

**Professionals' supervisor-subordinate relationships, autonomy and commitment in
Australia: A leader-member exchange theory perspective**

Rod Farr-Wharton B.Sc, M.Sc. PhD

*University of the Sunshine Coast,
Maroochydore, Queensland. 4558, AUSTRALIA
Ph: +61 7 54301217
Email: rfarr@usc.edu.au*

*** Yvonne Brunetto** BA, DipEd, PhD - *Author for Correspondence*

*Associate Professor in HRM
School of Commerce and Management , Southern Cross University
P.O Box 42, Tweed Heads,
NSW. 2485 AUSTRALIA
ph: +61 255069373;
Mobile: 0408192098;
Fax: +61 255069370
Email: yvonne.brunetto@scu.edu.au*

Kate Shacklock B.Ec, PhD

*Department of Employment Relations and Human Resources,
Griffith University - Gold Coast Campus
Queensland 4222, AUSTRALIA
ph: +617 5552 8543
Fax: +61 7 55529206
Email: k.shacklock@griffith.edu.au*

Abstract

This paper used Leader Member Exchange Theory (LMX) as a lens for comparing the impact of the supervisor-subordinate relationship on two types of professionals' perceptions of autonomy and in turn, upon their affective commitment. The reason for examining autonomy is because a characteristic of being a professional is having autonomy; however, we argued that such perceptions are affected by the quality of the supervisor-subordinate relationship. The findings confirmed this argument, although the trend was stronger for engineers compared with nurses.

Using the OLS procedure, the goodness of fit of the model identified that supervision and autonomy accounted for approximately a third of the variance of engineers' levels of affective commitment and a fifth of the variance for nurses. That is, the impact of supervision practices was stronger on autonomy and commitment for engineers than for nurses in Australia. Moreover, statistically, the two groups of professionals were similar in their perceptions of the quality of their supervisor-subordinate relationship as well as their perceptions of autonomy, and the qualitative findings supported similar factors impacting upon their perceptions. The only significant difference between the two groups was in their levels of affective commitment.

The implications of these results include the need for those managing professionals to consider ways of improving workplace supervisor-subordinate relationships because of the impact upon perceived autonomy as well as commitment to their organisation, and hence the retention of such professionals.

Key words: Australia, Autonomy, Commitment, LMX theory, Professionals, Supervisor-subordinate relationship

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Introduction

Professionals are defined as those employees who have the knowledge and skills designated by a professional body, usually in conjunction with universities and/or professional bodies and the government to control entry to the profession (Evetts and Buchner-Jeziorska, 1997). They differ from other employees because professionals undergo a socialisation process from the time they begin training, ensuring that their practice will adhere to professional norms and ethics (Friedson, 2001). Compared with other employees, professionals with the necessary knowledge and skills associated with a specific discipline therefore have also traditionally had more discretionary power/autonomy to make decisions in relation to the client (Dent, 2003). Additionally, Friedson (2001) argues that not only does a professional demand autonomy and control in their work, they also expect to influence the strategic direction of an organisation, rather than be dominated by the organisational chains of command. Historically, such discretionary autonomy in decision-making has led to instances where professional discretionary power has challenged the ability of organisations to control their use and allocation of resources. This has led to conflict within organisations when organisational objectives contradicted professional goals and values (Brock, Powell and Hinings, 1999). Brock et al (1999: 19) argue that “professionals are able to use their power to ensure that changes are congruent with their interests and values”, suggesting that professionals have the autonomy to ignore organisational objectives if they contradict professional values and beliefs.

However, the introduction of managerialist reforms over the past three decades has specifically aimed at increasing managerial control and imposing greater accountability of professionals

(Friedson, 2001). One outcome of such reforms is the importance of the first line manager in managing professionals. The implementation of management reforms over the past 30 years in OECD countries such as Australia, UK, and NZ has deliberately aimed to increase the discretionary power of supervisors, specifically to curtail the autonomy of professionals, and especially those delivering social services in the public sector (Bolton, 2003; Pollit, 1993). Hence, the power of professionals has come to increasingly rely on the quality of the relationship with their supervisors – often also professionals tasked with the dual responsibility of role-modelling the beliefs and values of the professional as well as implementing organisational controls (Dent, 2003; Friedson, 2001). Additionally, Maynard-Moody and Musheno (2003) argue that public sector professionals' level of discretionary power is very much dependent upon the level of support offered by supervisors. This suggests that effective supervisor-subordinate relationships will be an important factor affecting professionals' perceptions of autonomy.

