satisfaction [BPNS], organisational commitment [OC], job embeddedness [JE] and work engagement [WE]). It was found that most of these variables related negatively to turnover intention. These relationships are depicted in Table 2.

Goodness-of-fit statistics

The work-related basic psychological need satisfaction scale is regarded as a valid measure, reporting an acceptable fit for CFI (0.915), an adequate fit for RMSEA (0.063) and an acceptable fit for SRMR (0.060), as used in this study. The requirements for CFI (< 0.9), RMSEA ($0.05 < x > 0.08$) and SRMR ($0.05 < x > 0.08$) have been met for the work-related

TABLE 2: Descriptive statistics and Pearson's correlation coefficient.

Dimension/Variable	α	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.
Basic psychological need satisfaction (autonomy)	0.78	–												
Basic psychological need satisfaction (relatedness)	0.81	0.28*	–											
Basic psychological need satisfaction (competence)	0.81	0.21*	0.23*	–										
Affective commitment	0.80	0.47**	0.35**	0.25*	–									
Continuance commitment	0.75	-0.19*	-0.05*	-0.14*	-0.13*	–								
Normative commitment	0.77	0.26*	0.16*	0.10*	0.61**	0.14*	–							
Job embeddedness (organisational fit)	0.90	0.48**	0.35**	0.26*	0.69**	-0.08*	0.52**	–						
Job embeddedness (organisational links)	0.71	0.14*	0.26*	0.18*	0.33**	-0.07*	0.34**	0.37**	–					
Job embeddedness (organisational sacrifice)	0.87	0.31**	0.17*	0.13*	0.50**	0.03	0.44**	0.52**	0.19*	–				
Work engagement (vigour)	0.81	0.17*	0.28*	0.28*	0.40**	-0.20*	0.32**	0.35**	0.34**	0.19*	–			
Work engagement (dedication)	0.81	0.24*	0.25*	0.23*	0.49**	-0.12*	0.42**	0.45**	0.30**	0.31**	0.81**	–		
Work engagement (absorption)	0.82	0.12*	0.20*	0.20*	0.38**	-0.11*	0.35**	0.39**	0.35**	0.22*	0.78**	0.77**	–	
Turnover intention	0.69	-0.35**	-0.15*	-0.18*	-0.49**	0.15*	-0.36**	-0.41**	-0.10*	-0.37**	-0.37**	-0.43**	-0.32**	–

*, Statistically significant: $p \leq 0.05$.

*, Practically significant correlation (medium effect): $0.30 \leq r \leq 0.49$.

** , Practically significant correlation (large effect): $r \geq 0.50$.

basic psychological need satisfaction questionnaire. Looking at the organisational commitment questionnaire, CFI (0.784), RMSEA (0.095) and SRMR (0.115) indicate some concerns regarding the validity of this instrument. Comparative fit index for this instrument is below the required 0.9, RMSEA is within the range of adequate fit (0.05 <x> 0.08) and the SRMR is above the acceptable fit levels (0.05 <x> 0.08). For the job embeddedness scale, CFI (0.799), RMSEA (0.070) and SRMR (0.090) were reported. The job embeddedness scale meets one of the estimates; CFI being slightly lower than 0.9, the RMSEA being regarded as an adequate fit (0.05 <x> 0.08) and SRMR slightly above .08 which is also regarded to be adequate. The RMSEA (0.079) for the Utrecht Work Engagement Scale indicated an adequate fit (0.05 <x> 0.08), making this a valid instrument as used in this study. Comparative fit index (0.889) was reported to be slightly below the prescribed parameters (< 0.9). The SRMR is regarded as acceptable at 0.067 (0.05 <x> 0.08). For the turnover intention scale, the following results were found: CFI (0.962), RMSEA (0.074) and SRMR (0.052), making this a valid instruments as used in this study. The CFI is regarded as an acceptable fit (< 0.90), RMSEA as an adequate fit (0.05 <x> 0.08) and SRMR as an acceptable fit (0.05 <x> 0.08).

