Clinical competency and psychological empowerment among ICU nurses caring for COVID-19 patients: A cross-sectional survey study

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Abstract
Aim: This study aimed to determine clinical competency and psychological empowerment among ICU nurses caring for COVID-19 patients.

Background: Nurses need clinical competency (skills pertaining to knowledge, reasoning, emotions and communication) and psychological empowerment (regard for one’s organisational role and efforts) to deliver quality care.

Methods: This cross-sectional study was conducted with 207 nurses working in ICUs in Iran. A clinical competency survey instrument consisting of basic demographic questions and the Spreitzer psychological empowerment questionnaire was completed online. Descriptive and inferential statistics were used to analyse the data in SPSS software version 13 to address the primary research question.

Results: There was a significant positive relationship between clinical competency and psychological empowerment ($r = .55$, $p < .001$). Clinical competency had a significant positive relationship with work experiences ($r = .17$, $p = .01$).

Conclusion: Clinical competency has been tied to nurse health and quality of care. Given the significant positive relationship between clinical competency and psychological empowerment, attention must be given to ways to psychologically empower nurses.

Implications for Nursing Management: Nursing managers can consider the promotion of psychological empowerment related to its significant positive relationship to clinical competency. Psychological empowerment can be bolstered through the promotion of servant leadership, organisational justice and empowering leadership practices.
1 | BACKGROUND

The COVID-19 pandemic is a disaster and an international concern necessitating a concerted global effort to mitigate disease transmission (Huynh et al., 2020; Khan et al., 2020). In Iran, the latest mortality rate of SARS-CoV-2 virus is 93,086 among 4,092,671 of COVID-19 confirmed cases (Worldometer, n.d.). Of all health care providers, nurses spend the most time providing direct patient care and are at the forefront of battling pandemics and other health care crises (al Thobaity & Alshammari, 2020; Butler et al., 2018). The demand of the nursing role has been compounded by COVID-19, which has escalated the need for patient triage, management of complicated comorbidities and the delivery of supportive and complex clinical care (Xie et al., 2020). Due to the rapidly evolving and increasing needs of patients and their families, the responsibilities of nurses have been ever-increasing in volume and complexity (Levi & Moss, 2022). Nurses in intensive care units (ICUs) work in more challenging and complex conditions during the pandemic and had to deal with anxiety, fear and other emotional states due to witnessing patients’ suffering and death (Alan et al., 2020). Related studies reported high levels of stress, anxiety and depression among health care workers during the COVID-19 pandemic (Alan et al., 2020; Butler et al., 2018).

The provision of quality care has long been a priority of nurses and patients alike (Aiken et al., 2018). Professional competence is crucial in providing quality health care services. Konrad et al. (2021) competence refers to the actual performance of a person in a specific role, in a given situation. It is defined as a combination of the knowledge, skills, abilities and behaviour needed to carry out a job or special task (Fukada, 2018). Many efforts have been made to prepare health care providers in response to disasters, but studies indicate that these actions have not been very effective (Alan et al., 2020). Nurses ‘clinical competencies during emergencies demonstrate nurses’ ability to provide a comprehensive and rapid response to an unexpected illness based on their knowledge, skills and experience, and this can significantly prevent and control illness affect emergency infection (Li et al., 2021).

To assuage undue stress and optimize the provision of patient care, nurses must be trained and supported in the areas of crisis management, triage, infection prevention and control, effective communication, psychological support and palliative care (Borasio et al., 2020; Corless et al., 2018). Although COVID-19 has necessitated that nurses require ample clinical skills and psychological preparedness to deliver quality care, many new nurses have not yet had the opportunity to develop expertise in these noted areas (al Baalharith & Pappiya, 2021; Karnjuš et al., 2021).

Health care systems invest significant resources to optimize nursing performance in the workplace for the betterment of patient care (Schoenfelder et al., 2020). One tool that has been noted to bolster nursing care quality, as well as job satisfaction, is psychological empowerment, which is defined as the attitude that one has regarding their role and efforts within an organisation (Li et al., 2018). Psychological empowerment has been described as involving the four cognitive domains of meaning, self-determination, competence and perceived impact (Ghasemi Hamzehkola & Naderi, 2019; Spreitzer, 1995). Prior studies have shown psychological empowerment as a relevant consideration for nurses with correlations to job satisfaction and work performance (Ebrahimi et al., 2013; Ghasemi Hamzehkola & Naderi, 2019; Kuo et al., 2021; Li et al., 2018; Mirkamli & Nastiezaie, 2010; Oducado, 2019; Zahednezhad et al., 2015).

