

**Investigating the Relationship between Social Ties and Intention
to Quit as Mediated by Job Embeddedness: A Study conducted
within the Pharmaceutical Industry**

MARGIEN ELISABETH MATTHEWS

OSTMAR002

Supervisor: Professor Anton Schlechter

A Research Report submitted in partial fulfilment for BUS5006W

Organisational Psychology Section in the School of Management Studies

Faculty of Commerce

University of Cape Town

2014

COMPULSORY DECLARATION:

This work has not been previously submitted in whole, or in part, for the award of any degree. It is my own work. Each significant contribution to, and quotation in, this research report from the work, or works of other people has been attributed, cited, and referenced.

Signature:

Signed by candidate

Signature removed

Date: 22 December 2014

The copyright of this thesis vests in the author. No quotation from it or information derived from it is to be published without full acknowledgement of the source. The thesis is to be used for private study or non-commercial research purposes only.

Published by the University of Cape Town (UCT) in terms of the non-exclusive license granted to UCT by the author.

TABLE OF CONTENTS

ACKNOWLEDGEMENTS4

ABSTRACT5

INTRODUCTION7

 Research Objectives10

LITERATURE REVIEW11

 Intention to Quit11

 Social Network Theory13

 Job Embeddedness16

 Job Embeddedness and Organisational Commitment17

 Social Ties and Job Embeddedness19

 Organisation-based Social Ties19

 Occupation-based Social Ties20

 Conceptual Model21

METHOD23

 Research Design23

 Sampling23

 Measuring Instruments24

 Biographical Items25

 Participants25

 Scales28

INVESTIGATING THE RELATIONSHIP BETWEEN SOCIAL TIES AND INTENTION TO QUIT AS MEDIATED BY JOB EMBEDDEDNESS	3
Intention to Quit Scale	28
Organisation-based and Occupation-based Social Ties Scale	29
Organisation-based and Occupation-based Job Embeddedness Scale.....	30
Procedure	31
RESULTS	32
Validity and Reliability of the Measurement Scales.....	32
Intention to Quit Scale	33
Job Embeddedness Scale	33
Social Ties Scale	34
Results for Exploratory Factor Analysis.....	35
Results from Descriptive Statistics	36
Relationships between the Constructs	37
Indirect Relationship between Social Ties and Intention to Quit	40
The Relationship between Organisational Social Ties and Intention to Quit, as Mediated by Organisational Job Embeddedness	40
The Relationship between Occupational Social Ties and Intention to Quit, as Mediated by Occupational Job Embeddedness.....	42
Relative Importance of the Constructs in Predicting Intention to Quit	43
DISCUSSION.....	45
Limitations of the Study and Recommendations for Future Research	47
Managerial Implications	47
REFERENCES	49

ACKNOWLEDGEMENTS

I wish to thank my family, namely my daughters, Kristina and Brigitta Matthews, my father Mettinus Oosterveld, and in particular my husband of 25 years, Jack Matthews, for their active support and self-sufficiency whilst my attention was mostly elsewhere during 2014. This result would not have been achieved without their blessing. I also wish to thank my employer, Pharma Dynamics, and in particular the CEO, Paul Anley, for their support of my studies at this late stage of my career. I thank the dedicated organisational psychology academic staff of the UCT Faculty of Commerce, so ably represented by Prof. Joha Louw, Associate Prof. Suki Goodman, Dr. Ines Meyer, and Mr Francois de Kock for reigniting my passion for learning in the field of organisational psychology. Last but certainly not least I thank my supervisor, Prof. Anton Schlechter, for his ability to provide effective guidance and endless statistical explanations as well as dealing with my frequent, highly ignorant questions with limitless patience, a straight face and judicious use of humour.

ABSTRACT

Orientation: In order to maintain a competitive advantage, employers need to understand the various factors (antecedents) that are conducive to employee retention and engagement. Social ties is one such factor that is believed to be related to job embeddedness and the intention to quit. Better understanding the role that social ties play in employee engagement and the intention to quit will hopefully aid the development of effective retention strategies.

Research Purpose: An empirical study was conducted, within a sample obtained from the pharmaceutical industry, to investigate the relationship between social ties and intention to quit as mediated by job embeddedness.

Motivation for the Study: The pharmaceutical industry is experiencing severe skills shortages, particularly in terms of pharmacists. Developing a better understanding of the role that social ties play in employee retention may assist these organisations in putting interventions in place to reduce undesirable voluntary employee turnover.

Method: A quantitative research approach was employed to investigate the broad research question i.e. if the relationship between organisational and occupational social ties and intention to quit is mediated by organisational and occupational job embeddedness. A descriptive research design was employed and a questionnaire consisting of 36 items was designed using existing measures, to collect data. The questionnaire was distributed online and convenience sampling was used to collect data across the pharmaceutical industry ($n = 524$). Data were analysed using descriptive statistics, correlations analyses and multiple regression analysis.

Main Findings: Significant negative relationships were found between organisational social ties and intention to quit, and between occupational social ties and intention to quit. It was further found that organisational job embeddedness completely mediated the relationship

between organisational social ties and intention to quit. Occupational job embeddedness completely mediated the relationship between occupational social ties and intention to quit.

Practical / Managerial Implications: The value of social ties in an organisational setting is an under-researched aspect of employee retention. By developing retention strategies aimed at enhancing organisational ties and by facilitating occupational ties with co-workers, employers may be able to reduce turnover and so retain scarce skills.

Contribution: The present study contributes to the current body of social science research as few studies have empirically demonstrated the mediating role of job embeddedness in the relationship between social ties and intention to quit. There is also limited empirical research conducted in South Africa that has investigated the relationships between organisational and occupational social ties, organisational and occupational job embeddedness and intention to quit. These results will hopefully be used to develop more effective retention strategies in the pharmaceutical industry.

INTRODUCTION

Where-as some voluntary turnover is beneficial to an organisation (Shaw, Gupta, & Delery, 2005), on the whole employers seek to reduce excessive voluntary turnover for reasons such as the exorbitant costs that are associated with recruiting and selecting new employees; the managerial time involved in orientation, induction and training of new employees; the disruption in productivity; loss of intellectual capital and tacit knowledge experienced; the potential impact on organisational reputation and external relationships; as well as the reduction in morale associated with turnover (Ghosh, Satyawadi, Joshi, & Shadman, 2013; Holtom, Mitchell, Lee, & Eberly, 2008; Waldman, Carter, & Hom, 2012).

Avoiding excessive voluntary turnover is even more important where there are already existing skills shortages that are likely to lead to difficulties in finding replacement staff (Van Zyl, 2009). Khoele and Daya (2014) investigated the turnover of middle and senior managers in the pharmaceutical industry in South African and found that in the sampled organisations, employee turnover averaged almost 22% per annum between 2007 and 2010. Reasons for staff turnover include a range of industry, company and personal factors.

The healthcare industry in South Africa is facing a shortage of skilled professional staff and increased remuneration inflation for job categories deemed as scarce and/or critical skills, which includes pharmacists in particular. South Africa is currently experiencing a severe shortage of pharmacists with average vacancy rates ranging from 36% to 76% in certain regions. The World Health Organisation (WHO) recommends one pharmacist per 2 300 people in the population, while South Africa currently has one pharmacist per 3 849 people in the population. For South Africa to meet this WHO target by 2030, an additional 750 pharmacists will need to be registered per year, which is in excess of the current average of 476 pharmacists graduating from eight pharmacy schools per annum (*Pharmacy human*

resources in South Africa, 2011). This state of affairs, combined with an awareness that other continents are facing the same challenge, such as a prediction that there will be a critical shortage of pharmacists in the US by 2015 (Knapp, Manolakis, Webster, & Olsen, 2011), creates a compelling rationale for employers to do all they can to retain such staff. Understanding what causes employees to stay (i.e. what embeds employees in their jobs) will assist South African pharmaceutical employers to develop targeted talent retention strategies aimed at reducing voluntary turnover and increasing longevity of service (tenure).

Extensive research has been conducted on employee turnover, as summarised by Holtom *et al.* (2008). Whereas much research has focused on intention to quit as a construct (for example, Bhal & Gulati, 2006; Carmeli & Weisberg, 2006; Chow, Ng, & Gong, 2012; Firth, Mellor, Moore, & Louquet, 2004; Maertz & Griffeth, 2004; Mossholder, Settoon, & Henagan, 2005), Mitchell, Holtom, Lee, Sablinski, and Erez (2001) proposed that it might be useful to examine why people choose to stay instead. They suggest that job embeddedness plays an important role in retention in that the more embedded employees are, the more likely they are to stay with an employer.

The job embeddedness construct has been examined from different perspectives and further refined in the following areas: organisational support and socialisation tactics (Allen & Shanock, 2013), human resource practices (Bergiel, Nguyen, Clenney, & Taylor, 2009), attitudinal measures (Clinton, Knight, & Guest, 2012), development of a global measure of job embeddedness (Crossley, Bennett, Jex & Burnfield, 2007), job performance and intention to leave (Halbesleben & Wheeler, 2008), provision of a meta-analysis of job embeddedness and turnover prediction (Jiang, Liu, McKay, Lee, & Mitchell, 2012), organisational citizenship, job performance, volitional absences and voluntary turnover (Lee, Mitchell, Sablinski, Burton, & Holtom, 2004) and on-the-job and off-the-job embeddedness (Yang,

Ma, & Hu, 2011). Employees who are strongly embedded in their jobs, defined as the extent to which an employee is attached to the job through various ties, are less likely to leave (Crossley *et al.*, 2007; Halbesleben & Wheeler, 2008; Ng & Feldman, 2010). Employers may thus be able to reduce turnover through identifying and acting on factors that are related to increases in job embeddedness. One way in which employees may become embedded in an organisational or occupational network is due to the nature of the ties that they develop with network members. In this way job embeddedness and social network theory seemingly are related to each other (Kilduff & Brass, 2010).

