

The relationship between the quality of working life and critical thinking of nurses in Milad Hospital of Isfahan, Iran

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Abstract

Background: The quality of working life depends on the working conditions of the staff, and the decline in the quality of nurses' working life leads to a decline in the delivery of clinical services.

Objectives: The purpose of this study was to determine the relationship between qualities of working life and critical thinking in nurses.

Methods: The present study is descriptive-correlational that was conducted on 123 nurses working in Milad Hospital in Isfahan. The data collection tools included demographic information questionnaire, Nursing Critical Thinking in Clinical Practice Questionnaire, and Quality of Nursing Work Life Scale. Data collection was carried out during December, 2018. The data were analyzed in SPSS software version 23 using descriptive statistics including mean, standard deviation, and frequency as well as analytical statistics including Pearson correlation coefficient.

Results: According to the results, a majority of the participants in the present study were females (52%). The score of nurses' critical thinking was found to be 319.76. The total average of nurses' quality of working life was reported as 138.70. Based on these results, there was no significant relationship between quality of working life and critical thinking in nurses.

Conclusion: The results of this study indicated that the critical thinking of nurses is good, and the quality of working life is moderate. There was also no relationship between critical thinking and quality of working life.

Keywords: *critical thinking, nurse, quality of working life*

Introduction

The quality of working life of the employees is one of the most important issues in many organizations such as health organizations [1]. The concept of life quality in organizations is related to dignity, trust, getting involved with organizational issues, and problem solving abilities of the employees, and as a result, satisfaction and efficacy of the organization [2,3]. The results of previous studies show that the quality of working life is related to employees' working situation, job satisfaction, and personal life [4]. The quality of working life in healthcare systems not only affects employees' satisfaction,

but also is one of the important factors in the stability of the health system [5]. Therefore, in the health organizations where the nurses are the largest population of the employees, the managers should take the variables of the quality of working life into consideration to create a more flexible working environment and meet the needs of personnel, and guarantee a continuous growth and advanced performance [6,7]. The quality of working life means the ability of nurses to meet their essential needs via doing their responsibilities, which eventually leads to achieving organizational goals. Understanding and promoting the quality of working life of the

nurses is an important factor in achieving a high quality patient care [1].

Available evidences revealed that one of the main factors that may have a significant effect on quality of working life is critical thinking [8]. Critical thinking is a process of thinking to provide care for patients directly or indirectly and independently or participatory based on clinical judgments [9]. Today, the gap between theory and action among medical sciences such as nursing is a major problem. Indeed, despite the fact that nurses pass many theoretical courses, they do not have the ability to use their knowledge [10]. Therefore, one of the main goals of nursing is to train nurses who can use their knowledge to provide proper services to patients, healthy individuals in the society, and different treatment centers. An important aspect that the nurses need to pay special attention is critical thinking [11].

Critical thinking has been defined as one of the essential and important parts of nursing training and clinical performances as it is one of the most important factors in making professional decisions [12]. According to the responsibility, extent of scope, and the necessity for proper and sensitive decisions, nurses need to gain knowledge and ability, judge in sensitive situations, make decisions to save lives, and think in critical situations [13,14]. The nursing process together with critical thinking has become a flexible tool and guarantees high quality care along with contemporary philosophy of holistic nursing [15]. In other words, high quality nursing care needs critical thinking [16]. Since critical thinking is crucial in increasing care quality and patients' health, nurses' critical thinking and its relationship with the quality of working life needs to be assessed [17].

The available databases show no similar study assessing critical thinking via specialized questionnaire in nurses and its relationship with quality of working life in Iran. Thus, the present study was conducted to assess the relationship between critical thinking and the quality of working life in nurses.

Methods

Study design

This cross-sectional study was conducted in 2018. The sample included all the nurses working in Milad hospital (Isfahan, Iran). The required

sample size was calculated based on error level $\alpha=0.05$, test power 8% ($\beta=0.2$), and the minimum correlation coefficient in a relationship significance of 0.25 in the hypothesis test $\rho=0$ vs. $\rho \neq 0$.

The participants voluntarily took part in the study and had B.S. or higher degrees and at least 1 year of working experience. In next step, 123 nurses were included as our sample via simple random sampling method.

Data collection tools in the present study were the questionnaires of demographic data, critical thinking of the nurses in the clinical environment and their quality of working life. The demographic questionnaire included variables about age, sex, marital status, working experience, place of employment, and level of education.

