MODERATING EFFECTS OF PROPENSITY TO CONNECT WITH OTHERS ON THE RELATIONSHIP BETWEEN FRIENDSHIP NETWORKS AND NURSES' JOB SATISFACTION

[1]HSIEH-HUA YANG, [2]YI-HORNG LAI, [3]FEN FEN HUANG, [4]SHU-CHEN KUO

[1,2,3]Department of health care administration, oriental institute of technology
[4]Center for general education, national defense medical center
E-mail: [1]FL008@mail.oit.edu.tw, [2]FL005@mail.oit.edu.tw, [3]FL006@mail.oit.edu.tw, [4]kuochen1327@gmail.com

Abstract- The purpose of this study is to replicate and extend previous research by examining the moderating effects of propensity to connect with others on the relationship between friendship networks and job satisfaction in the department of nursing. Hierarchical multiple regression was used to examine direct and moderating effects of these variables. The result showed that propensity to connect with others had moderating effect on the relationship between friendship network and two dimensions of job satisfaction. The findings have important implications for theory and practice.

Keywords- Friendship networks, job satisfaction, propensity to connect with others.

I. INTRODUCTION

Job satisfaction is perhaps the most widely studied work orientation over the last four decades of organizational research. It is obviously complex because of a multitude of variables associated with it [1]. In Taiwan, Chang, Lin, Kuo, Teng, and Lee [2] showed that interpersonal relationship was the highest factor of job satisfaction. And, a research [3] in a Norwegian population of nurses found that interaction, followed by pay and autonomy were the most important job factors.

The widespread nursing shortage and nurses' high turnover has become a global issue [4]. In Taiwan, the turnover rate among novice nurses was 30% in 2005, compared with a turnover of just 10% ten years earlier [5]. Chen, et al. [6] used a longitudinal design to study the turnover factors and found that there were 42.9% leavers and 57.1% stayers in the second wave. Further, the organization of health delivery system is undergoing radical changes in Taiwan. Since March 1995, the National Health Insurance program has been implemented. The implementation of the National Health Insurance system has led to the rapid growth of the overall demand for medical services, and the health care organizations expansion. In order to curb rising medical costs, fee-for-service, global budget, then case payment had been implemented successively. Hospitals are beginning to feel pressure from the health system reform. In this context, job satisfaction remains a dominant issue in the organizational literature. Many studies delve into the possible antecedents of job satisfaction. Despite decades of inquiry, these variables have only modestly predicted turnover [7] [8]. In the wake of such findings, scholars are exploring other determinants to enhance turnover prediction and understanding. Foremost among recent theoretical developments is the introduction of relational constructs to capture the quality and nature of workplace relationships [9]-[11]. It is suggested that friendship at work may make up the puzzling absence. This study discusses the antecedent conditions, too. Further, it attempts to scrutinize the moderating effect of propensity to connect with others on the relationship between friendship network and job satisfaction.

A literature review [12] revealed that the absence of a robust causal model incorporating organizational, professional and personal variables is undermining the development of interventions to improve nurse retention and indicated that organizational culture, commitment, and human relationships were identified as the strong predictors of job satisfaction. Since it had been proposed that professional commitment might escalate in importance as a compensation for the loss of organizational commitment [13], it is argued that job satisfaction has relationship to professional commitment. In this study, organizational culture and professional commitment are included as control variables.

Organizational culture refers to a system of shared meaning held by members that distinguishes the organization from other organizations [14]. Tzeng, Ketefian, Redman [15] found that strength of organizational culture predicted job satisfaction well and positively. And congruence between a managerial practice and the cultural values in a particular society has a positive effect on employee work attitudes and behavior [16]. Organizational culture has been shown to have a direct influence on staff satisfaction and commitment [17]-[20].

