

Perceived Organizational Culture, Professional Commitment, Advice Network and Job Satisfaction of Novice Nurses

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Abstract: - Nurses' job satisfaction is an important issue and it receives a lot of attention in the international nursing literature. But research about the influencing factors of novice nurses' job satisfaction is yet insufficient, especially a newcomer's advice network. This study explored the influence of network outdegree in the same division and across divisions on job satisfaction, as professional commitment, and perceived organizational culture were included as control variables. A total population of nurses recruited within 3 months in a medical center was surveyed. The results showed that perceived organizational culture was the strongest predictor of job satisfaction; and support the different effects of advice network outdegree in the same division and across divisions on job satisfaction.

Key-Words: - social network; advice network, outdegree across divisions; job satisfaction; novice nurse

1 Introduction

Since researchers have investigated job satisfaction as central determinants of turnover, many organizational scholars have devoted on research of job satisfaction. And many researchers have predominantly investigated job attitudes and labor market conditions as central determinants of voluntary quits [1, 2]. Despite decades of inquiry, these variables have only modestly predicted turnover [3, 4]. 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 [5-7]. Now, the workplace relationships will be scrutinized in this study.

The widespread nursing shortage and nurses' high turnover has become a global issue [8]. In Taiwan, the turnover rate among novice nurses was 30% in 2005, compared with a turnover of just 10% ten years earlier [9]. Chen, et al. [10] used a longitudinal design to study the turnover factors and found that of there were 42.9% leavers and 57.1% stayers in the second wave.

A literature review [11] 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. In this review, organizational commitment, cohesion of the ward nursing team were identified as the strong predictors of job satisfaction, and professional commitment, communication with supervisor/peers were moderate correlated with job satisfaction.

However, the organizational commitment is the psychological attachment of an employee to an organization. It cannot occur in a vacancy by newcomers. The cohesiveness of the ward nursing team was mentioned as a strong predictor, but not ever a direct measurement was applied to evaluate this variable. The basic element of cohesive team is interpersonal relationship, but the main stream of research about job satisfaction is focused on the individual characteristics, but not the interpersonal relationships.

In this study, advice network is used as a measurement of interpersonal relations, professional commitment and organizational culture will be included as control variables of job satisfaction, and then the model incorporates organizational, professional and personal variables. The objectives of this study are testing (1) the correlation between perceived organizational culture and job satisfaction, (2) the correlation between professional commitment and job satisfaction, (3) the correlation between advice network and job satisfaction; and constructing a model incorporating perceived organizational culture, professional commitment, and advice network to predict job satisfaction.

2 Literature Review

2.1 Job satisfaction of nurses

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 [12]. In Taiwan, Chang, Lin, Kuo, Teng, and Lee [13] showed that interpersonal relationship was the highest factor of job satisfaction. And, the research of Bjork and his colleagues in a Norwegian population of nurses found that interaction, followed by pay and autonomy were the most important job factors [14].

A research in Taiwan demonstrated a significant, direct, and positive effect of professional commitment on job satisfaction [15]. And in Mainland China revealed that job satisfaction could be explained by organizational commitment, professional commitment and other factors [16]. Seo,

Ko, Price [17] constructed a causal model of job satisfaction and showed that four structural variables (workload, supervisory support, routinization, and pay), two psychological variables (positive and negative affectivity), and one environmental variable (job opportunity) had a significant net effect on hospital nurses' job satisfaction.

2.2 Organizational culture

Organizational culture refers to a system of shared meaning held by members that distinguishes the organization from other organizations [18]. Organizational culture is concerned with how employees perceive the characteristics of an organization's culture, not with whether or not they like them [18].

Tzeng, Ketefian, Redman [19] found that strength of organizational culture predicted job satisfaction well and positively.

2.3 Professional commitment

Professional commitment is a person's involvement, pledge, promise or resolution towards his/her profession [20]. Irving, Coleman, and Cooper [21] have already argued that occupational commitment might escalate in importance as a compensation for the loss of organizational commitment. Felfe, Schmook, Schyns, and Six [22] indicated that commitment to the form of employment explains variance of organizational outcomes over and above organizational commitment. Fang's study [20] of Singaporean nurses demonstrated that job satisfaction was significantly and positively related to professional commitment. Professional commitment is positively related to the job satisfaction of nurses [23]. Harrison, Newman, and Roth [24] tested that overall job attitude is fundamentally important for understanding work behavior. In their study, overall job attitude was defined as job satisfaction and organizational commitment. Lu, Chiou, Chang [25] discovered that the scores of overall commitment and four factors of professional commitment decreased from nursing students to registered nurses significantly.