Whilst historically the professional archetype was considered to be similar in values and beliefs across different professions, especially in relation to their level of discretionary power (Brock et al, 1999; Friedson, 2001), it is now more likely that professionals' perception of autonomy is a product of the quality of the supervisor-subordinate relationship in which they operate. However, it is unclear whether each profession experiences similar supervisor-subordinate relationships. Since low levels of perceived support from supervisors have also been identified as a contributor of high turnover (Cheung, Bessell and Ellis, 2004; Podsakoff, MacKenzie, Paine and Bachrach, 2000), and an effective supervisor-subordinate relationship has been identified as the factor most likely to improve commitment and retention (Cohen, 2006; Tauton, Boyle and Woods, 1997), then there should be differences in autonomy evident across different types of professionals because of the increased discretionary power of supervisors in the social services professions.

This is an important HR issue because skilled professionals are in short supply in many OECD countries (OECD, 2005) and differences in the quality of the supervisor-subordinate relationship may be a critical factor. Recent reports identify both nurses and engineers as two professional groups that are in short supply in numerous OECD countries (OECD, 2006). For example, Australia requires an additional 10,000 nurses just to meet existing demand (Chang, 2005), which is approximately 3% of the registered nurses (AIHW, 2004) and this situation is similar to other OECD countries such as USA, Canada (Buchan & Calman, 2004). Moreover, similar shortages exist for engineers, especially for construction and mining engineers and this situation is also critical in European countries that have an aging baby boomer population (Association of Professional Engineers, Scientists & Managers, Australia (APESMA), 2007; OECD, 2006). Moreover, professionals are becoming increasingly important in the knowledge service sector and therefore their retention is a vital factor influencing organisational effectiveness and the continued sustainability of organisations operating in that sector (Gollan, 2005; Ostroff and Bowen, 2000; Ostroff, Kinicki and Clark, 2002). However, there has been limited research comparing the impact of supervisor-subordinate relationship (particularly since that relationship should have changed for nurses) on the outcomes for different types of professionals in short supply.

Leader Member Exchange Theory (LMX) argues that from an employees' perspective, the key features of a high quality supervisor-subordinate relationship are a high level of mutual support, trust and respect. Hence, under ideal conditions, LMX theory argues that the "in-group" experience effortless access to information, support and participation in decision-making, which makes it easier for them to solve work-related problems (Gerstner and Day 1997; Mueller and Lee 2002). Moreover, because the in-group are liked by their supervisors, irrespective of their

performance (Graen and Uhl-Bien, 1995), they are more likely to be promoted and/or receive bonuses or get first pick at interesting work assignments. Consequently, in return, supervisors experience dedicated employees who show initiative in the workplace as well as providing extra support for their supervisors' decisions (Wayne, Shore and Linden, 1997). Using LMX theory, it seems likely that these conditions will provide the most empowering workplaces for employees and consequently it is argued that employees would experience high commitment to their organisation (affective commitment). This is important because past research has identified affective commitment as a predictor of labour turnover and job performance (Pitt, Leyland, Foreman and Bromfield, 1995) and organisational effectiveness (Meyer and Herscovitch, 2001).

The findings from this study will therefore provide valuable new information for managers about the impact of the quality of supervisor-subordinate relationships upon the outcomes of different types of professionals. This is because autonomy is a characteristic of being a professional and the quality of relationships either positively enhances or negatively thwarts employees' perceptions of the effectiveness of management practices, which has implications for their perceptions of autonomy.

This paper has four parts. The first part provides a targeted review of the literature from which the hypotheses emerge. The second part describes the sample and methods used to test the hypotheses in Australia and address the research questions. The third part reports the results and uses the discussion section to identify pattern-matching with relevant past research and highlight implications for public sector managers and policymakers. The fourth part concludes the paper and suggests a model for the effective management of nursing professionals.

Background

The Quality of Supervisor-Subordinate Relationships

As stated, one way of examining the quality of the supervisor-subordinate relationship is to use the LMX theoretical framework. Past research suggests that the quality of LMX experienced by employees affects their outcomes (Schriesheim, Castro, and Cogliser, 1999). According to Gomez and Rosen (2001), high quality LMX predicts employees' experiences of psychological empowerment, including autonomy. This is because LMX argues that over time, the quality of "social exchanges" leads to a diverse quality of relationships between supervisors and subordinates. As stated, effective supervisor-subordinate relationships (high quality LMX relationships) are characterised by a high level of mutual support, trust and respect (Gerstner and Day 1997; Mueller and Lee 2002) increased information and resources flow as well as empowering relationships (Sparrowe and Linden, 1997). These same conditions are simultaneously likely to empower employees because these processes operate best when decision-making and power is delegated (Wayne, et al., 1997; Yrie, Hartman, and Galle, 2003). In contrast to the in-group, the "out-group" tends to suffer from poor levels of information-sharing and involvement in decision-making and consequently, lower levels of perceived autonomy.