Professional commitment is a person's involvement, pledge, promise or resolution towards his/her profession [17]. Fang's [21] study of Singaporean nurses demonstrated that job satisfaction was significantly and positively related to professional

commitment, the correlation parameter was 0.347. In another study [22], professional commitment is positively related to the job satisfaction of nurses. However, Ahmadi, Speedling, Kuhn-Weissman [23] discovered that professional role conception and job satisfaction were strongly negatively related at the time of hire and posited that the newly graduated nurse, faced with discrepancies between her school-taught values and practices and the values and practices of her workplace, may develop alienation and job dissatisfaction. According to this finding, the tenure should be considered in predicting job satisfaction. The importance of professional commitment has been widely advocated [21][24]-[27]. A review of the literature shows that three aspects of commitment have been applied to many domains. They are willingness to exert effort on its behalf, a desire to remain in the profession, and identifying with the profession by acceptance of its goals and values [28]. There is broad consensus that future careers will be less organizationally focused and more directed toward occupational or professional commitment.

The cohesiveness of the ward nursing team was mentioned as a strong predictor of job satisfaction [12]. The basic element of cohesive team is friendship network. Literature documents that individuals will have benefits through their social networks. Takase, Oba, and Yamashita [29] found the issues in interpersonal relationships were frequently cited causes that made nurses consider leaving their jobs. Bjorvell and Brodin's[30] found social support might reduce personnel turnover in hospitals. Greater social support and pay can reduce turnover by their positive impact on job satisfaction [31]. In organizational settings, Hodson[32] convincingly argued, the social relations of the workplace may make a key contribution to employees' job satisfaction, productivity, and well-being. Friendship network can be used as a measurement of social relations, but not ever a direct measurement was applied to evaluate this variable.

Nurses bring to their job more than just the professional abilities they have accumulated through years of education and experience. They also bring the assets they can procure through their social network. The researchers identified two main approaches in which social networks can enhance individual and organizational performance. First, social networks can facilitate access to information, resources, and opportunities [33]-[37]. Second, networks can help actors to coordinate critical task interdependencies and to overcome the dilemmas of cooperation and collective action [38].

There is debate about two network structures that have been argued to create social capital [37]. The traditional view of social capital stresses the positive effects of 'network closure' in promoting a normative environment that facilitates trust and cooperation between actors [34]. Structural hole theory [35] [36] proposes an alternative view of the relationship between network structure and the benefits of social capital. The structural hole theory [35]-[37] argues that the benefits from social capital stem from the brokerage opportunities created by disperse ties. Although structural hole theory is mainly concerned with the sources of competitive advantage, Burt [36] [37] also sees the autonomy of players as crucial asset to promote effective coordination in organizations.

Workplaces often have features that may facilitate friendship making. As nurses work in the ward nursing team, the workplace friendship in the working ward can help to facilitate coordination, cooperation, interdependencies and promote the job satisfaction. They can also meet others of other wards and make cross-ward friendships. Cross-ward friendships can provide extensive contact in multiple departments with access to information, resources, and opportunities. Obviously, there is difference between the friendship in working ward and across wards.

The effect of individual characteristics on social networks is important because empirical studies of the consequences of networks have discovered associations between the network ties and organizational outcomes. A literature review revealed that the intra-organizational network had shifted from as a constraining force to an opportunity for the performance [39]. Brass [40] examined the effect of individuals' structural positions and indicated that contacts beyond the normal work requirements are particularly important for technical core personnel to acquire influence. Totterdell et al. [41] found that negative changes in employees' affect were related to having fewer cross-divisional ties. Propensity to connect with others (PCO) is a stable individual characteristic. Totterdell et al. [42] developed a measurement and tested in two studies. These studies found PCO displayed distinctive relationships with work network characteristics.

II. METHOD

A cross-sectional survey design utilizing questionnaires was selected to fulfill the research objectives. All of the 405 nurses in the En Chou Kong Hospital were surveyed. Three hundred and three nurses completed the questionnaire representing a response rate of 74.8%. The instruments included social network nomination, organizational culture scale, professional commitment scale, and nurses' job satisfaction scale (NJSS).

Social network nomination was applied to derive the participants' friendship networks. The participants were asked to nominate up to 18 persons either in the same ward or across wards separately.

