

# Professional Capability in Triage Nurses in Emergency Department: A Qualitative Study

*Capacidad profesional en enfermería de triaje en el servicio de urgencias: un estudio cualitativo*

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## Abstract

In Emergency Department, triage nurses play a key role in the prioritization of the needs of patients who are in critical conditions. Accordingly, it is essential that the concept of professional capability and its aspects be explored in these nurses. The present study aims to identify Iranian triage nurses' perception of professional capability. The present study is a qualitative work based on conventional content analysis. 20 triage nurses participated in the study. Data were collected using in-depth, semi-structured interviews, focus group interviews, and observation. The collected data were analyzed according to Granheim and Landman's method. Analysis of the data collected from the interviews yielded 3 categories and 9 subcategories. In the present study, professional capability was found to be comprised of 3 domains: "clinical competence", "psychological empowerment", and "professional commitment". The results of the study helped identify a wide range of the dimensions of and factors affecting professional capability in triage nurses. Nursing administrators can use the findings of the study to identify nurses who are qualified to work in triage units and develop programs to enhance triage nurses' professional capability.

**Keywords:** Professional capability, Emergency department, Triage, Nurses.

## Resumen

En el Departamento de Emergencias, las enfermeras de triaje desempeñan un papel clave en la priorización de las necesidades de los pacientes que se encuentran en condiciones críticas. En consecuencia, es esencial que el concepto de capacidad profesional y sus aspectos se exploren en estas enfermeras. El presente estudio tiene como objetivo identificar la percepción de las enfermeras iraníes sobre la capacidad profesional. El presente estudio es un trabajo cualitativo basado en el análisis de contenido convencional. 20 enfermeras de triaje participaron en el estudio. Los datos se recopilaron mediante entrevistas en profundidad, semiestructuradas, entrevistas de grupos focales y observación. Los datos recogidos fueron analizados según el método de Granheim y Landman. El análisis de los datos recolectados de las entrevistas arrojó 3 categorías y 9 subcategorías. En el presente estudio, se encontró que la capacidad profesional estaba compuesta por 3 dominios: "competencia clínica", "empoderamiento psicológico" y "compromiso profesional". Los resultados del estudio ayudaron a identificar una amplia gama de dimensiones y factores que afectan la capacidad profesional de las enfermeras de clasificación. Los administradores de enfermería pueden usar los resultados del estudio para identificar a las enfermeras que están calificadas para trabajar en unidades de clasificación y desarrollar programas para mejorar la capacidad profesional de las enfermeras especializadas.

**Palabras clave:** Capacidad profesional, Servicio de urgencias, Triage, Enfermeras.

## Introduction

In the emergency departments of hospitals, even seconds can be crucial in saving a patient's life<sup>1</sup>. Overcrowding in emergency departments is a serious issue of healthcare systems around the world<sup>2</sup>. Prolonged waiting periods and lengthy periods of medical service adversely affect the quality of healthcare and increase the risk of undesirable consequences for patients in critical condition<sup>3</sup>. Responsible for quick differentiation of critical conditions from non-critical conditions, a triage unit is an indispensable part of an emergency department<sup>4</sup>. Triage is defined as prioritizing patients according to the seriousness of their conditions and providing the most appropriate clinical care to most people in the shortest possible time<sup>5</sup>. Satisfactory triage can decrease a patient's unreasonable expectations, allay a patient's and his/her companions' worries about the clinical status of the patient, facilitate and expedite the circulation of patients in the emergency department, and create a sense of satisfaction in both the receivers and providers of emergency clinical care<sup>6-7</sup>.

Triage nurses play a key role in the prioritization of the needs of patients in critical conditions and in need of immediate attention, thus the necessity of studying and identifying ways of enhancing triage nurses' professional capability<sup>8</sup>. If triage nurses are not capable enough, triage errors may occur, which in turn can cause such problems as: increase in the length of stay of patients, delays in transfer of patients to other hospital departments, overcrowding in the emergency department, decrease in the quality of care, and further complication of patients' conditions which in some cases leads to permanent damages or death<sup>9</sup>.

