RESEARCH ARTICLE

THE RELATIONSHIP OF SOCIAL CAPITAL WITH JOB SATISFACTION AND THE QUALITY OF NURSING CARE IN CRITICAL CARE NURSES

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ABSTRACT

INTRODUCTION AND OBJECTIVE:

Social capital is an important factor influencing job satisfaction and the quality of nursing care provided by nurses. This study aimed to examine the relationship between social capital, job satisfaction, and quality of nursing care among critical care nurses working in critical care wards (CCWs).

METHODS:

A descriptive-analytical study was carried out in 2018, with nurses working in the critical care wards (CCWs) of Mazandarn University hospitals located in Sari, Iran. The study included 195 participants who completed a demographic questionnaire, Nahapiet and Ghoshal's Social Capital Questionnaire, Spector's Job Satisfaction Survey, and the Quality Patient Care Scale. The collected data were analyzed using both descriptive (Percentages, means, and standard deviations) and analytical statistics (Analysis of variance, Pearson's correlation coefficient and Univariate regression analysis).

RESULTS:

The study's findings demonstrated a significant and positive correlation between social capital and both job satisfaction ($p=0.001$) and the quality of nursing care ($p=0.001$). Social capital was identified as an independent variable that accounts for 20% of the changes in job satisfaction and 41% of the changes in the quality of nursing care.

CONCLUSION:

This study highlights the importance of social capital in promoting job satisfaction and improving the quality of nursing care among CCW nurses. The findings demonstrate that social capital is a key factor that can significantly impact the quality of care provided to patients. Therefore, nursing managers must recognize the value of social capital and take active steps to promote it within their organizations.

KEYWORDS

Social capital, job satisfaction, quality of nursing care, critical care.

INTRODUCTION

The increasing demand for nursing services, coupled with heavy workloads and nursing staff shortages, has had a significant negative impact on the quality of nursing care [1]. Additionally, service recipients are now demanding higher-quality care at lower costs, exacerbating the strain on nursing staff [2]. Providing high quality nursing care is the extent to which the nursing care provided meets the expectations and needs of the patients, as well as the standards and criteria of the profession and the organization [3]. Qasemi and colleagues (2014) in their research reported that the quality of nursing care in Iran is as 55% overall, 79.2% in intensive care units (ICUs) and 53.5% in internal and surgical wards [4]. A study has shown that the quality of nursing care and patients' satisfaction are poor, particularly in countries like Ireland and Greece [5].

As nurses' motivation and job satisfaction can impact the quality of care they provide, a lack of motivation and job satisfaction can have adverse effects on care provision [6]. Job satisfaction is a multi-dimensional construct that involves a positive attitude towards one's job and a sense of pleasure derived from it. It is a dynamic and complex concept that encompasses various factors, including personal values, perceptions, and judgments [7]. Based on a research finding, a significant number of registered nurses expressed job dissatisfaction, possibly stemming from inadequate support and action within the workplace [8]. According to Faramarzpour's study, job satisfaction among nurses was reported as moderate, with the lowest levels found among those working in ICUs [9]. Abella's research on the hospital wards and critical care units showed that nurses' job satisfaction was average in general [10].

Social capital can serve as an essential strategy to improve nurses' job satisfaction and performance, thereby enhancing the quality of nursing care [11]. Social capital is a concept in organizational management that can have a significant impact on the quality of services and outputs. It includes factors such as knowledge transfer, teamwork improvement, organizational commitment, and improved service quality [12]. A study found that social capital has a positive effect on both job satisfaction and the quality of nursing care [11]. The relationship between job satisfaction and social capital among healthcare personnel was found to be significant in another study [13]. According to Laschinger et al. (2014), there is a relationship between social capital and nurses' perceptions of the quality of nursing care [14].

Nurses play a crucial role in healthcare teams and can significantly improve the quality of care provided to patients. In particular, nurses working in critical care settings such as ICUs provide comprehensive care to critically ill patients. However, there is a lack of research on the relationship between social capital, job satisfaction, and the quality of nursing care among CCW nurses. Given the importance of social capital in enhancing the efficiency of nursing services, this study aimed to investigate the relationship between social capital and job satisfaction as well as the quality of nursing care among nurses working in CCWs.

