

# Professionalism of Healthcare Jobs in the War

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## Abstract

**Background:** Professionalism is an important characteristic of professional jobs including nursing and medicine. Many professional values during the crisis are glaring.

**Objectives:** This study was conducted to explain the role of the Iran-Iraq war in the professionalism of healthcare disciplines based on the documented experiences of medical staff.

**Methods:** This is part of a qualitative study which used the conventional content analysis in 2014 - 2016. The researcher collected and analyzed 119 memories of the healthcare providers about the Iran-Iraq war, simultaneously.

**Results:** Professionalism was one of the main categories emerged from the analysis of data. This theme included six sub-themes, "promotion of personal and professional empowerment", "compliance with laws and regulations", "holistic care", "expression of good traits", "interpersonal relationships", and "sublimation of spirit".

**Conclusions:** Experiences of healthcare providers in the war can be applied in peacetime and future crisis through broadening their perception of nursing and medicine professions and improving their sense of professionalism.

**Keywords:** Content Analysis, Healthcare, Nursing, Medicine, Professionalism, Qualitative Research, War

## 1. Background

Professionalism is an important characteristic of in-service careers. Professionalization is a multi-dimensional concept and, depending on times, contexts and disciplines has variable meaning (1). Today, development of education standards and professional certificates has led professional jobs such as nursing and medicine to move to professional status. Nurses, physicians, and other healthcare professionals provide medical assistance and humanitarian aids in conflicts, owing to their specialized knowledge and skills and their expected duty to society (2,3). Evidence has pointed to different nature of care in war (2). Studies found that wartime nursing is an integral part of the history of professional nursing, and greatest advances in the organization and professionalization of nursing have taken place during wartime (4). Very little has been written about the professionalization of healthcare disciplines in the wartime despite the importance of these historical times.

The Iran-Iraq war began in September 1980 and ended in August 1988 (4). During the war, Iranian healthcare staff, as well as combatants, experienced many difficulties and their efforts are not secret for anyone. Medical staff tried to treat the wounded during the war and they were not safe from war injuries. It has been reported that more than 4,000 Iranian doctors, nurses, paramedics, and rescue workers were killed in the war (5). Care in the time

of crisis is an indisputable fact. Being in the condition of war may happen to anyone, including care providers. Medical staff, especially doctors and nurses who have returned from war, have valuable insights for current and future society. This unique experience cannot be acquired in any situation other than war. These experiences can be transferred to the managers and medical staff to be used to deal with potential crises such as future wars. Only little has been documented about the healthcare providers' experiences in the Iran-Iraq war (2, 4, 6, 7). Some studies found that caring experience during the war had some benefits for healthcare providers. For example, Rahimghaee et al. pointed out to the professional self-achievements in nurses during the Iran-Iraq war. They experienced improvement in their clinical and professional character as a result of providing care during the wartime (2). Some studies mentioned stressful experiences including being overwhelmed by the volume of casualties, the severity of injuries and youth patients, couples with clinical inexperience, sleep deprivation, and austere living conditions in other wars (8). But none of these studies have focused on the concept of professionalism in the healthcare disciplines.

Although the fighting, suffering, and dying occurred in the Iran-Iraq war, the experiences of healthcare providers who served in that time can provide important guidance for today's professionals. In fact, one may merely look at

recent history of various countries to understand that caring in the war is a global reality today. Thus, the researcher in this study tried to transform the tacit knowledge and experience of healthcare providers to explicit knowledge.

## 2. Objectives

This study was conducted to explain the role of the Iran-Iraq war in the professionalism of healthcare disciplines based on the documented experiences of medical staff.

## 3. Methods

### 3.1. Design and Sample

This is part of a qualitative study which used the conventional content analysis during 2014 - 2016. The study population consisted of healthcare professionals who had taken care of veterans, wounded, and martyrs in the Iran-Iraq war.