Employees take part in social networks both inside and outside the organisation and these social ties contribute to various degrees of job embeddedness. An external social tie may be participation in an occupational social network, and an internal social tie may be characterised by an organisational social network. Where employees have strong social ties in place to an organisation, turnover intention is reduced (Feldman & Ng, 2007). Similarly Feldman and Ng point out that where individuals have strong ties to an occupation, they are less likely to quit the profession.

Understanding external and internal social ties and their relationship to job embeddedness and voluntary turnover was identified as being of assistance in understanding employees' turnover decisions (Holtom *et al.*, 2008). The present study was conducted in response to the call by Holtom to further conduct research in the areas of social network theory and job embeddedness; to have a more international focus (as in providing data through an African study in this case), and reviewing aspects of organisation-based and occupation-based social ties and turnover and intention to quit. The present study aims to contribute to the current body of literature that deals with the role of social ties in regard to job embeddedness and intention to quit, specifically in the South African pharmaceutical industry. Understanding

differences between organisation-based social ties and occupation-based social ties, job embeddedness and turnover intention may further assist organisations in developing targeted strategies aimed at increasing the employee's ties to the organisation, thereby reducing turnover intentions. It is hoped that the results will provide empirical evidence of the role of social ties in job embeddedness and intention to quit and so add to the body of knowledge in the field of talent retention.

Research Objectives

The main research objectives of the current study are to:

- Investigate relationships between organisational and occupational social ties and intention to quit
- Investigate whether organisational job embeddedness mediates the relationship between organisational social ties and intention to quit
- Investigate whether occupational job embeddedness mediates the relationship between occupational social ties and intention to quit

LITERATURE REVIEW

The constructs intention to quit, job embeddedness and social ties are firstly examined in a literature review. Both organisational and occupational aspects of job embeddedness and social ties shall be investigated. Four hypotheses shall be put forward that suggest the relationships between these constructs.

Intention to Quit

The traditional view of labour turnover is that voluntary departures are largely driven by low levels of job satisfaction, combined with opportunities for employment elsewhere. This view has broadened over the years to include other antecedents such as withdrawal (as a process with distinct steps); the need to separate intention to quit from actual separation; the correlation between low organisational commitment and turnover; the role of perceived alternatives or pull effects; and perceptions of labour market opportunities and ease of movement (Winterton, 2004). A model was developed by Winterton that identifies the triggers of intention to quit as being low job satisfaction coupled with perceived opportunities elsewhere; and linked actual separation with low organisational commitment and ease of mobility.

Many variables have been found to impact on the intention to quit. Previous research has contributed to the body of literature on antecedents to intention to quit. These antecedents include job stress (Firth *et al.*, 2004); the role of job dissatisfaction (Hom & Kinicki, 2001; Seston, Hassell, Ferguson, & Hann, 2009) ; the role of wasteful activities as an indication of dissatisfaction (Jaramillo, Mulki, & Locander, 2006); emotional dissonance and organisational identification (Mishra & Bhatnagar, 2010); internal co-worker ties and external information exchange (Randel & Ranft, 2007); career orientation (Tschopp, Grote, &

Gerber, 2014), risk taking (Chow *et al.*, 2012), personality (Zimmerman, 2008) and transformational leadership (Waldman *et al.*, 2012).

Holtom *et al.*'s (2008) review of turnover and retention research identified seven major trends over the past decade. These are: 1) individual difference predictions of turnover, such as personality and motivating forces; 2) reviewing attitudes in times of change and stress; 3) empirical research on the unfolding model of which the components are shocks, scripts, image violations, job satisfaction and job search; 4) a focus on contextual variables, specifically interpersonal relationships such as leader-member exchange; 5) looking at the factors why people stay, specifically organisational commitment and job embeddedness; 6) reviewing dynamic turnover processes over time, such as changes in job satisfaction; 7) expanding understanding of relationships between job satisfaction and turnover, as well as on commitment and turnover.

Randel and Ranft (2007) conducted research on workplace social inclusion which has some overlap with social capital theory. Two distinct motivations to maintain ties with co-workers were identified, namely relationship motivation (maintaining social ties with co-workers for the purpose of social support and personal friendship) and job facilitation motivation (social ties that help employees improve job success). It was found that both types of motivation contribute to social inclusion. In addition, a relationship was found between job facilitation motivation and external organisational information exchange, where an individual had turnover intentions.

Social ties are wider than just organisation-based and therefore occupational aspects also bear examination. Carmeli and Weisberg (2006) conducted research into turnover intentions across different professions and found that turnover intentions varied, with social workers having lower turnover intentions than lawyers and financial officers. Due to a shortage of

pharmacists in South Africa, this professional group may have a higher turnover intention due to an abundance of job opportunities.

Social Network Theory

Social capital reflects the idea that a person's connections, be they family, friends or work associates, comprise a tangible asset that is both beneficial for its own sake as well as advantageous in a material sense. Research in this area has taken typically four different approaches, namely communitarian, networks, institutional and synergy. The networks view is characterised by two key aspects, namely bonding, defined as strong intercommunity ties that provide a sense of identity and purpose); and bridging, defined as horizontally crossing social divides into other communities (Woolcock & Narayan, 2000).

Working within the network approach to social capital, Aguilera (2002) linked social capital strongly to economic activity and defined social capital as "...resources possessed by people as a result of their relationships with others, such as resources being information and behaviour economic action" (Aguilera, 2002, p. 854) and focuses on three aspects of social capital, namely network structure, network quality and network diversity.

Maertz and Griffeth (2004) identified that previous studies of employee turnover did not place much emphasis on the role of social networks that influence employees' decisions and defined this further as one of eight motivational forces, entitled constituent forces. This was the attachment to/desire to withdraw from people in the organisation. Employees may be attached to other individuals or constituents within the organisation, which differs from attachment to the organisation itself.

Mossholder *et al.* (2005) identified four attributes of intra-organisational behaviour, namely network centrality, co-worker support, felt obligation towards co-workers and interpersonal citizenship behaviour. Each of these behaviours focuses on intra-organisational behaviour,

but captures different nuances of the causal process. Network centrality refers to the number of ties a person has in an organisation and posits that employees with higher ties are deemed to be more embedded. Interpersonal citizenship behaviour refers to the relationships co-workers have in terms of providing assistance to each other. Co-worker support refers to the extent to which employees feel supported by their peers. Felt obligation towards co-workers refers to the expectation of reciprocity where assistance was provided. These four attributes expand on the understanding of intra-organisational social networks.

Moynihan and Pandey (2007) argued that employees exist in both intra- and extra-organisational social networks and that these networks have a shaping effect on employee attitudes and behaviour. It was found that a strong and positive intra-organisational network contributed to the likelihood of employees staying with an organisation. The alternate hypothesis, that a strong external social network would increase external job mobility, resulted in only weak support for the value of external networks in turnover intention.

Kilduff and Brass (2010) identified four core ideas contained in current organisational social network research, namely social relations, embeddedness, structural patterning and utility of network connections. Embeddedness links social relationships with economic transactions, both inside and outside organisations. Thus in previous research a link has been established between aspects of social network theory and job embeddedness. The manner, variety, strength, value and status of relationships with significant others has been shown to have an influence on the employee's ties with the organisation.

Conversely, the weakness or absence of some or all of these social network aspects may contribute towards a perceived intention to quit (Lee *et al.*, 2004; Moynihan & Pandey, 2007).

Maertz and Griffeth (2004) propose viewing intention to stay or quit through a lens of causal motives. They classified the motives as shown in Table 1.

Table 1

Types of forces

Type of force	Cognitive self-question
Affective	How does working here make me feel? (comfort or discomfort)
Calculative	What are my future prospects for meeting my goals? (favourable / unfavourable)
Contractual	Do I owe any obligation to stay? (reciprocity)
Behavioural	What would I lose by leaving? (high cost motivates staying, low cost motivates leaving)
Alternative	Do I have better alternatives to working here?
Normative	What do family and friends expect me to do?
Moral / ethical	Is quitting the right thing to do?
Constituent	How strong are my attachments to the people in the organisation?

Note. Maertz & Griffeth (2004)

Constituent forces are most affected by the strength of social ties. However, contractual, behavioural and normative forces are also influenced by the strength or otherwise of social ties within the organisation. Thus a focus on facilitating social ties within an organisation may impact on four of the above eight forces that operate on an employee's intention to stay or quit. Strategic action by employers to increase social ties may have the ability to positively influence an individual's intention to stay and thereby embed themselves more strongly within their organisation.

Conversely, people who leave organisations have an influence on the departure of others to whom they are connected (Krackhardt & Porter, 1986). When a well-connected person leaves an organisation, the organisation no longer has access to their social capital, which is characterised by the acuity of their social perceptions, the structure of their social ties and

their social networks (Pastor, Meindl, & Mayo, 2002). These social networks can consist of expert power-knowledge that exist both inside an organisation and expand beyond an organisation to link to other strong external role players (Burt, 2005).

The above literature review suggests the existence of a relationship between organisational social ties and intention to quit, and a (lesser) relationship between occupational social ties and intention to quit, which led to the formulation of the following hypotheses:

H1: A negative relationship exists between organisational social ties and intention to quit

H2: A negative relationship exists between occupational social ties and intention to quit

Job Embeddedness

Mitchell *et al.* (2001) introduced a job embeddedness construct that aimed to add to an understanding of why people stay in their jobs. The construct refers to the ties that bind individuals to their organisations and was described as having three aspects. Firstly, an individual's links to other employees, teams and groups in the workplace; secondly perceptions of the employee's job fit, organisation fit and community, and thirdly their perception of what they would give up, or sacrifice, if they were to leave their job. A measure of job embeddedness was developed and it was demonstrated to predict the outcome of intent to leave. The measure developed by Mitchell *et al.* related to both on-the-job embeddedness, namely how connected an employee is to the workplace, as well as to off-the-job embeddedness, namely how entrenched an individual is in his or her community.

