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# Presenting a competency model of treatment managers with a qualitative method of passive defense in hospitals

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#### Abstract

# **Original Article**

**BACKGROUND:** Passive defense is one of the most effective and sustainable methods of defense against threats, especially in hospitals. In hospitals, worthy managers are nessesary to continue growth and sustainable success. Aim of this research is presenting a competency model of treatment managers using a qualitative method in field of passive defense.

**METHODS:** The statistical population in the qualitative field included 26 experts from the scientific community and academic specialists. Comprehensive library reviews and evaluation of past studies were done and then, using the Delphi method, the dimensions and competency components of managers were identified with a passive defense approach. Kendall test and "Kendall's coordination coefficient" were used to evaluate the degree of consensus and coordination of panel members. Data were analyzed by SPSS software and by executing the analyze command, nonparametric tests, and K related samples (P = 0.05).

**RESULTS:** The value of Kendall coefficient was 0.766 for the level of agreement and consensus of experts in the second round for the competency dimension of managers and 0.746 for the competency components of managers, which showed that there was coordination between views. The mean and standard deviation (SD) of panel members' responses in the first round and in the second round showed the importance of competency factors.

**CONCLUSION:** The competence of senior managers can change their performance in this position in the organization and generally help in identifying potential and profound characteristics. Therefore, managers should increase the general knowledge by participating in training courses and psychology topics.

**KEYWORDS:** Competency Model; Treatment Managers; Passive Defense

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#### Introduction

Healthcare organizations need appropriate programs to stay up to date in an environment where medical information, technologies, and relationships with other healthcare systems are constantly changing.<sup>1</sup> Besides, in the economies of all countries, organizational performance has become a national priority. Among healthcare organizations, one of the priorities for the

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Ehsan Sadeh; Department of Management, School of Humanities, Saveh Branch, Islamic Azad University, Saveh, Iran Email: e.sadeh@yahoo.com development of the health sector is hospital. An organization cannot be found to have experienced continuous growth and sustainable success unless it is managed and led by competent and efficient managers.<sup>2</sup> The concept of competency was initially defined as human characteristics.<sup>3</sup> Some of these terms are derived from law and were later used in clinical psychology. Competency in the field of career counseling was then mentioned to define and characterize skills and knowledge related to recruitment. Some reports have defined competency as a characteristic that characterizes human performance.<sup>4</sup> One of the current health

system major problems is lack of competency of managers. Therefore, identifying the competencies of managers in the field of treatment based on the principles of passive defense causes people to be in a suitable organizational position in accordance with their abilities and work skills.5,6 Passive defense is a type of civil defense and refers to a set of actions that do not require software. By implementing it, financial losses to vital and sensitive military and civilian equipment and facilities and human casualties can be prevented or the amount of these damages and losses can be reduced to a minimum. Passive defense is one of the most effective and sustainable methods of defense against threats.7 In Iran, despite the special position in terms of geopolitics and having huge oil and gas wealth, the issue of passive defense has not received much attention.8 In order to achieve different aspects of development, human beings are the main criterion and their health is very important for the leaders of development programs.9 However, many of the world's healthcare systems are still mismanaged, and many countries around the world still face many difficulties in making their own decisions in the field of healthcare. Therefore, significant changes in the system of providing health services are on the agenda.<sup>10</sup> The construction of health centers is of the great importance in the defense support of the country's health and treatment in critical situations, and many of these medical centers are among the most sensitive and important centers in the country.<sup>11</sup> Health is considered as one of the main vital features of macroeconomics and politics and it is the main criterion for the development of a country. Given that the issue of passive defense is one of the topics whose technical knowledge is being formed in the country, a more accurate understanding of the concepts and position of this topic can be an effective measure in terms of potential threats and threats to national security.<sup>12,13</sup> It is essential that the health system

be able to deal with problems in a desirable way and overcome health barriers. According to the above-mentioned issues, the purpose of this study is to review and evaluate the theoretical foundations and internal and external studies conducted in the field of competence of managers in the field of treatment, to provide a comprehensive and complete model of managers' competence with passive defense approach in the field of treatment on the performance of human resources and in a qualitative manner.