Based on the guidelines for CFI and RMSEA, the organisational commitment and job embeddedness instruments do not meet all the fit requirements and thus the interpretations of the results of these instruments need to

bear this in mind. The work-related basic psychological needs satisfaction questionnaire, the work engagement scale and the turnover intention scale meet the expected requirements of CFI (< 0.9), RMSEA (0.05 <x> 0.08) and SRMR (0.05 <x> 0.08), with regard to goodness-of-fit, enhancing the reliability of the results.

Structural equation modelling

The conceptual model has been analysed using PLS-based SEM (partial least squares method). Paths 1–4 will be explained and are presented in Figure 1. Partial least square is used to assess the psychometric properties of the measurement model and estimates the parameters of the structural model. Partial least square uses a two-step process (Chin, 1998). This process suggests that the outer model (measurement model) first needs to be assessed for reliability and validity before the inner model (structural model) can be assessed. The outer model is related to the loading of each dimension to each variable. The inner model is related to the direction and strength of the relationship between the variables. The results related to the PLS modelling will be presented in the next section, first discussing the outer model followed by the inner model.

The outer model

All variables in the study met the requirements for composite reliability (above 0.6). When assessing the outer model,

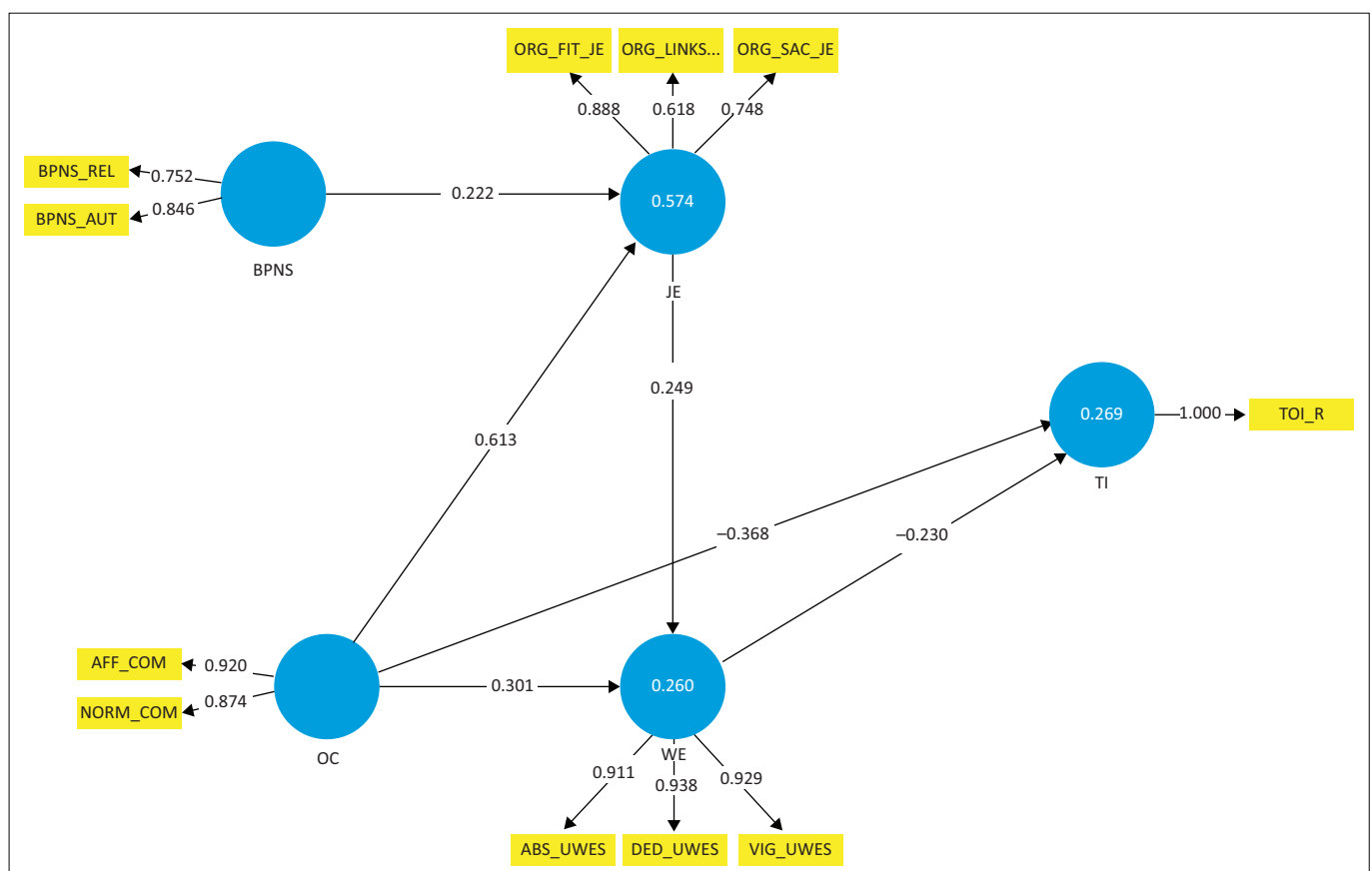


FIGURE 1: The final model.

during the first analysis, it was noted that only BPNS did not meet the expected average variance expected/extracted (AVE). The expected AVE should be above 0.50 and as indicated in Table 4, the AVE for BPNS is 0.492, whilst the other variables met the required AVE. A low AVE occurs as a result of low or insignificant loadings by dimensions. This will be explored further by investigating the low or insignificant loadings of these variables.