The Nursing Critical Thinking in Clinical Practice Questionnaire designed by Zuriguel Pérez et al. (2017) includes 109 questions in four dimensions: personal (39 items), intellectual and cognitive (44 items), interpersonal and self-management (20 items), and technical (6 items). Each item is classified on a Likert-type response scale of 4 points, ranging from 1=never or almost never, to 4=always or almost always. The overall score is the sum of the values obtained, and scores may also be obtained for each dimension. The total score ranges from 109 to 436. The scores were categorized into 4 levels: 109-190.75 (weak), 190.75-272.5 (moderate) 272.5-354.25 (good), and 354.25-436 (well) of critical thinking. The content and face validity of this tool was confirmed by the developer of the scale, and its reliability was found to be 0.96 using Cronbach's alpha in American nurses [18]. This questionnaire was translated to Persian and was confirmed by experts via back translation. The content validity of the tool was assessed and confirmed by 15 nursing professors from the nursing and midwifery faculty of Islamic Azad University of Isfahan (Khorasgan), and in this study, its reliability was assessed and confirmed using Cronbach's alpha ($\alpha=0.672$).

The quality of life of the nurses was assessed through the Persian version of Quality of Nursing Work Life Scale that was created by Brooks and Anderson [19]. The scale consists of 42 items and has four subscales (Home/Work Life [15 items], Work Organization/Design [12 items], Work Conditions/Contention [10 items], and Work

World [5 items]). Each item in the original scale is scored in 6-point Likert scale ranging from “completely disagree (1 point)” to “completely agree (6 point)”. The minimum total score is 42, and the maximum is 252. The scores between 42-94.5, 94.5-147, 147-199.5, and 199.5-252 show weak, moderate, good, and well levels of critical thinking, respectively. The designers reported the Cronbach’s alpha values for all areas of the questionnaire to be between 0.56 and 0.60, which shows a high internal consistency of the questionnaire [19]. Khani et al. reported the Cronbach’s alpha of all the variables of the questionnaire to be between .075 and 0.90 with a mean of 0.93 [20].

After getting permission from the vice chancellor of the research of Islamic Azad University of Isfahan (Khorasgan) and the authorities of Milad hospital, we asked the nurses to participate in the study. First, the goals and methods of the study were explained to those who tended to participate, and then a written agreement was taken from them. Finally, they were asked to fill out the questionnaire under the supervision of the researcher.

The present article is an M.S. dissertation confirmed by the vice chancellor of the research

of Islamic Azad University of Isfahan (Khorasgan) with the code of ethics IR.LAU.KHUISFT.REC.1396.200.

The participants provided written informed consent after receiving information about the study objectives, the confidential nature of all surveys, anonymity, and voluntary participation and withdrawal.

The data were analyzed using SPSS 23. Their normality was assessed and confirmed using Kolmogorov-Smirnov test. A descriptive analysis of the quantitative and qualitative variables was done using mean (standard deviation) and numbers (percentage), respectively. Linear regression was used to assess the relationship between the critical thinking and the quality of working life. The significance level was considered to be $p < 0.05$ in the present study.

Results

A majority of the participants were female (52%) and married (69.9%) and had Bachelor of Nursing (81.3%). The mean age of the nurses was 36.47 ± 6.01 . The demographic characteristics of the sample are shown in Table 1.

Table 1: Demographic characteristics of the participants

Variables	Group	Number (percent)
Sex	Female	64 (52)
	Male	59 (48)
Educational level	B.S.	100 (81.3)
	M.S.	21 (17.1)
	Ph.D.	2 (1.6)
Marital status	Single	32 (26)
	Married	86 (69.9)
	Divorced	4 (3.3)
	Widowed	1 (0.8)
Place of employment	Inpatient units	62 (50.4)
	ER	24 (19.5)
	ICU	26 (21.1)
	OR	11 (9)
Variables	Mean (SD)	
Work experience	11.64 (5.35)	
Age	36.48 (6.01)	

According to Table 2, the mean score of critical thinking of the nurses was 319.76. Mental and cognitive dimension had the highest mean score

(129.91), and technical dimension had the lowest mean score (21.89).

Table 2: The mean scores of critical thinking and its dimensions in the nurses

Variable	Minimum	Maximum	Mean	SD
Personal	94	139	114.44	8.91
Intellectual and cognitive	106	146	129.91	8.26
Interpersonal and self-management	41	67	53.512	5.28
Technical	15	28	21.89	2.92
Total score of critical thinking	282	362	319.76	15.56

Table 3 shows that the mean of the nurses' quality of working life was 138.70. Working area had the

highest mean score (67.91), while working world had the least mean score (12.06)

Table 3: Mean scores of quality of working life and its dimensions in the nurses

Variable	Minimum	Maximum	Mean	SD
Home/Work Life	10	36	21.34	4.97
Work Organization/Design	27	43	36.83	2.91
Work Conditions/Contention	42	101	67.91	2.41
Work World	6	23	12.60	2.41
Total score of quality of working life	107	176	138.70	10.28

Table 4 reveals that most of participants in the present study had a moderate level of quality of

working life (86.2%) and a good level of critical thinking (98.4%).

Table 4: Categorized levels of quality of working life and critical thinking scores in nurses

Variables	Levels	n (%)
Quality of working life	Weak	0
	Moderate	106 (86.2)
	Good	17 (13.8)
Critical thinking	Well	0
	Weak	0
	Moderate	0
	Good	121 (98.4)
	Well	2 (1.6)

As shown in Table 5, the correlation coefficient between the quality of working life and critical

thinking of the nurses is not significant ($P>0.05$).