2.4 Advice network

Literature documents that individuals' behavior is enabled or constrained by interconnected relationships. Takase, Oba, Yamashita [26] found the issues in interpersonal relationships were frequently cited causes that made nurses consider leaving their jobs. Bjorvell and Brodin's [27] found social support might reduce personnel turnover in hospitals. Greater social support and pay can reduce

turnover by their positive impact on job satisfaction [28]. "Social support", which is usually categorized into supervisory support, peer support, and kinship support, refers to the assistance with job-related problems.

In organizational settings, Hodson [29] convincingly argued, the social relations of the workplace may make a key contribution to employees' job satisfaction, productivity, and well-being. Ibarra [30] posited that instrumental relationships are related primarily to work situations, whereas expressive relationships address emotional matters. Yang et al. [31] indicate that network outdegree is correlated with job satisfaction.

In understanding the advice network, one seeks to know "who consults who on work related matters?" [32]. This allows for the identification of the individuals consulted when one faces specific problems related to ones' tasks. Flap and Volker [33] collected data using name-generating questions and the analysis revealed that having advice relations with colleagues as well as with managers does promote job satisfaction.

3 Problem Solution

3.1 Research design and sample

A cross-sectional survey design utilizing questionnaires was selected to fulfill the research objectives. A total population of 49 nurses recruited within 3 months in a medical center was surveyed. All of the novice nurses completed the questionnaire.

3.2 Instruments

The instruments included social network nomination, professional commitment scale, perceived organizational culture scale, and nurses' job satisfaction scale (NJSS).

Social network nomination was applied to derive the participants' advice networks. The advice network was measured as "I will acquire information from this person when it is needed to do my work". They were asked to nominate up to 18 persons either in the same division or across divisions.

Professional commitment scale is a 6-point Likert type scale (1 = strongly disagree, 6 = strongly agree) with 3 items. The Cronbach's alpha was 0.84 in this study.

Perceived organizational culture scale is a 6-point Likert type scale (1 = strongly disagree, 6 = strongly agree) with 14 items. The instrument was

developed by Jen, Huang, and Cheng [34]. The sum of these 14 items represents the degree of innovation, attention to detail, aggressiveness, and people orientation. The Cronbach's alpha was 0.98 in this study.

The NJSS was adopted from Lin, Wang, Li, & Huang [9]. It was applied to measure job satisfaction in 5 domains of human relationship, feedback, environment, workload, 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 had strong internal consistency with all multiple-item constructs achieving Cronbach's alpha ranged from 0.77 to 0.98, exceeding the 0.7 threshold commonly suggested for exploratory research [35].

3.3 Ethical considerations

Prior to data collection, approval to conduct the study was obtained from the Far Eastern Memorial Hospital and the participants signed an agreement.

3.4 Analysis of data

Excel was applied to data coding and processing. The Statistical Package for the Social Sciences (SPSS) software was used to describe the data and construct the regression model.

Ucinet 6 for windows [36], a social network analytic program, was applied to calculate the outdegree. Outdegree is a measure for an individual's connections to others. NetDraw [37] was applied to draw the network graph.

4 Results

4.1 Characteristics of respondents

The description information of studied variables is presented as table 1. The job satisfaction in 5 domains was over medium, signifying the newly recruited nurses were satisfied with benefit and promotion, human relations, feedback, environment, and workload moderately. The advice network outdegree in the same division is between 0 and 6, while the advice network outdegree across divisions is between 0 and 21. It means that they have many relations who can offer advice in the other divisions.

The layout of advice social network was property based, as figure 1 to 6. The size of each node was based on the degree of job satisfaction. Each node represents a participant. The bigger node indicates the participant has higher degree of job satisfaction. The map of advice network in the same division, as figure 1, 3, and 5, shows 7 isolates and

16 components. Obviously, the novice nurses were assigned to 16 divisions. Within each division, the number of novice nurses ranged from 2 to 9. If there were 2 persons in a division, the network shape was dyad. If there were 3 persons in a division, the network shape would become triangle or string. If there were more than 3 persons in a division, the network shape would appear branching or starting.