Professionals' perceptions of autonomy

Autonomy is perceived somewhat differently depending on the discipline; however a review of both the public sector and empowerment literature suggests that professionals have a higher level of autonomy in the workplace, compared with other employees (Adler and Asquith, 1993; Hoyle and John, 1995; Spreitzer, 1995, 1996, 2007). Within the literature on professionals, a professional's perception of autonomy is considered to be a function of *rule* discretionary power (the fewer the number of organisational or legal or fiscal rules, the greater their power), *value*

discretionary power (the more complex the work undertaken and the level of ambiguity in the work environment, the greater their power) and *task* discretionary power (the less the accountability associated with task delivery, the greater their power) (Adler and Asquith, 1993).

On the other hand, within the empowerment literature, Spreitzer (2007) conceptualises autonomy within the empowerment construct. Two dimensions of empowerment are identified: structural and psychological (Spreitzer, 1995; 1996). Firstly, Spreitzer (1995; 1996) argues that structural empowerment refers to whether the organisational structures and processes facilitate optimal employee performance, arguably similar to *rule* discretionary power in impact. Linked to this, Kanter (1993) argue that organisations determine the quality of structural empowerment experienced by employees by influencing their access to resources, information and decision-making power. Extending this, Seibert, Silver and Randolph (2004) suggest that the quality of structural empowerment is evident in employees' perceptions of psychological empowerment.

Secondly, Spreitzer (1995; 1996) argues that psychological empowerment refers to employees' responses and outcomes from working within a particular organisational empowerment context, with autonomy being a subset of empowerment. That is, he argues, psychological empowerment refers to employees' perceived levels of power and can be conceptualised using four constructs: 'meaning' (which refers to a work goal moderated against an employee's own beliefs and values), 'competence' (self-efficacy about an employee's capabilities to undertake tasks), 'self-determination' (an employee's sense of autonomy about workplace choices) and 'impact' (an employee's beliefs about their impact in the workplace). Previous research has already identified that an employee's perceptions of autonomy (also referred to as self-determination) is an important construct affecting organisational outcomes (Conger and Kanungo, 1988; Gomez and Rosen, 2001; Seibert, et al, 2004; Spreitzer, 1995, 1996; Thompson, and Prottas, 2006).

Using LMX theory, under ideal conditions professionals arguably would feel most autonomous when they have adequate information, resources, support, participation in decision-making and trust to solve problems, are empowered to make relevant decisions about work-related matters, and work in an environment embedded in mutual respect. This will in turn affect their perceptions of self-determination, in deciding how and when to undertake job tasks, their perceptions of how satisfied they are in their workplace (likely affected by their access to appropriate information and resources) and how competent they are in undertaking the tasks. In addition, professionals are likely to experience even greater autonomy in the workplace because of their knowledge specific expertise (Hoyle and John, 1995).

However, the implementation of recent reforms affecting nursing professionals has decreased their level of structural empowerment (by increasing their level of accountability), in turn decreasing their *task and rule discretionary power* (Ackroyd, Kirkpatrick, and Walker, 2007). The reforms have had the effect of 'increasing bureaucracy and managerial supervision... leading to shifts in the nature and quantity of work' for nurses (Ackroyd, et al., 2007, p. 18). This means that whilst all professionals continue to have autonomy to make decisions in the workplace based on their *value discretionary power* because of the complexity of the work undertaken; the change in the supervisor-subordinate relationship may have caused a change in the perception of autonomy for nurses. Hence, whilst all professionals should have a relatively high perception of autonomy because of the power derived from their expert knowledge, it is expected that nurses will have a lower perception of autonomy compared with engineers. To examine this premise, the following hypothesis is proposed:

Hypothesis 1: There is a positive relationship between LMX and professionals' subsequent perceptions of autonomy for both nurses and engineers.

Hypothesis 2: Engineers have a higher perception of autonomy compared with nurses.

Affective commitment

Allen and Meyer (1990) define affective commitment as the emotional attachment to, and identification with, an organisation. Other previous research has identified that those with high levels of affective commitment are likely to be loyal and attached to the organisation, thereby reducing their likelihood of leaving and lowering turnover (Meyer and Allen 1997; Pitt, et al., 1995). The strongest predictor of commitment is job satisfaction (Lok and Crawford, 1999), while affective commitment is a strong predictor of labour turnover and job performance (Pitt, et al, 1995) as well as organisational effectiveness (Meyer and Herscovitch, 2001).

Whilst previous research has identified the positive relationship between LMX and the level of affective commitment (Brunetto and Farr-Wharton, 2004; 2006a; 2006b; 2007), the links between autonomy and job satisfaction (Judge and Watanabe, 1993), and LMX with autonomy (Gerstner and Day, 1997), there is minimal research linking LMX and autonomy with affective commitment, and even less for professionals. To guide the data collection that examines these possible links, the following hypotheses are proposed:

Hypothesis 3: There is a positive relationship between professionals' perceptions of autonomy and their levels of affective commitment.

Hypothesis 4: There is a positive relationship between professionals' levels of satisfaction with LMX, their perceptions of autonomy and their levels of affective commitment.