Based on the outer model loadings, competence (BPNS, 0.611) was found to have the lowest loading towards BPNS (Table 5) and it was decided to test if the AVE would increase if competence (BPNS) was excluded from the analyses. It was also noted that continuance commitment (OC) recorded an insignificant loading as indicated in Table 5 ($p = 0.2410$). Continuance commitment did not meet the expected level of significance of less than 0.01 and thus was removed from the next round of analysis.

The model was tested again without competence (BPNS) and continuance commitment (OC). Removing competence (BPNS) increased the AVE of BPNS from 0.492 to 0.639

(Table 6). Without continuance commitment (OC), the AVE of OC also improved from 0.05333 to 0.804, with the composite reliability changing from 0.659 to 0.892. The composite reliability (internal consistency reliability) ranges between 0.78 and 0.95, which exceeds the recommended threshold of 0.60. The average variance extracted/explained was also found to be above the required level of 0.50, ranging between 0.58 and 0.86. The composite reliability and AVE and the dimensions of each variable with significant loadings are reported in Table 7. The following AVE values have been reported: BPNS (0.639), JE (0.575), OC (0.804) and WE (0.858). The results presented in Table 7 indicated that all variables met the requirements for reliability and validity.

The inner model

Based on the analysis of the inner model (round 1, Table 7) it was found that the path between BPNS and JE was significant (0.0000); the path between OC and JE was significant (0.0000), the path between OC and TI was significant (0.0010), the path between OC and WE was significant (0.0000), the path between WE and JE was significant (0.011) and the path

TABLE 3: Goodness-of-fit statistics.

Fit statistics	BPNS	OC	JE	WE	TI
S-B χ^2	197.757	422.096	1275.037	290.796	20.696
Df	101	132	579	116	9
RMSEA	0.063 (0.050; 0.076)	0.095 (0.085; 0.106)	0.070 (0.065; 0.076)	0.079 (0.068; 0.090)	0.074 (0.031; 0.116)
CFI	0.915	0.784	0.799	0.889	0.962
SRMR	0.060	0.115	0.090	0.067	0.052

S-B χ^2 ; Satorra-Bentler chi-square; df = degree of freedom; RMSEA = root mean square error of approximation; CFI = comparative fit index; SRMR = standardised root mean residual; BPNS, basic psychological need satisfaction; OC, organisational commitment; JE, job embeddedness; WE, work engagement; TI, turnover intention

TABLE 4: Composite reliability, Cronbach's alpha and average variance expected/extracted, outer model (Round 1).