METHODS

DESIGN
The descriptive-analytical study conducted in 2018 included 195 nurses who were working in CCWs. The primary objective of the study was to examine the correlation between social capital, job satisfaction, and the quality of nursing care provided by CCW nurses.

PARTICIPANTS
Nurses were recruited from three hemodialysis wards, eight cardiac care units (CCUs), and 14 ICUs (including pediatric, neonatal, trauma, cardiac surgery, neurosurgery, general, and burns ICUs) in five hospitals affiliated with Mazandaran University of Medical Sciences in Sari city, Iran. The study employed a simple stratified random sampling method to select the participants. Using the sample correlation coefficient equation and values obtained from an article by Shin et al., [15], the required sample size was estimated to be 195 nurses, taking into account a 10% chance of sample loss. The number of CCW nurses in each hospital was obtained from the nursing offices of all five hospitals. To create a representative sample, approximately 50% of all the nurses employed in each ward were selected to participate in the study. Given that there was a total of 450 nurses working in these hospitals, this resulted in a final sample size of 195 nurses.

$$n = \frac{\left[Z_{1-\frac{\alpha}{2}} + Z_{1-\beta} \right]^2}{\left[\frac{1}{2} \ln \frac{1+r}{1-r} \right]^2} + 3$$

The inclusion criteria for the study were having a Bachelor's or higher degree in nursing and at least one year of clinical experience in ICUs. The exclusion criteria included unwillingness to participate in the study and incomplete questionnaires.

DATA COLLECTION

The data collection tools utilized in this study included four components:

1- Demographic characteristics questionnaire, which inquired about variables such as age, gender, marital status, level of education, work experience, work shift, and type of employment.

2- The standard social capital questionnaire developed by Nahapiet and Ghoshal, consisting of 28 items that measure social capital across structural (eight items), cognitive (eight items), and communication (12 items) dimensions [16]. Each item in the questionnaire is scored based on a Likert scale (1=strongly disagree, 2=disagree, 3=no comments, 4=agree, and 5=strongly agree). The total score ranges from 28 to 140. A score of 28-47.9 indicates low, 48-93.9 moderate and above 94 high social capitals. The content validity of the questionnaire was assessed by Kazemzadeh et al. in 2013, and its reliability was confirmed with a Cronbach's alpha of 0.85 [17]. The validity and reliability of the questionnaire were also confirmed in other studies [18, 19].

3- The Job Satisfaction Survey (JSS) developed by Spector is a tool used to evaluate employees' attitudes toward their job [20]. The JSS consists of 36 items across nine domains, including Pay, Promotion, Supervision, Fringe Benefits, Contingent Rewards, Operating Procedures, Coworkers, Nature of Work, and Communication. Each item is scored on a 6-point Likert scale, with responses ranging from 1 (strongly disagree) to 6 (strongly agree). A score of 36-95.9 indicates low job satisfaction, 96-156.9 moderate job satisfaction, and 157-216 high job satisfaction. In 2015, Gholami et al. standardized the JSS for use in Iranian society and reported strong concurrent validity with correlation coefficients ranging from 0.6 to 0.8 for each sub-domain when compared to the job descriptive index. They also assessed the reliability of the JSS using Cronbach's alpha and reported coefficients ranging from 0.57 to 0.86 for each sub-domain, with an overall coefficient of 0.86 for total reliability, indicating good reliability of the survey [15].

4- The Quality Patient Care Scale (QualPaCS) is a highly reliable tool for measuring the quality of care [21]. The

QualPaCS is a scale that consists of 68 items assessing the quality of nursing care from the perspective of nurses across three dimensions: psychosocial, communication, and physical. Each item is scored on a 4-point Likert scale (4=always, 3=often, 2=sometimes, and 1=never), with 32 items in the psychosocial dimension, 22 in the physical dimension, and 14 in the communication dimension. The total score range is from 68 to 272, where a score of 68-136 is considered undesirable, 137-204 is fairly desirable, and 205-272 is desirable. The validity and reliability of the QualPaCS have been confirmed by various studies. Vahidi et al. reported a Cronbach's alpha of 0.93, indicating high reliability, while Neishabory et al. reported a Cronbach's alpha of 0.80 for the tool [22, 23]. In this study, the questionnaires' reliability was calculated using Cronbach's alpha coefficients of 0.716 for job satisfaction, 0.918 for social capital, and 0.978 for nursing care quality, indicating high levels of reliability for all three measures. The researcher distributed the questionnaires to nursing personnel in the wards and collected them during the same work shift. Data were collected over a period of two months and then analyzed using IBM SPSS-22 software.