Organizational culture scale is a 6-point Likert type scale (anchors: 1 = strongly disagree, and 6 = strongly agree). The instrument was developed by Jen, Huang, and Cheng [43]. The sum of these 17 items represents aggressive organizational culture, including the degree of innovation, attention to detail, aggressiveness, and people orientation. The Cronbach's alpha was 0.88 in this study.

Professional commitment scale is a 6-point Likert type scale (1 = strongly disagree, 6 = strongly agree) with 3 items. These 3 items are 'Being a professional nurse is great helpful to my self-image', 'I am proud of being a professional nurse', and 'I am enthusiastic about nursing care'. The Cronbach's alpha was 0.83, exceeding the 0.7 threshold commonly suggested for exploratory research [44].

The NJSS was adopted from Lin, Wang, Li, & Huang [5]. It was applied to measure job satisfaction in 4 domains of job environment, human relationship, feedback, and benefit and promotion. The questions were scored on a 6-point Likert scale ranging from 1 point (very dissatisfied) to 6 points (very satisfied). The measurement has strong internal consistency with all multiple-item constructs achieving Cronbach's alpha ranged between 0.89 and 0.98, exceeding the 0.7 threshold commonly suggested for exploratory research [44].

Prior to data collection, approval to conduct the study was obtained from the Medical Center and the participants signed an agreement.

Excel was applied to data coding and processing. UCINET 6 for window [45] was used to calculate the social network variables. Efficiency is effective size divided by observed size [35]. The equation is shown as below. The Statistical Package for the Social Sciences (SPSS) software was used to describe the data and construct the regression model.

III. RESULT

The participants came from 17 wards in a hospital. There are 301 females and 2 males. Since the percentage of males is 0.7, the gender difference is not included in regression model. Over half of the participants are graduated from college, one third of them are from university, and the others are from high schools. The mean tenure in present ward is 4.26 years, and the longest tenure is 14 years. The mean score of professional commitment is 12.56.

The social network efficiency represents the effective size divided by observed size. The mean scores of efficiency in the same ward and across different wards are 0.65 and 0.56 respectively.

The regression model of job satisfaction was constructed, using friendship network efficiency in the ward and across wards, aggressive organizational culture, and professional commitment as independent variables with tenure and education as control variables. As table 1, the results showed that R square for each model is 0.34-0.93. For the four dimensions of job satisfaction, aggressive organizational culture is the robust predictor. The efficiency of friendship network in the ward was negative correlated with satisfaction of work load, while the efficiency of friendship network across wards was positive correlated with satisfaction of work load.

The interaction term was significant for the satisfaction of human relationship and benefit & promotion, as figure 1 and 2. For a nurse with higher propensity to connect with others, the satisfaction with human relationship would be increased by increasing efficiency, and the satisfaction with benefit & promotion would be decreased by increasing efficiency. For a nurse with lower propensity to connect with others, the satisfaction with human relationship would be decreased by increasing efficiency, and the satisfaction with benefit & promotion would be increased by increasing efficiency.

Table 1、Regression Model of Job Satisfaction

Variables	Job environment B (s.e.)	Human relationship B (s.e.)	Benefit & promotion B (s.e.)	Workload B (s.e.)
Constant	12.46(0.09)	29.62(0.10)	24.85(0.11)	12.42(0.13)
Tenure	-0.10(0.06)	0.08(0.06)	-0.04(0.07)	0.13(0.09)
Education				
College/University	-0.02(0.12)	-0.21(0.13)	0.19(0.14)	-0.26(0.17)
High school/university	0.32(0.23)	0.01(0.23)	-0.28(0.25)	-1.21(0.32)***
Professional commitment	-0.29(0.08)***	0.16(0.08)*	0.09(0.08)	0.43(0.11)***
Organizational culture	1.64(0.07)***	3.60(0.07)***	3.32(0.08)***	0.59(0.10)***
Propensity to join with others	0.02(0.23)	-0.49(0.24)*	0.37(0.26)	0.22(0.33)
Efficiency in the ward	0.05(0.06)	0.11(0.06)	-0.08(0.07)	-0.27(0.09)**
Efficiency across wards	-0.10(0.06)	-0.08(0.06)	0.12(0.07)	0.22(0.09)*
Interaction term				
POC*efficiency in the ward	0.27(0.31)	0.68(0.32)*	-0.77(0.35)*	-0.13(0.44)
POC*efficiency across wards	-0.09(0.06)	-0.05(0.06)	0.11(0.07)	-0.08(0.09)
R	0.86	0.97	0.95	0.58
R square	0.73	0.93	0.90	0.34