## Methods

*Study location:* This study was conducted in the period of February 2017 to October 2016 in the Ministry of Health and Medical Education, and Shahid Beheshti University of Medical Sciences, Tehran, Iran, and the Passive Defense Organization of Iran under monitoring of faculty members of Department of Management, School of Humanities, Islamic Azad University, Saveh Branch, Saveh City, Iran.

Delphi method: The method of selection and number of specialists were dependent on the Delphi target factors and based on the extent of the problem, the quality of the decision, the ability of the research team in managing the study, internal and external validity, data collection time, available resources, scope of the problem, and acceptance in the quality of response. Delphi participants, the professionals and experts have four characteristics: knowledge and experience in subject, desire, sufficient time the to participate, and effective communication.14,15

*Elite experts'* sampling: The statistical population was 35 elite experts; these people were experts of the scientific community and university who had executive records the decision-making at levels, so-called knowledgeable experts. They were purposefully selected and participated in the interview process. They included staff managers, experts in the Ministry of Health and

Medical Education and the treatment-related passive defense unit, experienced managers in the treatment department of hospitals, and experts at the Shahid Beheshti University of Medical Sciences. These managers were the same staff managers related to treatment and were selected as the sample size. From 35 elite experts, only 26 of them collaborated until the end of the study. These members were selected using purposive sampling method and based on experiental fit, and good informants were identified and selected by snowball method. In the first step, with comprehensive library reviews and evaluation of past studies, the dimensions and components of managers' competence were identified and extracted with a passive defense approach (Table 1).

In the next step, using the Delphi method among professors and experts, the dimensions and competency components of managers were identified with a passive defense approach.

*Questionnaire:* The questionnaire was designed based on the theoretical literature on the subject and research background, and to evaluate the validity of the questionnaire, content validity was used. In order to check validity the content of the research questionnaire, the questions were given to a number of management professors according to the components extracted from valid researches and with reference to the relevant sources, to comment on the validity of the questionnaire. In the qualitative review of the content, experts were asked to provide the necessary feedback after a qualitative review of the tool, based on which, the items were corrected. Content validity ratio (CVR) was evaluate the content validity used to quantitatively. To determine the CVR, experts were asked to review each question of the based the questionnaire on three-part spectrum of "necessary", "useful", and "unnecessary", and then the answers were calculated according to the following formula:

$$CVR = (n_E - \frac{N}{2}) / (\frac{N}{2})$$

The  $n_E$  was the number of specialists who chose the option "necessary" and N was the total number of specialists who were provided with a questionnaire to check the validity of the data collection tool. The CVR obtained from the formula was higher than the CVR presented in the CVR table, and the validity of the questionnaire was confirmed.<sup>16</sup>

In the first round, after receiving the questionnaire in the hands of the panelists, dimensions and components were determined and the importance of each step was recognized with a high average of 4. In addition, the respondents had a total of 8 dimensions for managers' competence, 6 dimensions for the performance of human resources, and 26 components for the dimension of managers' competence. Some of these dimensions were somewhat identical to those presented in previous studies and were omitted. In some cases, some of these dimensions were combined or replaced with existing ones.

*In the second round,* panel members reiterated their views on the dimensions and components of managers' competencies, human resource performance, and the impact and importance of each dimension and component. Examining the answers to open-ended questions in the first round of questionnaires showed that the dimensions and components suggested by the respondents were conceptually identical to the existing and identified dimensions and components of the literature. Therefore, these dimensions were combined with the existing dimensions and components. Dimension of mental competence (components of analytical skills, memory skills, creativity, and design) and the dimension of coaching (competence related to organizational citizenship behavior, health management evaluation, and crisis organization) were added and replaced for the qualification of managers for the second round.