The map of advice network across divisions, as figure 2, 4, and 6, shows 11 isolates and 2 components. It indicated that 11 novice nurses did not have any relations across divisions. And these 2 components are not equal in size. One component was composed of only 3 persons; the other component was composed of many persons with more dense appearance. The bigger component had central part with higher density and marginal part

with lesser links. Within the central part, the individual had more connections. While in the marginal part, the individual had fewer connections. Most of the nodes in the marginal part have smaller size, and most of the nodes in the central part have larger size.

As table 2, the correlation matrix shows that the 5 domains of job satisfaction all are correlated with the other variables, but not outdegree. It meant that the advice network outdegree in the same division is not correlated with any other variable, while the outdegree across divisions is correlated with 3 dimensions of job satisfaction. Besides, professional commitment and perceived organizational culture are correlated with 5 domains of job satisfaction.

Table 1. Descriptive information of studied variables

| Variables | Mean | SD | min | max |
|---|-------|------|------|-----|
| Job satisfaction | | | | |
| Benefit and promotion | 4.54 | 0.66 | 3.80 | 6 |
| Human relations | 4.66 | 0.67 | 3.75 | 6 |
| Feedback | 4.59 | 0.64 | 3.67 | 6 |
| Environment | 4.54 | 0.69 | 3.33 | 6 |
| Workload | 4.24 | 0.61 | 2.80 | 6 |
| Advice network outdegree in the same division | 2.35 | 1.48 | 0 | 6 |
| Advice network outdegree across divisions | 3.78 | 4.38 | 0 | 21 |
| Professional commitment | 14.33 | 2.12 | 11 | 18 |
| Perceived organizational culture | 4.72 | 0.60 | 4 | 6 |

Table 2. Intercorrelations and alpha reliabilities among study variables

| Variables | Alpha | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) |
|--|-------|-------|--------|-------|-------|-------|--------|--------|--------|-----|
| Job satisfaction | | | | | | | | | | |
| Benefit and promotion(1) | .98 | - | | | | | | | | |
| Human relations(2) | .92 | .85** | - | | | | | | | |
| Feedback(3) | .89 | .91** | 0.86** | - | | | | | | |
| Environment(4) | .94 | .88** | .75** | .77** | - | | | | | |
| Workload(5) | .77 | .80** | .69** | .70** | .74** | - | | | | |
| Advice network outdegree in the same division(6) | - | -.16 | -.13 | -.22 | -.04 | -.012 | - | | | |
| Advice network outdegree across divisions(7) | - | .30* | .25 | .43** | .38** | .28 | -0.07 | - | | |
| Professional commitment(8) | .84 | .47** | .54** | .54** | .55** | .46** | -0.002 | 0.37** | - | |
| Perceived organizational culture(9) | .98 | .77** | .71** | .78** | .65** | .57** | -0.11 | 0.15 | 0.58** | - |

Note: Item numbers are reported in parenthesis.

** Correlation is significant at the .01 level (2-tailed).

*Correlation is significant at the .05 level (2-tailed).

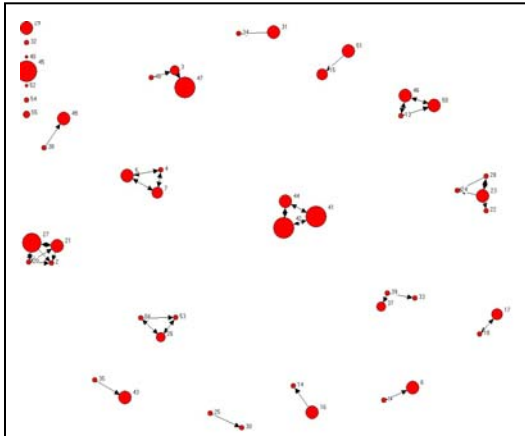


Fig 1. Advice network in the same division (benefit and promotion)

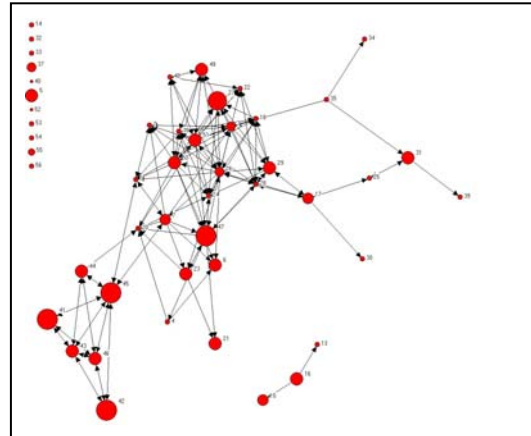


Fig 2. Advice network across divisions (benefit and promotion)

