

## Original Research

### Designing a Model to Evaluating the Performance of National Accreditation of Hospitals

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#### Abstract

**Introduction:** Accreditation program is one of the most reputable quality-based and safety-based evaluation models with increasing global acceptance in the health sector that correct implementation of it will lead to more and better observance of safety and patient rights and improve the quality of health services. Therefore, the present study aimed to design a model to evaluate the performance of the national accreditation model of hospitals.

**Methods:** This qualitative research was conducted using grounded theory method. Participants were sampled purposively. Data saturation was happened after 16 semi-structured interviews. Data were analyzed according to Strauss and Corbin approach using Atlas.ti software. As a result, 1387 codes from open coding, 44 concepts and 12 categories are categorized into six dimensions.

**Results:** "Support of the client" was identified as causal conditions. "competence of evaluating teams", "accreditation implementation structure", and "comprehensive and barrier of standards" were introduced as strategic conditions, "evaluation of national accreditation performance of hospitals" as an axial phenomenon, "empowerment of process owners" as context conditions, "adequacy of hospital resources with the implementation of standards", "sharing accreditation benefits with service providers", "participation of service providers", and "regulatory regulations" as mediator conditions, and finally, "service quality" and "safety" are identified as outcomes.

**Conclusion:** The research findings include categories and concepts that can be used in evaluating the performance of hospital accreditation models as key indicators and can be effective in improving the quality of hospital accreditation.

**Keywords:** Performance evaluation, National accreditation, Hospital

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#### Introduction

Hospitals play an important role in improving the mental and physical health of people. The type of clients and the nature of services in the health and medical sector require the establishment of a purposeful system for planning, improving and evaluating the quality of health care services. The control process

plays an important role in the productivity of health care organizations. The purpose of control is to ensure that the goals of the organization are achieved and the desired results are achieved (1). Health care organizations face significant challenges due to competitive needs to provide services. An environment in which the economic, political,

and legal incentives of health care providers to control cost and maintain quality makes quality promotion the only way to achieve the desired success. Therefore, most health care managers and policy makers in the field of health, standardization, accreditation and evaluation of health service providers consider it inevitable to improve quality (2).

Hospitals are increasingly under pressure to improve the quality of care services through national programs such as hospital value-based purchases, inpatient reduction programs, and hospital-based scoring programs. Despite recent policy emphasis on the link between pay and quality, quality improvement efforts have traditionally focused on the processes and outcomes of clinical providers (3). Therefore, the role of accreditation and certification in improving patient and organizational outcomes is largely unclear. Accreditation and certification is a thriving industry, and there are many interested stakeholders who can benefit from these services despite the lack of strong evidence of their effectiveness (4).

Given that accreditation in many countries has led to improved hospital performance, some studies show that the implementation of accreditation standards in Iranian hospitals has been associated with challenges and obstacles. These challenges and obstacles are: lack of necessary infrastructure, lack of manpower to implement the standards, lack of participation of physicians, lack of resources and appropriate information systems and documentation, high cost of implementing accreditation standards, promotion of administrative bureaucracy, increasing workload Manpower, creating stress in employees due to increased workload and time consuming implementation of standards (5-7). In their study, Sack et al. Had limited recognition of the impact of accreditation on health care services, arguing that accreditation shows its impact over time and that it is not possible to pinpoint a point in time to show impact. Accreditation specified (8). The challenge is to strike a balance between the roles of health professionals, government policy makers, the general public and other stakeholders in improving quality and setting standards for the health sector (9).

Currently in Iran, the Ministry of Health Treatment and Medical Education annually evaluates medical centers using its desired hospital standards and determines the degree of

hospitals based on them. Despite these standards and the achievement of grades 1 and 2, many hospitals still lack the appropriate quality and efficiency (10, 11). The study by Salmon et al. (12) and Greenfield et al. (13) showed that accreditation is a process that helps to improve performance and develop positive outcomes in patient health studies. The results of the study by Arab et al. (14) showed that not only patients do not have a good knowledge of their rights, but also patients' rights are not properly respected by medical centers. They considered the adoption of a comprehensive law and the design of a specific program to monitor and supervise the implementation of that law to ensure the observance of patients' rights.

