

The Association between Social Capital and Burnout in Nurses of a Trauma Referral Teaching Hospital

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Abstract- Social capital is a multi-faceted phenomenon in social sciences that massively affects many social fields. It can be a helpful factor in promoting health. Among the groups with high burnout, nurses have always shown higher levels of burnout. Studies have revealed that social capital can be an important factor affecting burnout. This study aimed to determine the extent of the effect of social capital on burnout in nurses of a trauma referral teaching hospital in Rasht. This was a descriptive correlational study conducted on 214 nurses of a trauma referral teaching hospital. Maslach standard questionnaire and the social capital questionnaire devised by Boyas and colleagues were used. Data were analyzed using descriptive statistics, Pearson correlation coefficient, and linear regression analysis to determine the extent of the effect of social capital on burnout. The study showed an inverse association between social capital and burnout. The intensity of the relationship was -0.451 ($P < 0.0001$). Also, the linear regression model of social capital on burnout variable showed that the regression coefficient of social capital equaled -0.34 . The determination coefficient of this regression model indicated that social capital explained 20% of burnout changes. The results showed high burnout in emotional exhaustion dimension and an inverse association between social capital and burnout. Thus, attempts should be made to promote social capital dimensions among nurses. Given the inevitability of job stress in a nursing environment, and managers should plan on improving the working conditions and training techniques to deal with such stress.

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Introduction

Social capital has become an important issue in public health research in a way that only in 2002, 50 articles on social capital and health was published. Although at first there was no evidence of social capital benefits to health, there is now an impressive body of empirical evidence that highlight it as a determining factor at least in some health outcomes (1). Social capital is manifested in shared beliefs and values and social relationships among members of an organization (2). Social capital has a multi-dimensional meaning (3). From different perspectives, it can be seen as a by-product of social relationships due to mutual exchanges among members involved in

communities or social networks (4). Social capital has important impacts on organizations namely facilitating knowledge along with improving teamwork, organizational commitment, and the quality of products and services (5).

It is generally consisted of structural features (bonding, communicative bridge and relationship) and cognitive characteristics (the relationship that enables people for group work to solve problems and achieve common goals) (6). Organizational-cognitive dimensions of social capital include trust, social relationships, organizational commitment, communication, fairness, and influence (7). As a matter of fact, managers who can create social capital in their organization pave the way to success (5). Lack of social

capital causes other capitals to lose their effectiveness and hinders the way to development and excellence (8). Studies show that social capital can evaluate the quality of relationships at workplace and people can use it as a protection to stress and burnout (7). Nursing compared to other health care jobs continually shows higher levels of burnout (9). The term “burnout” was first introduced by Friedberg in 1974 when he recognized a state of increasing frustration and despair in care service providers (10).

Burnout is observed in groups whose job necessitates direct services and whose goal is to help people including doctors, nurses, the police and, teachers (11). Its dimensions are as follows; emotional exhaustion, in which the person feels his/her energy and feelings are depleted (12). Depersonalization, which is defined as an extreme indifference to the feelings of clients in which they are considered as object in service provider’s attitude, filled with a sense of indifference when dealing with them (13). Reduced sense of personal achievement occurs when an individual feels like reducing emotions, competence and success as working with other people (14). Its risk factors include high workload, repetitive tasks, conflicts with superiors and colleagues and exposure to aggressive behavior by clients (15). Providing high-quality care and helping human beings are of nursing goals (16).

When nurses suffer burnout, they, as a result, provide poor care that leads to organizational loss (17), thereby first the clients and then the nurses themselves pay the price. In other words, poor quality nursing services reduces clients’ satisfaction (18,19). Nurses themselves are also damaged since burnout affects their whole life (20). Based on an investigation in Iran, the prevalence of burnout among nurses was high so that in hospitals affiliated with Babol University of Medical Sciences (Babol city, North of Iran), 68.6% high and 0.7% of very high burnout have been reported (21). Kowalski and his colleagues proposed that cooperative environment at workplace, shared values and goals, mutual support and reduced workload can lessen the risk of burnout to a remarkable extent specifically emotional exhaustion (22). A study by Diller *et al.* indicated that scheduled group meetings and supervising sessions seem helpful in forming social environments and communicative structures in hospitals (23).

Respecting the fact that the main standpoint of nursing job is taking care of human beings which requires nurses possessing healthy body and soul who are able to manage their stress to prevent burnout. One of the ways of achieving them is forming informal

groups and relationships in organizations. As a result, the theoretical framework of this study was carried out to evaluate and assess the dimensions of social capital and their association with burnout to finally promote health in nurses, patients, and the whole society.

Materials and Methods

This was a descriptive correlational study performed by 214 nurses working in different wards of Poursina Teaching Hospital including surgery, orthopedic, operating room, neurology, neurosurgery, nursing office, emergency department, clinic, and ICU in 2012.