Nurses experience substantial psychological stress during their routine work which is exacerbated during crises, such as the COVID-19 pandemic. At this time, strengthening the nurse capacity to respond to psychological needs is of paramount importance (Buheji & Buhaid, 2020). This study aimed to determine clinical competency and psychological empowerment and their related factors among ICU Nurses Caring for COVID-19 patients hospitalized in the ICUs affiliated with Tabriz University of Medical Sciences.

2 | METHODS

2.1 | Study design and sampling

In a cross-sectional survey study, researchers obtained data from February 2021 through April 2021 in Tabriz, Iran. Tabriz is one of the largest metropolitan cities located in the northwestern part of Iran. There are two referral general hospitals for Covid-19 patients in Tabriz, namely, Imam Reza and Sina. The list of nurses of ICUs of these two hospitals (N = 255) was obtained from the overseeing nursing managers, and all of them were included in our study based on inclusion and exclusion criteria. The inclusion criteria included being directly involved in the care of COVID-19 patients hospitalized in ICU wards and having at least 6 months of work experience in ICU wards. Nurses who met the inclusion criteria (n = 250) were advised of their eligibility and subsequently sent the study survey via WhatsApp or Instagram. Of the 250 questionnaires sent out, 207 nurses responded.

2.2 | Measurement instrument

Data were collected using a three-part survey of demographic information, a researcher-made questionnaire of clinical competency based on a literature review (Sharma et al., 2020; Yousefi et al., 2021) and a psychological empowerment questionnaire (Spreitzer, 1995). The
The demographic portion of the survey contained questions regarding age, gender, marital status, shift work and work experiences (Table 1). The clinical competency portion of the survey contained 43 items regarding clinical skills features, which were grouped into six dimensions: (a) general recognition of COVID-19 infection skills (five items), (b) clinical care of patient with COVID-19 skills (20 items), (c) infection prevention and control skills (seven items), (d) self-care skills (three items), (e) decision-making skills (two items) and (f) educational skills (six items). All questions pertaining to clinical competency involved a 5-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree), with higher scores indicating a higher degree of clinical skills.

The face and content validity of the questionnaires was confirmed by quantitative and qualitative methods. The questionnaires were provided to 10 professors of Tabriz University of Medical Sciences and modified according to their feedback. Also, to determine the quantitative content validity, content validity ratio (CVR) and content validity index (CVI) were used. According to the Lawshe table, if 10 experts rate the items as essential, a CVR above 0.62 and CVI above 0.79 would be considered acceptable (Ayre & Scally, 2014). The CVR rating was 0.85, and the CVI was 0.91. To investigate the questionnaire’s reliability, Cronbach’s alpha coefficient was calculated, which was .85.

The psychological empowerment scale was designed in 1998 by Spreitzer. The scale contains the five dimensions of (a) meaningfulness (or meaning); (b) skills; (c) self-determination (or selection); (d) impact and (e) confidence, which each contains three items. All items use a 5-point Likert scale from 1 (very strongly disagree) to 5 (very strongly agree), with a higher score indicating a higher degree of psychological empowerment. Score ranges from 15 to 75. The validity and reliability of the psychological empowerment scale have been determined and demonstrated in previous studies, including those involving nursing populations (Spreitzer, 1995; Zahednezhad et al., 2015).

### 2.3 Data analysis

Collected data were analysed by SPSS 13 software using descriptive statistics (mean, standard deviation, frequency and frequency percentage) and analytic statistics (t test, Pearson correlation coefficient test and analysis of variance [ANOVA]). Data were considered statistically significant if the p value for a particular statistical test was <0.05.

| Variable          | n (%) | Clinical competency | p value | Psychological empowerment |
|-------------------|-------|----------------------|---------|---------------------------|
|                   |       | Mean (SD)            |         |                           |
|                   |       |                      | p value |                           |
| Gender            |       |                      |         |                           |
| Male              | 60 (29)| 194.95 (19.08)       | .159    | df = 205                  |
|                   |       |                      | .87     |                           |
| Female            | 147 (71)| 194.50 (18.08)      |         |                           |
| Marital status    |       |                      |         |                           |
| Single            | 100 (48.3)| 194.75 (17.62)    | .89     | df = 205                  |
|                   |       |                      | .92     |                           |
| Married           | 107 (51.7)| 194.52 (19.04)    |         |                           |
| Work shift        |       |                      |         |                           |
| Fixed             | 25 (12.1)| 194.48 (18.84)     | -.04    | df = 205                  |
|                   |       |                      | .96     |                           |
| Circulating       | 182 (87.9)| 194.98 (18.31)    |         |                           |
| Education level   |       |                      |         |                           |
| BS                | 189 (91.3)| 195.28 (17.35)     | 2.41    | df = 2.204                |
|                   |       |                      | .09     |                           |
| MS                | 17 (8.2) | 186.29 (26.19)      | .55     | df = 2.204                |
| PhD               | 1 (.5) | 213.00               |         |                           |
| Age (years)       | 31.28 (6.34)| r = .186         | .123    | p = .07                   |
| Work experience (years) | 7 (5.75) | r = .17           | .137    | p = .49                   |
3 | RESULTS