Due to the fact that the results of the studies do not show a documented relationship between the results of national accreditation of hospitals and the quality of hospital services, the present study aimed to provide a model for evaluating the performance of the national accreditation model of hospitals to measure the quality of presented services by hospitals.

## Methods

The present study is exploratory-applied in terms of purpose and qualitative in terms of method, which was performed using data-based theory. This approach is a general methodology for theory development based on data collection and analysis, which is developed and discussed during the research process. According to the research method (qualitative), the statistical population included managers and staff experts and national evaluators of hospital accreditation and senior and middle managers of hospitals, providers and recipients of services in educational and medical centers of the pole of a country. After the approval of the ethics committee in biomedical research of Islamic Azad University of Semnan (code IR.IAU.SEMNAN.REC.1398.020) were studied purposefully. The strategy used to select individuals was target-based sampling using the snowball method. After the initial concepts emerged, the selection of the next participant depended on how much he / she could help to clarify the emerging concepts. This sampling process continued until data saturation.

In this study, data saturation was achieved by conducting 16 interviews and initial concepts were formed. The interviews were conducted with consent and individually in a secluded room and quiet environment with the coordination of the interviewee. The main method of data collection in this study was a semi-structured interview based on an interview guide. All interviews were conducted by the lead researcher. The initial questions of the interview were to encourage participants to talk freely about their experiences. For example, they were asked to comment on how accreditation works. Subsequent follow-up questions were asked based on the information provided by the participant to clarify the concept under study. Exploratory questions such as give more explanation, or give examples, articulate your meaning more clearly, were also asked among the more general questions. Each interview lasted approximately 30 to 60 minutes. All interviews were recorded, then typed verbatim and analyzed using Atlas.ti software version 7. Due to the fact that in qualitative research, the researcher needs to be immersed in the data (15), so the researcher has reviewed the interviews several times (if necessary) and read the text several times. To analyze the obtained data, the coding method was used, which is a kind of data reduction and analysis strategy - in the framework of which qualitative data are summarized, classified and categorized based on macro-social and cultural context. The analysis of the obtained data was performed based on the working method in the above strategy in the form of open, axial and selective coding. Coding refers to the techniques proposed by Strauss and Corbin (16), which include shredding data from interviews and notes to create concepts, categories and juxtaposing categories in such a way that clearly justify the relationship between them.

In this study, to achieve the reliability criterion of the findings, the following three common methods were used (17): 1- Validation and control by members: In this section, participants were asked to evaluate the overall findings and about Comment on its accuracy. 2- Analytical comparisons: In this method, the primary (raw) data was referred to to compare and evaluate the structure of the theory with the raw data. 3- Using the audit method: In this field, three experts in the field of foundation

data theory supervised the different stages of coding, conceptualization and extraction of categories.

## Results

The results showed that all of participants were male. The mean age (std) of participants was 51.80 (2.15) years. 4 people had bachelor's degree, 6 people master's degree and 6 people doctorate (Table 1).

In the present study, the recorded interviews were carefully transcribed and their data were entered into the Atlas.ti software. Then, by line-by-line review and coding of the text, concepts and categories were extracted. As a result, 1387 codes were obtained from open coding, 44 concepts and 12 categories from axial coding (Table 2).

Table 2 lists the main concepts and categories related to them. The identified categories were placed in the paradigm model based on the data approach of Strauss and Corbin Foundation and were placed in each of the dimensions of the paradigm model including causal conditions, contextual conditions, intervening conditions, strategy and outcome. In axial coding, by examining the relationship between research variables, categories of national accreditation performance evaluation of hospitals, customer service support, competency of assessment teams, accreditation executive structure, comprehensive and barrier of standards, empowerment of process owners, appropriateness of hospital resources By enforcing the standards, the sharing of accreditation benefits with service providers, the involvement of service providers, regulatory regulations, service quality, and safety were identified. In the data theory approach of the Strauss and Corbin Foundation, in order to present a paradigm model, the obtained categories were arranged based on the central phenomenon, causal conditions, intervening conditions, contextual conditions, strategy and outcome.