A review of literature shows that capability is a broad concept whose meaning can vary according to individuals' circumstances and characteristics, contexts, and perceptions<sup>10</sup>. The present study is the first attempt at understanding the concept of professional capability in triage nurses and identifying their beliefs and perceptions regarding professional capability. In view of the dearth of knowledge in this field and the need for a profound investigation, qualitative research approaches seem to be essential for establishing the meaning and the different dimensions of the concept of professional capability in triage nurses. The present study aims to identify Iranian triage nurses' perception of professional capability.

## Methods

The present study relies on conventional content analysis. Qualitative content analysis is an effective method for collecting reliable and valid results from textual data in order to generate knowledge and new ideas, present facts, and lay down guidelines for performance<sup>11</sup>. In this method which is used for mental interpretation of the content of textual data, the content of texts is analyzed to extract the main themes and the existing patterns among the data<sup>12</sup>. Content analysis is something more than extracting the actual content of textual data: it enables a researcher to discover the key concepts and hidden patterns in the content of the data collected from research participants<sup>13</sup>.

**Sample and setting:** The subjects of the present study consisted of 20 nurses (12 males and 8 females) who were selected according to the purposive sampling method from the triage units of three university hospitals in the southeast of Iran between February 2016 and December 2017. The inclusion criteria were having at least a bachelor's degree in nursing, having at least one year experience of practice in the triage unit, and being willing and able to share emotions and experiences.

**Data Collection:** Data collection in the present study was based on personal interviews, focus group interviews, and observation. Accordingly, 20 semi-structured, in-depth interviews were conducted with 20 triage nurses on a face-to-face basis. Each participant was interviewed in one or two sessions each lasting from 45 to 60 minutes. In addition, two focus group meetings were held with a 5-member group of triage nurses—the meetings lasted from 90 to 120 minutes. The researcher was in charge of leading the discussions and a co-researcher (a nurse) acted as note taker. All the participants agreed on the time and place of the interviews. The interviews were continued until in-depth data were obtained, and the process of participant selection was continued to the point of data saturation. The other approach used for data collection in the present study was observation: the researcher spent a few hours from different shifts (morning, afternoon, and night) observing the nurses in triage units. Overall, fifteen 2-hour observation sessions were conducted.

Each interview began with general questions, and gradually, after the participant's trust had been earned, probing questions would be introduced, e.g. "How did you feel about it?", "Can you explain more?", and "Can you give me an example of it?", to address more specific and profound matters.

Examples of the questions asked in the interviews are:

Q1: Based on your own experiences, how would you define professional capability for triage nurses?

Q2. Based on your own experiences, what capabilities should a triage nurse possess?

Q3. As a triage nurse yourself, have you ever felt that your colleagues lack the capabilities required in a triage nurse?

The present study relies on conventional content analysis as suggested by Granheim and Landman (2004)<sup>14</sup>. Initially, the script of each interview was written as soon as possible following the interview. To immerse in the data and achieve a sense of comprehensiveness, the researcher would read each script several times. Words, sentences, or paragraphs which contained important points about professional capability in triage nurses were taken as meaning units. Similar preliminary codes were classified into broader categories based on their similarities and differences and the development of categories thus continued. To validate the stability of the codes, the researcher frequently revised the categories and checked the data. Eventually, the main categories of the concept of professional capability were established after deep and thorough consideration. Data analysis was performed using MAXQDA 10.0 R250412.