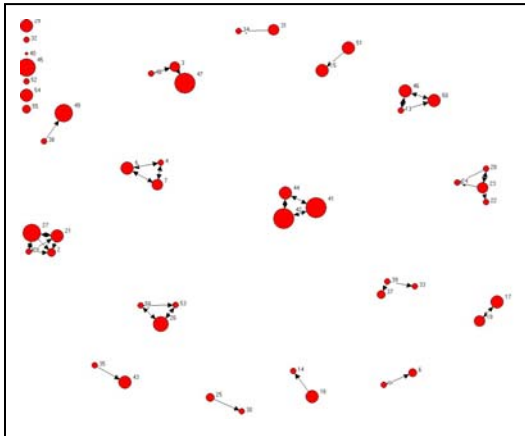


Fig 3. Advice network in the same division (feedback)

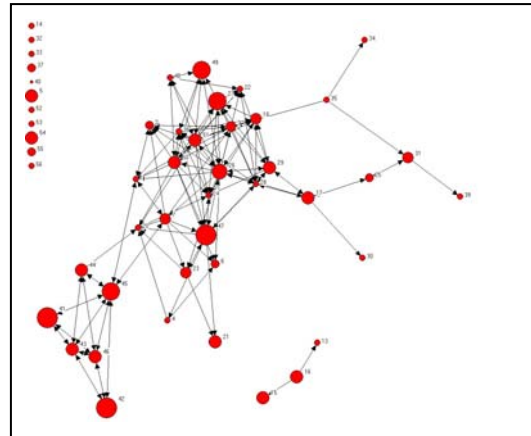


Fig 4. Advice network across divisions (feedback)

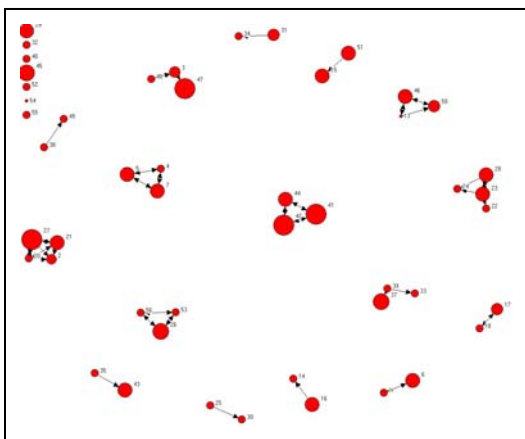


Fig 5. Advice network in the same division (environment)

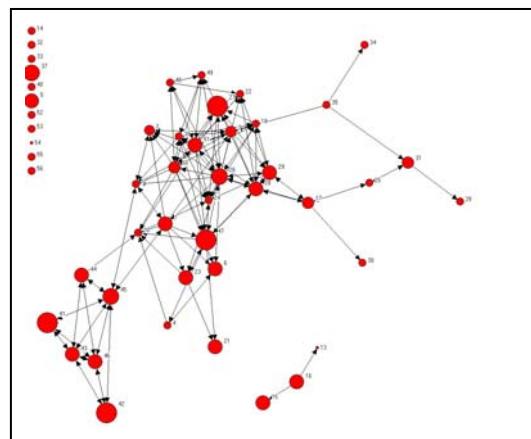


Fig 6. Advice network across divisions (environment)

Table 3. Regression model of job satisfaction

| | <u>Benefit and promotion</u> B (s.e.) | <u>Human relationship</u> B (s.e.) | <u>Feedback</u> B (s.e.) | <u>Environment</u> B (s.e.) | <u>Workload</u> B (s.e.) |
|---|--|---|-----------------------------|--------------------------------|-----------------------------|
| constant | 0.72(0.50) | 0.74(0.57) | 0.72(0.44) | 0.88(0.60) | 1.39(0.60) |
| Advice network outdegree across divisions | 0.03(0.02)* | 0.02(0.02) | 0.05(0.01)** | 0.04(0.02)* | 0.02(0.02) |
| Professional commitment | -0.02(0.04) | 0.05(0.04) | -0.002(0.03) | 0.05(0.04) | 0.04(0.04) |
| Perceived organizational culture | 0.83(0.12)*** | 0.68(0.14)*** | 0.79(0.11)*** | 0.60(0.15)*** | 0.47(0.15)** |
| R square | 0.63 | 0.54 | 0.71 | 0.52 | 0.37 |