### 3.2. Data Collection and Analysis

There were numerous texts about memories, diaries, and written narratives of physicians, nurses, and rescuers that covered their experiences to a large extent. Therefore, the researcher collected and analyzed 119 printed and electronic texts about the experiences and memories of 101 healthcare providers in the Iran-Iraq war simultaneously. The principles of conventional content analysis were used to analyze the data. This type of design is usually appropriate when existing theory or research literature on a phenomenon is limited. The main focus of the analysis was to discover professionalism experiences of healthcare providers in the caring process of the wounded and their families in the Iran-Iraq war. The researcher avoided using preconceived themes, instead of allowing the themes and sub-themes and names for them to flow from the data. Data analysis started with reading all data repeatedly to achieve saturation and obtain a sense of the whole. Then, the researcher read the word by word to derive codes by first highlighting the exact words from the text that appear to capture key concepts. Next, the researcher approached the text by memoing and making notes of her first impressions, thoughts, and initial analysis. The words, sentences, or paragraphs with a specific meaning were defined as meaning unit; concepts of meaning unit were distilled in 4-5 words and abstracted in a code. Emerging initial codes were sorted into the themes and sub-themes based on similarities and differences. In this process, both manifest and latent content analyses were performed to extract the final themes. Also, the constant comparison analysis was

used and the extracted themes and sub-themes were compared and reviewed repeatedly with each other and with initial data. Concepts and meanings that indicated a similar subject were put together and therefore, themes and sub-themes emerged. Emerged tentative themes were reviewed by the researcher and peer necessary revisions were made. The process of collecting and analyzing data continued until saturation.

### 3.3. Rigor

Prolonged engagement of the researcher in the phenomenon under study (24 months), precise recording and reporting of all stages of the research, limited review of literature, peer reviewing, and full immersion in the data increased the trustworthiness of the study. Informants were selected from a vast spectrum (men, women; physician, nurse, paramedics, and aid workers; various terms of attendance in front; caring in the post of relief, emergency centers, field hospitals, hospice and hospitals in different cities). It is to be noted that the researcher interacted with combatants who defended the country in the war with Iraq and healthcare workers who took care of the wounded. She had already performed various qualitative studies and published some of them in the international journals.

The present study was confirmed by the ethics committee of Tehran University of Medical Sciences and Health Services. The researcher committed herself to respect the rights of authors in the use of printed and electronic texts and laws relating to the publication of literature.

## 4. Results

The results were obtained from evaluating 952 pages of the memories of healthcare providers in the Iran-Iraq war published in several books. These memories were collected in interviews of 101 healthcare employees who had taken care of the war wounded during the Iran-Iraq war. Themes and sub-themes derived from the data are shown in [Table 1](#).

### 4.1. Promoting Personal and Professional Empowerment

#### 4.1.1. Enhancement of the Experience

At the beginning of the war, the majority of healthcare providers had no experience of dealing with the crisis, leading to many problems. However, over time, the troops and healthcare staff gained many experiences, leading to a better organized and more coherent planning that in turn improved the quality of triage, evacuation, transfer and assistance to the wounded, facilitated and speeded up treatment and care of them and subsequently reduced the number of martyrs and injuries.

**Table 1.** Themes and Sub-Themes Emerged from Data

Theme	Sub-theme
<b>Promoting personal and professional empowerment</b>	Enhancement of the experience
	Proficiency and efficiency
	Training/Learning
	Training before entering the front
	Learning when caring of the wounded
	Discover the dormant forces in the human
<b>Compliance with laws and regulations</b>	Evolution over time
	Observance to discipline and obey the commander
<b>Holistic care</b>	Medical team as field troops
	Unusual Conditions
	Poor health conditions
	High workload
	The high volume of casualties
	Severity of injuries
	Action
	Observance to hygiene
	High speed operation
	Establishment of multiple treatment centers
	Triage
	Transmission and evacuation of the wounded
	Caring and treatment
	Holistic support
Under control conditions	
<b>Expression of good traits</b>	Self confidence
	Mobility/ability
	Diligence
	Loyalty
	Precision and focus
	Courage
	Creativity
	Wisdom
<b>Interpersonal relationships</b>	Interpersonal relations of staff
	Cooperation among staff
	Morality
	Cordiality
	Spiritual influence
<b>Sublimation of spirit</b>	Relationship Therapy
	The loss of materialist dependence in the front
	Escape from ordinary life
	A feeling of inner satisfaction
	Sublimation of spirit

“At first, doctors treated the wounded in very small tents or bunkers on the front lines that naturally many injuries were martyred because of the lack of skilled doctors and medical equipment. But over time, Iran’s frontline has

with the strongest emergency and field hospitals in the world wars.” P<sub>3</sub>

Healthcare workers sometimes used the experiences of indigenous people such as removing the sticky mud from the body of the wounded with water pressure, building the wood heater and the desert bathroom with style of rural people to solve their problems.

