

Social capital, social intelligence, and their relationship among ICU and CCU nurses

Hamed Akbarian (✉ hamedabarian44@gmail.com)

University of Tabriz <https://orcid.org/0000-0002-5295-2906>

Mir Mojtaba Hosseini Mazraehshadi

University of Tabriz

Research Article

Keywords: Social capital, Social intelligence, CCU and ICU nurses, Medical Sociology, Bourdieu

Posted Date: June 10th, 2022

DOI: <https://doi.org/10.21203/rs.3.rs-1619539/v1>

License: © ⓘ This work is licensed under a Creative Commons Attribution 4.0 International License. [Read Full License](#)

Abstract

Background

The social capital of nurses is one of the main factors which affect the performance of nurses and the quality of care. Assessing the relationship between social capital and its related factors is one of the necessary works that should be done so that later, actions can be taken to increase social capital. Social intelligence is one of the factors that can increase nurses' social capital.

Aim

To investigate the relationship between social capital and social intelligence among ICU and CCU nurses.

Methods

A researcher-made social capital questionnaire and the Tromsø social intelligence scale (TSIS) were distributed to ICU and CCU nurses (n = 170), and the correlation between social capital and social intelligence was calculated.

Results

The results reveal that the level of social capital and its dimensions as well as the social intelligence and its dimensions were more than average among the respondents of the study. The research demonstrated that social awareness, social information processing, and total social intelligence had significant and positive relationships with social capital and its dimensions. On the other hand, the social skills dimension was not significantly correlated with any of the dimensions of social capital ($p > 0.05$). In addition, there were significant and positive correlations between two socio-demographic variables of age and years of work experience and all of the social capital dimensions except capital between nurses and companions of patients ($p < 0.05$). Contrarily, there were not any significant correlations between gender and social capital dimensions, nor between educational degree and social capital dimensions.

Conclusion

As the social capital of nurses goes up, the quality of nursing care improves. So, managers must take wise strategies to increase social capital. One of the measures that they can do is to increase social intelligence by taking wise strategies.

Introduction

The nursing workforce constitutes the largest personnel in the healthcare industry (United States Department of Labor, 2015). The rapid changes in roles and responsibilities of nurses, such as gaining more autonomy in the delivery of healthcare services, have put unprecedented administrative and management challenges within the nursing workplace (Auerbach et al., 2014). Many of the most pressing problems of a workforce usually are complex and formidable; these problems, in general, can be resistant to change. Application of the concept of social capital in nursing workforce can offer a pre-emptive strategy to ameliorate, if not prevent, these pressing problems. Clarification of principles of social capital within the context of nursing workplace is the tenet of its successful application in nursing management.

The term "social capital" originated from the domain of sociology and is regarded as an important element for organizational success through the networks of relationships (Shin & Lee, 2017). Several social scientists have made significant contributions to the development of social capital; however, Bourdieu was the first who formally defined this concept in his 1986 publication entitled "The forms of capital". He defined the concept of social capital as "the aggregate of the actual or potential resources

which are linked to possession of a durable network of more or less institutionalized relationships of mutual acquaintance and recognition - or in other words, to membership in a group" (Bourdieu, 1986). About a decade later, Putnam introduced the notion of social capital to the field of empirical studies [9, 10]. Putnam (2000) also asserts that norms and trust are the source of social capital and that people learn to do the right thing through a process of socialization.

Social capital relates to the resources available within communities in networks of mutual support, reciprocity, and trust that contribute to community strength. Social capital involves friendships and connections between people which have advantages for the participants, develop trust and cooperation, and contribute to the vitality of communities (Narayan, 1999).

Numerous characteristics of social capital have been identified in nursing publications (Andersen et al., 2015; Chang et al., 2012; Chang et al., 2019; DiCicco-Bloom et al., 2007; Ernstmann et al., 2009; Firouzbakht, 2018; Hofmeyer, 2003; 2013). However, five of these characteristics, including relational network, trust, shared understanding, reciprocity and social cohesion, are the most frequently stated in the literature; thereby, these attributes have been considered as the essential determining attributes of nurses' social capital (Walker & Avant, 2013).