## Casual conditions

Causal conditions are a set of events and conditions that affect a central category. In this study, the category of "customer support management" was identified as a causal condition affecting the central phenomenon. This includes the concepts of responding to complaints and suggestions, timely and

continuous access to the treatment team, providing accommodation facilities, providing the required information, and respectful behavior.

Responding to complaints and suggestions: From the perspective of health care recipients, one of the important measures that should be seriously pursued in hospitals with a high degree of accreditation is proper response to complaints and suggestions. The clearness of the grievance process and the provision of a clear and timely response to the issues were components of responding to complaints from the perspective of the participants. "I do not know what accreditation is? But I think a hospital with a better grade should have a better response. Now my patient, who has been sleeping here for two nights, does not always have a blanket. "Should I go and tell the head of the hospital? I mean, the head of the hospital does not know that the previous patients who had problems sleeping here have a blanket?" (P1). Timely medical services: From the perspective of the service recipients, one of the main processes that should perform better in a hospital with a higher degree of accreditation is the timely medical services and continuous nursing services. The timely presence of the treating physician and consultant and the provision of services without delay and accessible at all hours of the day and the appropriate response are examples of this category: "I expect that if this hospital is first class, I will be there from morning to 3 pm I should not procrastinate that the doctor wants to remember to discharge my patient. My patient has been hospitalized in this hospital for 10 days, his doctor has not visited him more than twice, and then you should look at the bill they give us "(P2).

Respectful behavior: From the perspective of care recipients, one of the categories that should be available in the hospital with a higher degree of accreditation is respectful treatment of the patient and his companion. Respectful treatment of the client from the time of admission to the treatment of the doctor and nurse, as well as respect for the principles of confidentiality of patient information is an example of this category. "When I came to this private hospital, someone came with me right away to guide me through my admissions work and then directed me to the hospital room. Their behavior was very respectful. How good

it is that this kind of behavior is done in all hospitals and the Ministry of Health must should take these issues into account the hospitals, because these respectful behaviors create a sense of trust in the hospitals" (P3). Providing the required information: From the perspective of service recipients, one of the categories that should be available in the hospital with a higher degree of accreditation is providing the required information to the patient and his/her companion. Providing the necessary information at the time of admission, providing the necessary training and legal access to the medical record are examples of this. "The first time we were admitted, he explained to us about our insurance and hospital costs. After we referred to the nurse, he introduced himself/herself and talked to me about my work. It was very good. The patient's body has the right to make a decision right away. If his/her affordance is suitable, he/she will come to this hospital. If he/she does not have the affordance, he/she will choose another place. Other hospitals should also use this method"(P4).

### Context conditions

This category refers to a set of conditions that provide the context for the phenomenon and affect behaviors and actions. Underlying conditions affect the central category and its results. In the present study, the category of "empowerment of process owners" was identified as a background condition. This category includes the concepts of managerial empowerment, staff empowerment and medical graduate empowerment. Empowerment of managers: From the participants' point of view, creating organization, directing resources and consolidating organizational behaviors are the duties of managers to lead the accreditation program in hospitals, which requires needs assessment and careful planning of the Ministry of Health to empower managers in this area. "As a manager who has been managing the hospital for 20 years now, I do not remember the Ministry of Health remembering a training needs assessment once to see what training needs its managers really have to implement the standards? First empowering managers, then announcing a new standard" (P9). Employee empowerment: Manpower is the most important source of