In order to verify the trustworthiness of the collected data, the researcher employed the criteria suggested by Guba and Lincoln (1985)<sup>15</sup>. The credibility of the data was verified using the methods of prolonged engagement (12 months) with subject matter, member checking, and peer checking. The dependability and confirmability of the data were verified using the triangulation method (semi-structured, in-depth, personal interviews, focus group, and observation), data source triangulation (data collection in different shifts and hospitals), and audit trail which includes correct interview techniques, accuracy in making scripts, and analysis by colleagues. Finally, to verify the transferability of the data, the researcher presented precise and thorough descriptions of the participants' characteristics, methods of data collection, and manner of analysis alongside textual examples of the participants' statements.

**Ethical considerations:** Formal research approval was obtained from ethic center of Shiraz University of Medical Sciences and nursing schools (ethics code: IR.SUMS.REC.1396.S197). Before the interviews, the participants were informed about the objectives of the study, the voluntary nature of their participation, methods of data collection and why the interviews were to be recorded, the roles of the researcher and the participants, confidentiality of their information, and anonymity of the participants. Subsequently, they were asked to sign an informed consent form if they were willing to participate in the study. The participants were also informed that they were free to withdraw at any point of the research and the time of the interviews would be set by their agreement. In order for the observations to be ethical, the participants were observed with prior notice and in an overt manner.

## Results

The participants consisted of 20 nurses: 12 males (60%) and 8 females (40%). The average age and work experience of the participants were  $40.46 \pm 10.05$  and  $13.32 \pm 8.79$  respectively. 18 of them (90%) had a bachelor's degree and 2 had a master's degree (10%). Data analysis led to the development of 3 categories, and 9 subcategories. The categories emerging from the data analysis included (1) clinical competence (2) psychological empowerment, and (3) professional commitment [Table 1].

**Table 1: Categories and subcategories extracted from the content analysis**

| categories                | subcategories                                 |
|---------------------------|---|
| Clinical competence       | Professional knowledge                        |
|                           | Clinical skill                                |
|                           | Clinical judgment                             |
| Psychological empowerment | Resiliency                                    |
|                           | Emotional intelligence                        |
|                           | Self-confidence                               |
| Professional Commitment   | Organizational discipline                     |
|                           | Observance of the principles of communication |
|                           | Adherence to ethical codes                    |

### Clinical competence:

Clinical competence was one of the most prominent categories extracted from the experiences of most of the participants. This concept falls into the three subcategories of professional knowledge, clinical skill, and clinical judgment.

### Professional knowledge

As one of the major components of clinical competence referred to by the participants, professional knowledge incorporates triage knowledge and clinical knowledge. Based on the experiences of the participants, a triage nurse must have adequate knowledge about the process of triage and be able to rank patients according to ESI (Emergency Severity Index) triage algorithm. In addition to having triage knowledge, a triage nurse must be equipped with clinical knowledge i.e. sufficient familiarity with physiopathology of diseases, symptoms of diseases, and diagnostic tests, as well as nursing procedures in high-risk emergencies e.g. cardiac arrest, airway obstruction, shock, internal bleeding, trauma, and poisoning.

"Some of my colleagues are not properly familiar with triage and how patients should be prioritized. A prioritization error can make a patient's condition more critical—I've witnessed cases where such errors resulted in the death of patients" (Nurse 4, female).

### Clinical skill

From the perspective of the participants, in addition to having professional knowledge, triage nurses must possess clinical skill which includes technical skill and team-

work skill. The interviewees defined technical skill in a triage nurse as the ability to act rapidly, assess patients quickly and accurately, identify patients' chief complaints, effectively take a patient's medical history, and skillfully perform a physical examination. Furthermore, they stated that a triage nurse must be able to measure and record a patient's vital signs correctly and accurately, determine a patient's level of consciousness (LOC), perform Cardiopulmonary resuscitation (CPR), and read an electrocardiogram (ECG).

"In my opinion, a triage nurse must have high technical skills, be well-rounded, and be capable of performing several tasks simultaneously" (Nurse 9, male).