ETHICAL CONSIDERATIONS

The Ethics Committee of Mazandaran University of Medical Sciences approved the present study (REC.MAZUMS.1396.10214). All participants provided informed consent, were guaranteed anonymity, and assured of the confidentiality of their data.

DATA ANALYSIS

The data were analyzed using IBM SPSS (Version 22) software. Descriptive statistics, including percentages, means, and standard deviations, were used to describe the participants' demographic characteristics, social capital, job satisfaction, and quality of nursing care. To determine the relationship between variables, Analysis of Variance (ANOVA), Pearson's correlation coefficient and Univariate regression analysis were used, with a significance level of a=0.05.

RESULTS

The study included 195 nurses, 75.9% of whom were female, and 24.1% were male. Among the participants, 70.8% were married. The mean age of participants was 32.93±7.478 years, and their mean work experience was 9.95±6.840 years, with a mean ICU work experience of 8.57±6.439

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years. More than half of the participants (56.48%) had official (permanent) or semi-official (temporary renewable) contracts (Table 1).

TABLE 1. THE DEMOGRAPHIC CHARACTERISTICS OF THE CCW NURSES

Variables		Number (%)
Gender	Male	47 (24.1)
	Female	148(75.9)
Age (year)	22-32	109 (55.9)
	33-43	71 (36.4)
	>44	15 (7.7)
Marital Status	Single	57 (29.9)
	Married	138 (70.1)
Education	B.Sc.	171 (87.7)
	M.Sc.	24 (12.3)
Ward	Dialysis	21 (10.8)
	ICU	100 (51.3)
	CCU	74 (37.9)
Work Shift	Fixed	150 (76.9)
	Rotating	45 (23.1)
Employment Type	Official	50 (25.6)
	Semi-official	59 (30.2)
	Contractual	55 (28.3)
	Training	31 (15.9)
Work Experience (year)	<5	69 (35.5)
	6-10	49 (25.1)
	11-15	35 (17.9)
	>16	42 (21.5)
ICU Work Experience (year)	<5	87 (44.6)
	6-10	47 (24.1)
	11-15	27 (13.9)
	>16	34 (17.4)
Organizational Position	Head nurse	23 (11.8)
	Deputy head nurse	18 (9.2)
	Clinical nurse	154 (79)

The average score for the quality of nursing care was 233.58±31.26 among CCWs. Approximately 83.6% of the nurses reported a satisfactory level of nursing care quality, with the highest scores in the psychosocial dimension and the lowest scores in the communication dimension (Table 2).

The ICU nurses had an overall mean job satisfaction score of 118.67±20.633, with the majority (84.6%) reporting moderate job satisfaction. Among the different dimensions of job satisfaction, coworkers had the highest value (19.19±2.23) while pay had the lowest value (8.65±6.04).

Additionally, most of the nurses (77.4%) reported having high social capital with an overall mean score of 108.93±22.87. The communication dimension had the highest value (48.24±12.13) while the cognitive dimension had the lowest value (30.25±6.73) (Table 3).

The ICU nurses reported higher scores for social capital and quality of nursing care, while the CCU nurses had higher job satisfaction scores. Furthermore, the type of ICU was found to have an impact on social capital, job satisfaction, and the quality of nursing care (Table 4)

TABLE 2. DISTRIBUTION AND MEAN SCORES OF NURSING CARE QUALITY AMONG CCW NURSES

Variable	Mean and SD	Undesirable Number (%)	Fairly Desirable Number (%)	Desirable Number (%)
Quality of nursing care	233.31±58.26	3 (1.5)	29 (14.9)	163 (83.6)
Psychosocial dimension	105.18±79.46	8 (4.1)	49 (25.1)	138 (70.8)
Communication dimension	53.12±42.36	3 (2.3)	83 (47.3)	109 (50.4)
Physical dimension	74.14±61.85	13 (6.7)	56 (29.2)	126 (64.1)
Confidence interval=95%				