	Table 1. Comp	etency characteristics of treatment managers with a passive defense approach	
Dimension	Component	Index	References
Political	Political awareness	Political insight, lack of politicization, political understanding, not neglecting the enemies of intellectual unity with the determined policies of the system	1, 2
competencies	Ideological competence	Believing in the revolution, protecting system, avoiding extremism, avoiding political strife, not using the managerial position, political authority	2-4
	Strategic knowledge	Strategic knowledge, awareness of the environment, observance of hierarchy, technological knowledge, commitment to continuous learning and medical knowledge, knowledge and sensitivity of the medical profession, knowledge of medical knowledge, knowledge and professional information	1
Knowledge competencies	Public knowledge	Economic knowledge (micro and macro economics), management knowledge, financial management knowledge, knowledge of information and communication systems, market management and marketing knowledge, continuous learning, teamwork in the field of treatment, knowledge and public awareness	1-5
	Professional knowledge	Technical and operational knowledge, full knowledge of health and medical principles in the country, full knowledge of health and medical principles abroad, scientific validity	6, 8, 10
Experimental competencies	Understanding organizational factors, dimensions, and structure	Paying attention to the organizational formality of the treatment field, the organizational complexity of the treatment field, the organizational focus of the treatment field, specialization in the treatment field, the professionalism of treatment staff, and the standards in the treatment field, empowering others in the field of treatment, performance management, hospital economic management, allocating financial resources in different parts of the hospital, human resource management	11-13
	Hierarchical growth in the field of treatment	Submission of work report to a high position, existence of vertical hierarchy, unlimited control of life, existence of specific work unit responsibility, executive maturity	15-17
	Practical experiences while working	Paying attention to the health of medical staff, coordination between the activities of members of the organization, coordination between different units of the organization, trust-based relationships with patients and suppliers, cooperation with other medical centers, experience of working with legal and governmental institutions active in the field of treatment, ability of control and supervision, accountability, crisis management, hospital financial management	14-17
	Ethical characteristics	Relying on God, honesty, and truthfulness, preserving human dignity and values, justice and fairness, committed to fulfilling responsibilities, stability commitment, credibility, service, attention to religious and moral values	15-17
Individual competencies	Personality traits	Influencing people's thoughts and feelings, motivating, powerful and decisive in decision-making, brave and courageous, self-confident, thought excellence, risk-taking, seizing opportunities, smart, creative and innovative, simple living, service spirit, work conscience, networking, influencing, self-regulation and appearance, adaptation between religious, ethical, and Islamic behavior and beliefs, partnership, steadfastness, communication skills, decision-making skills, leadership skills, management skills, counseling and guidance, risk-taking in the medical profession, time management, problem-solving ability, crisis management, creativity and innovation	5, 6

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	Table 1. Competenc	y characteristics of treatment managers with a passive defense approach (continue)	
Dimension	Component	Index	References
Attitudinal competencies	Managerial insight	Planning and organizing, interest in teamwork, paying attention to change in the field of treatment, behavioral and intellectual skills, paying attention to organizational interests, understanding the hospital mission, understanding hospital realities, planning, setting challenging goals	1
	Balanced attitude	Establishing a balance between performance and wages, creating justice among all employees active in the field of treatment, participation and delegation	4-10
	Thinking positive	Positive view of treatment innovations, foresight, rational thinking, consultability, emphasis on hospital efficiency	6-9
	Contingent attitude	Ability to predict the future, ready to respond to future adversity in the field of treatment, confidence building, vision	11, 12
	Strategic attitude	Attention to organizational knowledge sharing, consequentialism, training of expert workforce in the field of treatment, ability to evaluate before taking action, conflict management, diagnosis and problem solving	11, 12
Skills	Human/communication skills	Strong and effective communication within the organization, strong and effective communication outside the organization, recognition of interpersonal and environmental interactions, mutual trust building, collective wisdom and decision-making, flexibility, negotiation and bargaining skills, confidence building, judgment and decision-making, effective control of other physicians, helping other physicians' progress, collaboration and teamwork	6-10
	Perceptual skills	Systemic thinking, analytical thinking, creative thinking, process thinking, strategic thinking, analytical power, knowledge aristocracy of the past, foresight, presence of mind and intellectual readiness, understanding the present	6-10
	Executive skills	Ability to work with modern technologies, resource allocation, timely decision-making, planning and organizing, the ability to gain the right position for the organization, monitoring skills, time management, legal management, optimal management of financial resources and budget, creativity in providing novel treatment solutions	10-12