Different types of professionals

Previous research has identified a similarity in the beliefs, values and aspirations across different types of professionals (Brock, et al., 1999; Friedson, 2001; Maynard-Moody and Mushero, 2003). As stated, professionals are those employees with expert knowledge that makes them eligible to belong to professional associations that control the number of new professionals accredited into the profession (Evetts and Buchner-Jeziorska, 1997). Nurses and engineers are similar because many OECD countries have a shortage of these two professions (OECD, 2006). However, there are at least two differences between engineers and nurses. Firstly, engineering has existed as a profession longer than the nursing profession, which has only required university qualifications for the past two decades in some OECD countries. In other countries, university requirements for nurses are still not mandatory but are increasingly the norm, for example in the United Kingdom (Robinson, Murrells and Clinton, 2006). A second difference is that healthcare professionals have been identified as undergoing significant change as a result of the implementation of reforms specifically aimed at increasing supervisory discretion, and in turn, reducing the discretionary power of nurses (Bolton, 2003; Ackroyd, Kirkpatrick, and Walker, 2007), which be evident in lower perceptions of autonomy compared with other professionals such as engineers. It is expected that will have negatively affected the quality of supervisor-nurse relationships. It is therefore anticipated that despite both types of professional being in short supply, nurses will have a lower level of satisfaction with their supervisor-subordinate relationship and this may have in turn affected their level of affective commitment as argued by Cohen (2006). To identify the similarities and differences between these two types of professionals, the following hypothesis is proposed:

Hypothesis 5: Engineers and nurses experience different levels of satisfaction with LMX and levels of affective commitment.

Methods

This research used mixed methods to capture the trends in employees' opinions (using quantitative methods) as well as explanations for those opinions (qualitative methods) (Rocco, Bliss, Gallagher and Perez-Prado, 2003). A cross-sectional design was used to gather data from professionals to test whether the quality of relationships between professionals and their supervisors affects their perceptions of autonomy and in turn, their levels of affective commitment. Quantitative data was collected using a survey-based, self-report strategy (Ghauri and Gronhaug 2002), and qualitative data was collected, transcribed and thematically analysed from interviews with nurses and engineers to identify the reasons for their opinions. The emerging patterns of data were then compared with the findings of previous research.

Quantitative data was collected from:

1. Nursing professionals (N=1064)
2. Engineering professionals (413)

Qualitative data was collected from:

1. Nursing professionals (N=84)
2. Engineering professionals (32)

Measures

The measures included in the questionnaire are outlined as follows:

a) The leader-member exchange (LMX) validated test-bank survey, which traditionally measures the satisfaction of employees with the quality of the relationship with their supervisor (Mueller and Lee, 2002). In this study a seven item uni-dimensional scale (LMX-7),

developed by Graen and Uhl-Bien (1995), was used. An example of a question includes "I am certain to what extent my LM will go to back me up in my decision-making".

b) Psychological autonomy was operationalised using Spreitzer's (1996) measure of self-determination because it has the strongest correlation to organisational effectiveness and previous research suggests that it is an indicator of the quality of structural empowerment experienced by employees (Spreitzer, 2007).

c) Allen and Meyer's (1990) commitment instrument was used to measure the dependent variable - affective commitment (commitment to the organisation) - using 8 items from their organisational commitment inventory. Researchers have reported Cronbach's alphas ranging between .74 and .90 for this measure (see Allen and Meyer 1996).

The questions used in the focus groups comprised two sections; firstly, demographic questions related to their position and tasks associated with their position and secondly, questions about the factors affecting their perceptions of autonomy to make decisions about what and how tasks were undertaken in their workplaces.

Samples

Sampling choices for nursing professionals were made based on typicality to ensure that the samples were representative of

1. Public and private sector hospitals
2. Urban and regional hospitals
3. Big (metropolitan), medium and smaller hospitals
4. Hospitals located in at least four states of Australia.

To obtain data from nurses, 4,800 anonymous surveys were randomly distributed to nurses working in the wards of 9 hospitals specifically chosen to meet the criteria listed above. A

letter explaining the purpose of the survey, an invitation to voluntarily participate and a return envelope for them to use, accompanied the survey. In total, the response was 1064 completed useable surveys, inferring a response rate of approximately 23%.

To obtain data from engineering professionals, six engineering firms, varying in size from SMEs to larger organisations, were approached for inclusion in the study. In response, four firms agreed to participate, one small firm (45 employees), one SME (140 employees) and two larger firms (about 400 employees each). In total, 800 anonymous surveys were sent to a random selection of employees (comprising engineers, draftsmen, administrative employees supporting engineers and workers without qualifications that undertook manual tasks within engineering firms) across the four firms. The survey was accompanied with a letter explaining the purpose of the survey, an invitation to voluntarily participate and a return envelope for them to use. In total, the response was 413 completed useable surveys, inferring a response rate of approximately 51.3%.

