



The Relationships of Social Capital with COVID-19 Anxiety and Aggression Among Nurses Caring for COVID-19 Patients in Two Hospitals in Southwestern Iran

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Abstract

Background: Health crises expose nurses to numerous psychological challenges and affect their daily interactions.

Objectives: This study aimed to explore the relationship between social capital and psychological symptoms among nurses caring for COVID-19 patients.

Methods: In this descriptive-analytical study using systematic random sampling, data from 207 nurses were collected through a demographic questionnaire, the Onyx and Bolen Social Capital Scale, the Corona Disease Anxiety Scale (CDAS), and the Buss Perry Aggression Questionnaire (BPAQ).

Results: The mean \pm SD age of the nurses was 33.6 ± 7.76 years. The mean \pm SD scores for social capital, anxiety, and aggression among participants were moderate, low, and low, respectively. A significant inverse relationship was observed between social capital and both COVID-19 anxiety and aggression.

Conclusions: It is recommended that officials work to empower the nursing care team by providing opportunities for the development of social capital and anger management skills.

Keywords: Aggression, Anxiety, COVID-19, Nurse, Social Capital

1. Background

The World Health Organization (WHO) has identified COVID-19 as the most significant global health crisis (1), leading to nurses frequently working overtime due to staffing shortages. This situation often results in the cancellation of much of their free time (2), which can make them more susceptible to illnesses and impact their clinical decision-making abilities (3).

Social capital involves the norms, networks, and trust that allow groups to achieve goals that their members cannot accomplish individually (4). The demanding work shifts can eliminate opportunities for nurses to engage in activities that help them manage stress in healthy ways (5). As a result, they may exhibit aggressive behaviors. Understanding the relationship between

social capital and psychological variables is essential in strengthening the nursing team.

2. Objectives

The study aimed to assess the relationship between social capital and psychological symptoms among nurses caring for COVID-19 patients in two hospitals in southwestern Iran.

3. Methods

In this descriptive-analytical study, the sample size was calculated to be at least 180 individuals, ultimately completed by 207 nurses working at Imam Ali Andimeshk and Khatam al-Anbia hospitals in Shoushtar, accounting for a 15% dropout rate. The sampling method employed was systematic. The demographic

questionnaire and subsequent electronic questionnaires were utilized (date range: 2021-10-02 to 2022-01-04). This study received an ethical approval code (IR.SHOUSHTAR.REC.1400.004) from the Ethics Committee of Shoushtar Faculty of Medical Sciences. To maintain confidentiality, there was no requirement to enter the completers' first and last names. Completing the questionnaire implied consent to participate in the study. Inclusion criteria included not having a mental illness and having worked in a hospital for at least 6 months prior to the coronavirus outbreak. Exclusion criteria included the use of psychoactive drugs.

3.1. Onyx and Bullen's Social Capital Scale

This 31-item questionnaire uses a four-point Likert scale and includes domains such as participation in local communities, social trust, relationships with neighbors, friends, and family, appreciation of life, proactivity in a social context, and acceptance of differences. The total score ranges from 31 to 124, with higher scores indicating greater social capital. Its reliability and validity were confirmed in previous studies (6).

3.2. Corona Disease Anxiety Scale (CDAS)

This 18-item scale (four-point Likert scale) assesses psychological and physical symptoms. The total score ranges from 0 to 54, with higher scores indicating higher levels of COVID-19 anxiety. The reliability of the entire scale was confirmed ($\alpha = 0.919$) (7).

3.3. Buss Perry Aggression Questionnaire (BPAQ)

This 29-item questionnaire (five-option scale) measures aspects of physical and verbal aggression, anger, and hostility. In Zahedi Rad et al.'s study, Cronbach's alpha was 0.74 for physical aggression, 0.69 for verbal aggression, and 0.67 for anger, 0.72 for hostility, and 0.77 for the entire questionnaire (8).

The obtained data were analyzed using descriptive and inferential statistics in SPSS 22.

4. Results

Among the participants ($n = 207$), 167 individuals (80.67%) were female. The mean \pm SD age of the nurses was 33.6 ± 7.76 years. The numbers of single, married, and divorced individuals were 82, 122, and 3, respectively.