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For the individual competency dimension, the components of emotional intelligence, social competence, dimensions of safety management, staff health, staff training and improvement, staff recruitment, communication management, and cultural affairs for human resource performance were added and replaced for the second round. In all stages of determining the importance of factors in the form of Likert scaling, in each round against each factor, the average responses of panel members in previous rounds and the response of each person were reported to the respondents separately. According to the scale used in this study, a five-point scale based on the Likert scale including the options of "very high impact: 5", "high impact: 4", "medium impact: 3", "low impact: 2", and "very low impact: 1" was used. Point 3 was selected as the neutral point. In this case, the study was defined as having two ranges of disagreement from 1 to 3 and a range of agreement from 3 to 5. In the second round, the opinions of each member in the previous round were shared with the other members and they were again asked to evaluate each element.

Statistical analysis: According to the data obtained from Delphi method and different parts of the questionnaire in each round, statistical indices, minimum, maximum, average, value, and standard deviation (SD) were calculated. The distribution of the questionnaire according to the Delphi method was done in two stages and in each stage, the items that had the condition of mean  $\geq 4$  were brought in the next round and also components with an average of less than 4 were removed and not included in the next rounds of the questionnaire. Besides, the

indicators of consensus and the degree of consensus of experts in different periods were calculated. In the present study, Kendall test and "Kendall's coordination coefficient" were used to evaluate the degree of agreement and coordination of panel members (P = 0.05). Moreover, in the present study, the number of Delphi panel members was determined according to the theoretical saturation during interviews and its analysis; the the interpretation of different values of Kendall coefficient is given in table 2.

The test data were entered in SPSS software (version 21, IBM Corporation, Armonk, NY, USA) and analyzed by executing the analyze command, nonparametric tests, and K related samples (P = 0.05).

#### Results

The value of Kendall coefficient for measuring the degree of consensus of experts in the first round was 0.623 for the competency dimension of managers and 0.451 for the competency components of managers. In the second round, the value of Kendall coefficient was 0.766 for managers' competency dimension, 0.746 for managers' competency components, and 0.722 for human resources performance dimension, which shows that there was harmony between the views. Significance was also calculated to be P < 0.001, which indicates that the observed coordination coefficient was significant. The mean and SD of the panel members' responses in the first round about the importance of factors were calculated. Average rankings in the political, knowledge, first round for experimental, individual, and attitudinal competencies and also skills were 1.25, 4.43, 4.39, 4.25, 2.82, and 3.86, respectively (Table 3).

Table 2. Interpretation of Kendali coordination coefficient values						
Confidence in the arrangement of factors	Interpretation	The value of W				
Not existing	Very weak consensus	0.1				
Low	Poor consensus	0.3				
Medium	Medium consensus	0.5				
Much	Strong consensus	0.7				
Very much	Very strong consensus	0.9				

Table 2. Interpretation of Kendall coordination coefficient values

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based on dimensions of competence of first round						
Subgroup	Suggested components	Number of answers	Minimum	Maximum	Answers (mean ± SD)	Permission to enter the next round of Delphi
Political	Political awareness	26	4.00	5.00	$4.90 \pm 0.31$	Yes
competencies	Ideological competence	26	4.00	5.00	$4.80 \pm 0.42$	Yes
Knowledge	Strategic knowledge	26	4.00	5.00	$4.80 \pm 0.42$	Yes
competencies	Public knowledge	26	4.00	5.00	$4.80 \pm 0.42$	Yes
-	Professional knowledge	26	4.00	5.00	$4.80 \pm 0.42$	Yes
Experimental	Understanding	26	4.00	5.00	$4.80 \pm 0.42$	Yes
competencies	organizational factors,					
	dimensions, and structure	24	1.00	5.00	4 00 0 40	¥7
	Hierarchical growth in the field of treatment	26	4.00	5.00	$4.80 \pm 0.42$	Yes
	Practical experiences while working	26	4.00	5.00	$4.80 \pm 0.42$	Yes
Individual	Ethical characteristics	26	4.00	5.00	$4.80 \pm 0.42$	Yes
competencies	Personality traits	26	4.00	5.00	$4.80 \pm 0.42$	Yes
Attitudinal	Managerial insight	26	4.00	5.00	$4.80 \pm 0.42$	Yes
competencies	Balanced attitude	26	4.00	5.00	$4.80 \pm 0.42$	Yes
1	Thinking positive	26	4.00	5.00	$4.80 \pm 0.42$	Yes
	Contingent attitude	26	4.00	5.00	$4.80 \pm 0.42$	Yes
	Strategic attitude	26	4.00	5.00	$4.80 \pm 0.42$	Yes
Skills	Human/communication skills	26	4.00	5.00	$4.80\pm0.42$	Yes
	Perceptual skills	26	4.00	5.00	$4.80\pm0.42$	Yes
	Executive skills	26	4.00	5.00	$4.80\pm0.42$	Yes