The participants of the focus groups were obtained by asking survey participants to supply contact details if they were interested in being part of a focus group. Focus groups were held on-site and at times convenient to the participants. Each focus group took an average of approximately 45 minutes to complete.

Analysis of Quantitative Data

Path analysis was used to test the impact of supervision practices on firstly, professionals' perceptions of autonomy and in turn, their affective commitment. In particular, path analysis using an ordinary least square (OLS) approach was used to test the hypotheses. The advantage of path analysis is that it permits more than one equation to predict the dependent variable (affective commitment) and therefore it includes the indirect impact of LMX into the bigger equation. OLS is an explanation of variance and the overall R^2 measure identifies the overall 'goodness of fit'

for the proposed model (Ahn, 2002). Another advantage of using path analysis with an OLS approach is that it estimates parameters within an independent system, which could avoid the problem of multicollinearity (Grapentine, 2000). For these reasons, OLS was used for analysis of the data.

Analysis of qualitative data

The qualitative questions sought to solicit information about what factors affected professionals' perceptions of autonomy and their intentions to continue working. In each case, only the first response from each participant was included for analysis and the data was then transcribed and categorised based on "commonalities and differences" across emerging themes and then frequencies for each category were determined (Ghauri and Gronhaug 2002). The systematic patterns that emerged were then used to draw conclusions that address the research questions.

Results

The demographics of the survey respondents (N=1064; see Table 1) are:

1. Gender: 320 males and 1160 females.
2. Age: 277 respondents were less than thirty years of age, 570 were between 30 and 45 years of age and 632 were over forty-five years of age.
3. Education: 900 were professionals with at least an undergraduate qualification, 488 had a certificate or diploma qualification and 92 had no tertiary qualification.

[Insert Table 1 here]

For the focus groups, 84 nurses (10% male and 90% female) and 32 engineers (78% male and 22% female) participated in 18 focus groups (12 with nurses and 6 with engineers). The

participants (N=116) consisted of representatives from six hospitals and four engineering sites, comprising 32 males and 84 females.

Factor Analysis

The correlation matrix identified that many correlations exceeded 0.3, indicating that the matrix was suitable for factoring. Bartlett's test for Sphericity was significant (Chi-square value=9017.408, $p<.001$, df 78) and the KMO measure of sampling adequacy was .877, which is well above the .6 requirement. When Principal Axis Factoring was undertaken to extract the variables, three factors had eigenvalues greater than one and 73.52% of the variance could be explained using these three factors. The factor transformation matrix suggests a relatively high correlation between factors. As stated, the advantage of using an OLS approach is that it estimates parameters within an independent system, which could avoid the problem of multicollinearity (Grapentine, 2000).

Correlation Coefficient

Table 2 details the correlation coefficients for each variable. All variables were significantly related to one another except for the control variable – time in the present position held in the organisation. Further, the Cronbach's alpha scores identified an acceptable reliability score for each of the measures, are also included.

[Insert Table 2 here]

Results from quantitative analysis

Hypothesis 1. In order to address the first hypothesis (*There is a positive relationship between LMX and professionals' subsequent perceptions of autonomy*) a linear regression was undertaken. The hypothesis was accepted because:

1. All Professionals: $F=52.746$, $p<.001$, $R^2 = 11.1\%$ $\beta=.333$;
2. Engineering Professionals: $F=42.545$, $p<.001$, $R^2 = 17.1\%$ $\beta=.414$;
3. Nurse Professionals: $F=31.32$, $p<.001$, $R^2 = 8.3\%$ $\beta=.288$.

Comparing the R^2 value for the groups, the findings suggest that the impact of LMX upon autonomy is highest for engineering professionals (17.1 per cent) (see Table 3). This means that approximately seventeen percent of the variance of engineers' perceptions of autonomy can be explained by their satisfaction with LMX.

[Insert Table 3 here]

Hypothesis 3. In order to address the third hypothesis (*There is a positive relationship between professionals' perceptions of autonomy and their levels of affective commitment*) a linear regression was undertaken. The hypothesis was accepted because:

1. All Professionals: $F=131.45$, $p<.001$, $R^2 = 13.8\%$, $\beta=.358$;
2. Engineering Professionals: $F=164.98$, $p<.001$, $R^2 = 18.8\%$ $\beta=.434$;
3. Nurse Professionals: $F=87.32$, $p<.001$, $R^2 = 11.3\%$ $\beta=.338$;

The R^2 value is highest for engineering professionals (18.8 percent) (see Table 4). This means that almost a fifth of the variance of affective commitment for engineers can be explained by their perception of autonomy.