Variables	Cronbach's alpha	rho_A	Composite reliability	Average variance extracted
BPNS	0.488	0.508	0.742	0.492
JE	0.626	0.718	0.797	0.575
OC	0.437	0.743	0.659	0.533
TI	1	1	1	1
WE	0.917	0.932	0.948	0.858

BPNS, basic psychological need satisfaction; OC, organisational commitment; JE, job embeddedness; WE, work engagement; TI, turnover intention.

TABLE 5: Loadings per dimension towards each variable (Round 1).

Dimension to variable	Original sample (O)	Sample mean (M)	Standard deviation (SD)	T Statistics (O/STDEV)	p
ABS_UWES \leq WE	0.911	0.91	0.016	58.654	0.0000
AFF_COM \leq OC	0.927	0.927	0.008	120.279	0.0000
BPNS_COMP \leq BPNS	0.611	0.612	0.077	7.901	0.0000
BPNS_REL \leq BPNS	0.696	0.687	0.075	9.276	0.0000
CONT_COM \leq OC	-0.131	-0.129	0.111	1.173	0.2410
DED_UWES \leq WE	0.938	0.937	0.01	93.399	0.0000
NORM_COM \leq OC	0.85	0.847	0.033	25.786	0.0000
ORG_FIT_JE \leq JE	0.894	0.893	0.016	56.96	0.0000
ORG_LINKS_JE \leq JE	0.566	0.565	0.079	7.166	0.0000
ORG_SAC_JE \leq JE	0.779	0.775	0.042	18.747	0.0000
TOI_R \leq TI	1	1	0	-	-
VIG_UWES \leq WE	0.93	0.929	0.015	63.988	0.0000
BPNS_AUT \leq BPNS	0.786	0.783	0.049	16.068	0.0000

Based on the results from Table 5, it can be noted that the only insignificant loading was OC and thus this was removed from the second round of analysis.

ABS_UWES \leq WE, absorption to work engagement; AFF_COM \leq OC, affective commitment to organisational commitment; BPNS_COMP \leq BPNS, competence to basic psychological need satisfaction; BPNS_REL \leq BPNS, relatedness to basic psychological need satisfaction; CONT_COM \leq OC, continuance commitment to organisational commitment; DED_UWES \leq WE, dedication to work engagement; NORM_COM \leq OC, normative commitment to organisational commitment; ORG_FIT_JE \leq JE, organisational fit to job embeddedness; ORG_LINKS_JE \leq JE, organisational links to job embeddedness; ORG_SAC_JE \leq JE, organisational sacrifice to job embeddedness; TOI_R \leq TI, turnover intention; VIG_UWES \leq WE, vigour to work engagement; BPNS_AUT \leq BPNS, autonomy to basic psychological need satisfaction.

between WE and TI was significant (0.0010). The following paths were found to be insignificant: the path between BPNS and TI (0.1220), the path between BPNS and WE (0.2490) and the path between JE and TI (0.4370). Significance was determined by a p -value of 0.05 and less. The insignificant paths were removed and the model was tested again; the results are presented in Table 8.

The beta path coefficients are positive amongst BPNS, OC, JE, WE and TI; the paths between OC, WE and TI are negative (Table 8). The paths reported are only those that are statistically significant at $p < 0.05$. Basic psychological need satisfaction ($\beta = 0.22, p < 0.000$) had a positive significant influence on job embeddedness. Organisational commitment ($\beta = 0.61, p < 0.000$) had a positive significant influence on job embeddedness. Job embeddedness ($\beta = 0.25, p < 0.001$) had a positive significant influence on work engagement. Organisational commitment ($\beta = 0.30, p < 0.000$) positively influenced work engagement. Organisational commitment ($\beta = -0.37, p < 0.000$) had a negative significant influence on

turnover intention. Work engagement ($\beta = -0.23, p < 0.000$) reported a negative significant influence on turnover intention.