Halbesleben and Wheeler (2008) found that engagement and embeddedness were unique constructs, in that job engagement refers to a psychological state of attachment to the work (the specific tasks) whereas job embeddedness refers to a variety of forces that keep an employee in the job and relate more strongly to the organisation and the workplace. Mitchell

et al. (2001) made the point that job engagement may change if job conditions change (such as demands or resources), where-as job embeddedness should change more slowly and require more significant events in order to decrease over time. Halbesleben and Wheeler also found that job embeddedness shared unique variance with turnover intention whereas job engagement did not.

Yang *et al.* (2011) conducted an extensive literature research on job embeddedness and found that it predicted voluntary turnover better than traditional models of turnover. Jiang *et al.*'s (2012) meta-analytic investigation, which drew on 65 independent samples, found that on-the-job and off-the-job job embeddedness was negatively related to turnover intention and actual turnover, after controlling for certain factors such as job satisfaction, job alternatives and affective commitment. Turnover intention was found to mediate the effect of job embeddedness on actual turnover (Jiang *et al.*, 2012).

Focusing more closely on the healthcare industry, Leupold, Ellis and Valle (2013) in a study of 143 retail pharmacists in the USA found a significant negative relationship between pharmacists' job embeddedness and their intention to quit. Proactive efforts by organisations to increase job embeddedness mitigated their intention to leave.

Job Embeddedness and Organisational Commitment

Organisational commitment refers to the strength of commitment that an employee feels towards the employer. Where-as this construct is not directly the subject of research in this paper, nevertheless it is deemed important to differentiate the construct of organisational commitment from the job embeddedness construct.

Organisational commitment research has identified three different forms of commitment, namely affective, continuance and normative. Affective commitment refers to an individual's identification and involvement with an organisation; continuance commitment refers to the

perceived costs of leaving an organisation; and normative commitment refers to a felt obligation to remain with the organisation. A meta-analysis conducted by Meyer, Stanley, Herscovitch and Topolnytsky (2002) found that all three levels of commitment were negatively related to withdrawal cognition and turnover, and that affective commitment had the strongest and most favourable correlations with outcomes that were organisation-relevant (for example, performance and attendance) and employee-relevant (for example, stress and work/family balance).

How is commitment different to the job embeddedness construct? Job embeddedness refers to aspects of fit, links and sacrifice in describing the ties or binds that hold an employee in an organisation (Mitchell *et al.*, 2001). There is some similarity between the job fit aspect of job embeddedness and affective commitment, however affective commitment is more concerned with the employee's perception of identification with the organisation where-as fit is a broader construct which incorporates job fit, organisation fit and community fit. There are similarities between continuance commitment and the sacrifice component of job embeddedness, in that both are concerned with the costs or sacrifices associated with leaving or staying. Normative commitment concerns itself with obligations that an employee feels towards the organisation and co-workers; this is an aspect of the links construct of job embeddedness which focuses not only on links with other employees, but also incorporates teams and groups. Ng and Feldman (2007) make the point that embeddedness addresses the number of links individuals have whereas normative commitment looks at the nature of the links.

Crossley *et al.* (2007) highlight that half of the job embeddedness construct focuses on factors outside the workplace i.e. community which is not covered by the organisational commitment construct, and that job embeddedness is a more general construct of the extent to

which people feel attached, regardless of personal choice. Where-as some aspects of the commitment construct and the job embeddedness construct dovetail with each other, however job embeddedness is a broader concept that is separate in nature to the concept of organisational commitment.

Social Ties and Job Embeddedness

Feldman and Ng (2007) found that the role of social capital with regard to job embeddedness and mobility is unclear. Social ties at work serve to strengthen employees' links with the organisation and thereby contribute to job embeddedness (Mitchell *et al.*, 2001). On the other hand, people with greater connections may have more mobility with regard to other job opportunities that they may be able to access through their network. Social ties that are occupation-based may therefore lead to greater mobility (Gersick, Dutton, & Bartunek, 2000).

Using the job embeddedness model of fit, links and sacrifice developed by Mitchell *et al.* (2001), Ng and Feldman (2007) proposed a theoretical framework for the study of both organisational embeddedness (what keeps people in their organisations) and occupational embeddedness (what keeps people in their occupations). Each of these aspects is examined in the following two sections.

Organisation-based Social Ties

Organisational embeddedness does not imply that an employee is bound to the same job, as occupational moves within the organisation are possible. However, the extent to which an individual feels enmeshed or tied to an organisation regardless of career moves within the organisation is the focus of organisation-based social ties.

Organisations benefit from employee embeddedness; however the effects on employees may be less positive. Aspects that may affect a highly job embedded employee include the

reduction of external career mobility; diminished learning opportunities outside the immediate corporate environment; and reduction in building social capital and human capital development behaviour (Lee *et al.*, 2004).

If, as argued above, job embeddedness is negatively related to turnover intentions (Yang *et al.* (2011); organisation-based social ties are also related to intention to quit (Lee *et al.*, 2004); and organisation-based social ties are related to job embeddedness (Mitchell *et al.*, 2001); what is the relationship between the three constructs? In light of the arguments presented above, the following hypothesis is worth testing:

H3: Organisational job embeddedness mediates the relationship between organisational social ties and intention to quit

Occupation-based Social Ties

Ng and Feldman (2007) identify three aspects of interest with regard to occupational embeddedness. Firstly, it is of interest with regard to an individual's career development where turnover may be a necessary means to pursue further growth in a chosen career; secondly high turnover may reflect substantial investment in a chosen occupation rather than any organisational retention errors that have implications for employer retention strategies for occupation-embedded professionals; and thirdly a benefit of occupation-driven mobility ensures transfer of knowledge and innovation across organisations.

Feldman and Ng (2007, p. 356) stated that "...social ties within occupational networks may also embed individuals in their current vocations. Individuals often seek to establish their self-concepts by identifying heavily with those whom they see as similar to themselves....Moreover, because occupational networks often span multiple organisations (De Janasz and Sullivan, 2004), an individual's ties to an occupation are likely to be stronger (and therefore more embedding) than his or her ties to a particular organization."

Organisational and occupational embeddedness are seen as distinct and different. Occupational embeddedness allows for mobility opportunities across different organisations, whereas organisational embeddedness allows only for mobility shifts (vertical or lateral) within the same organisation. Therefore, it is believed that occupational embeddedness will impact organisational embeddedness to a lesser extent than vice versa (Ng & Feldman, 2007).

With organisational embeddedness and organisational social ties having been explored in H3, it was felt worthwhile to investigate the occupational aspect of job embeddedness and social ties. This led to the formulation of the fourth hypothesis, as follows:

H4: Occupational job embeddedness mediates the relationship between occupational social ties and intention to quit

Conceptual Model

A conceptual model is provided below, separated for organisational and occupational social ties and job embeddedness in relation to intention to quit, based on the literature review and the arguments provided in the previous section.

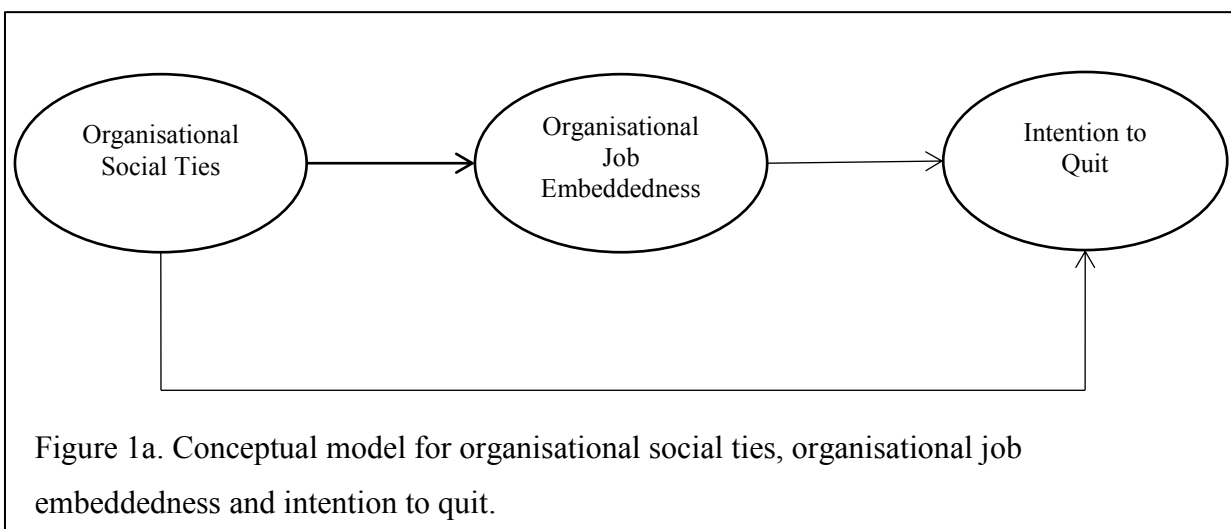
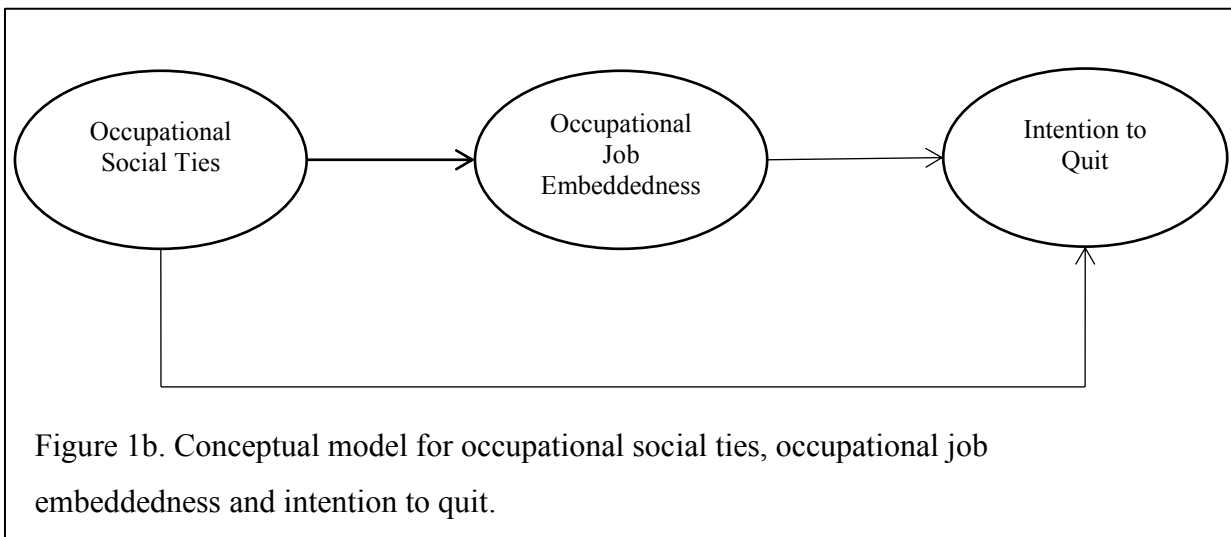


Figure 1a. Conceptual model for organisational social ties, organisational job embeddedness and intention to quit.