added value in organizations. From the participants' point of view, the implementation of measures and standards and the advancement of the goals of the National Accreditation Program will not be possible without accurate training needs assessment and balanced staff empowerment. The following description is from the perspective of the participants. "Unfortunately, I have to say that we have not seen any training in the field of accreditation in these years. I do not mean training and put four powerpoints on the site. The training should be practical and purposeful. "A trained human being or acquainted with scientific models. The good result is that for the day of accreditation, another hospital wants to make 4 documentaries to get its grade. But is this the purpose of accreditation?" (P10). Empowerment of medical graduates: The need to create the necessary technical skills to implement accreditation standards, creating a participatory spirit and teamwork from the participants' point of view as requirements for empowering university graduates to enter the hospital work environment. "I realized the main reason why doctors did not participate in accreditation before graduation. While studying, the doctor must learn that when you enter the hospital, it is not just a matter of visiting the patient, your role in treatment goes far beyond that, if a medical student sees that residents "Over the years, they have respected his role in accreditation, and in the classroom he has been repeatedly reminded that filling in the patient file correctly is one of your duties, such as prescribing the right medicine, then we do not have all these basic problems with our doctors here" (P13).

### Intervening conditions

Interventional conditions affect how they act and react. In the present study, based on the content analysis, four categories of adequacy of hospital resources with the implementation of standards, sharing of accreditation benefits with service providers, participation of service providers, and regulatory regulations have been defined as intervening conditions. "Proportion of hospital resources to implement standards" includes the concepts of adequacy of financial resources, adequacy of equipment resources

and adequacy of human resources. Appropriateness of financial resources: According to the participants, hospital managers need access to financial resources to provide and create productivity of human resources and equipment in order to facilitate the implementation of accreditation standards. "In safety management visits, we often have good approvals, but unfortunately, most of the time, due to lack of financial resources, its implementation is delayed. Now, no supplier works non-cash. That is why the hospital has to meet really vital needs. Give priority "(P15). Proportion of equipment and pharmaceutical resources: Equipment resources are essential to provide quality and safe services in hospitals. According to the participants, hospitals prioritize and provide vital resources necessary to provide services, but face severe financial constraints on access to new capital equipment and pioneering in this field. "We do our best to meet the basic needs of medicine and equipment, and we do not have a major problem. Although these minimum needs are really difficult to meet in this situation, for example, if we want to do a CT scan to generate revenue for the hospital, we face a problem. We are and still have to refer our patients to other hospitals "(P7). Adequacy of human resources: Human resources are the most valuable management tool to achieve the goals of the National Accreditation Program. From the participants' point of view, low manpower index has become the most important concern of hospitals to provide quality services. The following description is from the perspective of the participants. "We turn the nursing staff into an experienced staff, and then they are recruited by the public sector with the first recruitment test. Now we have a real problem finding a male nurse. On the other hand, due to income problems, the board does not give permission to recruit. We have a lot of problems "(P12).

"Sharing accreditation benefits with service providers" includes concepts such as hospital revenue, managers' job stability, physicians' motivation, and employee motivation. Hospital revenue: From the participants' point of view, the executive guarantee of the national accreditation program is related to the provision of benefits by providing service providers. The effect of ranking hospitals through hoteling tariffs is effective on

hospitals' income. "Well, if we do not perform well in accreditation, it naturally affects the hospital hotel tariff, and given that the validity of certificates is biennial, it will be difficult for hospitals to compensate. Therefore, hospital staff try not to drop grades." (P14). Job stability of managers: Accountability to superiors for the results of national accreditation is of particular importance to managers. However, from the participants' point of view, the very wide distance between the scores for grading and the ease of gaining first-class credit has reduced part of this sensitivity. "One hundred percent of the results are important for managers. Because, after all, there is a criterion that affects their performance, and on the other hand, because it affects the income of hospitals, it is also important for officials, but because in practice, policies are designed so that we do not fall The first degree is not very challenging for managers, ultimately it rarely happens to affect the job stability of managers and in fact other factors affect the dismissal and installation"(P13). Motivation of physicians' participation: Despite the importance of physicians' participation in the national accreditation program from the participants' point of view, the accreditation mechanism lacks the necessary factors to motivate or oblige physicians to participate in the program. "I have worked both as an assessor in national accreditation and in a teaching hospital. It has been very interesting to me that even our students have been actively involved in educational accreditation because they have benefited from its results. But on the contrary, they have no co-operation in medical accreditation. "It does not matter to them at all. I think accreditation should have a mechanism that makes it more attractive for physicians to participate" (P16). Employee Involvement Motivation: According to the mechanisms envisaged in hospitals based on the method of motivational or functional payment to employees and the effect of accreditation rankings on hospital income and in proportion to the department / units where employees work between accreditation results and the income of the employed employees is communicated. "Obviously, when my hospital drops, so does my income. The doctor may not care much about it because his source of income is out of the hospital, but it's more important to me as a nurse. I even have to