# Table 3. Results of data analysis of the first round of Delphi method according to group of factors based on dimensions of competence of first round

SD: Standard deviation

The mean and SD of the panel members' responses in the second round also were calculated. Descriptive analysis and general results of data collection related to Delphi panel comments are achieved (Table 4, Figure 1).

#### Discussion

The present study aims to provide a competency model for managers in the field of treatment with a passive defense approach done in a qualitative manner. This research is designed by performing independent steps that have relatively independent approaches and in turn, contribute to the relevant literature. In the first stage, the competency model of managers with a passive defense approach was drawn using the Delphi method. A scale for managers' competencies with a passive defense approach in accordance with the Delphi questionnaire was presented. In another stage, the competency model of managers was validated with a passive

defense approach in the field of treatment. In order to carry out this mission, in the following sections, the issue of how to measure and evaluate the impact of managers' competencies on human resource was performed with a passive defense approach, and finally a model was presented and tested that has identified all aspects of this phenomenon, especially in the field of treatment. It has been shown that the proper implementation of passive defense in medical organizations can be related to the specific competencies of medical managers, which have a significant impact on the performance of human resources.<sup>17</sup> In addition, operationalizing and evaluating professional competencies of managers with a passive defense approach makes it possible to conduct experimental research in hospitals and government centers.<sup>18</sup> In fact, this study is a limited part of experimental work to examine the competencies of managers in a qualitative way using the Delphi method.

competence of second round							
Subgroup	Suggested components	Number of	Minimum	Maximum	Answers	Permission to enter the	
		answers			(mean ± SD)	next round of Delphi	
Political	Political awareness	26	3.00	5.00	$4.11 \pm 0.46$	Yes	
competencies	Ideological competence	26	4.00	5.00	$4.46 \pm 0.50$	Yes	
Knowledge	Strategic knowledge	26	3.00	5.00	$4.46 \pm 0.42$	Yes	
competencies	Public knowledge	26	4.00	5.00	$4.38 \pm 0.42$	Yes	
	Professional knowledge	26	3.00	5.00	$4.00 \pm 0.42$	Yes	
Experimental	Understanding organizational factors,	26	3.00	5.00	$4.23 \pm 0.71$	Yes	
competencies	dimensions, and structure						
	Hierarchical growth in the field of treatment	26	3.00	5.00	$4.11 \pm 0.42$	Yes	
	Practical experiences while working	26	4.00	5.00	$4.46 \pm 0.50$	Yes	
Individual	Ethical characteristics	26	3.00	5.00	$4.23 \pm 0.71$	Yes	
competencies	Personality traits	26	3.00	5.00	$4.11 \pm 0.42$	Yes	
Attitudinal	Managerial insight	26	3.00	5.00	$4.11 \pm 0.42$	Yes	
competencies	Balanced attitude	26	4.00	5.00	$4.46 \pm 0.50$	Yes	
	Thinking positive	26	3.00	5.00	$4.46 \pm 0.64$	Yes	
	Contingent attitude	26	4.00	5.00	$4.38 \pm 0.49$	Yes	
	Strategic attitude	26	3.00	5.00	$4.00 \pm 0.69$	Yes	
Individual	Analytical skills	26	1.00	5.00	$2.65 \pm 1.64$	Yes	
competencies	Memory skills	26	1.00	5.00	$2.73 \pm 1.61$	Yes	
	Creativity and design	26	1.00	5.00	$2.65 \pm 1.64$	Yes	
Coaching	Competencies related to organizational	26	1.00	5.00	$2.65 \pm 1.64$	Yes	
	citizenship behavior						
	Health management evaluation, crisis	26	1.00	5.00	$2.46 \pm 1.72$	Yes	
	management and organization						