Thus it is suggested that job embeddedness has a direct relationship with intention to quit, while social ties has both a direct relationship with intention to quit, as well as a mediated relationship with intention to quit, mediated by job embeddedness. This conceptual or theoretical model was empirically investigated further.

METHOD

Research Design

A descriptive research design and quantitative approach was employed to address the broad research questions and to test the proposed relationship between organisational and occupational social ties and intention to quit, and whether this relationship is mediated by organisational and occupational job embeddedness.

Furthermore, the research approach followed in the present study can be described as cross-sectional and *ex post facto* and was applied to respondents with the shared characteristic of being employed in the pharmaceutical industry. Differences were related to size of organisation, age, gender, duration of employment and specific type of occupation within the pharmaceutical industry.

Sampling

Convenience sampling was used. The researcher is currently employed in the pharmaceutical industry and for ease of access, made use of the employer organisation to sample participants, as well as enlisting other pharmaceutical organisations in the industry to participate in the study. Time and cost constraints, along with available access, made this type of sampling a suitable choice.

An electronic questionnaire was distributed to all 145 employees of the researcher's current employer. Other pharmaceutical organisations were engaged in the ways described below.

A South African pharmaceutical salary survey administered by Deloitte, an international accounting and consulting firm, comprised 35 pharmaceutical companies in South Africa in 2014, including the majority of the 15 largest pharmaceutical organisations. The researcher made a short presentation at a survey circle workshop to create awareness of the proposed

research project and to enlist support, which was favourably received. All participants consented to Deloitte providing the researcher with their contact details in order for the researcher to contact them with a view to encourage participation in the study within their organisations. The survey was subsequently distributed to the heads of Human Resources of all 35 pharmaceutical companies for distribution within their organisations.

In addition, two industry bodies, namely the National Association of Pharmaceutical Manufacturers (NAPM) and the Innovative Pharmaceutical Association of SA (IPASA) distributed the questionnaire to their member bodies with a request to participate in the study.

Four recruitment agencies who are active in the pharmaceutical industry also distributed the questionnaire to jobseekers in the pharmaceutical industry, one of which included a database of 550 medical representatives.

In this way the researcher hoped to reach as many pharmaceutical employees as possible in South Africa in order to increase the number of respondents to the survey.

A large retail pharmacy chain made contact with the researcher and requested that the survey be run separately for their pharmacy employees with the addition of a few customised questions. This was duly administered and resulted in 275 usable responses which were incorporated in the main body of data. A total of 524 usable responses were received by following all of the approaches above.

Measuring Instruments

The sub-scales focused on the key areas of research, namely intention to quit, organisation-based social ties, occupation-based social ties, organisation-based job embeddedness and occupation-based job embeddedness.

The questionnaire consisted of 36 items and was designed to replicate similar studies conducted by Cohen (1993), Ferris, Treadway, Kolodinsky, Hochwarter, Kacmar, Douglas and Frink (2005), Ng and Feldman (2010) and Crossley *et al.* (2007). There were three subscales and a fourth section with demographic questions in the questionnaire.

The survey was prefaced with a qualifying question asking whether or not the respondent was employed in the pharmaceutical industry. If the response was no, the questionnaire defaulted to thanking the respondent for their interest and letting them know that the questionnaire was for employees in the pharmaceutical industry only.

Biographical Items

The following biographical items were used to describe the sample: gender, age, size of organisation, duration of employment in the pharmaceutical industry, type of occupation and length of occupation.

Participants

Table 1 summarises the demographic characteristics of the sample. The information below was used only to better understand the sample and was not used in any statistical inferences.

Table 1

Biographical details of respondents

Biographical Variable	Number	Percentage
Gender		
Male	178	34
Female	337	64.3
Missing	9	1.7
Total	524	100

Age

Under 20 years of age	1	.2
20 to 29 years of age	123	23.5
30 to 39 years of age	184	35.1
40 to 49 years of age	122	23.3
50 to 59 years of age	63	12.0
60 years of age and over	30	5.7
Missing	1	.2
Total	523	100

Size of organisation

0 to 10 employees in South Africa	1	.2
11 to 100 employees in South Africa	101	19.3
101 to 500 employees in South Africa	131	25.0
501 to 1000 employees in South Africa	10	1.9
1001 employees or more in South Africa	281	53.6
Missing	0	0.0
Total	524	100

Length of employment in pharmaceutical industry

Up to 2 years	83	15.8
3 to 5 years	98	18.7
6 to 10 years	104	19.8
11 to 15 years	87	16.6
16 to 20 years	46	8.8
21 to 25 years	39	7.4
26 to 30 years	24	4.6
31 years or over	41	7.8

Missing	2	.4
Total	524	100

Length of employment in current occupation

Up to 2 years	217	41.4
3 to 5 years	164	31.3
6 to 10 years	83	15.8
11 to 15 years	30	5.7
16 to 20 years	10	1.9
21 to 25 years	6	1.1
26 to 30 years	5	1.0
31 years or over	6	1.1
Missing	3	.6
Total	524	100

Occupational level

Unskilled	5	1.0
Semi-skilled	64	12.2
Skilled technical and academically qualified workers, junior management, supervisors, foremen, superintendents	123	23.5
Professionally qualified, experienced specialists and mid management	283	54.0
Senior or top management	44	8.4
Missing	5	1.0
Total	524	100

Biographical data from the survey (n = 524) indicated that the majority was female (64.3%), 53.6% of the sample were employed in larger pharmaceutical companies (over 1001

employees in South Africa), the most frequent length of tenure in the pharmaceutical industry was 6 to 10 years (19.8% of the sample), the most frequent length of employment in the current occupation was up to two years (41.4%) and the most frequent occupational level being professionally qualified, experienced specialists and middle managers (54.0%). The latter data suggests that this survey covered a large sample of knowledge workers who enjoy increased mobility due to scarce skills, as evidenced by short tenure with the current employer.

Scales

Regarding the variables relating to the research question, three pre-existing scales were used as described below. A five-point Likert-type response scale was used to collect responses to the selected items. The response scale ranged from 1 “Strongly Disagree” to 5 “Strongly Agree”.

Intention to Quit Scale

Cohen (1993) developed an intention to quit scale that comprises three items, namely:

- I think a lot about leaving the organisation
- I am currently searching for an alternative to this organisation
- When I can I will leave this organisation

Kahumuza and Schlechter (2008) reported that the scale was used in South African studies, namely Schlechter (2006) and Boshoff, Van Wyk, Hoole and Owen (2002) and was found to be reliable in the South African context. A Cronbach alpha of .91, for example, was obtained by Schlechter (2006).

Organisation-based and Occupation-based Social Ties Scale

Ferris *et al.* (2005) developed a Political Skill Item Pool of 40 items. Six of these items related to networking ability. These six items were subsequently used in research to measure organisational embeddedness and was further development by Ng and Feldman (2010). The items are as follows:

- I spend a lot of time and effort at work networking with others
- I am good at building relationships with influential people at work
- At work, I know a lot of important people and am well connected
- I spend a lot of time at work developing connections with others
- I am good at using my connections and network to make things happen at work
- I have developed a large network of colleagues and associates at work whom I can call on for support when I really need to get things done

Ng and Feldman (2010) subsequently adjusted the scale to put the focus on occupation rather than the workplace, by developing the items below:

- I spend a lot of time and effort at networking with others in my occupation
- I am good at building relationships with influential people in my occupation
- In my occupation, I know a lot of important people and am well connected
- I spend a lot of time developing connections with others in my occupation
- I am good at using my connections and network to make things happen for my career
- I have developed a large network of colleagues and associates in my occupation whom I can call on for support when I really need to get things done

Ng and Feldman (2010) used these items to conduct research in the United States. Even though these scales do not yet seem to have been used in the South African context, they have yielded good psychometric properties in the United States samples (Cronbach alpha = .91 for

organisational social behaviour and .95 at Time 1, .85 at Time 2 and .96 at Time 3 for occupational social behaviour). Also, considering the items they appear to have satisfactory face validity. It was therefore assumed that these scales would be appropriate for use in the present study.

Organisation-based and Occupation-based Job Embeddedness Scale

Crossley *et al.* (2007) reviewed job embeddedness scales with a view of reducing the number of items that would adequately assess the construct and developed a global job embeddedness scale comprising of seven items. Cronbach's alpha for the scale was found to be .88 and the scale was thus considered to be reliable.

The seven items were as follows:

- I feel attached to this organisation
- It would be difficult for me to leave this organisation
- I'm too caught up in this organisation to leave
- I feel tied to this organisation
- I simply could not leave the organisation that I work for
- It would be easy for me to leave this organisation (reverse scored)
- I am tightly connected to this organisation

This sub-scale focused on job embeddedness with regard to organisational ties. In order to measure job embeddedness as it related to occupational ties, the same questionnaire was used but the word "occupation" was substituted with the word "organisation".