In the final model (Figure 1), 55% ($R^2 = 0.547$) of the variance in *job embeddedness* is explained by organisational commitment and basic psychological need satisfaction, 26% ($R^2 = 0.260$) of the variance in *work engagement* is explained by organisational commitment and job embeddedness, and 27% ($R^2 = 0.269$) of the variance in *turnover intention* is explained by organisational commitment and work engagement.

Discussion

Path 1: Organisational commitment through job embeddedness and work engagement to impact turnover intention

Based on SEM it was found that organisational commitment through job embeddedness and work engagement impacted the turnover intention of lecturers. When lecturers understand that they would lose out on or when no other

TABLE 6: Outer model (Round 2).

Variable	Cronbach's alpha	rho_A	Composite reliability	Average variance extracted
BPNS	0.443	0.464	0.779	0.639
JE	0.626	0.718	0.797	0.575
OC	0.759	0.784	0.892	0.804
TI	1	1	1	1
WE	0.917	0.933	0.948	0.858

BPNS, basic psychological need satisfaction; OC, organisational commitment; JE, job embeddedness; WE, work engagement; TI, turnover intention.

TABLE 7: Inner model (Round 1).

Path between variables	Original sample (O)	Sample mean (M)	Standard deviation (SD)	T-statistics (O/STDEV)	p
BPNS \geq JE	0.211	0.212	0.052	4.067	0.0000
BPNS \geq TI	-0.111	-0.113	0.071	1.55	0.1220
BPNS \geq WE	0.081	0.077	0.07	1.154	0.2490
JE \geq TI	-0.072	-0.071	0.093	0.777	0.4370
OC \geq JE	0.559	0.557	0.048	11.541	0.0000
OC \geq TI	-0.276	-0.275	0.08	3.463	0.0010
OC \geq WE	0.443	0.441	0.058	7.666	0.0000
WE \geq JE	0.128	0.13	0.05	2.554	0.0110
WE \geq TI	-0.21	-0.211	0.061	3.447	0.0010

BPNS \geq JE, basic psychological need satisfaction to Job embeddedness; BPNS \geq TI, basic psychological need satisfaction to turnover intention; BPNS \geq WE, basic psychological need satisfaction to work engagement; JE \geq TI, job embeddedness to turnover intention; OC \geq JE, organisational commitment to job embeddedness; OC \geq TI, organisational commitment to turnover intention; OC \geq WE, organisational commitment to work engagement; WE \geq JE, work engagement to job embeddedness; WE \geq TI, work engagement to turnover intention.

TABLE 8: Inner model (Round 2).

Path between variables	Original sample (O)	Sample mean (M)	Standard deviation (SD)	T-statistics (O/STDEV)	p
BPNS \geq JE	0.222	0.228	0.053	4.162	0.0000
JE \geq WE	0.249	0.245	0.078	3.201	0.0010
OC \geq JE	0.613	0.611	0.041	14.883	0.0000
OC \geq TI	-0.368	-0.367	0.066	5.574	0.0000
OC \geq WE	0.301	0.305	0.075	3.999	0.0000
WE \geq TI	-0.23	-0.227	0.059	3.922	0.0000

BPNS \geq JE, basic psychological need satisfaction to job embeddedness; JE \geq WE, job embeddedness to work engagement; OC \geq JE, organisational commitment to job embeddedness; OC \geq TI, organisational commitment to turnover intention; OC \geq WE, organisational commitment to work engagement; WE \geq TI, work engagement to turnover intention.

TABLE 9: Variance of final model explained.