[Insert Table 4 here]

Hypothesis 4. In order to address the fourth hypothesis (*There is a positive relationship between professionals' levels of satisfaction with LMX, their perceptions of autonomy and their levels of affective commitment*) a regression analyses was undertaken. The hypothesis was accepted because:

1. All Professionals: $F=119.764$, $p<.001$, $R^2 = 24.5\%$, beta for LMX= .32; beta for autonomy = .259.

2. Engineering Professionals: $F=154.174$, $p<.001$, $R^2 = 34.6\%$ beta for LMX= .295; beta for autonomy =.401.

3. Nurse Professionals: $F=90.98$, $p<.001$, $R^2 =21.2\%$ beta for LMX= .24; beta for autonomy=.346.

The R^2 value for engineering professionals suggests that the impact of both LMX and autonomy upon their levels of affective commitment was greater (34.6 percent) than the impact upon nurses (21.2 percent). This means that, overall; approximately 35 percent of the variance of engineers' level of affective commitment can be accounted for by their satisfaction with their supervision as well as their perception of autonomy (see Table 5).

[Insert Table 5 here]

Hypotheses 2 and 5. In order to address the second and fifth hypotheses (Hypotheses 2 and 5) about whether engineers have a higher perception of autonomy compared with nurses and whether they experience similar level of satisfaction with their supervisor-subordinate relationship and similar levels of commitment to their organisations, an independent t-test was undertaken. The second hypothesis is rejected and the fifth hypothesis is partially accepted because the findings suggest that the means for nursing and engineering professionals are similar in terms of their levels of satisfaction with supervisor-subordinate relationships as well as their

perceptions of autonomy. However, nurses did have a significantly lower level of commitment to their organisation than did engineering professionals (see Table 6).

[Insert Table 6 here]

Results from Qualitative analysis

In responses to the question “*What factors affect your perception of autonomy in the workplace?*”, two categories of factors emerged as dominant influences for both engineers and nurses: workplace relationships and management practices (see Table 7). However, the interesting finding was that the effect of each of these factors could be either positive or negative. From the analysis of the nursing focus groups’ data, the main theme that emerged was that nurses’ workplace relationships with their supervisors was either a positive factor enhancing their perceptions of autonomy at work or a negative influence on their autonomy. Workplace relationships with their peers was another positive factor, while poor management practices were identified as the next most frequent negative influence on nurses’ perceptions of autonomy.

Similar to nurses, engineering professionals commented that the workplace relationship with their supervisors was the most frequent positive influence upon their perceptions of autonomy at work. In contrast, they too reported a dominant influence of poor management practices creating lowered perceptions of autonomy. In addition, engineers reported poor management of projects resulted in lowered perceptions of autonomy.

[Insert Table 7 here]

Discussion and Implications

This paper used LMX theory as a lens for comparing the impact of the supervisor-subordinate relationship upon two types of professionals' perceptions of autonomy and in turn, upon their affective commitment. The reason for examining autonomy was because one of the characteristics of being a professional is having autonomy. However, the implementation of recent reforms was supposed to reduce the discretionary power of professionals - particularly nurses - by increasing the power of supervisors to make professionals accountable. Ackroyd, et al, (2007) argued that nurses' perceptions of autonomy were largely dependent on how synergistic organisational goals and objectives were with professional values and beliefs. It was therefore expected that first, the quality of the supervisor-subordinate relationship would predict nurses' perception of autonomy and second, that engineers would experience higher perceptions of autonomy. This is an important issue because the empowerment literature has already identified that employees' perceptions of autonomy also affect organisational outcomes (such as job satisfaction and commitment) (Gomez and Rosen, 2001; Seibert, et al, 2004).

The findings did not support the argument presented. Both nurses and engineers were only somewhat similarly satisfied with their supervisor-subordinate relationships (See Table 6). One explanation for this finding is that it could be that both engineers and nurses are similarly negatively affected by supervisor-subordinate relationships, since both groups were only somewhat satisfied. Such a finding would support research by Ferlie, Pettigrew, Ashburner and Fitzgerald (1996); Bolton (2003), Pollit (1993) and Ackroyd et al (2007) suggesting all professionals have experienced a change in supervisor-subordinate relationships as a result of reforms increasing the discretionary power of supervisors.

Further, despite past research identifying how the nurse' perception of discretionary power had been negatively affected by reforms increasing the power of supervisor, the findings indicate no difference in nurses' and engineers' perception of autonomy. One explanation is that both nurses and engineers' perception of autonomy is not greatly affected by the quality of the supervisor-subordinate relationship because their discretionary power is maintained as a result of their specialised professional knowledge and skills. This explanation would support research by Friedson (2001), Dent (2003) and Brook et al (1999) about the discretionary power of professionals generally.