Social intelligence refers to the ability to understand and manage one's own feelings and behaviors as well as those of others and the skillful handling of human relationships. Social intelligence is defined as the "ability of individuals to understand other people's moods, feelings, desires, motivations, and intentions, and manner of working independently and on a team, and to solve problems and conflicts" (Özdemir N, 2021). It has been proposed that there are five components to social intelligence: understanding of other people's moods, ability to get along with others, knowledge of community norms, understanding and sensitivity in complex social situations, and competence in managing people (Tioco, 2018), Silvera et al. (2001) suggested that understanding other people's feelings and thoughts defines the social information process; reading their body language and understanding other's desires and expectations in relationships define social awareness; and immediately perceiving others' moods and understanding their thoughts define social skills. To satisfy these three components characterizing social intelligence, the concept of self needs to be fully developed, which means individuals must be able to know and present themselves effectively (Tioco, 2018).

There has not been much research on the relationship between social intelligence and social capital among nurses, but various studies have been conducted on the relationship between these two variables among other groups of people. For example, Mirsafian (2018) examined the relationship between social intelligence and social capital among members of a sports organization in Iran and reported that with the increase in social intelligence, the social capital of individuals also increased. In their research among students of the Kashan University of Iran, Rahimi et al. (2017) found that there was a significant positive relationship between social intelligence and social capital.

The present study investigated the correlation between social intelligence and social capital among CCU and ICU nurses.

Methods

Population

The target population of the study was CCU and ICU nurses in Shahid Madani Cardiac Hospital. According to the latest statistics provided by the hospital administrators to the researchers, 206 CCU and ICU nurses were working in the hospital.

Sample and Procedure

The random sampling method was employed to ensure a sample that resembled the population of CCU and ICU nurses in the hospital. Using the Cochran formula, a sample size of 150 was needed to obtain a sample with an accuracy of + 5 or -5 percent. An oversampling procedure (n = 170) was applied to obtain the desired sample. Participants were evaluated by using anonymous self-reported questionnaires.

Social Capital Questionnaire

Social capital includes participation, trust, and cohesion (Onyx & Bullen, 2000). Among the influential people with whom the social capital of nurses is formed in interaction are other nurses, patients, and patients' companions. In this study, a researcher-made questionnaire was employed to assess the social capital of nurses. In this 27-item questionnaire, 9 items were used to evaluate each dimension of nurses' social capital, including capital between nurses, between nurses and patients, and between nurses and patients' companions. Questions related to each dimension included participation, trust, and cohesion between these individuals.

Two professors of sociology were provided with the questionnaire to confirm its reliability, and their desired modifications were applied to the questionnaire. The validity of the questionnaire was 0.88, 0.79, and 0.87 in the social capital between nurses, between nurses and patients, and between nurses and patients' companions respectively, measured by the Cronbach's alpha method. The overall Cronbach's alpha coefficient was 0.92.

Tromsø Social Intelligence Scale (TSIS)

The TSIS was designed to measure three aspects of social intelligence: social information processing, social skills, and social awareness (Silvera et al., 2001). The questionnaire contains 21 items, including 7 items for each dimension. A total score is calculated by adding up each item score (ranging from 1 to 7). The higher the score, the greater the social intelligence.

The Persian version of this questionnaire was used in this study. The validity of the TSIS questionnaire was 0.89, 0.78, and 0.70 in the social information processing scale, social skills scale, and social awareness scale respectively, measured by the Cronbach's alpha method. The overall Cronbach's alpha coefficient was 0.82.

Sociodemographic Information

Each participant was asked to provide their sociodemographic information, including their gender, age, level of education, and years of work experience as a nurse.

Data Analysis

Data was analyzed using SPSS software, version 26. Different statistical tests (Independent-Samples

T-Test, One-way ANOVA, and Pearson's r) were used based on levels of measurement of the variables. A p -value less than 0.05 was considered statistically significant.