describe my doctor's duties to complete the documentation so that we do not have a drop in grade "(P9).

"Service providers 'participation" includes the concepts of managers' participation, middle managers' participation, and doctors' participation. Participation of senior managers: From the participants' point of view, the level of scientific ability of managers in their participation in the accreditation program is effective. Conflict with the daily problems of the organization and the unwillingness to scientific management and the wrong way of selecting managers reduces the effective participation of managers. "Our bosses are suffering on a day-to-day basis. I think accreditation is a scientific tool for managers that, if they are well-justified and capable of using it, they can use it to solve hospital problems. But unfortunately not. There is interest from managers and there is no plan to empower managers "(P13). Involvement of middle managers: According to the participants, the highest level of activity is in the field of implementation of accreditation standards with middle managers of the hospital. Knowledge, appropriate experience, sense of responsibility and accountability to superior managers are the reasons for proper participation of middle managers. "Because nurses are both responsible for the performance of the subdivision and are usually people who have gone through the process of development and have sufficient experience, they generally take on the task of advancing accreditation programs" (P11). Physicians' participation: From the participants' point of view, lack of proper justification of the program, not being harmed by non-participation and the low role of physicians in setting standards are the reasons for inappropriate physicians' participation. "As a nurse, if I give the patient medicine half an hour later, the consequences will be a problem for me, but the doctor is not responsible anywhere. If he advises the patient 4 hours later, no one can ask him. If it is midnight, I must be afraid tremble to call doctor to explain the new case to him/her, they will not participate until there is no response "(P10). The "role of regulatory regulations" includes concepts such as the role of insurance organizations and the role of regulatory laws. The role of insurance organizations: From the participants' point of view, due to the lack of

independent evaluation teams from the Ministry of Health, providing a greater role to insurance organizations in the evaluation process helps to bring the results closer to the quality realities of hospitals. "When the representative of the insurance organization enters the evaluation operation, his position is not clear at all. He only signs the minutes. I think if this role is highlighted like the evaluation system, the accreditation results will be closer to reality" (P12). The role of regulatory laws: The impact of the implementation of regulatory laws by the Ministry of Health on the ranking of hospitals and the issuance of certificates, if there is an executive guarantee from the participants' point of view, will strengthen the support of the national accreditation model. "A good thing that started in the third term was to discuss the Ministry of Health's monitoring programs on the results. It also started with the cesarean section index, which means that if a hospital did not follow the normal delivery instructions and did not rationalize its cesarean section index, there would be a drop till to correct the index "(P14).

### Strategies

The strategies considered in the data theory of the foundation refer to providing solutions to deal with the phenomenon under study, the purpose of which is to manage, deal with, accomplish and show sensitivity to the phenomenon under study. In this study, the competency categories of assessment teams, accreditation executive structure, and comprehensiveness and barrier of standards are considered as strategies. "Competence of assessment teams" includes the concepts of technical knowledge, communication skills, uniformity of assessors' procedures, assessment within standards, and qualitative messages of assessors. Technical knowledge: It is necessary to be in the role of accreditation assessor, sufficient mastery of standards along with knowledge of national laws and guidelines related to these standards. Given the variety of topics that can be evaluated by national evaluators, the participants' experience usually shows that the evaluators do not have enough knowledge to ask questions and evaluate performance in areas that are not directly related to their degree and work experience. "Usually, our evaluators had good information