A total of 214 of 355 of nurses in the hospital were selected by limited sample size formula. Quota sampling method was used in which regarding the number and percentage, quota of each was determined and 214 nurses were selected from surgery (n=18), emergency (n=37), orthopedic (n=33), neurosurgery (n=21) and operation room (n=28), clinic (n=19), ICU (n=30), neurology (n=17) and nursing office (n=11). After obtaining written consent form from the hospital director, the researcher randomly entered nine wards in different shifts. The questionnaire consisted of three following parts: First, demographic characteristics including age, sex, working ward, position, shift, experience, employment and marital status. Second, Maslach questionnaire (Second Version, 1993) (24) as a gold standard assessment tool to assess burnout (25). Third, social capital questionnaire extracted from the study by Boyas and colleagues in 2012. After explaining instructions for filling the questionnaires, they were distributed randomly among the nurses. To assess the validity of burnout and social capital questionnaires, the internal consistency method was used.

The questionnaire was affirmed by 10 university professors of Management and Social Medicine, and then used. To evaluate the reliability, questionnaires were distributed among 30 individuals of society members and were completed within two weeks, and the Chronbach’s coefficient alpha was calculated. Chronbach’s alpha in all three Maslach’s dimensions of burnout in this study was acceptable and accounted 0.81. The internal correlation of this questionnaire was acceptable. The questionnaire included 22 items that measure different dimensions of burnout. Nine items dealt with emotional exhaustion, five items with depersonalization, and eight items with the sense of personal inadequacy, and all three aspects were measured by frequency and intensity aspects. Which means how many times and with what intensity the item

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was felt. Likert Scale from 0 numbered frequency and intensity- 6 and from 0- 7, respectively. In social capital questionnaire extracted from Boyas *et al.* in 2012, questions were graded very high (5), high (4), moderate (3), low (2), and very low (1). In order to measure the independent variable of trust one scale (Boyas *et al.*, 2012), to measure procedural fairness 4 scales (26), to measure distributive fairness 6 scales (27) in questions 2 -11, to measure social relationship 8 scales (28), to measure organizational commitment 8 scales (29), to measure the independent variable of communication 4 scales (7), and to measure the independent variable of influence 4 scales were used (7). The simple sampling method was used. After collecting the questionnaires, the results were analyzed by descriptive statistics, the correlation coefficient and linear regression analyzes using SPSS software.

Results

Findings indicated that 197 (92.1%) of the participants were women. 55 of them were single (25.7%), and 159 (74.3%) married. The minimum and maximum working experience was 3 and 30 years, respectively. Their mean age was 34.3 years. 48 nurses (22.4 %) had fixed morning shift, 1 nurse (1%) evening and night shift, and 164 (76.4%) circulating shift. Most of them belonged to the emergency department (17.3%) and the least from the nursing office (5.1%). A total of 194 participants were practical nurses (90.7%) and 9 head nurse (4.2%) and 11 supervising nurses. Of burnout dimensions, emotional exhaustion had mean=24.65, SD=12.16. Depersonalization had mean=4.71, SD=5.11. Sense of reduced personal accomplishment had mean=41.09, SD=9.58. The results also showed that 75% of nurses had emotional exhaustion at high, depersonalization at moderate and reduced personal accomplishment at a low level (Table 1).

Table 1. The Extent of Burnout in Nurses

| Burnout dimension | Third quartile (0.75 percentile) | SD | Cut-off point | Results based on 75% of subjects |
|--|----------------------------------|-------|----------------|----------------------------------|
| Emotional Exhaustion | 34 | 12.16 | <18 low | high |
| | | | 18-30 Moderate | |
| | | | >30 high | |
| Depersonalization | 8 | 5.11 | <6 low | moderate |
| | | | 6-11 Moderate | |
| | | | >12 high | |
| Reduced sense of Personal Accomplishment | 48 | 9.58 | > 40 low | low |
| | | | 33-40 Moderate | |
| | | | < 33 high | |

In this research, an association was found between social capital dimensions and burnout in participants. The linear correlation coefficient was -0.451 ($P<0.0001$) which indicates an inverse linear relationship between the two variables. Then, we used linear regression to determine the effect of social capital variable on burnout. This model showed that the regression coefficient of social capital equaled -0.34 that is for one unit increase in social capital, burnout decreases for 0.34 unit.

On the other side, the Adjusted R Square of model equaled to 0.2 which suggests that social capital can

predict burnout to 20%. The rather low rate of this variable implies that variables other than social capital affect the burnout. Moreover, on social capital dimensions, results of Pearson correlation coefficient displayed a linear inverse association among all dimensions of social capital and burnout (Table 2).

To determine the effect of each dimension on burnout, linear regression was used. Results of analysis were indicative of the fact that organizational commitment more than other dimensions led to burnout. The effect of this variable was -5.08 (Table 3).