Another component of clinical skill which the participants referred to was teamwork skill. According to the experiences of the interviewees, as conditions in emergency departments are unpredictable and sometimes a large number of patients or accident victims are referred to the triage unit of emergency departments, triage nurses must not only possess inter-professional communication skills, but be adept at management and leading others (making inter-departmental arrangements, organizing and guiding the personnel), task assignment, and time management in teamwork.

"Teamwork is like the performance of the musicians in a concert: the members must play in coordination—if each individual acts as he pleases, there'll be chaos and disorder" (Nurse 14, male).

### **Clinical judgment**

Another component of clinical competence referred to by the participants was clinical judgment. According to the interviewees, a triage nurse must be able to use critical thinking, clinical reasoning, clinical intuition, and scientific evidence in critical clinical circumstances to diagnose a patient's problem and make the right decision. The interviewees believed that critical thinking is the prerequisite of clinical reasoning which makes clinical judgment possible.

"To solve a patient's clinical complaint, I consider all the possible solutions, and after taking a course of action, I think about the results" (Nurse 5, female).

Based on their experiences, the participants defined clinical reasoning as the ability of a triage nurse to analyze the mental and actual information of a patient and form a clinical judgment accordingly.

"I identify contradictions between the clinical symptoms and paraclinical data of patients by reasoning" (Nurse 11, male).

According to the experiences of the participants, clinical intuition is an inner feeling or sudden conception which can help a nurse identify a patient's problem or predict a decline in his/her condition.

"Once they brought a patient to the triage unit and I told my colleagues I had a premonition he was going to have a cardiac arrest, which he actually did" (Nurse 17, male).

Another element of clinical judgment referred to by the interviewees was relying on scientific evidence in one's clinical judgment. They believed that triage nurses must combine their technical skills and professional knowledge and use scientific evidence to determine patients' clinical problems and take appropriate clinical measures.

"To make good clinical judgments, I keep my knowledge up-to-date and follow clinical guidelines and consider evidence-based nursing in my clinical decision-making" (Nurse 9, female).

### **Psychological empowerment:**

Another major category identified in the present study is psychological empowerment which consists of the three subcategories of resiliency, emotional intelligence, and self-confidence.

#### **Resiliency**

The participants defined resiliency in a triage nurse as the ability to be patient, flexible, adapt to the tough conditions which exist in the emergency department, and tolerate hardships.

"Working in a triage unit is something not everyone can handle. Only those who are as hard as steel and have a lot of patience can work in triage. You need to be indefatigable and be capable of working in hard conditions" (Focus group).

#### **Emotional intelligence**

Based on the experiences of the participants, triage nurses need to be aware of their own feelings and emotions and be capable of controlling them so that they can keep calm in complicated and critical conditions and not lose focus.

"One of my colleagues was fired from the triage unit because he was not emotionally stable and was short-tempered and would get into arguments with patients or their companions" (Nurse 7, male).

#### **Self-confidence**

From the participants' perspective, triage nurses must possess high self-esteem, be able to act with self-confidence, and defend their right decisions without fear.

"Some of my colleagues don't believe in their own abilities; they lack self-confidence. For instance, if a triage doctor asks them why they've placed a patient in level 2, they immediately get nervous and cannot defend their decisions in a determined manner" (Nurse 16, female).

### **Professional Commitment:**

The third category of professional capability is professional commitment which comprises the three subcategories of organizational discipline, observance of the principles of communication, and adherence to ethical codes.

#### **Organizational discipline**

One of the factors in professional commitment referred to by the participants was organizational discipline which includes having a neat appearance, punctuality, and fol-

lowing the guidelines and policies of the hospital. According to the participants, triage nurses must perform their duties in accordance to the regulations and policies of the hospital, be punctual for work, and wear neat clothes.

“Some of the nurses ignore the rules and instructions in the triage unit and discharge patients without checking with the emergency doctors, which has gotten them into legal trouble several times” (Nurse 12, female).