“The villagers had heaters operating with wood. We brought two barrels from the camp. We cut them by the bayonet and made something like heater of villagers. The heater actually worked great!” P<sub>65</sub>

#### 4.1.2. Proficiency and Efficiency

Some of the healthcare providers, including physicians, nurses, paramedics, and aid workers who went to the front had high proficiency and efficiency in the treatment and caring of the injuries. Indeed, war added to their proficiency and performance skills.

“We had become proficient in identifying the types of bombs so that we recognize them from their color. Is that nerve or mustard or cyanide bomb?” P<sub>65</sub>

#### 4.1.3. Training/Learning

The war had benefits despite the hardships and problems. The informants said that the front had become a center of education for all. One of the necessities of attending in the front was passing courses regarding such as chemical bombs, personal protection, decontamination, the types of guns and how to work with them, and how to use life vests. These training courses were very useful for the informants. In contrast, some said that they did not train before attending the front. So, they faced challenges in the treatment and caring of the wounded and protection of themselves. The majority of the informants mentioned the educational aspect of the care of the wounded. They had received great skills in the field of triage and evacuation of the wounded, treatment measures, complex surgeries, and care of veterans with complex trauma. Some physicians noted that they learned a lot of skills from the proficient nurses, clinicians, and rescuers. On the contrary, the nurses, clinicians, and rescuers acquired knowledge and experience from physicians in many situations. In fact, medical team did not neglect training in the midst of the war. Later, faculty members and other professionals who had participated in the war used this unique experience to teach their students and colleagues at the universities and therapeutic settings. Also, the healthcare workers tried to acquire knowledge and skills in non-medical fields such as shooting, working with anti-aircraft, driving trucks, buses, and tanks in their spare time. The informants emphasized that the war was a factor to explore the dormant forces in human.

“Participation in the war gives power to human to test his ability in difficult and critical situations and discover the dormant forces in him by overcoming unwanted fear.” P<sub>65</sub>

Generally, most of them recognized the war as an informative and constructive factor.

#### 4.1.4. Evolution Over Time

The findings suggest that the medical and nursing professions evolved with the acquisition of knowledge, skills, and experience over time.

### 4.2. Compliance with Laws and Regulations

#### 4.2.1. Observance of Discipline and Obeying the Commander

The informants mentioned that discipline and obedience to the commander are necessary so that if disregarded, they can lead to irreparable injuries and damages.

#### 4.2.2. Medical Team as Field Troops

They reminisced about the medical team by calling them as field soldiers. They noted that combat clinic was sometimes very close to the front line and the medical team attended in high-risk areas to take care of the wounded. They were not sometimes in a constant place but were sent to various camps.

“In the Army, the guideline has mentioned that clinic tents can be setup in thirty kilometers battlefield, whereas in the wartime emergency tents were setup ten kilometers away from the main place of the operation and ambulance drivers were sometimes forced to go ahead two or three kilometers in the front line to bring the wounded back to the emergency tent.” P<sub>3</sub>

### 4.3. Holistic Care

#### 4.3.1. Unusual Conditions

The medical team took care of the wounded in poor sanitary conditions, high workload, and high volume of casualties with extensive trauma.

“Most rural people had infectious diseases such as diarrhea and vomiting due to the use of contaminated water.” P<sub>2</sub>

A nurse said:

“The hospitals and clinics in the city were full of the wounded and martyrs. Skilled staff and existing facilities would not be enough for that tragedy.” P<sub>20</sub>

A doctor mentioned about the high workload in the hospital at the time of enemy’s chemical attack:

“No one would sleep until the next morning. Handling of 1,500 chemically wounded patients had exhausted all. Most staff of hospital did not go to their homes and stayed in the hospital for 17 days.” P<sub>2</sub>

Another informant quoted:

“A critically injured male was brought to the emergency line. The young man had been directly hit shrapnel in his face. His facial muscles hanged and didn’t have the lower jaw. The wound was so deep that technicians were moaning when looking at him and they did not dare to dress his wounds.” P<sub>3</sub>

One rescuer said:

“Unfortunately, we were faced with a tragic scene. All 15 people were pulled from the rubble piece by piece and all were martyred. Cut limbs, crushed and bruised bodies and faces were not recognizable. We found that there were 14 heads of the martyrs, but the pieced body of a three year old girl was headless.” P<sub>25</sub>

#### 4.3.2. Actions

The main actions of the medical team included observance to hygiene, high speediness, triage, transferring and evacuating the wounded, caring and treatment, holistic care of the injured, and keeping conditions under control. Establishment of the post of relief, emergency centers, field hospitals, and hospice has been mentioned in the data. An informant said that high speediness in doing procedures is necessary.

“Here (in front) mobility and speediness are of great importance for success.” P<sub>59</sub>

A physician said:

“The injury of the wounded was worse than all (a wounded in the back of the pickup). It was very difficult to prioritize injuries in that situation. I was alone; I did not know which of the wounded must be handled first.” P<sub>59</sub>

A nurse had memorized chemical attack by Iraq in Halabja and deployment of Iranian reinforcements in a pig shed as a second station (Bane) care and treatment of the wounded.

“At first, we gave compotes to chemical injuries, dressed them with sterile cloths, instilled eye drops, sprayed inhaler, superficially dressed their blisters to not be burst and transmit the infection. Then, they were immediately transferred to the Station No. 3 (behind Bane). Medical staff sent the wounded to Bakhtaran after treatment.” P<sub>1</sub>

A doctor mentioned about the Iraqi chemical attack in the Valfajr 8 operation and the care and treatment of the chemically injured in Imam Hussein hospital (Jurjani).

“Chemically wounded” patients were regularly admitted. The basement and the upper corridors of the hospital were full of injured patients. We started fluid therapy for them. Nurses sniped ruptured blisters on the body’ wounded then other doctors and I washed them with disinfectants and use the ointment after drying. Finally, we gave them antibiotics. Some of the wounded had severe

dyspnea. Even they had a blister in their lungs and had to use oxygen tent.” P<sub>2</sub>

A nurse aide noticed numerous martyrs and lack of enough space in springhouses.

“Springhouses were full of the corpses. Even there wasn’t enough space for the family of Mrs. Dehghan (one of the nurses that all members of her family were killed). Evening soldiers prepared a place for corpses. Some ice slices were put around them to prevent the spread of bad smell and a person stood sentinel to keep the bodies away from animals.” P<sub>17</sub>

#### 4.4. Expression of Good Traits

The critical condition of the war caused more expression of good traits such as self-confidence, mobility/ability, diligence, loyalty, precision and concentration, courage, creativity, and wisdom in healthcare providers. An informant said about the creativity of medical staff:

“We frequently were out of enough collars (to fix the neck of persons affected by explosion wave). So, we decided to make them with styrofoams of military equipment that were better than plastic collars and worked very well.” P<sub>66</sub>

#### 4.5. Interpersonal Relationships

##### 4.5.1. Interpersonal Relations of Staff

This sub-theme included cooperation between staff as well as morality, cordiality, and spiritual influence. A supervisor of a military hospital stated:

“We (hospital staff) were very warm and intimate. We helped each other and were like a coherent family.” P<sub>20</sub>

Interpersonal relations of staff sometimes were unsuitable and resulted in challenges. An informant noted unsuitable cooperation of local staff from one of the border cities with dispatched staff that caused difficulties for the dispatched team from Tehran.

“Local medical staff stayed in the city after vacating the hospitals. They didn’t cooperate with us and deferred the preparation of operation room and equipment that we needed.” P<sub>1</sub>

Another significant dimension was high spirits of most injured patients despite the severe inflicted injuries that surprised medical team and reinforced their spirits. In contrast, there were people who had a strong urge to return to their homes; they negatively affected other soldiers as well as medical team.