Variable	Original sample (O)	Sample mean (M)	Standard deviation (SD)	T-statistics (O/SD)	p
JE	0.547	0.552	0.044	12.455	0.0000
TI	0.269	0.272	0.053	5.067	0.0000
WE	0.260	0.265	0.051	5.086	0.0000

JE, job embeddedness; TI, turnover intention; WE, work engagement.

opportunities are available outside the organisation, they stay because of the cost associated with leaving (Allen & Meyer, 1990). Lecturers also experience a higher level of job embeddedness that entails a greater organisational fit, organisational links and organisational sacrifice. Employees experiencing organisational commitment, links and higher level of fit are likely to experience higher organisational sacrifices if they intend to leave. These sacrifices are also linked in with the side-bet theory, indicating that when employees evaluate the working environment as favourable, they are less likely to want to leave, especially taking into account the sacrifices that they would endure when leaving (Becker, 1960).

Employees who are more embedded in their jobs tend to also experience a higher level of work engagement. Job embeddedness was found to impact positively work engagement of lecturers at UNAM. Based on the Comprehensive Burnout and Engagement (COBE) model adapted from Bakker, Demerouti and Verbeke (2004), employees who are more engaged in their work and have the required resources are more likely to achieve positive organisational outcomes instead of experiencing health problems such as fatigue and exhaustion. Based on the conservation of resources theory by Hobfoll (1989), when employees build up more resources, those that have been created and maintained tend to accumulate, resulting in higher levels of engagement instead of burnout.

Those employees who do not recognise the importance of these benefits would lack in energy and experience lower levels of performance. This relationship is also explained by the side-bet theory (Becker, 1960), which posits that employees who would want to remain at the organisation would do more to avoid losing these benefits. The organisational equilibrium theory (Barnard, 1938) indicates that when there is an imbalance between outcomes and inputs, these employees would find ways to restore this imbalance. In this instance, employees who are aware of the benefits provided by the organisation will also see the need to work harder for longer to ensure that their efforts match the outcomes provided by the organisation.

Work engagement impacted the turnover intention of lecturers. The job demands-resources model (Bakker & Demerouti, 2007) indicates that the greater the match between the job demands and the job resources, the more likely employees would experience work engagement and contribute to the productivity of the organisation. When there is a mismatch between the job demands and resources, employees may experience burnout (not part of this study) and become bored or disengaged, which results in turnover intention.

Path 2: Organisational commitment through work engagement to impact turnover intention

Employees who are committed to the organisation tend to experience higher levels of work engagement (Geldenhuis, Laba, & Venter, 2014). Being aware of the benefits provided

by the organisation, with no alternative employment opportunities outside the organisation, employees understand the need to perform to avoid losing these benefits. The side-bet theory (Becker, 1960) argues that with no opportunities available outside the organisation, employees tend to stay at the organisation and work towards the success of the organisation. Trying to hold on to these benefits, employees will also become more absorbed in their work. The organisational equilibrium theory (Barnard, 1938) maintains that when there is an imbalance, employees would engage in behaviour to balance the relationship, working for longer to retain these benefits.

The job demands-resources theory (Bakker & Demerouti, 2007) posits that when employees have the required resources they would be more engaged and experience better health instead of feeling tired or exhausted. These employees identify and are involved with the organisation, which means that they are also likely to work hard for longer periods of time as they identify with it.

The link between work engagement and turnover intention has been explained in Path 1.

Path 3: Organisational commitment to impact turnover intention

The side-bet theory (Becker, 1960) demonstrated that when the organisation provides for the needs of employees and they experience normative commitment, they are likely to want to stay. As these employees would sacrifice these benefits when planning to leave, they are likely to want to remain and work towards the success of the organisation. The relationship between affective commitment and turnover intention is explained by the side-bet theory of Becker (1960).

Path 4: Basic psychological need satisfaction through job embeddedness and work engagement to impact turnover intention

Basic psychological needs impacted the job embeddedness of lecturers. The self-determination theory (Ryan & Deci, 2000) indicated that when these basic psychological needs are satisfied, employees experience motivation and identification with the organisation. Based on the side-bet theory (Becker, 1960), when the organisation satisfies the need for relatedness and enhances motivation of employees, they are likely to want to remain as they do not want to lose these benefits (organisational sacrifice).