In Table 1, the mean \pm SD scores for social capital, anxiety, and aggression among participants were moderate (55.18 ± 16.61), mild (14.08 ± 9.53), and low (47.40 ± 14.45), respectively. The mean total anxiety

scores were higher among women than men, while the mean total social capital scores were higher among men.

Table 1. The Mean \pm SD of Social Capital, Anxiety, and Aggression by Participant Gender

Variables	Mean \pm SD	
	Female	Male
Total social capital	52.23 \pm 15.11	67.52 \pm 17.08
Total aggression	47.31 \pm 13.77	47.80 \pm 17.19
Total COVID-19 Anxiety	14.55 \pm 9.55	12.10 \pm 9.31

In Table 2, a significant relationship was observed between participants' anxiety scores related to COVID-19 and their social capital ($P = 0.005$), and anger ($P = 0.049$).

Table 2. The Relationships of Social Capital (and Its Domains) with COVID-19 Anxiety (and Its Symptoms) and Aggression (and Its Components)

Variables	Beta	Adjusted R ²	Sig.
Relationships of social capital and its domains with anxiety			
Appreciation of life	-0.048	0.038	0.003
Social trust	-0.07	0.062	0.001
Relationships with neighbours	-0.091	0.003	0.19
Relationships with friends and family	-0.043	0.017	0.03
Participation in local communities	-0.038	-0.003	0.49
Proactivity in a social context	-0.095	0.061	0.001
Acceptance of differences	-0.040	-0.002	0.08
Social capital	-0.195	0.038	0.005
Relationship between social capital and COVID 19 anxiety domains			
Physical symptoms	-0.075	0.001	0.28
Psychological symptoms	-0.68	0.058	0.001
Relationships of social capital with aggression and its components			
Physical	-0.055	-0.002	0.42
Hostility	-0.10	0.006	0.14
Anger	-0.13	0.014	0.049
Verbal	-0.098	0.005	0.16
Total aggression	-0.11	0.009	0.097

5. Discussion

Men exhibited higher levels of social capital compared to women. The rate of local participation for men was 12.20 ± 6.94 , whereas for women it was 7.31 ± 6.04 . This discrepancy might be attributed to different roles and limitations faced by women and men in society. Men also displayed higher levels of social trust (8.12 ± 2.94) compared to women (5.78 ± 2.49). A possible reason for the declining trust among women could be their lower participation in local communities, which may be further exacerbated by the fear of contracting

COVID-19. Additionally, the vulnerabilities women face in today's society might contribute to their decreased social trust (9). Married nurses showed the lowest levels of social capital (53.29 ± 16.39) and the highest scores of COVID-19 anxiety (15.86 ± 9.88), aligning with Jafari et al.'s findings ($P < 0.05$) (10). Haghbin et al. found higher levels of anxiety among married and divorced women compared to single women (11). Difficulty in controlling the disease provokes anxiety, and high levels of anxiety can lead to social rejection. In the present study, social capital was inversely associated with COVID-19 anxiety, which was not consistent with the study by Chang et al. (12). This discrepancy may be due to age and cultural differences.

Considering the ambiguous nature of the relationship between social capital and aggression, studies have yielded conflicting results (13). Social capital was only related to anger (a component of aggression). This may be due to the small sample size. Nurses may suppress their anger due to fear of dismissal and inadequate support.

5.1. Conclusions

Officials should strive to strengthen the nursing team by providing conditions for nurses to engage in various social situations and developing social trust and anger management skills.

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Footnotes

Authors' Contribution: M. P. and A. A. H.: Writing the manuscript; T. A.: Data gathering; S. A. M.: Data analysis.

Conflict of Interests: The authors declare no conflict of interest.

Data Availability: The data presented in the study is available on request from the corresponding author during submission or after publication.

Ethical Approval: This study was approved by the Ethics Committee of Shoushtar Faculty of Medical Sciences (IR.SHOUSHTAR.REC.1400.004).