Further, whereas previous research suggests that effective supervisor-subordinate relationships promote empowered employees, these findings when examined using the LMX framework, suggest that the quality of the supervisor-subordinate relationship created only somewhat autonomous professionals. In contrast, LMX theory argues that if the level of satisfaction with the supervisor-subordinate relationship is high, then professionals should probably experience effective access to appropriate information and resources and consequently would probably perceive themselves as being empowered in the workplace. Additionally, the qualitative data suggests that the quality of the supervisor-subordinate relationship was both a positive and a negative factor for both groups. A second positive influence on nurses' perceptions of autonomy was their peer relationships at work. Another theme that emerged from the data was engineers' and nurses' perceptions of dis-empowerment resulting from management's unrealistic work demands (see Table 7). The finding has real implications for the supervisors of professionals in short supply because previous research by Cheung et al (2004) and Podsakoff et al (2000) suggest that low level of perceived support from supervisors contributes to high turnover. Further the lower levels of affective commitment for both engineers and nurses evident from this study

should provide further warning bells for those managing professionals because affective commitment is a predictor of absenteeism and turnover (Eby, Adam, Russell and Gaby, 2000; Meyer and Herscovitch, 2001; Pitt, et al., 1995) as well as job satisfaction, productivity and organisational effectiveness (Judge and Watanabe 1993; Petty, McGee and Cavender, 1998).

Using the OLS procedure, the goodness of fit of the model identified that supervision and autonomy accounted for approximately a third of the variance of engineering professionals' levels of affective commitment and a fifth of the variance for nursing professionals, that is, the impact of supervision practices was stronger upon autonomy and commitment for engineers (34.6%) than for nurses (21.2%). Moreover, statistically, the only significant difference between the two groups of professionals was in their levels of affective commitment. This means that the quality of workplace relationships is important to both engineers and nurses because not only does it contribute to their perceptions of autonomy, but also it significantly positively affects their levels of affective commitment.

The findings suggest that the present management practices are not ideal for promoting effective workplace relationships. Such a finding about both nurses and engineers is particularly important because they are in short supply in numerous OECD countries. It is therefore imperative that researchers identify factors affecting their organisational commitment, not only because it affects professionals' productive potential, but also because it is a predictor of turnover. LMX theory argues that employees' perceptions of their supervisor-subordinate relationships will strongly impact on their ability to do their job efficiently and effectively because it will affect their access to relevant information and resources required to do their job (Mueller and Lee, 2002). The findings from this paper therefore suggest neither nurses nor engineers work in organisations that embed effective workplace relationships - the kind that promotes the efficient flow of resources,

information and respect for professionals required for them to do their job. In relation to nursing professionals, these findings may provide one explanation as to why nurses who report dissatisfaction with management policies and practices have a 65% higher probability of intending to quit than those reporting to be satisfied (Gray and Phillips, 1994; Secombe and Smith, 1997). It may also provide one explanation as to why nurses are leaving the profession. For example, at the Australian population census in 1996, 19.8% of persons (aged 15-64 years) with a highest qualification in nursing were not nursing (Productivity Commission, 2005).

The implications of these results include the identified need for those managing professionals to consider ways of improving supervisor-subordinate relationships because of their impact upon firstly, autonomy at work and secondly, commitment to the organisation. One of the characteristics of being a professional is the importance of role-modelling in acculturating their particular professional ethos into new members (Ferlie, et al., 1996). Both the quantitative and qualitative findings suggest that the quality of supervisor-subordinate relationships is not ideal for facilitating this process for many professionals. Instead, the findings suggest that there is a need to embed effective supervisor-subordinate relationships amongst professionals so as to positively improve their perception of autonomy and in turn, improve their commitment to their organisations; thereby being more effective in retaining valuable staff.

Conclusion

There is a shortage of professionals of both nurses and engineers in many OECD countries and management practices have been previously identified as a factor contributing to the problem, hence, attraction and retention strategies have been widely discussed in the literature as a means to address such a staffing and skills challenge. Despite the depth of discussion about retention

strategies in the literature, limited consideration has been given to the exploration of autonomy and supervisor-subordinate relationships as impacts upon the commitment of professionals to their organisation. The contribution of this paper is that it has identified that there are no significant differences in the level of satisfaction with supervision and perceptions of autonomy for nurses and engineers, despite the implementation of reforms attempting to increase the managerial discretionary power of the supervisors of social services professionals such as nurses. Further, in an attempt to further understand how professionals' affective commitment is affected by factors at work, this study sought to compare, for the first time, how autonomy and the supervisor-subordinate relationship might make such an impact on two different types of professionals.

The findings from this paper provide a richer picture of the state of professionals' supervisor-subordinate workplace relationships, and the resultant perceptions of autonomy for Australian nursing and engineering professionals. The LMX lens was ideal for identifying the impact of the relationships between professionals and their supervisors - finding that these very relationships may be contributing negatively to shortages of professionals by directly impacting upon professionals' perceptions of autonomy and in turn, their levels of affective commitment. That is, the study contributes new knowledge to both HR theory and practice.