Results

Sample statistics

In this study, 151 of the respondents were female and 19 were male. The mean age was 37.39 years with a standard deviation of 7.46. The majority of the participants (157) had bachelor's degrees and 13 of them had master's degrees or more. Furthermore, nurses with 16–20 years of work experience had the highest frequency among the groups of work experience (Fig. 1).

Social Capital

The score of social capital among nurses is shown in Table 1. Each dimension of social capital ranged from 9 to 56. The total social capital score ranged from 27 to 162. A higher score in the social capital questionnaire represents a higher level of social capital. The results of the study show that the levels of social capital in each dimension were more than average. Also, the overall social capital score among respondents was high.

Table 1
Scores of different dimensions of social capital among nurses

Social capital dimension	Mean	Standard Deviation
Between nurses	39.44	7.07
Between nurses and patients	36.53	5.34
Between nurses and companions of patients	36.18	6.38
Total social capital	112.17	15.96

Social Intelligence (TSIS)

Table 2 reveals the score of social intelligence among nurses. Each aspect of social intelligence ranged from 7 to 42, and the overall social intelligence score ranged from 21 to 126. The higher the score, the greater the social intelligence. The results of the study show that the levels of social capital in each dimension and also the total social intelligence were more than average.

Table 2
Scores of different dimensions of social intelligence among nurses

Social intelligence dimension	Mean	Standard Deviation
Social information processing	30.45	5.03
Social skills	27.71	5.48
Social awareness	28.39	5.09
Total social intelligence	86.56	10.96

Correlation between demographic variables and social capital

Table 3 describes the significance of the correlations between demographical variables of the study and social capital. The table reveals that there was not a significant correlation between gender and dimensions of social capital; nor between educational degree and social capital dimensions. There was a significant relationship between age and capital between nurses, between nurses and patients, and the overall social capital (correlation coefficient = (0.421), (0.244) and (0.326) respectively); so that, as respondents got older, their social capital increased. In addition, there was a significant correlation between years of work experience as a nurse and social capital between nurses, between nurses and patients, and the overall social capital ($F = 7.82, 2.59, \text{ and } 4.34$ respectively). The results of the LSD test show that as respondents had more work experience, their social capital increased.

Table 3
Significance of the correlations between demographic variables and social capital dimensions

Variable	Between nurses	Between nurses and patients	Between nurses and companions of patients	Total social capital
Gender	0.69	0.86	0.24	0.73
Age	0.00**	0.01**	0.06	0.00**
Educational degree	0.87	0.82	0.63	0.84
Years of work experience	0.00**	0.02*	0.25	0.00**

**p < 0.01; *p < 0.05.

Correlation between social capital and social intelligence

Association between social capital and social intelligence dimensions was computed by employing Pearson correlation (Table 4). According to this table, there wasn't any significant correlation between social skills and any of the social capital dimensions. On the other hand, there were significant relationships between social awareness and overall social capital and its dimensions, except the capital between nurses. Social information processing had significant associations with total social capital and its dimensions. Likewise, there were significant relationships between total social intelligence and total social capital and its dimensions.

Table 4
Correlation between dimensions of social capital and social intelligence

Independent variable dimensions		Between nurses	Between nurses and patients	Between nurses and companions of patients	Total social capital
Social skills	Pearson correlation	0.150	0.059	0.029	0.098
	Significance	0.05	0.44	0.70	0.20
Social awareness	Pearson correlation	0.139	0.251**	0.165*	0.211**
	Significance	0.07	0.00	0.03	0.00
Social information processing	Pearson correlation	0.221**	0.254**	0.242**	0.280**
	Significance	0.00	0.00	0.00	0.00
Total social intelligence	Pearson correlation	0.241**	0.263**	0.202**	0.276**
	Significance	0.00	0.00	0.00	0.00

**p < 0.01; *p < 0.05.

Discussion

Social capital

The results of this study indicated that the rate of social capital among ICU and CCU nurses of Shahid Madani Cardiac Hospital of Tabriz was higher than average. Gilbert (2017) reported similar findings on the score of social capital among registered nurses. Also, among the three dimensions of social capital, capital between nurses, between nurses and patients, and between nurses and companions of patients had higher scores, respectively.