### **Observance of the principles of communication**

Following the principles of communication was one of the factors stressed by all the interviewees. They believed that triage nurses must introduce themselves to patients, treat patients and their companions with respect, consider the feelings and worries of patients, listen to them properly and answer their questions patiently. Even though the majority of the participants stressed the importance of observing the principles of communication, the researcher witnessed in some shifts that triage nurses did not act according to the principles mentioned by the participants.

On one occasion, a 20-year-old man with a femur fracture from a car accident was brought to the triage unit. His pain was intense and he shouted to the triage nurse, “Why don’t you help me? Aren’t you human?” The triage nurse responded angrily, “Your pain is not my problem. You should have been more careful!” (Researcher’s observation).

### **Adherence to ethical codes**

The participants described adherence to ethical codes as one of the most important components of professional commitment and the essence of the nursing profession. Among the major codes which the interviewees referred to were treating patients with dignity, maintaining patient confidentiality and respecting the privacy of patients, observing justice and honesty, acting responsibly, and being responsive.

“Adherence to the principles of professional ethics is the foundation of nursing and is the jewel of the capabilities in a triage nurse. A nurse who doesn’t care about ethics is not qualified for work in triage” (Nurse 10, female).

“On several occasions, foreign patients were referred to the triage unit and because they were in need of emergency care I gave them priority for medical attention without bias toward my countrymen” (Nurse 18, male).

Using a qualitative approach, the present study was an attempt at understanding triage nurses’ perception of professional capability based on their experiences. Nearly all the participants in the present study referred to clinical competence as one of the key elements of professional capability in triage nurses. In the present study, clinical competence was found to be comprised of professional knowledge, clinical skill, and clinical judgment. While the study of Meretoja (2004) deals mainly with the clinical knowledge and technical skill aspects of clinical competence in nurses, the present study also found references to teamwork skill and clinical judgment in the participants’ experiences as other important elements of clinical competence<sup>16</sup>. In their study of Iranian nurses’ experience-based perceptions of clinical competence in response to critical conditions, Aliakbari et al. (2014) found knowledge, clinical skills, and teamwork to be the components of clinical competence from their participants’ perspective—however, they did not report any experiences related to clinical judgment. In the present study, on the other hand, the participants repeatedly mentioned that triage nurses need to be skilled at clinical judgment to be able to diagnose correctly and take appropriate clinical measures<sup>17</sup>. According to the findings of the present study, professional knowledge and clinical skill are important capabilities in a triage nurse. Most of the interviewees mentioned that possessing the above-mentioned capabilities is essential to practice in triage, and without them, triage nurses cannot classify patients with precision, make mistakes, and may even endanger a patient’s life. Similarly, the study of Aloyce (2014) shows that many triage nurses lack sufficient knowledge, clinical skill and speed, which leads to errors in classification of patients and overcrowding in triage units, which in turn result in patients’ dissatisfaction and adverse effects on the quality of care<sup>18</sup>. The study of Rahmati et al (2013) shows that education has a positive effect on increasing the knowledge and skill of emergency department’s nurses regarding the triage of patients<sup>19</sup>. Based on the experiences of the participants in the present study, conditions in triage units are unpredictable: at critical times, a triage unit can become overcrowded and triage nurses have to deal with a large number of patients. In such circumstances, having teamwork skill, as one of the major components of clinical competence, becomes essential for a triage nurse. The study of Grover (2017) refers to management skills, leadership skills, and inter-departmental coordination as the primary elements of emergency nurses’ teamwork skills. In the present study, however, inter-professional communication skills and time management were found to be among the main components of teamwork in addition to the above-mentioned factors<sup>20</sup>. In their study of the teamwork competence of emergency nurses in Iran, Bahrami et al. (213) report that nurses who lack team-