##### 4.5.2. Relationship Therapy

One of the important roles of the healthcare workers, especially nurses, was psychological support of injuries

and their families. This role became more difficult, especially when the wounded needed more complex treatments and surgeries or when they were involved in complications leading to serious changes in lifestyle of the wounded, such as limb amputation. One of the difficult situations that employees faced was informing the families of martyrs or injured warriors and psychological support of them. Sometimes the situation was so stressful for the medical team that they could not appropriately react. However, they tried to use their previous experiences and wisdom to manage such situations.

#### 4.6. Sublimation of Spirit

This theme included the loss of materialist dependence in the front, escaping from ordinary life, feeling of inner satisfaction, and sublimation of spirit. Entrance to the spiritual world of the front line led to waking up the mettle of medical team and internal changes.

“All dependencies would be lost. Work, office, car, home, wife, and children lost their meaning.” P<sub>66</sub>

A nurse wrote about keeping away from normal life by going to the front and her feelings at the time of the end of the war:

“It was hard to believe, but we were going to start a normal life again; something that we had escaped from. We had come here to find ourselves. We were closer than ever to death and martyrdom. But, now we had to go back.” P<sub>1</sub>

One doctor wrote about his inner satisfaction:

“I was tired, but I feel good because I had helped the poor.” P<sub>2</sub>

Another informant quoted about uplifting their spirit and flip awakening:

“A flip in the life wakes us up. This is where the sense of responsibility for the war veterans shows its true value and we felt our responsibility. This situation teaches sacrifice and devotion to me and people like me, and warns us that we have not done too much important, if we are joining an amputated hand.” P<sub>62</sub>

## 5. Discussion

In this study, the role of war in healthcare disciplines based on the experiences of healthcare professionals in the Iran-Iraq war was explained. Many of the emerged themes as professionalization dimensions also had been previously introduced in literature. For example, promotion of personal and professional empowerment in unconventional condition was one of the most important themes extracted from the data. During the war, healthcare providers gained skills and experiences about treatment and care of the traumatic wounded in critical con-



dition. Promotion of personal and professional empowerment (9), the role of teaching and learning (10) and increased level of knowledge and experience (11) as the main components of professionalization have been mentioned in literature. Biderman et al. emphasized the increase of awareness and experience of the Australian military nurses in Vietnam (12). Firouzkouhi et al. have also reported at the beginning of the war, the armed forces, nurses, and medical staff had no experience of chemical attacks. Over time, they gained a lot of knowledge and experience on how to protect themselves and treat and care of chemically inflicted patients (6).

The results showed that skills and experience of medical team were of great importance that affected their performance in the war. Similar findings have been reported in another study (6). In this regard, Ghanjal et al. reported that rescuers were familiar with the emergency care and resuscitation measures in the face of injuries (13). The present study showed that skills and efficiency of the majority of medical staff increased in the face of injuries during the war that is in line with the result of another study (4). In this study, most informants emphasized the need for training about caring and treatment of patients in critical condition, personal protection and care of chemical attack victims before they being sent to the war zones; however, there were many scenarios with educational aspects for them. In fact, the war was remembered as a university. Training before entering the war zones and providing care for the victims was very fruitful and entrepreneur in actual situations. These findings were confirmed in other studies (2, 4). Firouzkouhi et al. reported that over time and further with the use of chemical weapons by the enemy, the health staff in the care of patients gained more experience. In addition, professional training courses were held in chemical emergency departments to update their information and to learn new techniques for treatment of patients that resulted in the provision of better care to chemical attack victims (6). In contrast, some informants noted that they did not train before entering the front. Similar findings have been reported in other studies (6, 13-15). Sarhangi et al. emphasized the lack of training on chemical attacks in the early years of the war (14). It should be noted that still the use of chemical weapons is considered as a potential threat despite the prohibition on the use of them. So, it is a vital need to train healthcare providers about the principles of protection and care of chemical attack victims. Also, some researchers noted that rescuers did not have the necessary skill to use mules to carry the wounded in the mountainous areas and this had created problems in the transition of the wounded (13). Researchers emphasized the need for training on general and specialized skills regarding the principles of triage and prioritization of vic-

tims and providing first aid to victims (14) and taking care of traumatic patients (8, 15).

Another finding of this study was to share knowledge and experience gained during the war with other colleagues and students in educational and clinical settings that is consistent with another study (6).