Social intelligence

The mean score of social intelligence and its dimensions among ICU and CCU nurses was moderate to high. Among the dimensions of social intelligence, social information processing, social awareness, and social skills had higher scores, respectively. The score of social intelligence among respondents of this study was higher than those of Özdemiş N (2021), but the order of the scores of dimensions is the same.

Correlation between social capital and social intelligence

In this study, there were significant and positive relationships between social awareness, social information processing, and total social intelligence and total social capital and its dimensions. On the other hand, there were not significant associations between social skills and three aspects of social capital. Likewise, Rahimi et al. (2017) reported a positive and significant relationship between social capital and all dimensions of social intelligence.

Limitations

One of the limitations of this study was that all respondents were recruited from a single cardiac hospital. In future studies, the target population of the studies can be greater.

Implications and recommendations

Since previous studies have shown that high social capital among nurses improves their performance and quality of care (Shin & Lee, 2016), as well as findings of this study on a significant relationship between social intelligence and social capital, it is recommended that nursing students and new nurses be taught the strategies to increase social intelligence as part of the educational curriculum and also at the beginning of their nursing profession.

Another finding of this study was that, as the age and work experience of nurses increased, they got higher scores in the social capital questionnaire. According to this finding, it is suggested that discussion groups be set up between experienced and fresh nurses so that more experienced nurses can share their experiences with the less experienced ones.

Declarations

Participant consent: All of the respondents provided written consent to participate in the study.

Competing interests: The authors declare no competing interests.

References

1. Andersen, L. L., Poulsen, O. M., Sundstrup, E., Brandt, M., Jay, K., Clausen, T., Borg, V., Persson, R., & Jakobsen, M. D. (2015). Effect of physical exercise on workplace social capital: Cluster randomized controlled trial. *Scandinavian Journal of Public Health, 43*(8), 810–818. <https://doi.org/10.1177/1403494815598404>
2. Auerbach, D. I., Buerhaus, P. I., & Staiger, D. O. (2014). Registered Nurses Are Delaying Retirement, A Shift That Has Contributed To Recent Growth In The Nurse Workforce. *Health Affairs, 33*(8), 1474–1480. <https://doi.org/10.1377/hlthaff.2014.0128>
3. Bourdieu, P. (1986). The form of capital. *Handbook of Theory and Research and the Sociology of Education*, 241–258. https://scholar.google.com/scholar_lookup?title=The%20forms%20of%20capital&pages=241-258&publication_year=1986&author=Bourdieu%2CP
4. Chang, C.-W., Huang, H.-C., Chiang, C.-Y., Hsu, C.-P., & Chang, C.-C. (2012). Social capital and knowledge sharing: effects on patient safety [<https://doi.org/10.1111/j.1365-2648.2011.05871.x>]. *Journal of Advanced Nursing, 68*(8), 1793–1803. <https://doi.org/https://doi.org/10.1111/j.1365-2648.2011.05871.x>
5. Chang, H.-Y., Chu, T.-L., Liao, Y.-N., Chang, Y.-T., & Teng, C.-I. (2019). How do career barriers and supports impact nurse professional commitment and professional turnover intention? [<https://doi.org/10.1111/jonm.12674>]. *Journal of Nursing Management, 27*(2), 347–356. <https://doi.org/https://doi.org/10.1111/jonm.12674>
6. DiCicco-Bloom, B., Frederickson, K., O'Malley, D., Shaw, E., Crosson, J. C., & Looney, J. A. (2007). Developing a Model of Social Capital: Relationships in Primary Care. *Advances in Nursing Science, 30*(3). https://journals.lww.com/advancesinnursingscience/Fulltext/2007/07000/Developing_a_Model_of_Social_Capital_9.aspx
7. Ernstmann, N., Ommen, O., Driller, E., Kowalski, C., Neumann, M., Bartholomeyczik, S., & Pfaff, H. (2009). Social Capital and Risk Management in Nursing. *Journal of Nursing Care Quality, 24*(4). https://journals.lww.com/jncqjournal/Fulltext/2009/10000/Social_Capital_and_Risk_Management_in_Nursing.10.aspx
8. Firouzbakht, M., Tirgar, A., Ebadi, A., Sharif Nia, H., Oksanen, T., Kouvonen, A., & Riahi, M. E.. (2018). Psychometric Properties of Persian Version of the Short-Form Workplace Social Capital Questionnaire for Female Health Workers. *The international journal of occupational and environmental medicine, 9*(4), 184–193. <https://doi.org/10.15171/ijoem.2018.1264>
9. Gilbert, J. H. (2017). *Social capital and human capital of nurse managers and registered nurses* [Ph.D., Indiana University]. <http://dx.doi.org/10.7912/C2/1299>