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

4.2. Regression model of job satisfaction

The regression model of job satisfaction was constructed, using advice network outdegree across divisions, professional commitment, and perceived organizational culture as independent variables. Advice network in the same division was not included in the regression model, since it was not correlated with any domains of job satisfaction. Regression analysis is a statistical tool for evaluating the relationship of one or more independent variables to a single, continuous dependent variable [38]. It has been used to fit a predictive model to a set of observed data [39-41]. As table 3, the results showed that R square for each model is 0.37-0.71. For benefit and promotion, feedback, and environment, advice network outdegree across divisions and perceived organizational culture are good predictors. While for human relationship and workload, only perceived organizational culture is a significant predictor. And the professional commitment did not have any effect on job satisfaction.

5 Discussion and Conclusion

The results show that perceived organizational culture and professional commitment are correlated with all domains of job satisfaction, while advice network outdegree across divisions are correlated with 3 domains of job satisfaction. And advice network outdegree in the same division is not correlated with any domain of job satisfaction. In addition, the effect of professional commitment disappeared in the regression model.

5.1 General findings

5.1.1 Job satisfaction can be predicted by perceived organizational culture and advice network outdegree across divisions

R squares of regression models for five domains of job satisfaction were ranged from 37% to 71%. It meant that the proportions of job satisfaction explained by perceived organizational culture, professional commitment, and advice network outdegree across divisions were around 37% to 71%. The significant predictors were perceived organizational culture and advice network outdegree across divisions for feedback, benefit and promotion, and environment. For the other two domains, human relationship and workload, only perceived organizational culture was a significant predictor.

Feedback was measured as the evaluation of the work devotion of colleagues, and the affirmation of nursing role from other health professionals' viewpoint. Reasonably, it can be explained by advice network. The measurement of benefit and promotion included the evaluation of welfare system, the promotion system, the equity of the promoting system, et al. The correlation between benefit and promotion and advice network seem unreasonable. However, during the entrance stage, all the image of the hospital came from friends or colleagues. And the correlation can be surged by advice network outdegree, especially across divisions. Environment was evaluated as the renovation of instrument, the supply condition, and the security. All these were hardly evaluated during entrance stage. The evaluation could be influenced by their friends and colleagues.

5.1.2 Perceived organizational culture is the strongest predictor of job satisfaction for novice nurses

The results show that if a nurse perceives more innovative organizational culture, she also has higher job satisfaction. Before a person decides to apply a new job, he/she must perceive the organizational culture congruence with their value. The positive correlation between perceived organizational culture and job satisfaction means that nurses who perceive organizational culture congruence with their value may have higher job satisfaction. Even if the organizational culture is not concerned with whether or not they like them [18], it is predictable that a newcomer with higher job satisfaction must be pleased with the organizational culture.

As mentioned, organizational culture refers to a system of shared meaning held by members that distinguishes the organization from other organizations [18]. How could a newcomer perceive the organizational culture? Verplanken [42] studied the value congruence and job satisfaction among nurses. In his study, it was suggested that selection contributed significantly to value congruence at job entry, while socialization experiences contributed to value congruence during the first year. Since the participants are at job entry, we infer that the value congruence with their friends encourages them to choose this hospital and their former friends had contribution to the perceived organizational culture.

5.1.3 Advice network across divisions is correlated with professional commitment of novice nurse

Research on the generations of nurses showed that the younger generation had higher value on their work but not on organization. Stuenkel et al. [43] showed that nurses born between 1960 and 1980 embraced higher values in having autonomy and variety in their tasks than those born between 1943 and 1960. Takase, Oba, Yamashita [26] found the 'generation X' rated their needs and values more highly than other generations. Since the participants just graduated from school, they were born as the 'generation X'. They had higher value on their professional work, and highly valued their own need and values.

Professional commitment is shaped during the socialization process and is encountered by individuals through professional experiences. Similarity breeds connection [44]. The participants connect with their friends of the same value across divisions. And the attitude, belief, and value similarity lead to attraction and interaction [45]. The

interaction with the friends across divisions breeds professional commitment. The more friends they have across divisions, the more homophilous of the professional commitment.