The items relating to job embeddedness and occupational ties were as follows:

- I feel attached to my occupation
- It would be difficult for me to leave my occupation

- I'm too caught up in my occupation to leave
- I feel tied to this occupation
- I simply could not leave my occupation
- It would be easy for me to leave my occupation (reverse scored)
- I am tightly connected to my occupation

The above scales comprised items focused on the key areas of the current research, namely intention to quit, organisation-based social ties, occupation-based social ties, organisation-based job embeddedness and occupation-based job embeddedness.

Procedure

The research project and the questionnaire were approved by the University of Cape Town's Faculty of Commerce Ethics in Research Committee.

Data were collected by means of an online questionnaire and participation was voluntary and anonymous. Qualtrics survey software was used to collate and administer the survey.

An invitation letter stating the purpose of the study as well as addressing issues of anonymity and confidentiality was provided along with the survey. A small monetary incentive (entering into a lucky draw for one gift voucher) was offered and the email distributed to encourage participation. Contact details of participants who participated in the lucky draw were separated from the rest of the survey responses to preserve confidentiality and anonymity. This list of email addresses were further only used for the purposes of drawing a winner and notifying him/her.

The Software Package for the Social Sciences (SPSS) Version 22 was used to conduct the statistical analyses. Descriptive statistics, correlation and multiple regression analyses were employed.

RESULTS

The data was analysed as follows. Firstly, reliability and validity of each of the three scales was established using exploratory factor analyses and calculating internal reliability by means of Cronbach alpha, respectively. Once the scales had demonstrated uni-dimensionality descriptive statistics, Pearson Product Moment Correlation Coefficients and Standard Multiple Regression analyses were conducted. Finally, the indirect (mediated) relationship was examined using Baron and Kenny's (1986) approach. All the statistical analyses were conducted using SPSS (ver. 22).

Validity and Reliability of the Measurement Scales

Exploratory Factor Analysis (EFA) was conducted to assess the construct validity of the subscales. The Kaiser-Meyer Olkin (KMO) measure of sampling adequacy, along with Bartlett's test of sphericity was used to assess the factorability of the data. Significant results were found for Bartlett's test ($p < .01$) and the KMO measures were $> .60$, indicating that EFA was appropriate for this data. The number of items per number of respondents rule-of-thumb was also clearly satisfied. The principle axis factoring extraction method, employing a Direct Oblimin rotation was used. An oblique rotation was chosen as it was expected that the factors would be inter-related. A scree plot was used to determine the number of factors to be extracted, the so-called Scree test, in conjunction with Keiser's criterion (i.e. factors should have Eigenvalues greater than 1 to be interpretable). Any items that were found to have factor loadings smaller than $r = .3$ would be removed.

Cronbach's alpha was used to measure internal reliability. Cronbach alpha values of greater than $.70$ were considered satisfactory in accordance with Nunnally's (1978) guidelines. Internal consistency was assessed using corrected item-total correlations, and items were retained with corrected item-total correlations of greater than $.30$.

Intention to Quit Scale

The four items were investigated using EFA to establish construct validity. The Scree plot revealed a break after the first factor. Based on this finding, as well as the eigenvalues greater than 1 cut-off, it was decided that a single factor structure had emerged (eigenvalue = 2.6; explained 87.6% variance; factor loadings were $.838 < r < .876$). The results of the EFA are summarised in Table 1. Items 1 to 4 loaded on Factor 1, which all relate to intention to quit.

Internal reliability of Cohen's (1993) three item intention to quit scale was calculated. The Cronbach alpha was found to be satisfactory (Cronbach alpha = .929, i.e. $r > .7$). No items were removed as it would not lead to any further increase in Cronbach alpha. All item-total correlations were greater than the accepted standard ($.838 < r < .876$; i.e. $r > .3$).

Based on this evidence, intention to quit was considered to be a valid and reliable uni-dimensional scale.

Job Embeddedness Scale

This scale comprised of fourteen items of which seven were focused on organisational job embeddedness and seven on occupational job embeddedness.

Exploratory Factor Analysis was conducted on the data collected with the 14 job embeddedness items. The KMO measure was found to be above .60 and Bartlett's test was significant, ($p < .01$) thus the criteria was met indicating that factor analysis was appropriate. There-after the so-called Scree plot test was conducted. The Scree plot revealed a break after the second factor. Based on this finding as well as the eigenvalues greater than 1 cut-off (Keiser's criterion), it was decided that a two factor structure had emerged (eigenvalues = 5.238 and = 2.771, respectively; explained 43.7% and 23.1% variance, respectively; factor loadings were found to be $.740 < r < .877$ and $.711 < r < .869$, respectively). The results of the EFA are summarised in Table 2 below. Items 1 to 7 loaded on Factor 1, which relates to

organisational job embeddedness. Items 8 to 14 loaded on Factor 2, which related to occupational job embeddedness. Thus the two factors separated organisational and occupational job embeddedness, as expected.

Internal reliability was calculated for the organisational job embeddedness sub-scale. The Cronbach alpha was found to be satisfactory (Cronbach alpha =.741; i.e. $r > .7$). All item-total correlations were greater than the accepted standard ($.645 < r < .752$; i.e. $r > .3$).

Regarding occupational job embeddedness, the Cronbach alpha was also found to be satisfactory (Cronbach alpha =.763; $r > .7$). All corrected item-total correlations were greater than the accepted standard of .30 (namely $.634 < r < .723$).

Based on this basket of evidence, the two sub-scales used to measure job embeddedness were considered to be valid and reliable uni-dimensional scales.

Social Ties Scale

Twelve items comprised this scale, of which six were focused on organisational social ties and six on occupational social ties.

All twelve items (organisational along with occupational social ties) were investigated using EFA to establish construct validity. The Scree plot revealed a break after the second factor. Based on this finding, as well as the eigenvalues greater than 1 cut-off, it was decided that a two factor structure had emerged (eigenvalues 7.3 and 1.0, respectively; explained 60.8% and 8.2% variance, respectively; factor loadings $.615 < r < .764$ and $.730 < r < .817$, respectively). Items 1 to 6 loaded on Factor 2, which relates to organisational social ties. Items 7 to 12 loaded on Factor 1, which related to occupational social ties. Thus the two factors separated organisational and occupational social ties, as expected.

Regarding organisational social ties, the Cronbach's alpha was found to be satisfactory (Cronbach alpha = .892, i.e. $>.7$). No items were removed as it would not lead to any further increase in the Cronbach alpha. All item-total correlations were greater than the accepted standard of .30 ($.615 < r < .764$).

Regarding occupational social ties, the Cronbach's alpha was found to be satisfactory (Cronbach alpha = .922). No items were removed as it would not lead to any further increase in the Cronbach alpha. All item-total correlations were greater than the accepted standard of .30 ($.730 < r < .817$).

Based on this basket of evidence, the two sub-scales used to measure social ties were considered to be valid and reliable uni-dimensional scales.

Results for Exploratory Factor Analysis

Results for all sub-scales indicated satisfactory Kaiser-Meyer Olkin (KMO) values (i.e. greater than .60). Bartlett's test of sphericity indicated that the p-values for each scale were less than 0.001. Kaiser's rule or criterion, as explained in Cliff (1988), was applied by considering factors that had eigenvalues greater than 1 and factor loadings greater than .30. These findings are presented in Table 2 below.

Table 2

Results from Factor Analysis

KMO	Bartlett's Test of Sphericity		Scale	Eigenvalue	Explained variance (%)		Factor Loadings
	X	df					
.761	1203.679*	3	ItQ	2.6	87.6		.838 < <i>r</i> < .876
.879	3593.470*	66	JEORG	5.2	43.7	66.8	.740 < <i>r</i> < .877
			JEOCC	2.7	23.1		.711 < <i>r</i> < .869
.929	4484.054*	66	STORG	7.3	60.8	69	.615 < <i>r</i> < .764
			STOCC	1.0	8.2		.730 < <i>r</i> < .817

Note. Eigenvalue of factors from factor analysis, Principle Axis Factoring with Direct Oblimin rotation. ItQ = Intention to Quit; JEORG = Organisational Job Embeddedness; JEOCC = Occupational Job Embeddedness; STORG = Organisational Social Ties; STOCC = Occupational Social Ties.

* *Correlation significant at the 0.05 level (2-tailed)*

Results from Descriptive Statistics

Table 3 below summarises the number of participants, mean scores and standard deviations for each of the sub-scales. The mean score for intention to quit was above the scale mid-point, indicating that participants were on average less likely to be intending to quit their organisations. The mean score for organisational job embeddedness was above the scale mid-point, indicating relatively positive organisational job embeddedness. Occupational job embeddedness was (numerically) even higher, indicating a higher level of embeddedness to the participants' occupation than to the organisation.

Organisational and occupational social ties were at similar levels and were above the scale mid-point.