The findings indicated that talents and abilities of human are discovered in critical and arduous situations. In this regard, researchers have noted that the war created the conditions provoking increased knowledge in nurses by providing new experiences and challenging situations that can lead to professional and clinical improvements in nursing discipline (6). The findings also suggested that the evolution over time is one of the professional elements, which is in line with other study findings (10).

Another sub-theme was compliance with laws and regulations. Compliance with laws, regulations, and professional protocols defined as professionalization (10) and regulations as professionalization resources (10) have also been reported in other studies.

The findings suggested that prevention, treatment, and holistic care were other elements of professionalization. Unusual working conditions were one of the other sub-themes. Most informants mentioned high workload and a large number of the wounded and martyrs. This finding was indicated in other studies as well (2, 4).

The findings showed that rescue and transport of the wounded system in wartime were effective in many cases and led to the reduced casualties and damage of the wounded despite shortcomings. Other researchers reported the same findings (13, 14). Also, the need for speediness to reduce deaths and injuries in other studies has been confirmed (14). Conflicting findings have been reported in literature about first aid, transport, and triage in the case of chemical attack victims. For example, a study indicated the lack of proper management of the evacuation and transportation of chemical injuries (13). Another one has reported that triage and prioritization of chemical patients were well done despite the a large number of the chemical attack victims (6). Both sides of the spectrum can be seen in the findings of this study. Informants told in detail how to care of the chemical and war wounded. Other researchers have also described the way of treatment and care of chemical victims in their study (6). In this regard, systematic and holistic care of patients are considered as an element of the professionalization of nursing (10, 16), that confirmed the findings of the present study.

The findings showed that care and treatment of injured individuals in stressful conditions required employees with prominent features and good traits. Some researchers wrote about humanity, courage, dedication (6) and innovations (2) of nurses in the Iran-Iraq war. Other

literature mentioned that innovation, integrity, and honesty are as the features of the professionalization of nursing (11). Researchers reported that nurses who had participated in the war tended to view moral commitment as a deeper and more spiritual matter, a commitment that reaches the level of devotion and sacrifice (2).

Due to the high number of the wounded in critical condition, medical staff had very good cooperation with each other to reduce deaths and injuries. This finding is similar to the results of other studies (6). Cooperation among staff is considered as a feature of the professionalization of nursing (11). Having good and effective communication in reducing the tensions in victims and their families played a key role in the medical team success. Although this role imposed a very high psychological burden on staff, they steadfastly tried to reduce the pain and suffer of the injured and their families as much as possible. They tried to minimize tensions with high spirits and intimate relationships. Researchers reported that nurses noted the emotional tension arising from empathy and sympathy with the wounded, but they could overcome the situation with patriotism (2).

Sometimes some staff was seen as a role model for others due to their wise behavior and moral principles in the care and treatment of the wounded. Behavior, attitude, and professional communication are mentioned in the definitions as key elements of professionalization (10). Scannell-Desch and Doherty found that camaraderie, teamwork, and mutual support are necessary to live and work in the war zones (17). Other researchers have mentioned role models as a source of professionalism (10) that confirmed the present study.

The findings suggest that healthcare professionals with experience of challenges and hardships in the war had reached some degrees of excellent spirit and felt inner satisfaction. Other researchers reported that nurses' experience of serving in the front was a divine opportunity for them. They talked about their spiritual work and closeness to God (2).

All these factors can lead to the development of health professionals including medical and nursing in various areas during the war and after it. In this regard, other researchers emphasized the professional growth of the United States military nurses in the Iraq-Afghanistan war (17), professional growth of the Iranian nurses (4, 6), and improvement of clinical and professional characters of nurses as a result of providing care during the Iran-Iraq war (2).

One limitation of this study was the lack of access to the informants to verify their memories. The researcher tried to modify this limitation by increasing the number of reviewed and analyzed memories.

In general, the results showed that war had some benefits for healthcare providers, despite all hardships and adverse effects. Professional growth of medical and nursing discipline is the most important achievement for healthcare professionals whose experiences as human capitals should be used properly. In fact, converting experience and tacit knowledge of healthcare providers to explicit knowledge can be effective in identifying and analyzing problems and providing appropriate strategies in critical condition and the production of knowledge to deal with unusual situations and crises.

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### Footnotes

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