5.1.4 Advice network outdegree across divisions is important for job satisfaction, but not outdegree in the same division

The results show that if a novice nurse has more friends across divisions to consult on work related matter across divisions, she will have higher job satisfaction. However, the number of friends in the same division had not such effect. How could a newcomer have friends across divisions? We suspect that the friends across divisions are their schoolmates or friends' friends. And this is the reason why they applied to be a staff of this hospital.

A beginning professional nurse just entering hospital, or stepping into her first professional position, draws on knowledge not only from the curricula, readings, and interactions at the professional settings but also from the personal experience of interactions, relationships, and communities situated in the work place. As the result, the relationship across divisions is extremely influencing and should not be ignored.

5.1.5 Advice network outdegree across divisions is more important than professional commitment for novice nurses' job satisfaction

In the regression models, the advice network outdegree across divisions is a significant predictor for two domains of job satisfaction. If the novice nurses have friends in the other divisions, they may explore information about the organization administrative affairs, such as the benefit and promotion, and feedback.

Within the theory of social capital, personal networks are considered to be a means to achieve individual goals. Networks are a means to achieve goals and achieve performance. Social capital consists of the number of people in a network, their willingness to lend support, and their ability to do so [46, 47]. Some types of support providing company, other types providing information and advice. Both are important for job satisfaction. A significant body of literature has documented the value of social support networks for health [48]. Support is in the form of emotional processing or instrumental assistance from family, friends, or acquaintances. Numerous studies have found that these resources can mitigate poor working conditions, such as heavy demands [49]. In the nursing literature, social support is cited as an important factor in managing job-related stress [50, 51].

5.2 Practical implications

The implication from this study that job satisfaction and friendship network have relationship due to the interaction of advice networks across divisions. The formal and informal relationships newcomers form with friends and co-workers has been an important source of perceived organizational culture. A newcomer learns from their friends inside the hospital about the skills and routines required to perform jobs. This process helps them be integrated into the organization.

Since the novice nurses have passed through an extensive recruitment process, how to increase their retention rate through interaction between the novice nurses and the other faculties is an important issue. The entry period of work appears to be critical for a new employee's attitude about the new organization, and about the messages it conveys on this day. Except the information most useful to them for alleviating the uncertainty and anxiety surrounding the entry process, the organization may provide structured orientation activities both for the environment and the personnel which should make newcomers feel welcome and emotional supported.

Prior research revealed that the advice and friendship networks are coexist during later period [31]. After entry period the new persons would have made friends with their colleague in the same division or across divisions. These new friendship will influence their attitude and job satisfaction. Human resource professionals may strategically use the overlapping network to form team work, arrange employee shift schedule, and reinforce their satisfaction.

5.3 Future research

5.3.1 Longitudinal study will be helpful to understand the evolution of human relationship interaction and job satisfaction

Networks of personal relations evolve over time. They reflect and go with processes of socialization. In this study, we directly assessed the persons who can be consulted when needed. During the entry stage, novice nurses learn the professional role through intensive interaction with a small number of faculties. This increased interaction with faculty around specific problems of practice ultimately results in nurses' having more in common with the faculty to whom they are apprenticed than with each other and a gradual increase in the adoption of professional values and commitment coupled with a weakening of the social bonds that tie students

together. Further research may focus on the revolution of social networks.

5.3.2 How many are good enough for social network nomination?

The nomination number is an interesting issue. Yang et al. [52] studies adolescent social network and found that two names will generate social network with unstable structure, three names are the minimum to get more stable network structure, four or five names are needed to observe the links between boys and girls, and more than five names seem to be redundancy. However, in this study, the participants were asked to nominate up to 18 persons and someone nominated 21 persons. Although it is not suitable to compare these two studies with different context and participants, the nomination number for social network needs further research and discussion.

5.3.3 The visualization of social network may be used as a tool for human resource management

There are some message can be drawn from the layout of social network. If further observation and analysis are administered, many reserved message will be discovered. And it can be used as a management tool in human resource department.

5.3.4 The disappeared effect of professional commitment

The correlation between professional commitment and job satisfaction disappeared when in regression model. The high correlation between perceived organizational culture and professional commitment may be a good explanation. But, the decreasing professional commitment [25] may be more important. It is suggested that the professional commitment of nurses need further research.

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