and knowledge, but in the meetings that we had after the evaluations and I reported on them, sometimes the same evaluator, who I think was very professional, was less or less of our colleagues' knowledge and information in some areas. He made false comments that were completely contrary to the instructions given. Of course, this should not be the case and the evaluator's information should be more than the subject being evaluated. Of course, this is not general in my opinion and the evaluators' knowledge was good in general" (P8). Communication skills: From the participants' point of view, the evaluators' communication skills start from the time of arrival at the hospital and during the evaluation process have a great impact on creating a constructive space for the content and explanations to be provided by the evaluator and how to collect data for final judgment. The following description is from the perspective of the participants. "An important principle in evaluating is how to manage the evaluation space. Naturally, the evaluated person has a lot of stress to evaluate, which certainly has a great effect on his performance and explanation of the evaluator's questions. If the evaluator cannot manage this space and is very selfish and resentful. He simply asks his questions and does not pay attention to what is happening in the evaluation environment. He certainly cannot extract the data he is looking for and ultimately make the right decision to score" (P9).

Unity of the evaluators 'procedure: The disproportionate practice of the evaluators in collecting evaluation data in the evaluation teams or between the evaluators of different hospitals, which from the participants' point of view is due to different technical capabilities, different interpreters of the standards and non-standardization of evaluation methods. The following description is from the perspective of the participants. "Well, suppose in a strategic plan, a hospital evaluator follows the program management team from the beginning of the program to the report of the program indicators, but for another hospital where I work in the recovery office, the evaluator only covers the first two pages of the program. "Naturally, the results of the evaluation are not the same, and this creates a kind of feeling of injustice in the staff" (P13). Evaluation within the standards: In some standards, the qualitative concepts considered are not exactly in accordance with

the rules and regulations. Sometimes, the standards consider a lower level and sometimes more difficult conditions than the rules and regulations. The basis of the standards in the evaluations and the need for the evaluators to pay attention not to go beyond the standards were the points expressed by the participants. The following is from the participants' point of view: "I resisted asking the document evaluator to go outside the standards. Of course, this is not a permanent request, but it is really important because it can interfere with the evaluator's opinion and the standards, and in fact, makes the justice in evaluation difficult" (P3). Qualitative messages of the evaluators: Although providing direct opinions of the evaluators to the evaluated is contrary to the professional approach of the evaluation, but considering that improving the quality of services is one of the goals of accreditation, in the opinion of the participants, the evaluators' behavior, questions asked by the evaluators and guidance Evaluation can help convey qualitative concepts to hospitals. The following description is from the perspective of the participants. "When the evaluator talked to the patient about the sampling method and asked questions, my best memory was of the validation. Between his conversation and the conversation he had with the patient, I made a very important point about the sampling and what needs to be done. I have learned that it never leaves my mind, and this is, in my opinion, the best way to learn it" (P16).

"Accreditation executive structure" includes the concepts of time interval of changes in standards, accreditation rating criteria, validity period of accreditation certificates, number of accreditation evaluation days, method of informing hospital ratings, qualitative feedback of accreditation, and proportionality of accreditation teams. Interval of changes in standards: Qualitative concepts considered for national accreditation are expressed in the form of standards and metrics. Achieving these concepts requires training at various organizational levels from universities to hospitals, planning and ongoing remedial action in hospitals. According to the participants, the time interval between changes in standards is not commensurate with the readiness of hospitals to implement qualitative concepts. The following description is from the perspective of the participants. "I remember