Based on the self-determination theory (Ryan & Deci, 2000), employees who satisfy their need for autonomy are more likely to become motivated in their work, perform better and experience a greater level of organisational fit. Employees who engage in autonomous motivation are likely to be productive employees and likely to also earn the respect of their colleagues. When employees are able to satisfy their need for autonomy, they are likely to experience a higher level of self-efficacy and experience more pleasure in their work. The satisfaction of autonomy can be regarded as a

resource to help buffer against higher job demands and facilitate the execution of work-related activities. The side-bet theory (Becker, 1960) shows that when employees evaluate the working environment as favourable, they would want to stay and avoid experiencing these sacrifices.

The link between job embeddedness, work engagement and turnover intention has been explained in Paths 1 and 2.

Practical implications

To satisfy lecturers' need for autonomy, it is suggested that task groups and work groups are created where all staff members could provide their input through a departmental representative. Decisions that affect all academic staff members should be opened up for scrutiny and input at different levels of the organisation. In this way, lecturing staff may feel that their views are taken into account or that the organisation created these platforms to discuss these different views and that what academics have to say matters.

In order to improve the relationship between colleagues and supervisors, the university should promote team building and social activities. It is also suggested that clear and effective measures should be set up to deal with disputes and grievances between staff members. When colleagues and supervisors have better relationship with one another, they will be more willing to assist when asked and also be more comfortable to ask for assistance or guidance when necessary.

Lecturers should be allowed to attend training, conferences, seminars and workshops. Supervisors can facilitate the process where each employee could identify some career goals for the next year and, together with the supervisor, prioritise, budget and identify how these goals will be achieved. Allowing employees with the necessary potential and interest to act during the absence of a supervisor or manager improves the perceived competence. When tasks are delegated with the necessary autonomy and guidance, employees might improve their skills, abilities, perceived competence and self-efficacy. When employees experience a higher level of perceived competence and improved level of self-efficacy, they would also strive to work harder and want to take on more challenging tasks within the organisation.

It is also important to regularly assess the lecturers' level of job satisfaction, which was not assessed in this study. When lecturers experience lower levels of job satisfaction, they become less committed to the organisation, more disengaged and decide to leave the organisation. Identifying those factors that lecturers are satisfied or dissatisfied about will guide retention strategies and keep the top talent at UNAM. It is also recommended that the university should assess the equitable nature of salaries and benefits; this relates to internal and external equity. It is crucial to guarantee that

lecturers within the organisation are paid for what they do and that UNAM provides competitive salaries and benefits to attract and retain the top talent within the market.

Limitations and recommendations

This study was limited to only the five variables and may have excluded other environmental and individual factors that may have impacted the turnover intention. These factors may include job satisfaction that focuses on specific aspects of the job (Anjum, Fan, Javed, & Rao, 2014); work-life balance, which determines how the life of academics is impacted by their personal life or vice versa (Ajala, 2013); job demands-resources and its impact on employee well-being (Rothmann, Barkhuizen, & Tytherleigh, 2008); the self-efficacy of employees (Onyishi & Ogbodo, 2012); and burnout of academic staff members (Bakker et al., 2008). The job demands-resources theory (Bakker & Demerouti, 2007) indicates that self-efficacy, job satisfaction, work-life balance and job demands-resources may impact the level of motivation experienced by employees and how resources may impact the experience of job demands. The interaction between these factors may have impact on the level of work engagement, organisational commitment, turnover intention and burnout experienced by academics.

Considering the nature and scope of this project, it is recommended that future research includes more staff members of UNAM to ensure that the findings can be generalised to the entire UNAM academic population. Considering the relationships found between these variables and how it impacts the turnover intention, it warrants further investigation on a larger scale.

Conclusion

This study also found that basic psychological need satisfaction impacts turnover intention through job embeddedness and work engagement. Another path that was also established was the path from organisational commitment through job embeddedness and work engagement to turnover intention. Organisational commitment also impacted the turnover intention through work engagement. Organisational commitment also impacted the turnover intention directly.

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Authors' contributions

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