work skills cannot manage the conditions when the emergency department is overcrowded and suffer from anxiety and hastiness<sup>21</sup>. While the study of Bahrami et al. names team leadership, sharing tasks, and guiding the personnel as the main components of teamwork for emergency nurses, the present study found inter-professional communication skills and time management, in addition to the above-mentioned factors, to be important elements of teamwork. Another component of clinical competence derived from the participants' experiences is clinical judgment. From the interviewees' perspective, in order to identify clinical priorities quickly and accurately and conduct the right intervention, triage nurses need to be skilled at clinical judgment. They described clinical judgment as a capability that links such skills as clinical reasoning, clinical intuition, and critical thinking. Without clinical judgment, the other skills cannot be exercised in coordination and a satisfactory decision-making process will not happen. Likewise, the study of Kantar (2012) shows that clinical judgment is a key skill in nurses of all professional levels, especially emergency nurses, which plays an influential role in making exact diagnoses and making the right clinical decision<sup>22</sup>. From the participants' perspective in the present study, in urgent and critical circumstances where there is not much time for analysis and reasoning, clinical intuition can be vital to clinical judgment and decision-making. They defined intuition as an inner feeling and unconscious perception which can help them identify a potential problem or predict a decline in the condition of a patient. The participants in the study of Lyneham (2008) talk about similar experiences, which is consistent with the findings of the present study<sup>23</sup>. The second category of professional capability is psychological empowerment which comprises resiliency, emotional intelligence, and self-confidence. Based on the experiences of the participants, because the triage unit is a stressful, complicated, and unpredictable environment and occasionally nurses have to deal with large numbers of patients with various complaints, it is vital that triage nurses be highly resilient so that they can adapt to the difficult and stressful conditions of their environment, overcome the consequences of their physical and mental tensions, and maintain their psychological well-being. Likewise, the results of the study of Tubbert (2016) shows that emergency nurses need to possess resiliency to be able to employ their skills in critical conditions and take effective clinical measures<sup>24</sup>. In their studies of clinical competence of triage nurses in emergency departments, Ghanbari (2017) and Ebrahimi (2016) do not make any mention of resiliency, emotional intelligence, and self-confidence in their results<sup>25 - 26</sup>. In the present study, however, the elements of psychological empowerment were found to be important capabilities, which is one of the advantages of the present study. In the present study, the participants repeatedly referred to adherence to ethical codes as the most important element in professional commitment. In their study, Numminen et al. (2011) state that advances in technology, increase in medical expenses, and the complexity of healthcare present nurses with significant challenges; therefore, in order

to make correct and ethical decisions and interventions, nurses need ethical codes, thus the importance of adherence to ethical codes in practice in professional commitment<sup>27</sup>. Among the ethical codes stressed by the interviewees in the present study were respecting patient dignity, maintaining patient confidentiality and respecting the privacy of patients, observing justice and honesty, having a sense of responsibility, and being responsive. Likewise, in their study of the extent to which nurses and nursing students observe ethical codes, Bijani et al. (2017) report the highest mean scores for respecting patient dignity, maintaining patient confidentiality and privacy, and avoiding discrimination in care<sup>28</sup>. The results of the study of Jafaraghaee (2012) show that observance of ethical codes is indispensable to professional commitment from nurses' perspective, which is consistent with the findings of the present study<sup>29-35</sup>.

**Limitations:** One of the limitations of the present study is its use of purposive sampling: in this method of sampling, the qualitative researcher selects rich sources of data, which can diminish the variety of participants. Since the present study did not address patients' and doctors' experiences, it is suggested that future works of research on professional capability consider their experiences too.

## Conclusions

**T**he result of the present study, a wide range of elements of professional capability in triage nurses were identified. According to the results, to be qualified for work in triage, a nurse must not only have clinical competence, but possess psychological skills and professional commitment. Nursing administrators can use the findings of the present study to identify and employ nurses who have the required qualifications for work in triage, thereby enhancing the efficiency and quality of triage and increase patient satisfaction in emergency departments. Moreover, as there is not a standard instrument specifically designed for evaluation of professional capability in triage nurses in Iran or any other country, the findings of the present study can be used toward development of such an instrument.

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