TABLE 3. MEAN SCORES OF SOCIAL CAPITAL AND JOB SATISFACTION AMONG CCW NURSES

Variable	Mean and SD	Low Number (%)	Moderate Number (%)	High Number (%)
Job satisfaction	118.67±20.633	19 (9.7%)	165 (8.6%)	11 (5.6%)
Social capital	108.93±22.87	6 (3.1%)	38 (19.5%)	151 (77.4%)

TABLE 4. COMPARISON OF MEAN SCORES OF SOCIAL CAPITAL, JOB SATISFACTION, AND QUALITY OF NURSING CARE IN CCW NURSES

Ward	Social Capital	Job Satisfaction	Quality of Nursing Care
	Mean±SD	Mean±SD	Mean±SD
ICU	114.03±20.212	114.25±15.268	240.78±28.695
CCU	109.84±19.501	128.24±22.839	230.16±25.581
Dialysis	82.05±28.177	106.00±21.596	211.38±46.81
P-Value*	0.001	0.001	0.002
Tukey's or Honestly Significant Difference			

The results of the Analysis of Variance (ANOVA) indicated that nurses with 11-15 years of work experience had a slightly higher mean score for social capital (115.84±21.95), but this difference was not statistically significant (P=0.057), suggesting that work experience did not have a significant relationship with social capital (p=0.096). Moreover, social capital was not found to be significantly correlated with gender (P=0.723), marital status (P=0.219), education (P=0.954), or type of employment (P=0.308). No significant impact of these variables on social capital was found. However, social capital was found to have a significant relationship with ICU work experience (P=0.029), organizational position (P=0.001), and work shift (P=0.002). Pearson's correlation coefficient revealed a statistically significant positive relationship between job satisfaction and social capital, job satisfaction and quality of nursing care, and social capital and quality of nursing care (P=0.001). Univariate regression analysis of the predictor variables indicated that social capital could explain

approximately 41% of the variation in quality of nursing care as an independent variable. Additionally, job satisfaction could explain 13% of the variation in quality of nursing care as an independent variable. In a separate model, social capital could explain 20% of the variation in job satisfaction as an independent variable.

DISCUSSION

The study findings revealed a statistically significant positive relationship between social capital and both job satisfaction and quality of nursing care. Social capital was found to explain 41% of the variation in quality of nursing care and 20% of the variation in job satisfaction. Additionally, job satisfaction could explain 13% of the variation in quality of nursing care as an independent variable. A study conducted by Shin et al. (2017) on nurses in South Korea also reported a significant relationship between social capital and job satisfaction and quality of

nursing care. The authors suggest that various activities and interventions aimed at promoting social capital could enhance the quality of care provided by nurses [24]. Another study conducted on nurses found that higher social investment and greater social capital were associated with higher satisfaction with the effectiveness of the unit. The study also revealed that social capital not only had a direct positive effect on the quality of care, but also indirectly influenced nurses' perceptions of the quality of care. This emphasizes the crucial role that nurses play in ensuring the quality of patient care [25]. Care is the fundamental aspect of human needs and forms the core element of the nursing profession. A thorough understanding of nursing care is critical for nurses to provide high-quality care and services [26]. Strömgren and colleagues (2016) found that higher levels of social capital predict better job satisfaction, work motivation, and clinical empowerment. Therefore, social capital is an essential factor that contributes to job satisfaction and work motivation, leading to clinical advancements and improved patient safety [6]. Motivation and enthusiasm are essential for individuals to be more efficient and provide better services, including nurses. Therefore, nurses' job satisfaction can increase the quality of nursing care and performance [25]. In Ommen's study (2009), it was found that workload and professional experience were significantly correlated with job satisfaction, as well as trust, mutual understanding, and shared goals. The study concluded that the quality of social capital, which brings together members of social networks, is strongly related to job satisfaction [13]. Azadi and colleagues reported that an employee with strong social capital has effective professional communication skills and interacts positively with their coworkers. Such interactions promote job satisfaction, resulting in a sense of contentment, security, and attachment to their position within the organization [26]. In the case of nurses, social capital is made up of sources that are generated through socialization. These sources include trust, participatory norms, and networks of social ties that enhance efficiency and effectiveness, ultimately leading to improved job satisfaction and the quality of nursing care [25].