The study sample consisted of 207 nurses with a mean age of 31.28 years (SD = 6.34). Of the nurse respondents, 71% were female (n = 147), and 91.30% (n = 189) had a Bachelor of Science degree. The mean work experience of nurses was 7 years (SD = 5.75) (Table 1).

The nurses’ clinical competency ranged from 43–215, with a mean of 194.63 (SD = 18.33). Because of different number of statements in each dimension (as presented in methods part), we reported the mean of each dimension based on Likert point (score ranges: 1–5). The nurses ranked highest in skills pertaining to general recognition of COVID-19 infection and lowest in decision-making skills (Table 2).

The nurses’ psychological empowerment scores ranged from 15–75, with a mean of 54.97 (SD = 9.03). The highest psychological empowerment scores were noted to be in the realm of confidence, defined as belief that one holds regarding their own abilities (Hu & Hirsh, 2017). Conversely, the nurses’ lowest scores pertained to the domain of meaningfulness (Table 2).

Data analysis with t tests and ANOVA showed no statistically significant relationships between the demographic variables of gender, academic degree, marital status or work shift with clinical competency or psychological empowerment (Table 1). Statistically significant positive relationships were found between clinical competency and work experience, \( r = .17, p = .01 \) (Table 1) and between clinical competency and psychological empowerment, \( r = .55, p < .001 \) (Table 3). Additionally, there was a statistically significant positive relationship between psychological empowerment and age \( r = .12, p = .08 \), and clinical competency and age, \( r = .19, p = .07 \) (Table 1).

4 | DISCUSSION

This study aimed to determine clinical competency and psychological empowerment and their association among ICU Nurses caring for COVID-19 patients. The current study revealed that the nurses had clinical competency at above average level and the highest level of proficiency for the clinical skill of general recognition of COVID-19 and the least proficiency with decision-making skills. This is coherent with other recent studies (Chen et al., 2021; Faraji et al., 2019; Imani et al., 2018; Ramezan Tabriz et al., 2017). However, there are some contrasting studies, which may be attributable to varied work wards of the participants, data collection tools or current working conditions related to COVID-19 (Mirlashari et al., 2016; Ramelet et al., 2022; Simkoi et al., 2019).

The mean of psychological empowerment was relatively high in the present study (Mean [SD] = 54.97 [9.03], score range: 15–75). On average, nurses’ psychological empowerment was demonstrated most strongly in the dimension of confidence or the level of belief that one holds regarding their own abilities (Hu & Hirsh, 2017). Conversely, on average, nurses’ lowest level of psychological empowerment pertained to the dimension of meaningfulness, understood as the experience of work value formed from an individual’s subjective judgement of the work’s personal and social significance. The nurse participants’ low level of meaningfulness in our study demonstrates a negative sense of purpose and value (Hu & Hirsh, 2017). Previous studies have shown some variance among participant populations in the realm of psychological empowerment scoring, with some groups rating high in the areas of trust and meaningfulness and low in the areas of skills

| TABLE 2 | The mean (SD) of the scores of the clinical competency and psychological empowerment dimensions among nurses (n = 207) |
| --- | --- | --- |
| Clinical competency Dimensions | Mean (SD) | Psychological empowerment dimensions | Mean (SD) |
| General recognition of COVID-19 infection competence | 4.57 (.47) | Meaningfulness | 2.93 (.49) |
| Clinical Care of Patient with COVID-19 competence | 4.55 (.46) | Competence | 2.95 (.44) |
| Infection prevention and control competence | 4.51 (.53) | Self-determination | 3.96 (.91) |
| Self-care competence | 4.46 (.63) | Impact | 4.13 (.85) |
| Decision-making competence | 4.35 (.64) | Confidence | 4.23 (.86) |
| Education competence | 4.51 (.56) | | |