10. Hofmeyer, A. (2003). A moral imperative to improve the quality of work-life for nurses: Building inclusive social capital capacity. *Contemporary Nurse*, 15(1–2), 9–19. <https://doi.org/10.5172/conu.15.1-2.9>
11. Hofmeyer, A. T. (2013). How can a social capital framework guide managers to develop positive nurse relationships and patient outcomes? [<https://doi.org/10.1111/jonm.12128>]. *Journal of Nursing Management*, 21(5), 782–789. <https://doi.org/https://doi.org/10.1111/jonm.12128>
12. Mirsafian, H. (2018). Effect of Social Intelligence on OCB and EB, with Effect on Social Capital as a Mediating Variable, in a Sport Organization in Iran. *Physical Culture and Sport. Studies and Research*, 77(1), 34–40. <https://doi.org/doi:10.2478/pcssr-2018-0003>
13. Onyx, J., & Bullen, P. (2000). Measuring Social Capital in Five Communities. *The Journal of Applied Behavioral Science*, 36(1), 23–42. <https://doi.org/10.1177/0021886300361002>
14. Özdemir N, A. V. (2021). The relationship between social intelligence, self-esteem and resilience in healthcare professionals and the affecting factors. *Journal of Psychiatric Nursing*, 12(1), 18–28. <https://doi.org/10.14744/phd.2020.96658>
15. Putnam, R. D. (2000). Bowling Alone: America's Declining Social Capital. In L. Crothers & C. Lockhart (Eds.), *Culture and Politics: A Reader* (pp. 223–234). Palgrave Macmillan US. https://doi.org/10.1007/978-1-349-62397-6_12
16. Rahimi, h., madani, a., & eftekhari, h. (2017). The analysis of relationship between social intelligence with social capital and social consistency in students at University of Kashan. *Scientific Journal of Social Psychology*, 5(44), 59–72. http://psychology.iauhvaz.ac.ir/article_536641.html
17. Shin, J. I., & Lee, E. (2016). The effect of social capital on job satisfaction and quality of care among hospital nurses in South Korea. *J Nurs Manag*, 24(7), 934–942. <https://doi.org/10.1111/jonm.12401>
18. Shin, J. I., & Lee, E. (2017). The Influence of Social Capital on Nurse-Perceived Evidence-Based Practice Implementation in South Korea. *J Nurs Scholarsh*, 49(3), 267–276. <https://doi.org/10.1111/jnu.12288>
19. Silvera, D. H., Martinussen, M., & Dahl, T. I. (2001). The Tromsø Social Intelligence Scale, a self-report measure of social intelligence. *Scand J Psychol*, 42(4), 313–319. <https://doi.org/10.1111/1467-9450.00242>
20. Tioco, M. L. P. (2018). *Social intelligence quotient and teaching performance among nurse educators in Aklan*, [Master's thesis, Central Philippine University, Jaro, Iloilo City]. <https://hdl.handle.net/20.500.12852/312>
21. United States Department of Labor. (2015). *Registered nurses have highest employment in healthcare occupations; anesthesiologists earn the most*. Retrieved from <https://www.bls.gov/opub/ted/2015/registered-nurses-have-highest-employment-in-healthcare-occupations-anesthesiologists-earn-the-most.htm>
22. Walker, L. O., & Avant, K. C. (2013). *Strategies for Theory Construction in Nursing: Pearson New International Edition*. Pearson Education, Limited. <https://books.google.co.uk/books?id=L6-QngEACAAJ>