Table 3

Descriptive Statistics

Item	N	Minimum	Maximum	Mean	Std. Deviation
Intention to Quit	524	1.0	5.0	2.73	1.29
Organisational Job Embeddedness	524	1.0	5.0	2.98	.922
Occupational Job Embeddedness	523	1.0	5.0	3.52	.86
Organisational Social Ties	524	1.0	5.0	3.53	.77
Occupational Social Ties	524	1.0	5.0	3.48	.80
Social Ties - total	524	1.0	5.0	3.51	.73
Job Embeddedness - total	524	1.0	5.00	3.25	.72

Relationships between the Constructs

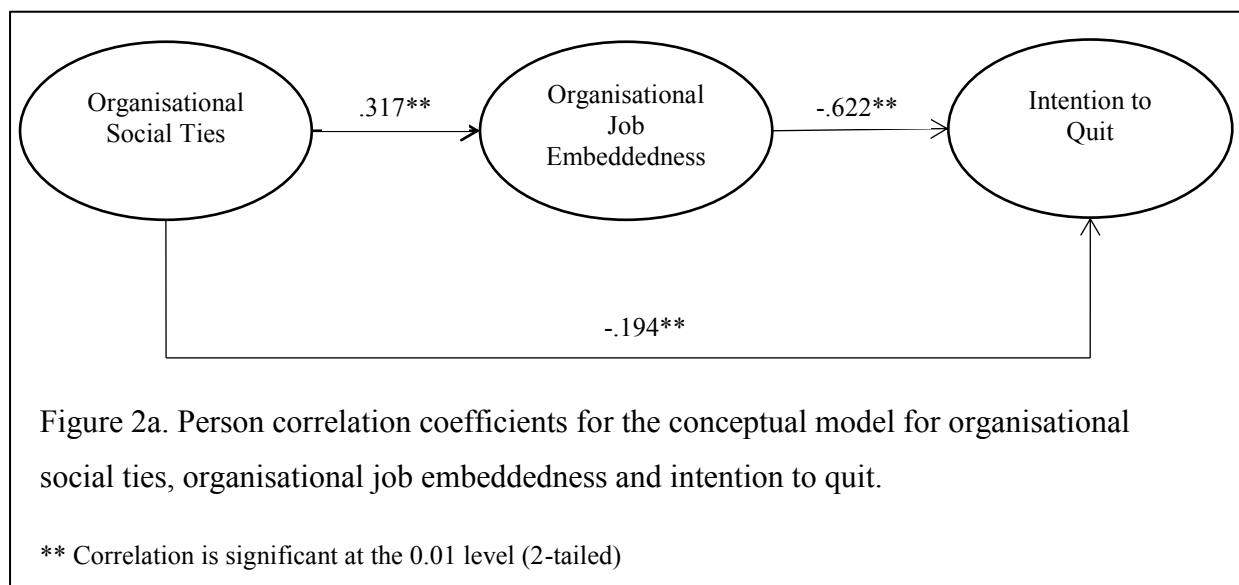
With reliability and validity of the measurement scales having been established, the next step in this study was to explore the direct and indirect (or mediated) relationships between the constructs. The relationships between the constructs were analysed using Pearson's Product Moment Correlation Coefficient (r). Cohen's (1988) guidelines were used to assess the size of the correlation coefficient. The Pearson correlation coefficients are summarised in Table 4 below. Based on Cohen's (1988) recommendations the following results can be identified from Table 4.

A significant and strong negative correlation ($r = -.622, p < 0.01$) was found between organisational job embeddedness and intention to quit. A significant and strong positive correlation was found between organisational social ties and occupational social ties ($r = .760, p < .01$).

A significant moderate positive correlation was found between organisational job embeddedness and occupational job embeddedness ($r = .320, p < .01$) and between organisational job embeddedness and organisational social ties ($r = .317, p < .01$).

A significant yet weak positive correlation was found between organisational job embeddedness and occupational social ties ($r = .285, p < .01$). A significant yet weak positive correlation was found between occupational job embeddedness and organisational social ties ($r = .201, p < .01$) and between occupational job embeddedness and occupational social ties ($r = .266, p < .01$). Significant yet weak negative correlations were found between intention to quit and occupational job embeddedness ($r = -.114, p < .01$), between intention to quit and organisational social ties ($r = -.194, p < .01$), and between intention to quit and occupational social ties ($r = -.153, p < .01$). These results supported Hypothesis 1, namely that a significant negative relationship exists between organisational social ties and intention to quit, as well as providing support for Hypothesis 2, namely that a significant negative relationship exists between occupational social ties and intention to quit.

The research model under investigation is presented in Figures 2a and 2b, depicting the Pearson correlation coefficients between the various variables.



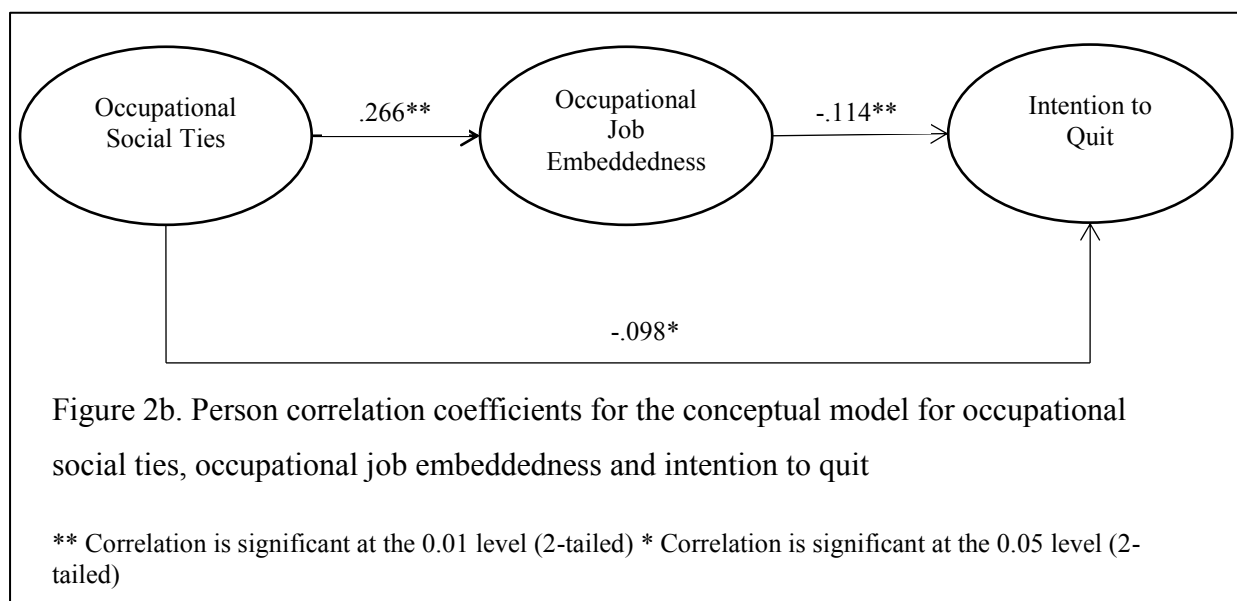


Table 4

Summary of Pearson Correlation Coefficients

	ItQ	JEORG	JEOCC	STORG	STOCC	STtot	JEtot
ItQ	1						
JEORG	-.622**	1					
JEOCC	-.114**	.320**	1				
STORG	-.194**	.317**	.201**	1			
STOCC	-.098*	.227**	.266**	.760**	1		
STtot	-.153**	.285**	.250**	.937**	.937**	1	
JEtot	-.465**	.828**	.796**	.321**	.302**	.330**	1

Note. ItQ = Intention to Quit; JEORG = Organisational Job Embeddedness; JEOCC = Occupational Job Embeddedness; STORG = Organisational Social Ties; STOCC = Occupational Social Ties; STtot = Social Ties total composite score; JEtot = Job Embeddedness total composite score.

** Correlation is significant at the 0.01 level (2-tailed) * Correlation is significant at the 0.05 level (2-tailed)

Indirect Relationship between Social Ties and Intention to Quit

To investigate the indirect relationship between social ties and intention to quit, as mediated by job embeddedness, Baron and Kenny's (1986) four step procedure was applied. The steps are briefly described below:

Step 1: The independent variable is significantly correlated with the dependent (outcome) variable

Step 2: The independent variable is significantly correlated with the mediating (mediator) variable

Step 3: The independent and mediating variables are simultaneously used in a regression equation in order to predict the dependent variable and the mediator should explain significant variance the outcome variable.

Step 4: To establish complete mediation, the effect of the independent variable on the dependent variable should be zero, when statistically controlling for the mediator.

The first three steps are sufficient to demonstrate mediation, according to Kenny, Kashy and Bolger (1998). Complete mediation is present when the all four conditions described above are met. If the fourth step is not demonstrated this would show to incomplete mediation.

To test H3 and H4, Baron and Kenny's (1986) four step procedure, as described above was used.

The Relationship between Organisational Social Ties and Intention to Quit, as Mediated by Organisational Job Embeddedness

Step 1: A significant yet weak negative relationship was found between organisational social ties and intention to quit ($r = -.194, p < 0.01$). The condition is therefore met.

Step 2: A significant medium positive correlation was found between organisational social ties and organisational job embeddedness ($r = .317, p < 0.01$). The condition is therefore met.

The results from the Standard Multiple Regression analysis are presented in Table 5.

Table 5

Organisational Job Embeddedness and Social Ties

Independent Variables	Std. Beta	t-value	Sig.t-value	F-value	Sig.F	R square
Constant		23.665	.000	164.767	.000	.387
JEORG	-.624	-17.250	.000			
STORG	.004	.098	.922			

Note. JEORG = Organisational Job Embeddedness; STORG = Organisational Social Ties. Dependent variable: Intention to Quit

Step 3: In Table 5 it can be seen that the regression model consisting of organisational social ties and organisational job embeddedness significantly predicts variance in intention to quit and explains 38.7% of the variance in intention to quit. Organisational job embeddedness was found to be a significant predictor of unique variance of intention to quit. The third condition was met based on these results. Thus mediation was demonstrated and H3 was supported, namely that organisational job embeddedness mediates the relationship between organisational social ties and intention to quit.

Step 4: To establish complete mediation, Baron and Kenny's (1986) fourth step was followed. A partial correlation coefficient was calculated for the relationship between organisational social ties and intention to quit, whilst statistically controlling for organisational job embeddedness. This relationship was found not be significant ($r = -.004; p > .05$). The fourth requirement, necessary to show complete mediation, was therefore satisfied; i.e. this relationship was found to be zero in controlling for the mediator.

Based on this basket of evidence the conclusion is therefore made that organisational job embeddedness completely mediates the relationship between organisational social ties and intention to quit.

The Relationship between Occupational Social Ties and Intention to Quit, as Mediated by Occupational Job Embeddedness

Step 1: A significant, but weak, relationship was found between occupational social ties and intention to quit ($r = -.098, p < 0.025$). The condition was therefore met.

Step 2: A significant, but weak, correlation was found between occupational social ties and occupational job embeddedness ($r = .266, p < 0.01$). The condition is therefore also met.

The results from the Standard Multiple Regression analysis are presented in Table 6.