*p<.05 **p<.01 ***p<.001

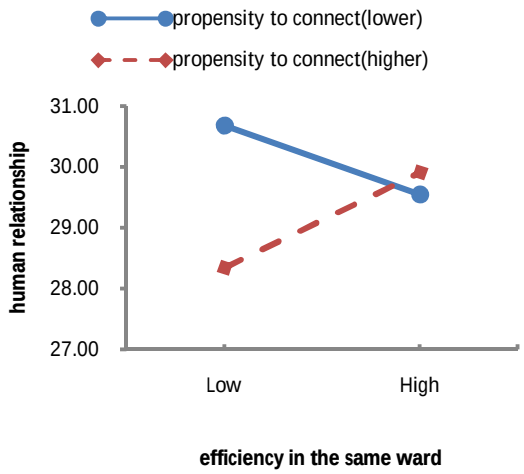

Fig. 1 The effects of propensity to connect with others

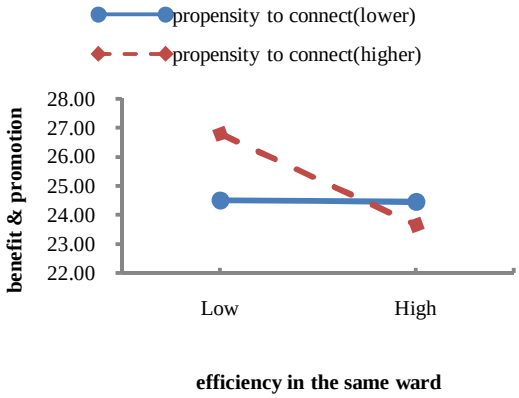

Fig. 2 The effect of propensity to connect with others

CONCLUSION

This study is to replicate and extend previous research by examining the moderating effects of propensity to connect with others on the relationship between friendship networks and job satisfaction in the department of nursing. Network efficiency was used as the friendship networks variable and job satisfaction was measured in four dimensions. Hierarchical multiple regression was used to examine direct and moderating effects of these variables. The results showed that the direct effect of efficiency in the ward and across wards on the satisfaction of work load and the moderating effects of propensity to connect with others on the relationship between efficiency in the ward and satisfaction of human relationship and benefit & promotion. The findings have important implications for theory and practice.

For theoretical implication, the direct effect of peer network may provide a sense of solidarity within the organization among their colleagues and further enhance the level of organizational commitment and job satisfaction. Practically, the head of the ward have to manage the networking in and across the wards.

REFERENCES

[1] C. L. Johnston, "Changing care patterns and registered nurse job satisfaction," Holistic Nursing Practice, vol. 11, pp. 69-77, 1997.

[2] F. M. Chang, C. J. Lin, H. W. Kuo, Y. K. Teng, and J. N. Lee, "Appraisal and satisfaction among staff nurses in the health stations of Taiwan province," China Journal of Public Health, vol. 14, pp.78-87, 1995.

[3] I. T. Bjork, , G. B. Samdal, B. S. Hansen, S. Torstad, and G. A. Hamilton, "Job satisfaction in a Norwegian population of nurses: A questionnaire survey," International Journal of Nursing Studies, vol. 44, pp. 747-757, 2007.

[4] M. Kingma, "Nursing migration: global treasure hunt or disaster-in the making?" Nursing Inquiry, vol. 8, pp. 205-212, 2001.