# Table 4. Results of data analysis of the first round of Delphi method according to group of factors based on dimensions of

SD: Standard deviation

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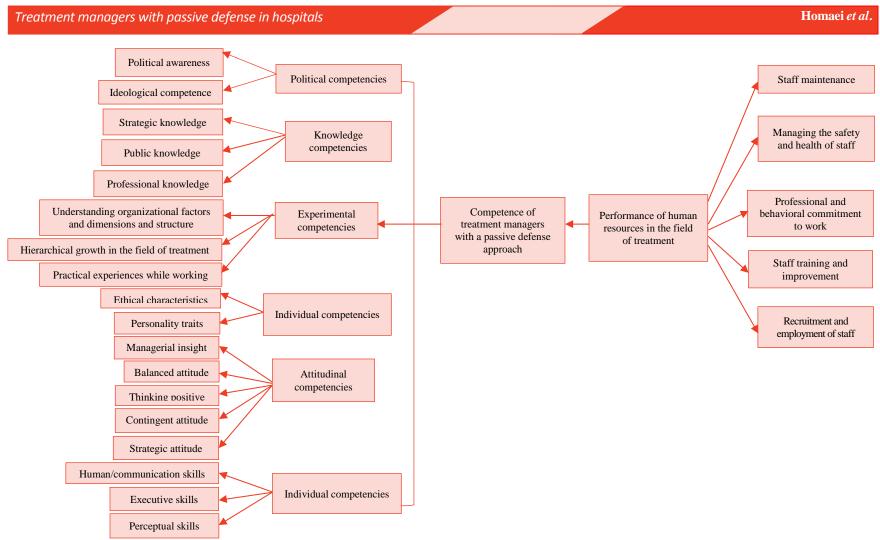


Figure 1. Descriptive analysis and general results of data collection related to Delphi panel comments