In the present study, a majority of nurses had high social capital, with the communication dimension having the highest value, particularly in the ICU. Khodayari (2015) also reported moderate social capital among nurses, with the communication dimension having a higher value compared to the other dimensions [27]. Another study conducted on nurses also reported moderate social

capital, with nurses having higher levels of social capital experiencing greater happiness in the workplace, job satisfaction, and quality of life [28]. Social capital is a critical element for the success of organizations and is associated with positive outcomes, such as increased job satisfaction, improved clinical risk management, and reduced turnover rates [25]. Dehghani's study (2014) found that nurses in the dialysis ward had the lowest social capital compared to those in other wards of the hospital [29]. Shin's study (2016) also reported that the social capital of nurses was lower than expected [11]. The variations in social capital levels observed among nurses may be due to several factors, such as the type of hospital ward, the nurses' work experience, psychological conditions, and place of residence. These factors cannot be standardized across all subjects and may contribute to differences in social capital levels.

The majority of the nurses had a desirable level of quality of nursing care, with the psychosocial dimension having the highest value, particularly in the ICU. Based on the findings of a study, the quality of nursing care was found to be higher in the ICU compared to other wards [30]. In fact, ICU nurses are required to complete specialized training when beginning work in the ICU. Additionally, the ICU typically has fewer patients and more available facilities and equipment, which allows for a more precise practice of clinical skills. Due to their continuous involvement in nursing care, ICU nurses play a crucial role in the recovery of critically ill patients. Based on the study results, the majority of ICU nurses exhibited moderate levels of job satisfaction, with the highest scores being observed in the coworkers' dimension. Additionally, the nurses reported moderate job satisfaction overall [9, 31]. The study also found that ICU nurses reported the highest job satisfaction with the availability of learning opportunities in the workplace, and their job satisfaction was higher compared to CCU nurses [31]. Hospital nursing organizations can enhance patient outcomes and overall organizational performance by giving priority to nursing job satisfaction and implementing efficient human resource management strategies [32]. The job satisfaction levels of hospital nurses in Turkey and Slovenia were found to be moderate in two separate studies [33, 34].

In the current study, social capital was found to have a significant correlation with work experience in ICUs, the type of hospital ward, organizational position, and work shift. Ommen's (2009) study reported a significant correlation between social capital and age, as well as

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professional experience [13]. Shin's (2016) study also found a significant correlation between social capital and work experience, age, and academic degree [11]. The discrepancies in the study results may be attributed to variations in sample sizes, levels of education, age, gender, work experience, and the type of hospital ward, which cannot be standardized across all studies.

LIMITATIONS

The self-report nature of data collection for job satisfaction and quality of nursing care may introduce response bias, as participants may provide socially desirable answers rather than their true sentiments. As the study was conducted on ICU nurses in Iran, caution should be taken when generalizing the findings to other settings and countries.

IMPLICATIONS AND RECOMMENDATIONS FOR PRACTICE

Hospital managers and nursing administrators should consider social capital as a factor that can influence job satisfaction and the quality of nursing care among CCW nurses. It is also recommended to conduct interventional studies aimed at enhancing CCW nurses' social capital to improve the quality of nursing care. To improve the quality of public nursing services, hospital managers and nursing administrators must take into account the role of social capital in shaping job satisfaction and nursing care quality among CCW nurses. Additionally, nursing school teachers could teach nursing students how to increase their social capital, which may ultimately enhance their job satisfaction and the quality of their nursing care.

CONCLUSION

Job satisfaction and social capital are essential factors that impact the quality of nursing care. Promoting social capital among CCW nurses should be a top priority for nursing managers seeking to enhance the quality of care provided to patients. This can create a supportive work environment that fosters the delivery of high-quality nursing care and leads to improved patient outcomes. Hospital managers should be aware that investing in training, mentoring, and recognition programs can aid in building nurses' social capital and increasing their job satisfaction.

CONFLICT OF INTEREST

The authors declare no conflict of interest.

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