that over a period of time, mandatory standards changed in the middle of evaluations. This is not a good sign. This shows that the Ministry of Health, as the custodian of standards, does not have a roadmap for standards and these changes. "It is very difficult and time consuming. Therefore, I think we should consider a period of stability between accreditations for changes in standards so that hospitals can consolidate and optimize their resources in line with the changes" (P7). Accreditation Ranking Criteria: The scores used to rank hospitals will be the criteria for grading and certification. According to the participants, the range of scores considered in recent courses is very open and has greatly facilitated the achievement of first-class accreditation. The following description is from the perspective of the participants. "I do not think it is too much to consider a score above 60% or 61% to reach the first degree of accreditation, that is, the hospital does not really need to change behavior or much effort to reach the first degree, but I think the economic situation and conditions of the organization Insurers have been influential in this decision, but the fact is that in this case, the degree of accreditation cannot indicate the quality of hospital services" (P10). Validity period of accreditation certificates: The period considered for two-year validity of certificates is appropriate for the participants and provides the necessary opportunity to make changes and corrective actions after accreditation. "Previously, when the validity period was one year, we had little time to address our shortcomings or to adapt to our new standards. It was very difficult, but now I think it has improved a lot and the two-year gap between comprehensive accreditation is fair to me." (P10).

Informing the community from ranking of hospitals: One of the important applications of accreditation is to assure the covered community about the quality of hospital services, but from the participants' point of view, a suitable way to provide hospital accreditation information to the community is not provided. "According to the standards, we are obliged to display the certificates in specific places of the hospital to the recipients of the service. That is, the recipient of the service reads this certificate when he has entered the hospital and is receiving the service and no

longer has a choice "(P12). Proportion of number and composition of evaluators of accreditation teams: Due to the limitation of accreditation days, from the participants' point of view, a change in the number of evaluators or the composition of accreditation evaluators seems necessary. The following description is from the perspective of the participants. "You see, in order for the evaluator to be able to cover the standards that he has to evaluate, he has been in the hospital for 10 nights. Well, he gets tired and the quality of his evaluation process does not line up from the beginning to the end. The evaluators do not have the technical ability to evaluate all the axes that have been given to them, and I think that the composition of the evaluation teams should be reconsidered "(P13).

"Comprehensive and constrained standards" include concepts such as the balance of structural, process, and outcome standards, consideration of diversity of hospital ownership and services, transparency and comprehensibility of standards, enforceability of standards, and appropriateness in job descriptions. Balance of standards of structure, process and results: From the perspective of the participants in this study, it is necessary for the standards to have a balanced and proportionate view of all three categories of structure and resources, processes and results. The following description is from the perspective of the participants. "In the first period of accreditation, a lot of attention was paid to the creation of structures. As we reached the next generations, the structures became less and less, and the processes received more attention. In general, it did not pay much attention to the results of accreditation. I think the comprehensiveness of the standards is that Pay attention to three components "(P4). Standard attention to the diversity of ownership and services of hospitals: Attention to the requirements of providing services in hospitals with different ownership, from the perspective of participants in this study has been seen as an effective factor in developing standards. The variety of specialties offered in hospitals, as well as the existence of specialized hospitals, etc., create requirements that, from the participants' point of view, should be considered in the development of standards. "When you read some of the standards, you think they are designed for public hospitals and

are not applicable at all and do not conform to the structure of private hospitals. Or, conversely, important quality issues for private hospitals or the armed forces that are not seen in the standards at all" (P15). Transparency and comprehensibility of standards: Accuracy in compiling and writing the text of standards and accreditation measures will create a common understanding in the audience and from the point of view of the participants will cause the evaluator and the evaluated not to look differently at the standards. The following description is from the perspective of the participants. "In the fourth generation accreditation book, a good step has been taken. At the end of each measurement, explanations are written about the quality dimensions of the standard, but nevertheless, a number of standards, especially in the field of management, do not clarify the task of the assessor and the Evaluation should use its own views to analyze standards and metrics, which may be better used in future versions" (P13). Feasibility of standards: From the perspective of the participants in this study, due to the locality of the accreditation model, in formulating the standards, it is necessary to pay attention to their accessibility and implementation for hospitals. "When we say that the standard should be enforceable, we do not mean that a qualitative goal should be removed from the standard, but given the current state of the health system and the resources available to hospitals, both the main purpose and concepts of the standards and expectations in writing should be established. The standards must be observed so that the hospital can execute it according to all its conditions "(P9). Appropriateness in creating job descriptions of occupational groups: From the participants' point of view, the quality concepts considered by the standards will improve the real quality in hospitals when given a fair and appropriate view of the technical and executive roles in hospitals for different occupational groups. Define tasks. "You see, in some places we know that bottlenecks in hospital problems, effective medical intervention, and quality improvement in clinical wards are not possible without the effective intervention of physicians and their active implementation of accreditation standards, and we do not achieve the goal we set. I think we should set aside compliments."