Table 5: Pearson correlation coefficient between the quality of working life and critical thinking of nurses

Variable	Critical thinking	Quality of life	Significance level
Critical thinking	1.00	-0.038	
Quality of working life	0.038	1.00	0.680

Discussion

The results of this study showed no significant relationship between critical thinking and the

quality of working life of the nurses. Critical thinking is beyond the ability of problem solving, gives a philosophical direction to the thinking

process, and is a cognitive process revealed by reflective thinking and reasoning [21]. Critical thinking increases the proper output using cognitive solutions and abilities. It can help us in making decisions, reasoning, and assessing the resources; therefore, it affects the quality of working life [8]. No study was conducted to assess the relationship between these two variables in nurses, and any idea about their relationship was merely a hypothesis.

The other main finding of the present study showed that the mean quality of working life of the participants was moderate. Some studies regarding the quality of working life of the nurses were previously conducted in Tehran [22], Kerman [23, 24], Birjand [25], Urmia [26], Gorgan [27], and Isfahan [28], all of which reported the quality of working life of the nurses to be ranging from weak to moderate. In a study by Bani Davoodi et al. (2013), it was found that the quality of working life of the nurses in one of the hospitals of Ahvaz was moderate [29]. Navidian et al. (2014) found a moderate quality of working life in the nurses [23]. These reports are in line with our findings. Drucker believes that human resource management system has many dimensions including tangible and emotional intangibles dimensions in society and any organization, which makes the identification of these dimensions more difficult. The maintenance factors of the personnel are mostly related to wellbeing, health, physical education, insurance, and therapeutic services. In addition, mood enhancers and human dignity preservers of the personnel are generally mental and spiritual and are related to value and belief [30]. Dargahi et al. (2007) concluded that observing the safety principals, occupational and environmental health plans in the hospitals, income increase, and occupational wellbeing play a positive role in increasing their quality of working life [22].

According to the results of the present study, the critical thinking of the participants was good. In recent years, clinical environments in nursing have changed a lot. Increases in population age, cultural-social differences, chronic diseases, and the need for patient-oriented care and evidence-based performance as well as the decreases in financial resources, technology changes, and emphasis on home health and care development have made the health environments more

complicated [9]. In such environments, providing patients with safe and effective care based on standard criteria is only achievable via improving the critical thinking of the nurses [31]. Critical thinking leads into positive outcomes in patients since it improves evidence-based performances. In a study by Chung et al. (2011) performed to determine the relationship between the critical thinking and qualification of the clinical nurses, it was reported that the critical thinking of the nurses ranged from moderate to high. The highest score was related to the interpretation ability, and the least score was related to documentation ability [32]. Madadkhani et al. (2015) also reported the moderate critical thinking of the female nurses working in hospitals of Qazvin [33]. However, Akhoundzadeh et al. (2011) reported that the critical thinking of the nurses is low, which is not in line with the results of the present study [21]. The researchers in the present study used a specialized tool to assess the critical thinking of the nurses as it could lead to more reliable and different results.

The importance of critical thinking based on new methods and techniques and the innovative thinking and problem solving are highlighted in the syllabus of B.S. of nursing in Iran. However, it is neglected in practice [34]. Therefore, identifying the factors that prevent critical thinking and assessing its reasons are crucial.

The results of this study showed no significant relationship between critical thinking and the quality of working life of the nurses. Critical thinking is beyond the ability of problem solving, gives a philosophical direction to the thinking process, and is a cognitive process revealed by reflective thinking and reasoning [21]. Critical thinking increases the proper output using cognitive solutions and abilities. It can help us in making decisions, reasoning, and assessing the resources; therefore, it affects the quality of working life [8]. No study was conducted to assess the relationship between these two variables in nurses, and any idea about their relationship was merely a hypothesis.

One of the limitations of the present study is that too many questions in the critical thinking questionnaire may lead to boredom of the participants and thus decrease accuracy of the results. The question about the quality of working life itself can also be a bias factor as some

experienced nurses may report it to be low, and inexperienced training nurses may report it to be high (for example due to the fear of getting fired). These limitations are the probable reasons for a non-significant relationship between critical thinking and quality of working life of the nurses in the present study. Therefore, based on these limitations, it is suggested that the future studies be conducted with larger samples and cover a province area. Randomized clinical studies around the effects of critical thinking training on quality of working life of nurses are suggested to obtain more reliable results and reveal cause-effect relationships. Regarding the critical thinking questionnaire, it would be better to use the revised versions containing fewer questions. Hence, developmental and psychometric studies are suggested to shorten this questionnaire.

According to the results of the present study, the critical thinking and quality of working life of the nurses were good and moderate, respectively. Besides, there was no relationship between these two variables. Future researchers are suggested to adopt appropriate plans in the health centers to improve these two variables. In fact, more studies are required in this area.

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Conflict of interest

There are no conflicts of interest to be declared.

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