| TABLE 3 | Mean (SD) of clinical competency and psychological empowerment with correlation (n = 207) |
| --- | --- | --- |
| Variable | Mean (SD) | Range | Correlation |
| Clinical competency | 194.63 (18.33) | 43–215 | \( r = .550, p < .001 \) |
| Psychological empowerment | 54.97 (9.03) | 15–75 | |
and confidence (Mirkamli & Nastiezaie, 2010; Shokrpour et al., 2021). This contrasts with the current study, which demonstrated that nurse participants scored highest in the area of confidence while being least empowered in the realm of meaningfulness. It is plausible that the variance across participant groups could be potentially related to the diversity of sampled settings, work environments and leadership styles (Qing et al., 2020).

Additionally, the results of the present study demonstrated a significant positive relationship between clinical competency and psychological empowerment. This is coherent with other work that has demonstrated a relationship between the job performance of nurses with psychological empowerment and community health nursing competency with psychological and organisational empowerment of public health nurses (Kuo et al., 2021; Maynard et al., 2014). Therefore, professional preparedness and psychological empowerment should be included in disaster preparedness planning. Given the unique circumstances that nurses currently face in the era of COVID-19, providing expanded skills training in areas such as triage, crisis management, effective communication, psychological support and palliative care is strongly indicated (Borasio et al., 2020; Corless et al., 2018). The augmentation of existing skill sets may be a key element for bolstering psychological empowerment, which in turn can optimize overall job satisfaction and the quality of patient care (Li et al., 2018). Although the mean of clinical competency at the PhD level was higher than the BS and MS degrees, no significant difference was observed, which may be due to the limited sample size.

There was a significant positive relationship between clinical competency and work experiences. To expand and enhance work experiences, retention of the current nursing workforce is imperative. The issue of how to best retain nurses is one of complexity; however, relevant approaches that have been described include strong working relationships, scheduling flexibility, adequate and fair compensation, elimination of mandatory overtime and increased nurse autonomy (Dall’Ora et al., 2020; Hopson et al., 2018).

This study had some limitations. The study was done in participation with only two ICUs in Iran, which may not be representative of all ICU nurse populations. Furthermore, this was a cross-sectional study, which produced correlational data that do not support cause and effect conclusions. Additionally, there was a lack of a comprehensive and standardized questionnaire to assess the clinical competency among ICU nurses caring for patients with COVID-19. As a result, it was necessary to create an instrument that was evaluated by subject matter experts for face and content validity. This instrument may be tested further in future studies in order to establish reliability.

5 | CONCLUSION

The COVID-19 pandemic has served to illuminate the ever-present and growing needs of nurses. Although the nurses sampled for this present study demonstrated good levels of clinical competency, it was discovered that they hold only moderate levels of psychological empowerment in conjunction with low levels of experienced work meaningfulness. Given the integral role of psychological skills in the health of nurses and the quality of nursing care, it is time for organisations to direct attention to cultivating work environments that promote nurse empowerment and autonomy.

6 | IMPLICATIONS FOR NURSING MANAGEMENT

Psychological empowerment has been described as a key factor in improving nursing care quality, patient safety and job satisfaction (Li et al., 2018). Strategies to bolster psychological empowerment include servant leadership, organisational justice and empowering leadership practices (Alotaibi et al., 2020; Khan et al., 2021; Zahednezhad et al., 2015). Servant leaders view themselves as organisation stewards who prioritize the growth and well-being of those they are leading. Furthermore, servant leaders place greater emphasis on sustainable well-being and performance over growth and profit (Eva et al., 2019). Organisational justice can be promoted through consistent, equitable practices applied throughout health systems, which in turn supports employee engagement and commitment (Imamoglu et al., 2019). Pertinent empowering leadership practices for nursing managers to consider include the provision of decision-making autonomy paired with a consistent pursuit of insights and knowledge from nurses’ work experiences (Alotaibi et al., 2020). This can be further augmented through the fostering of strong working relationships, scheduling flexibility, adequate and fair compensation and elimination of mandatory overtime (Dall’Ora et al., 2020; Hopson et al., 2018).

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CONFLICT OF INTEREST

We have no conflict of interest to disclose.

ETHICS STATEMENT

The study was recorded under the code (IR.TBZMED.REC.1399.949) at the ethics committee of the Tabriz University of Medical Sciences. The researcher obtained informed consent from the participants and participating subjects in the study by sending a completed questionnaire via social networks, introducing the research, explaining the research objectives, describing voluntary participation in research and ensuring the confidentiality of information.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.
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