Table 6

Occupational Job Embeddedness and Social Ties

Independent Variables	Std. Beta	t-value	Sig. t-value	F-value	Sig. F	R square
Constant		12.006	.000	4.765	.009	0.18
JEOCC	-.095	-2.111	.035			
STOCC	-.073	-1.611	.108			

Note. JEOCC = Occupational Job Embeddedness; STOCC = Occupational Social Ties. Dependent variable: Intention to Quit

Step 3: From Table 6 it can be seen that the regression model consisting of occupational social ties and occupational job embeddedness significantly predicted variance in intention to quit and explained 18% of the variance in intention to quit. Occupational job embeddedness was further found to be a significant predictor of unique variance of intention to quit. This third condition was met based on these results. Thus mediation was demonstrated and H4 was supported, namely that occupational job embeddedness mediates the relationship between occupational social ties and intention to quit.

Step 4: To assess if complete mediation existed in this data, Baron and Kenny's (1986) fourth step was followed. A partial correlation coefficient was calculated for the relationship between occupational social ties and intention to quit, whilst statistically controlling for occupational job embeddedness. This relationship was found not to be significant ($r = -.07$; $p > 0.05$). The fourth requirement necessary to show complete mediation was therefore satisfied; i.e. this relationship was found to be zero in controlling for the mediator.

Based on this basket of evidence the conclusion was therefore made that occupational job embeddedness completely mediates the relationship between occupational social ties and intention to quit.

Relative Importance of the Constructs in Predicting Intention to Quit

To compare the contribution of each of the independent variables, they were used as independent variables in a Standard Multiple Regression equation, with intention to quit as the dependent variable. The results of this analysis are presented in Table 7.

When simultaneously regressed, the regression model consisting of organisational and occupational job embeddedness and organisational and occupational social ties significantly explained 39.7% of the variation in intention to quit. It can be seen that organisational and occupational job embeddedness significantly explained unique variance in intention to quit,

while organisational and occupational social ties did not. When comparing the standardised Beta coefficients, organisational job embeddedness is ranked first (by a relatively large margin) and occupational job embeddedness second.

Table 7

Predictors of Intention to Quit

	R	R Square	F Change	df1	Sig. F Change
	.630	.397	85.377	4	.000
Independent variables	Beta	t	Part correlation		
Constant		19.07**			
Job Embeddedness Organisational	-.647	-17.24**	-.588		
Job Embeddedness Occupational	.086	2.33*	.079		
Social Ties Organisational	-.062	-1.14	-.039		
Social ties Occupational	.073	1.36	.046		

Note. ** Correlation is significant at the 0.01 level (2-tailed) * Correlation is significant at the 0.05 level (2-tailed)

DISCUSSION

Holtom *et al.* (2008) identified the understanding of external and internal social ties and their relationship to job embeddedness and voluntary turnover as being of assistance in understanding employees' turnover decisions. In response to Holtom's call for further research in this area, the job embeddedness (as discussed by inter alia Clinton *et al.*, 2012; Halbesleben & Wheeler, 2008; Lee *et al.*, 2004, Mitchell *et al.*, 2005 and Ng & Feldman, 2007) social ties (as discussed by Kilduff & Brass, 2010; Moynihan & Pandey, 2007 and Ng & Feldman, 2010) and intention to quit (Holtom *et al.*, 2008, Yang & Hu, 2011) constructs were examined independently, as well as their relationships to each other (Crossley *et al.*, 2007, Firth *et al.*, 2004 and Jiang *et al.*, 2012), in order to better understand research findings established to date.

Where-as there was extensive literature on the job embeddedness and intention to quit constructs, much less information was found on social ties and the relationship of social ties to turnover and job embeddedness. The value of social ties in an organisational setting was found to be an under-researched component in employee retention. Key findings in this area were that strong and positive intra-organisational networks are inversely related to the intention to quit and arguably to the likelihood of employees choosing to stay with an organisation. Only weak support was found for the alternate hypothesis, namely that a strong external network would increase external job mobility (Moynihan & Pandey, 2007).

Hypotheses were developed that corroborate previous research relating to the relationships between the job embeddedness, social ties and intention to quit constructs. A distinction was however drawn between the organisational aspects of job embeddedness (what keeps people in their organisations) and the occupational aspects of job embeddedness (what keeps people in their occupations) as described by Ng and Feldman (2007).

Research was conducted in the South African pharmaceutical industry which is experiencing serious skills shortages, particularly with regard to pharmacists (Pharmacy human resources in South Africa, 2011). Understanding the differences between organisation-based social ties and occupation-based social ties, job embeddedness and turnover intention will hopefully assist organisations to develop targeted strategies aimed at increasing the employee's ties to the organisation, thereby reducing their turnover intentions.

Empirical support for all four of the stated hypotheses were found. Firstly, a weak but significant negative relationship was found between organisational social ties and intention to quit, and also between occupational social ties and intention to quit. Second, it was found that organisational job embeddedness completely mediated the relationship between organisational social ties and intention to quit. Occupational job embeddedness was also found to completely mediate the relationship between occupational social ties and intention to quit.

These findings corroborate those of Mitchell *et al.* (2001) i.e. that social ties at work serve to strengthen the links of employees with the organisation and thereby contribute to job embeddedness. However, it has been suggested that occupation-based social ties may lead to greater mobility (Gersick *et al.*, 2000) which may support the finding that occupational job embeddedness has a weaker relationship between occupational social ties and intention to quit.

Individual decisions relating to occupational career choices are largely out of the hands of an employer. However, the significant role of organisational job embeddedness in mediating the relationship between organisational social ties and intention to quit provides clear direction for employers that social ties to an organisation are beneficial, support job embeddedness and reduce intention to quit.

The results of the present study provided empirical evidence of the relationship between social ties, job embeddedness and intention to quit. It is hoped that the results of the present study will add to the current body of social science research, as few studies have empirically demonstrated the mediating role of job embeddedness between social ties and intention to quit. There is also limited South African empirical research that explores the relationships between organisational and occupational social ties, organisational and occupational job embeddedness and intention to quit.

Limitations of the Study and Recommendations for Future Research

The limitations of convenience sampling apply and in future representative samples should be sought to allow for generalisation of the results. A further recommendation for future research is the replication of the present study across other South African samples, organisations and work contexts, as well as further research into the nature of organization-based and occupation-based social ties and turnover and intention to quit. Maertz and Griffeth's (2004) framework of causal motives and its relationship to social ties may also increase understanding of the role of organisation-based and occupation-based social ties in reducing turnover. Also, the research design and data collection approach might have brought about mono-method bias in the results and in future this could be addressed using various measures and respondents to collect the data.

Managerial Implications

Reducing turnover in an environment of scarce skills makes economic sense. Social ties are seemingly an important aspect of related to job embeddedness and low levels of intention to quit. Strong and positive intra-organisational networks contribute to the likelihood of employees staying with an organisation, as found by Moynihan and Pandey (2007).

Employers, in particular pharmaceutical employers, may benefit from developing retention strategies to enhance the formation of both organisational and occupational social ties amongst employees in order to reduce the potential for turnover and the negative snowball impact of good staff leaving. Such actions could range from informal to formal structured socialisation activities aimed at both motivations identified by Randel and Raft (2007), namely social support and personal friendship as well as social ties that help employees improve job success. Examples of creating informal environments conducive to employee interaction could include physical facilities (such as well-designed workspaces, easily accessible pause areas where refreshments are available, staff canteens); informal encouragement of workplace celebrations of personal events (birthdays, engagements, pregnancies); informal encouragement of the creation of networked support groups such as those for young managers, female supervisors, Black managers, occupational-specific groups etc. Formal activities could include facilitated corporate events that allow staff to interact; the formation of network support groups (which may be occupationally based) that serve a specific organisational purpose and have a budget to support their activities; an active mentoring and coaching programme; and effective utilisation of technology to enable work-oriented social exchange. In creating such opportunities, attention should be paid to the manner, variety, strength, value and status of relationships with significant others (Kilduff & Brass, 2010).

The development of an organisational culture that places value on co-worker support and interpersonal citizenship behaviour (Mossholder *et al.*, 2005) may also assist to strengthen social ties and thereby retain staff.

REFERENCES

- Aguilera, M. B. (2002). The impact of social capital on labor force participation: Evidence from the 2000 social capital benchmark survey. *Social Science Quarterly*, 83(3), 853-874. doi:10.1111/1540-6237.00118
- Allen, D. G., & Shanock, L. R. (2013). Perceived organisational support and embeddedness as key mechanisms connecting socialization tactics to commitment and turnover among new employees. *Journal of Organisational Behavior*, 34(3), 350-369.
doi:10.1002/job.1805
- Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychology research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51 (6): 1173 – 1182.
- Bergiel, E. B., Nguyen, V. Q., Clenney, B. F., & Taylor, G. S. (2009). Human resource practices, job embeddedness and intention to quit. *Management Research News*, 32(3), 205-to 219. doi:10.1108/01409170
- Bhal, K. T., & Gulati, N. (2006). Predicting turnover intentions: Incorporating the role of organisation and work-group level variables. *Global Journal of Flexible Systems Management (Global Institute of Flexible Systems Management)*, 7(3 and 4), 41-t0 50.
- Boshoff, A. B., Van Wyk, R., Hoole, C. & Owen. J. H. 2002. The prediction of intention to quit by means of biographic variables, work commitment, role strain and psychological climate. *Management Dynamics*, 11 (4): 14-28
- Burt, R. (2005). *Brokerage and closure: An introduction to social capital*. Oxford: Oxford University Press.