Table 2. Correlation between Dimension of Social Capital and Burnout

| Variables | N | Pearson Correlation | Sig. (2-tailed) |
|---------------------------------------|-----|---------------------|-----------------|
| Trust and burnout | 214 | -0.328* | 0.000 |
| Influence and burnout | 214 | -0.292* | 0.000 |
| Fairness and burnout | 214 | -0.271* | 0.000 |
| Organizational Commitment and burnout | 214 | -0.442* | 0.000 |
| Social Relationships and burnout | 214 | -0.374* | 0.000 |
| Communication and burnout | 214 | -0.36* | 0.000 |

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

Table 3. Regression Analysis of Burnout in Social Capital Dimension

| Model Variables | Regression coefficient | T-statistic | P-Value |
|----------------------|------------------------|-------------|---------|
| invariant | 72.52 | 13.84 | 0.000 |
| Trust | -2.05 | -1.49 | 0.14 |
| Fairness | -1.46 | -0.89 | 0.38 |
| Relations | -1.73 | -0.88 | 0.38 |
| Commitment | -5.08 | -2.91 | 0.004 |
| Communication | -1.65 | -0.79 | 0.43 |
| Influence | 0.13 | 0.068 | 0.95 |

Discussion

The present research was performed to examine the effect of dimensions of social capital on burnout among nurses. In this study, it was disclosed that the number of female nurses was more than men. The mean working experience was less than 15 years. These data conformed to other studies (30-32).

This study showed that nurses under study had high burnout in emotional exhaustion, moderate burnout in depersonalization and low burnout in a reduced sense of personal accomplishment. Based on a study in Alborz Hospital of Karaj city, 57.8% of nurses had moderate emotional exhaustion, 52.2% low depersonalization, and 64.4% low reduced sense of personal accomplishment (33). The results specified an inverse association between social capital and burnout. The study by Kowalski and colleagues suggested an inverse relationship between social capital and emotional exhaustion. The nurses who had a lower perceive of social capital had high emotional exhaustion (22). In a study by Boyas *et al.*, in 2012, it was realized that inasmuch as job stress caused burnout and intent to leave the job, social capital was effective in reducing this stress particularly in young workers (7). In Iran in 2010, Khammarnia proved that some components of social capital affect reduction of burnout (5). According to this study, an inverse association exists between trust and burnout. The results pointed out that the intensity of the relationship between trust and burnout of the nurses of this center was -0.24% that expressed an inverse relationship between the two variables. Moreover, the determining coefficient between the two variables equaled to 0.057 which evinced that trust could predict burnout to 5.7%. Boyas *et al.* reported that nurses with a high level of trust showed a low level of emotional exhaustion (7). A significant association was observed between trust and burnout in study by Khammarnia *et al.*, (5). Such a relationship was also seen between fairness and burnout in participants of the current study whose intensity of the relationship was -0.34%. Plus, the determining coefficient between the two variables was

0.115 which exhibited that the trust variable could predict burnout to 11.5%. In a study by Boyas *et al.*, it was revealed that individuals who had high level of trust showed low level of emotional exhaustion (7). In Khammarnia's study, a significant relationship was observed between trust and burnout (5). This relationship was also affirmed between fairness and burnout in nurses of Poursina referral Teaching Hospital. Study by Boyas *et al.* indicated that depersonalization (34) has a significant association with fairness. Results reported that those with low level of depersonalization had high fairness (34).

Alimoglu and Donmez in a study in Turkey suggested that working shift and low annual income could affect the burnout through job dissatisfaction (35). In this study, a significant association was indicated between influence and burnout. However, in the study by Boyas and Wind, it was declared that that with a high level of influence has a low level of depersonalization (34). Here, a significant relationship was observed between organizational commitment and burnout in nurses. Boyas *et al.* showed that with an increase in organizational commitment, emotional exhaustion remarkably decreases (7).

In another work by same researchers in 2010, it was also indicated that those with a high level of organizational commitment has low emotional exhaustion and depersonalization (34). In this study, the relationship between social relationship and burnout was inverse. Based on Khammarnia's study, no significant relationship existed between informal social relationship and burnout (5). Boyas and Wind showed that social relationships at workplace could have both positive and negative effects (34).

In current study, a significant association was confirmed by communication and burnout. These two variables had an inverse relationship. Boyas and Wind suggested that those with high burnout showed a low level of communication (34).

In conclusion, the overall results posed that the rate of burnout among nurses of Poursina Hospital is high, and the four variables of social capital affect the

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burnout. Therefore, attempts should be made to increase social capital so as to reduce burnout. Given the inevitability of job stress in a nursing environment, authorities in charge should plan on improving the working conditions and training techniques. Social communications can be facilitated by holding social meetings in hospitals in which nurses participate in groups. In order to increase social capital, promoting it in general trainings to nurses and other medical staff should be considered.

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