This study has a number of limitations. The main limitation is the use of self-report surveys causing common methods bias. However, Spector (1994) argues that self-reporting methods are legitimate for gathering data about employees' perceptions, as long as the instrument reflects an extensive literature review and pattern-matching is used to support interpretations of the data. A further imitation is the gender bias within the nurse sample (dominated by females) and the engineer sample (dominated by males).

In relation to nursing professionals, one model that may be appropriate for Australian, UK and NZ hospitals is the 'Magnet Hospital' management model, operating in some USA hospitals. One of its cornerstones is the re-empowering of nurses as a means of retaining them (Buchan, 1999; Laschinger and Wong, 1999). Such models challenge the traditional control management practices used in bureaucratic organisations, in place of more nurturing effective workplace relationships based on mutual respect and autonomous decision-making. Aspects of such a management model may have applicability for those organisations and countries experiencing high turnover rates and in turn, shortages of nursing and engineering professionals. Understanding the consequences of these workplace influences is vital in the successful management of organisations and the development of sustainable competitive advantage.

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Table 1:
Demographics of survey respondents

Variable		Nursing Professionals		Engineering professionals		TOTAL	
		No.	%	No.	%	No.	%
GENDER	Male	53	16.6	267	83.4	320	100
	Female	1011	87.2	149	12.8	1160	100
	TOTAL	1064	100	416	100	1480	100
AGE	< 30 years	110	39.7	167	60.3	277	100
	30 – 45 years	412	72.3	158	27.7	570	100
	> 45 years	542	85.6	91	14.4	633	100
	TOTAL	1064	100	416	100	1480	100
EDUCAT	Grad/Postgr	678	75.3	222	24.7	900	100
	Dipl/Certif	327	67.0	161	33.0	488	100
	School only	59	64.1	33	35.9	92	100
	TOTAL	1064	100	416	100	1480	100

Table 2:
Means, Standard Deviations, Correlations and Cronbach's Alpha Reliability

Variable	M	SD	1	2	3	4
1. LMX			1	(.93)		
2. Autonomy	4.65	.8	.286**	1	(.7)	
3. Affect Commitment	4.01	.95	.377**	.335**	1	(.87)
4. Time in present role	4	1	-.028	.028	.046	1

N = 1480.

Numbers in parentheses on the diagonal are the Cronbach's alpha coefficients of the composite scales.

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

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

Table 3:
Regression analysis detailing relationship between LMX and professionals' perceptions of autonomy

Autonomy	All Professionals	Engineering Professionals	Nursing Professionals
	β	β	β

LMX	.33**	.41**	.29**
F	52.75**	42.54**	31.32**
R²	.111	.171	.083

** Correlation is significant at the 0.001 level (2-tailed).

Table 4:
Regression analysis detailing relationship between professional employees' perceptions of autonomy and their affective commitment

Affective Commitment	All Professionals	Engineering Professionals	Nurses Professionals
	β	β	β
Autonomy	.36**	.43**	.34**
F	131.45**	164.98	87.32
R²	.138	.188	.113

** Correlation is significant at the 0.001 level (2-tailed).

Table 5:
Regression analysis detailing relationship between LMX and professionals' perceptions of autonomy and affective commitment

Affective Commitment	All Professionals	Engineering Professionals	Nursing Professionals
	β	β	β
LMX	.32 **	.29**	.24**
Autonomy	.26**	.40**	.35**
F	119.76**	154.17**,	90.98**
R²	.245	.346	.212

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

Table 6:
Results from Independent Samples Test: Nursing and Engineering Professionals

			Nurses [#]		Engineers ^{##}		T value
			Mean ^a	SD	Mean	SD	
Satisfaction	with	Supervision	4.67	1.0	4.61	1.2	.86

(LMX)					
Autonomy	4.32	.99	4.29	.98	.79
Affective Commitment	3.9	1.18	4.17	1.15	-3.32*

N= 960 ## N = 488

^a Mean: 1 = Strongly Disagree, through to 6 = Strongly Agree

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

Table 7:
Professionals: Factors that affect perceptions of autonomy in the workplace

Positive Themes	Frequency	Negative Themes	Frequency
<u>Nurse Professionals (N=84)</u>			
Workplace relationships with NUM (supervisor) and peers	23	Poor management practices, poor supervisor-subordinate relationships, lack of consultation, ideas not listened to, bullying	20
Respect for type/complexity of work undertaken	7	High patient/nurse ratio – can't do your job properly	15
Flexible work options	5	Lack of available opportunities- can't take up training options because of work demands	8
Interesting career opportunities	3	Ineffective promotional processes	3
<u>Engineers (N=32)</u>			
Workplace relationships and work atmosphere	8	Poor management of projects means short and unrealistic deadlines and long hours	9
Nature of the work and challenge of the projects	5	Poor management and communication	4
Interesting career opportunities and global opportunities	3	Comparatively low pay for the work expected	3