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Political awareness; Political insight, no politicization, political understanding, not neglecting the enemies, intellectual unity with the policies of the system. Ideological competence; Believing in the revolution and protecting the system, acceptance of the province, avoidance of extremism, avoidance of political strife, non-abuse of managerial position, political action. Strategic knowledge; Strategic knowledge, awareness of the environment, observance of hierarchy, technological knowledge, commitment to continuous learning and medical knowledge knowledge and sensitivity of the medical profession, medical knowledge, knowledge and professional information. Public knowledge; Management knowledge, financial management knowledge, knowledge of information and communication systems, market management and marketing knowledge, continuous learning, teamwork in the field of treatment, knowledge and awareness. Professional knowledge; Technical and operational knowledge, full knowledge of health principles in the country, full knowledge of health principles abroad, scientific validity. Understanding organizational factors: Organizational formality, organizational complexity, attention to organizational focus, professionalism, professionalism of employees, attention to standards, planning and organization, empowerment of others, performance management, economic management, financial allocation, human resource management. Hierarchical growth in the field of treatment: Submitting a work report to a higher authority, existence of vertical hierarchy, unlimited scope of control, existence of a single and specific work manager, executive maturity. Practical experiences while working; Attention to staff health, coordination between the activities of members of the organization, coordination between different units of the organization, relationships based on trust with patients and providers of cooperation with other medical centers, experience of working with legal and governmental institutions active in the field of treatment, ability to control and monitor, responsible for crisis management, hospital financial management. Ethical characteristics: Influencing people's thoughts and feelings, motivating, empowered and decisive in decision-making, brave and courageous, self-confident, thought excellence, risk-taking, seizing opportunities, creative and innovative, simple living, service spirit, work conscience, power influence, self-discipline and appearance, adaptation between religious behavior and beliefs, Islamic ethics, participation, steadfastness. Personality traits; Trust in God, honesty and truthfulness, preservation of human dignity and values, justice and fairness, committed to responsibility, stability, commitment, credibility, service, attention to religious and moral values. Managerial insight; Planning and organizing, interest in teamwork, attention to change in the field of treatment, behavioral and intellectual skills, attention to organizational interests, understanding the hospital mission, understanding the hospital facts, planning, setting challenging goals. Balanced attitude; Establishing a balance between performance and wages, creating justice among all employees active in the field of treatment, participation, and delegation. Thinking positive: Positive view of medical innovations, foresight, rational thinking, consultability, emphasis on hospital efficiency. Contingent attitude: Ability to predict the future, ready to respond to future adversity in the field of treatment, confidence building, vision. Strategic attitude: Attention to organizational knowledge sharing, consequentialism, training of expert workforce in the field of treatment, ability to evaluate before taking action, conflict management, diagnosis and problem solving. Human/communication: Strong and effective communication within the organization and outside the organization, recognizing interpersonal and environmental interactions, mutual trust, collective wisdom and decision-making, flexibility, negotiation and bargaining skills, judging and deciding, effective control of other physicians, helping other physicians to progress, cooperation and teamwork. Executive skills: Ability to work with modern technologies, resource allocation, timely decision-making, ability to gain the right position for the organization, time management skills, legal management, optimal management of financial resources. Perceptual skills: Systemic thinking, analytical thinking, creative thinking, process thinking, strategic thinking, analytical power, knowledge and aristocracy of the past, foresight, presence of mind and intellectual readiness, understanding the present.

This method gives an account of an experiment, in order to obtain the most reliable opinion consensus of a group of experts by subjecting them to a series of questionnaires in depth interspersed with controlled opinion feedback.<sup>19</sup> A research in Canada on the leadership showed that an important factor in the success or failure of public health systems was manegers. With a Delphi method in a participatory action research project on health leadership, they concluded that a modification of post-interview confidentiality form to address differentials power between participants and to enhance confidentiality in the participatory action research process was nessesary.<sup>20</sup> Another study in Spain with Delphi technique showed that 705 nurses replied to the first wave in the Delphi technique, and 394 in the second (response rate of 56%). Factorial analysis grouped the skills chosen into 10 factors: managing people, conflict management, independent learning, ethics, emotional balance, commitment, selfdiscipline, continuous improvement, critical thinking, and innovation. Four skill groups identified in this study (emotional balancing, commitment, self-discipline, and courage) were not usually included in the post-graduate courses.<sup>21</sup> In the present study, using the opinions of experts and knowledgeable managers' managers, dimensions of competence were identified. In particular, the competencies of managers in the field of treatment should be presented with a passive defense approach to show the kev competencies that managers in the field of treatment can acquire in order to be able to act optimally against internal and external threats by affecting the performance of human resources and cross the barriers of the health system. The most important limitations of this research were the following: poor cooperation of some medical and passive defense specialists in medical centers, hospitals, Ministry of Health, universities of medical

sciences, Passive Defense Organization, and passive defense offices in the ministry and universities of medical sciences in interviews and answering the questions of the Delphi questionnaire. In addition, the whole country was affected by the coronavirus disease 2019 (COVID-19), which the high prevalence and speed of transmission of this virus made the experts reluctant to interview in person in the Delphi method several times, and this made it difficult for the researchers to obtain information.

## Conclusion

The research results indicated that passive defense criteria were political awareness, ideological competence, strategic knowledge, public knowledge, professional knowledge, organizational understanding factors, dimensions, and structur, hierarchical growth in the field of treatment, practical experiences working, ethical characteristics. while personality traits, managerial insight, balanced attitude, thinking positive, contingent attitude, strategic attitude, analytical skills, memory skills, creativity and design, competencies related to organizational citizenship behavior, health management, and evaluation of crisis management and organization.

### **Conflict of Interests**

Authors have no conflict of interests.

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