Figures

Years of nursing experience

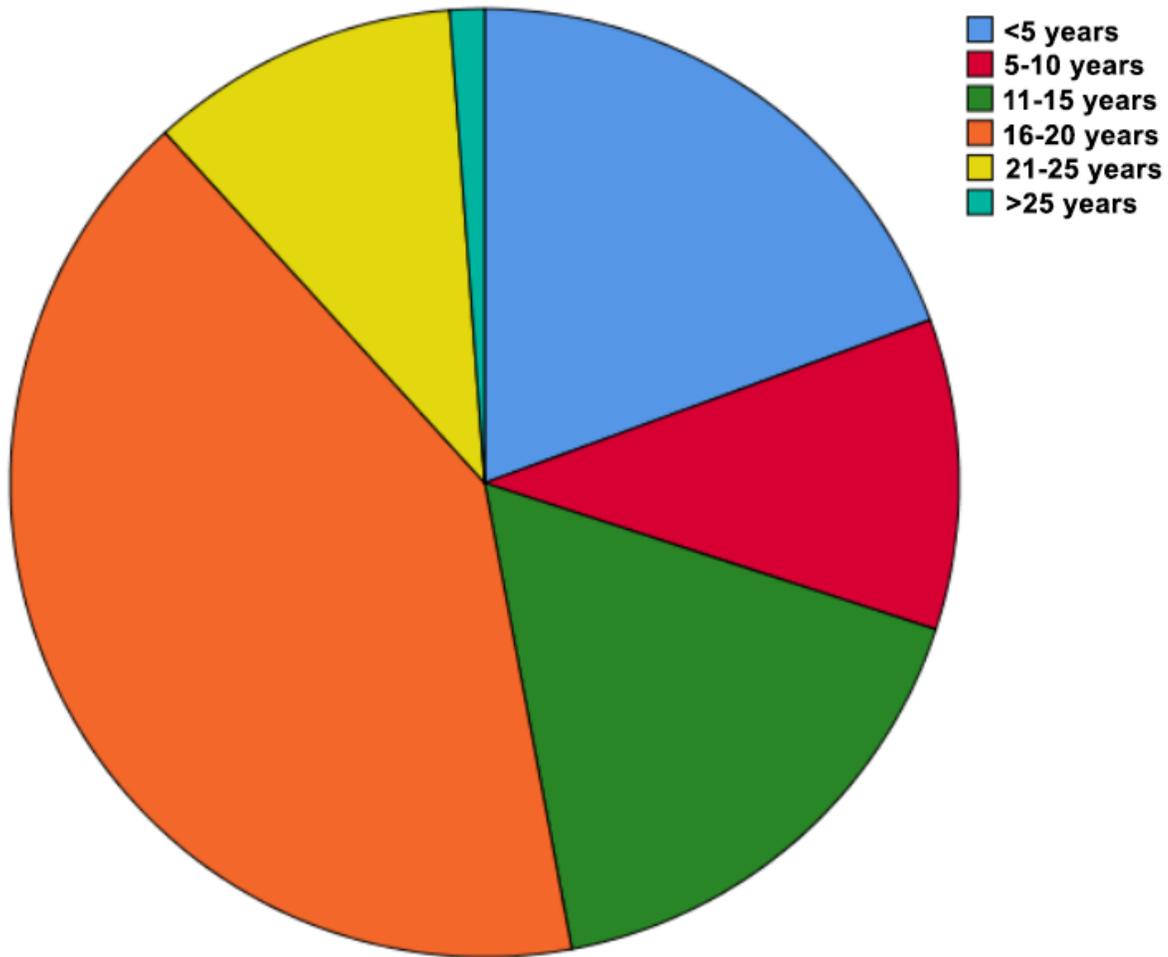


Figure 1

Legend not included with this version.