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Informed Consent: In this online questionnaire, to maintain the confidentiality of the information, there was no option for participants to enter their names and surnames. Additionally, the phone number of the researchers was included in the questionnaire so that participants could contact the researcher if needed, and the results of the study were provided to them upon request.

References

- Rothan HA, Byrareddy SN. The epidemiology and pathogenesis of coronavirus disease (COVID-19) outbreak. *J Autoimmun.* 2020;**109**:102433. [PubMed ID: 32113704]. [PubMed Central ID: PMC7127067]. <https://doi.org/10.1016/j.jaut.2020.102433>.
- Mascha EJ, Schober P, Schefold JC, Stueber F, Luedi MM. Staffing With Disease-Based Epidemiologic Indices May Reduce Shortage of Intensive Care Unit Staff During the COVID-19 Pandemic. *Anesth Analg.* 2020;**131**(1):24-30. [PubMed ID: 32343514]. [PubMed Central ID: PMC7173088]. <https://doi.org/10.1213/ANE.0000000000004849>.
- Zhu Z, Xu S, Wang H, Liu Z, Wu J, Li G, et al. COVID-19 in Wuhan: Immediate Psychological Impact on 5062 Health Workers. *medRxiv.* 2020;**Preprint**. <https://doi.org/10.1101/2020.02.20.20025338>.
- Putnam RD. The Prosperous Community: Social Capital and Public Life. *Am Prospect.* 1993;**4**(13).
- Lee KDM. *The Effects of Interpersonal Emotion Regulation During Conflict on Partner-Directed State Aggression [dissertation]*. Durham, NH, United States: The University of New Hampshire; 2020.
- Rjabi Gilan N, Ghaeemi SR, Reshadat S, Rajabi Gilan S. [The Relationship between Social Capital and Health-Related Quality of Life among Teachers]. *J Adv Med Biomed Res.* 2013;**21**(88):95-107. Persian.
- Alipour A, Ghadami A, Alipour Z, Abdollahzadeh H. [Preliminary validation of the Corona Disease Anxiety Scale (CDAS) in the Iranian sample]. *Health Psychol.* 2020;**8**(32):163-75. Persian. <https://doi.org/10.30473/hpj.2020.52023.4756>.
- Zahedi Rad Z, Rezakhani S, Vakili P. [The Effectiveness of Mindfulness-Based Stress Reduction on Depression and Aggression in Nurses of Psychiatric Hospital]. *J Nurs Educ.* 2021;**9**(5):122-32. Persian.
- Rezaei Nasab Z, Fotuhi S. [A Study on Gender Differences of Social Capital among Social Sciences Students of Tehran Kharazmi University]. *Women's Stud Sociol Psychol.* 2015;**13**(1):33-62. Persian. <https://doi.org/10.22051/jwsp.2015.1913>.
- Jafari M, Pourtaieb A, Khodayari-Zarnaq R. The impact of social capital on clinical risk management in nursing: a survey in Iranian public educational hospitals. *Nurs Open.* 2018;**5**(3):285-91. [PubMed ID: 30062021]. [PubMed Central ID: PMC6056430]. <https://doi.org/10.1002/nop.2141>.
- Haghbin M, Abbasi A, Rafei E, Kheradmand A, Javdani F, Hatami N, et al. [Anxiety caused by new coronavirus (Covid-19) in breast cancer patients during the coronavirus pandemic]. *Iran J Obstet Gynecol Infertil.* 2020;**23**(8):8-17. Persian. <https://doi.org/10.22038/ijogi.2020.17286>.
- Chang J, Ma W, Wang SM, Yi XR, Wang SK, Sun XJ. [Relationship of social capital with anxiety and depression in urban elderly population in China]. *Chin Ment Health J.* 2017;**31**(4):301-6. Chinese.
- Alcorta L, Smits J, Swedlund HJ, de Jong E. The 'Dark Side' of Social Capital: A Cross-National Examination of the Relationship Between Social Capital and Violence in Africa. *Soc Indic Res.* 2020;**149**(2):445-65. <https://doi.org/10.1007/s11205-019-02264-z>.