[5] C. J. Lin, H. C. Wang, T. C. Li, and L. C. Huang, "Reliability and validity of nurses' job satisfaction scale and nurses' professional commitment," Mid-Taiwan Journal of Medicine, vol. 12, pp. 65-75, 2007.

[6] H. C. Chen, C. I. Chu, Y. H. Wang, and L. C. Lin, "Turnover factors revisited: A longitudinal study of Taiwan-based staff nurses," International Journal of Nursing Studies, vol. 45, pp. 277-285, 2008.

[7] R. W. Griffeth, P. W. Hom, and S. Gaertner, "A meta-analysis of antecedents and correlates of employee turnover: Update, moderator tests, and research implications for the next millennium," Journal of Management, vol. 26, no. 3, pp. 463-488, 2000.

[8] C. P. Maertz, and M. A. Campion, "25 years of voluntary turnover research: A review and critique," International Review of Industrial and Organizational Psychology, vol. 13, pp. 49-81, 1998.

[9] T. R. Mitchell, B. C. Holtom, and T. W. Lee, "How to keep your best employees: Developing an effective retention policy," Academy of Management Executive, vol. 15, no. 4, pp. 96-108, 2001.

[10] K. W. Mossholder, R. P. Setton, and S. C. Henagan, "A relational perspective on turnover: Examining structural, attitudinal, and behavioral predictors," Academy of Management Journal, vol. 48, pp. 607-618, 2005.

[11] D. P. Moynihan, and S. K. Pandey, "The ties that bind: social networks, person-organization value fit, and turnover intention," Journal of Public Administration Research and Theory, vol. 18, no.2, pp. 205-227, 2008.

[12] H. Lu, A. E. While, and K. L. Barriball, "Job satisfaction among nurses: a literature review," International Journal of Nursing Studies, vol. 42, pp. 211-227, 2005.

[13] G. P. Irving, D. F. Coleman, and C. L. Cooper, 'Further assessments of a three-component model of organizational commitment: Generalizability and differences across occupations," Journal of Applied Psychology, vol. 82, pp. 444–452, 1997.

[14] S. P. Robbins, Organizational Behavior. New Jersey: Pearson Education Inc., 2003.

[15] H.-M. Tzeng, S. Ketefian, and R. W. Redman, 'Relationship of nurses' assessment of organizational culture, job satisfaction, and patient satisfaction with nursing care," International Journal of Nursing Studies, vol. 39, pp. 79-84, 2002.

[16] K. L. Newman, and S. D. Nollen, "Culture and congruence: the fit between management practices and national culture," International Journal of Business Studies, vol. 27, pp. 753-779, 1996.

[17] J. J. Johnson, and C. L. McIntyre, "Organizational culture and climate correlates of job satisfaction," Psychological Reports, vol. 82, pp. 843-850, 1998.

[18] P. Lok, and J. Crawford, "The relationship between commitment and organizational culture, subculture, leadership style and job satisfaction in organizational change and development," Leadership & Organizational Development, vol. 20, no. 7, pp. 365-376, 1999.

[19] D. B. Lund, 'Organizational culture and job satisfaction," Journal of Business & Industrial Marketing, vol. 18, pp. 219-236, 2003.