- Carmeli, A., & Weisberg, J. (2006). Exploring turnover intentions among three professional groups of employees. *Human Resource Development International*, 9(2), 191-206.
doi:10.1080/13678860600616305
- Chow, I. H. S., Ng, I., & Gong, Y. Y. (2012). Risk-taking and relational perspective on turnover intentions. *International Journal of Human Resource Management*, 23(3), 779-792. doi:10.1080/09585192.2011.561249
- Cliff, N. (1988). The eigenvalues-greater-than-one rule and the reliability of components. *Psychological Bulletin*, Vol 103(2), Mar 1988, 276-279. <http://dx.doi.org/10.1037/0033-2909.103.2.276>
- Clinton, M., Knight, T., & Guest, D. E. (2012). Job embeddedness: A new attitudinal measure. *International Journal of Selection and Assessment*, 20(1), 111-117.
doi:10.1111/j.1468-2389.2012.00584.x
- Cohen, A. (1993). Work commitment in relation to withdrawal intentions and union effectiveness. *Journal of Business Research*, 26(1), 75-90.
- Cohen, J. (1988). *Statistical Power Analysis for Behavioural Sciences (2nd ed.)*. New Jersey: Erlbaum.
- Crossley, C. D., Bennett, R. J., Jex, S. M., & Burnfield, J. L. (2007). Development of a global measure of job embeddedness and integration into a traditional model of voluntary turnover. *Journal of Applied Psychology*, 92(4), 1031-1042. doi:0021-9010/07
- De Janasz, S. C., & Sullivan, S. E. (2004). Multiple mentoring in academe: Developing the professional network. *Journal of Vocational Behaviour*, 64: 263 – 283.

Feldman, D. C., & Ng, T. W. H. (2007). Careers: Mobility, embeddedness, and success.

Journal of Management, 33(305) doi:10.1177/0149206307300815

Ferris, G. R., Treadway, D. C., Kolodinsky, R. W., Hochwarter, W. A., Kacmar, C. J.,

Douglas, C., & Frink, D. D. (2005). Development and validation of the political skill
inventory. *Journal of Management*, 31(1), 126-152. doi:10.1177/0149206304271386

Firth, L., Mellor, D. J., Moore, K. A., & Louquet, C. (2004). How can managers reduce
employee intention to quit? *Journal of Managerial Psychology*, 19(2), 170-187.

doi:10.1108/02683940410526127

Gersick, C. J. G., Dutton, J. E., & Bartunek, J. M. (2000). Learning from academia: The
importance of relationships in professional life. *Academy of Management Journal*, 43(6),
1026-1044. doi:10.2307/1556333

Ghosh, P., Satyawadi, R., Joshi, J., & Shadman, M. (2013). Who stays with you? factors
predicting employees' intention to stay. *International Journal of Organisational
Analysis*, 21(3), 288-to 312. doi:10.1108/IJOA-Sep-2011-0511

Halbesleben, J. R. B., & Wheeler, A. R. (2008). The relative roles of engagement and
embeddedness in predicting job performance and intention to leave. *Work and Stress*,
22(3), 242-256. doi:10.1080/02678370802383962

Holtom, B. C., Mitchell, T. R., Lee, T. W., & Eberly, M. B. (2008). 5 Turnover and
retention research: A glance at the past, a closer review of the present, and a venture into
the future. *The Academy of Management Annals*, 2(1), 231-274.

doi:10.1080/19416520802211552

- Hom, P. W., & Kinicki, A. J. (2001). Toward a greater understanding of how dissatisfaction drives employee turnover. *Academy of Management Journal*, 44(5), 975-987.
- Jaramillo, F., Mulki, P. J., & Locander, W. B. (2006). The role of time wasted in sales force attitudes and intention to quit. *International Journal of Bank Marketing*, 24(1), 24-36.
doi:10.1108/0265232061042326
- Jiang, K., Liu, D., McKay, P. F., Lee, T. W., & Mitchell, T. R. (2012). When and how is job embeddedness predictive of turnover? A meta-analytic investigation. *Journal of Applied Psychology*, 97(5), 1077-1096. doi:10.1037/a0028610
- Kahumuza, J., & Schlechter, A. F. (2008). Examining the direct and some mediated relationships between perceived support and intention to quit. *Management Dynamics*, 17(3)
- Kenny, D. A., Kashy, D. A., & Bolger, N. (1998). Data analysis in social psychology. *The Handbook of Social Psychology*, 1 and 2, 4th ed. 233-265
- Kilduff, M., & Brass, D. J. (2010). Organisational social network research: Core ideas and key debates. *The Academy of Management Annals*, 4(1), 317-357.
doi:10.1080/19416520.2010.494827
- Khoele, A., & Daya, P. (2014). Investigating the turnover of middle and senior managers in the pharmaceutical industry in South Africa. *SA Journal of Human Resource Management/SA Tydskrif vir Menslikehulpbronbestuur*, 12(1), Art. #562, 10 pages.
<http://dx.doi.org/10.4102/sajhrm.v12i1.562>

- Knapp, K. K., Manolakis, M., Webster, A. A., & Olsen, K. M. (2011). Projected growth in pharmacy education and research, 2010 to 2015. *American Journal of Pharmaceutical Education*, 75(6), 108. doi:10.5688/ajpe756108; 10.5688/ajpe756108
- Krackhardt, D., & Porter, L. W. (1986). The snowball effect: Turnover embedded in communication networks, *Journal of Applied Psychology*, 71, 50 – 55.
- Lee, T. W., Mitchell, T. R., Sablinski, C. J., Burton, J. P., & Holtom, B. C. (2004). The effects of job embeddedness on organisational citizenship, job performance, volitional absences, and voluntary turnover. *Academy of Management Journal*, 47(5), 711-722.
- Leupold, C. R., Ellis, L. E., & Valle, M. (2013). Job embeddedness and retail pharmacists' intention to leave. *The Psychologist-Manager Journal*, 16(4), 197-216.
doi:10.1037/mgr0000006
- Maertz, C. P., & Griffeth, R. W. (2004). Eight motivational forces and voluntary turnover: A theoretical synthesis with implications for research. *Journal of Management*, 30(667)
doi:10.1016/j.jm.2004.04.001
- Meyer, J. P., Stanley, D. J., Herscovitch, L., & Topolnytsky, L. (2002). Affective, continuance, and normative commitment to the organization: A meta-analysis of antecedents, correlates, and consequences. *Journal of Vocational Behavior*, 61(1), 20-52.
doi:http://dx.doi.org.ezproxy.uct.ac.za/10.1006/jvbe.2001.1842
- Mishra, S. K., & Bhatnagar, D. (2010). Linking emotional dissonance and organisational identification to turnover intention and emotional well-being: A study of medical representatives in india. *Human Resource Management*, 49, 401-419.
doi:10.1002/hrm.20362

- Mitchell, T. R., Holtom, B. C., Lee, T. W., Sablinski, C. J., & Erez, M. (2001). Why people stay: Using job embeddedness to predict voluntary turnover. *The Academy of Management Journal*, 44(6), 1102-1121.
- Mossholder, K. W., Settoon, R. P., & Henagan, S. C. (2005). A relational perspective on turnover: Examining structural, attitudinal, and behavioral predictors. *Academy of Management Journal*, 48(4), 607-618. doi:10.5465/AMJ.2005.17843941
- Moynihan, D. P., & Pandey, S. K. (2007). The ties that bind: Social networks, person-organisation value fit, and turnover intention. *Journal of Public Administration Research and Theory*, 18, 205-227.
- Ng, T. W. H., & Feldman, D. C. (2007). Organisational embeddedness and occupational embeddedness across career stages. *Journal of Vocational Behavior*, 70(2), 336-351. doi:http://dx.doi.org.ezproxy.uct.ac.za/10.1016/j.jvb.2006.10.002
- Ng, T. W. H., & Feldman, D. C. (2010). The effects of organisational embeddedness on development of social capital and human capital. *Journal of Applied Psychology*, 95(4), 696-712. doi:10.1037/a0019150
- Nunally, J. C. (1978) *Psychometric Theory*, McGrawHill, New York, NY
- Pharmacy human resources in South Africa*. (2011). (Industry Report No. 1). Arcadia, South Africa: South African Pharmacy Council. (Pharmacy Human Resources in SA 2011).
- Pastor, J. C., Meindl, J. R., & Mayo, M. C. (2002). A network effects model of charisma attributions. *Academy of Management Journal*, 45, 410 – 420.

- Randel, A. E., & Ranft, A. L. (2007). Motivations to maintain social ties with coworkers: The moderating role of turnover intentions on information exchange. *Group and Organization Management*, 32(2), 208-232.
- Schlechter, A. F. (2006). The influence of transformational leadership, emotional intelligence, trust, meaning, and intention to quit on organisational citizenship behaviour. Unpublished doctoral dissertation, University of Stellenbosch.
- Seston, E., Hassell, K., Ferguson, J., & Hann, M. (2009). Exploring the relationship between pharmacists' job satisfaction, intention to quit the profession, and actual quitting. *Research in Social and Administrative Pharmacy*, 5(2), 121-132.
doi:<http://dx.doi.org.ezproxy.uct.ac.za/10.1016/j.sapharm.2008.08.002>
- Shaw, J. D., Gupta, N., & Delery, J. E. (2005). Alternative conceptualizations of the relationship between voluntary turnover and organisational performance. *The Academy of Management Journal*, 48(1), 50-68.
- Tschopp, C., Grote, G., & Gerber, M. (2014). How career orientation shapes the job satisfaction-turnover intention link. *Journal of Organisational Behaviour*, 35, 151-171.
doi:10.1002/job.1857
- Van Zyl, R. (2009). Sectors and skills: The need for policy alignment. Cape Town, South Africa: Human Science Research Council Press.
- Waldman, D. A., Carter, M. Z., & Hom, P. W. (2012). A multilevel investigation of leadership and turnover behaviour. *Journal of Management*,
doi:10.1177/0149206312460679

Winterton, J. (2004). A conceptual model of labour turnover and retention. *Human Resource Development International*, 7(3), 371-390. doi:10.1080/1367886042000201967

Woolcock, M., & Narayan, D. (2000). Social capital: Implications for development theory, research, and policy. *The World Bank Research Observer*, 15(2), 225-249.

Yang, C., Ma, Q., & Hu, L. (2011). Job embeddedness: A new perspective to predict voluntary turnover. *Nankai Business Review International*, 2(4), 418-to 446.
doi:10.1108/20408741111178834

Zimmerman, R. D. (2008). Understanding the impact of personality traits on individuals' turnover decisions: A meta-analytic path model. *Personnel Psychology*, 61(2), 309-348.
doi:10.1111/j.1744-6570.2008.00115.x