[20] C. Silverthorne, 'The impact of organizational culture and person-organization fit on organizational commitment and job satisfaction in Taiwan," Leadership & Organizational Development Journal, vol. 25, pp. 592-599, 2004.
[21] Y. Fang, 'Turnover propensity and its causes among Singapore nurses: an empirical study,' International Journal of Human Resource Management, vol. 12, no. 5, pp. 859-871, 2001.
[22] K.-Y. Lu, P. L. Lin, C. M. Wu, Y. L. Hsieh, and Y. Y. Chang, "The relationship among turnover intentions, professional commitment, and job satisfaction of hospital nurses," Journal of Professional Nursing, vol. 18, no. 4, pp. 214-219, 2002.
[23] K. S. Ahmadi, E. J. Speedling, and G. Kuhn-Weissman, "The newly hired hospital staff nurse's professionalism, satisfaction and alienation," Internal Journal of Nursing Studies, vol. 24, no. 2, pp. 107-121, 1987.
[24] S. Aryee, and K. Tan, "Antecedents and outcomes of career commitment," Journal of Vocational Behavior, vol. 40, pp. 288-305, 1992.
[25] A. G. Bedeian, and E. R. Kemery, "Career commitment and expected utility of present job as predictors of turnover intention and turnover behavior. Journal of Vocational Behavior," vol. 39, pp. 331-343, 1991.
[26] G. Blau, and M. Lunz, "Testing the incremental effect of professional commitment on intent to leave one's profession beyond the effects of external, personal, and work-related variables," Journal of Vocational Behavior, vol. 52, pp. 260-269, 1998.
[27] E. Chang, "Career commitment as a complex moderator of organizational commitment as a complex moderator of organizational commitment and turnover intention," Human Relations, vol. 52, pp. 1257-1278, 1991.
[28] S. Aryee, T. Wyatt, and M. K. Min, "Antecedents of organizational commitment and turnover intentions among professional accountants in different employment settings in Singapore," Journal of Social Psychology, vol. 131, pp. 545-556, 1991.
[29] M. Takase, K. Oba, and N. Yamashita, "Generational differences in factors influencing job turnover among Japanese nurses: An exploratory comparative design," International Journal of Nursing Studies, vol. 46, pp. 957-967, 2009.
[30] H. Bjorvell, and B. Brodin, "Hospital staff members are satisfied with their jobs," Scandium Journal of Caring Sciences, vol. 6, no. 1, pp. 9-16, 1992.
[31] J. L. Price, "Reflections on the determinants of voluntary turnover," International Journal of Manpower, vol. 22, no. 7, pp. 600-624, 2001.
[32] R. Hodson, "Group relations at work: Solidarity, conflict and relations with management," Work and Occupations, vol. 24, pp. 426-452, 1997.
[33] M. Granovetter, Getting a job: A study of contacts and careers. Chicago: University of Chicago Press, 1974.
[34] J. S. Coleman, Foundations of Social Theory. Cambridge, MA: Harvard University Press, 1990.
[35] R. S. Burt, Structural Holes: The Structure of Competition. MA: Harvard University Press, 1992.
[36] R. S. Burt, "The contingent value of social capital," Administrative Science Quarterly, vol. 42, pp. 339-364, 1997.
[37] R. S. Burt, "The network structure of social capital," Research in Organizational Behavior, vol. 22, pp. 345-423, 2000.
[38] R. Gulati, "Social structure and alliance formation patterns: a longitudinal analysis," Administrative Science Quarterly, vol. 40, pp. 619-652, 1995.
[39] H. D. Flap, and N. D. de Graaf, 'Social capital and attained occupational status," Netherlands Journal of Sociology, vol. 22, pp. 145-161, 1986.
[40] D. J. Brass, "Being in the right place: a structural analysis of individual influence in an organization," Administrative Science Quarterly, vol. 29, pp. 518-539, 1984.
[41] P. Totterdell, T. Wall, D. Holman, H. Diamond, and O. Epitropaki, "Affect networks: a structural analysis of the relationship between work ties and job-related affect," Journal of Applied Psychology, vol. 89, no. 5, pp. 854-867, 2004.
[42] P. Totterdell, D. Holman, and A. Hukin, "Social networkers: measuring and examining individual differences in propensity to connect with others," Social Networks, vol. 30, pp. 283-296, 2008.
[43] C.-K.Jen, K. L. Huang, and B. S. Cheng, "Organizational culture and organizational climate," In Cheng, B.-S., Kuo, J. J. Jen, C.-K. (eds.) Organizational Culture—Analysis at the Employee's Level. Taipei, Yuan-Liou Publishing Co., Ltd., 2001. 2001.
[44] J. C. Nunnally, Psychometric Theory. New York: McGraw-Hill, 1978.
[45] S. P. Borgatti, M. G. Everett, and L. C. Freeman, Ucinet 6 for Windows: Software for Social Network Analysis. Harvard: Analytic Technologies, 2002.

★★★