"In many places, the nurse is doing the doctor's duties. Here, first, the accreditation should be transparent in the standards, clarify the doctor's job description, so that in the next stage, the management can refer to it and work more on the doctors' participation" (P14).

### Outcomes

Outcome refers to the results that are obtained from strategies and actions related to the central category. In the present study, two categories of "service quality" and "safety" were considered as outcomes. "Service quality" includes the concepts of process improvement, access to appropriate equipment, department / unit performance metrics, and the core management plan. Process Improvement: Process improvement is a way to combat process redundancies that delay program implementation, undermine staff performance, and reduce hospital productivity. Lack of continuous planning and attention of the managers of the organization to the standards defined in the field of quality improvement, in the time close to accreditation and only to prepare the necessary documents to present on the day of accreditation and lack of training and empowerment of managers to use scientific tools to improve Hospital processes are one of the phenomena that participants have encountered. "I, who work in the evening and night shifts, have practically nothing to do with the quality improvement unit of the hospital, and it seems that all quality improvement work is done in the morning and we are another organization in the evening and night". Greatness reaches the ears of managers in the evening and at night" (P16). Access to appropriate equipment: One of the requirements for providing quality services is the availability of minimum diagnostic and treatment equipment in hospitals. Existence of mandatory standards in the third period of national accreditation and also paying attention to the principle of optimality in the fourth generation from the participants' point of view makes available the appropriate equipment to provide the desired services. "There are limitations, but fortunately the third generation of accreditation, which was a mandatory measure, made up for many of our shortcomings and we do not have a problem at the moment. He emphasized, and we were very successful in managing the supply of

equipment when we did that" (P2). Unit / ward Performance Indicators: Performance indicators are measurable parameters for performance that help the hospital to define and measure the process of achieving organizational goals. According to the participants, the implementation of accreditation standards should ultimately improve the performance indicators of hospital wards / units, but for various structural and process reasons, this has not happened in hospitals. "When I do not have enough staff to take care of my patient and most of the ward staff are women who are removed from the staff list for various reasons such as pregnancy and .... I cannot have any replacement for them, well naturally the staff suffers "They get tired and we can practically not be able to achieve the performance indicators of the ward, even if the hospital programs are good or the standards are good" (P5). Managers' core program: Organizations seek to use their limited resources to meet their diverse and growing needs. Of all the management tasks, planning is one of the most basic tasks of managers. The purity of the environment and the presence of turbulence in it and the uncertainty caused by environmental changes add to the undeniable necessity of planning. According to the participants, the accreditation program, despite the development of standards in this area, has not led to a central program for managers. "Many of the management and leadership standards that refer to planning are practically inefficient. The fact is that our managers have simply become problem-solving machines and do not have the ability to plan to solve problems. The day before the accreditation is in the process of strategic planning, or other managers are not familiar with the hospital plan and do not have a plan-oriented view at all" (P8).

"Ensuring safety" includes the concepts of prioritizing safety issues, improving safety indicators, prevention and learning approaches, and reducing employee occupational exposure. Priority of safety issues: Special attention of accreditation standards to the issue of patient safety and more emphasis on safety-related standards along with continuous training of staff in this area has made safety-related issues a top priority for hospitals. The following description is from the perspective of the participants. "Since the implementation of the

accreditation program, because our committees have become very active in this field, and one of the topics of the committees, depending on the nature of the committee, is usually safety issues, and because of the frequent repetition of this issue in the speeches of accreditation evaluators and teachers. They came to the hospital for safety issues and became more important to our managers and received more attention "(P6). Safety indicators: It will be possible to measure the effectiveness of hospital supply measures by measuring safety indicators. Participants in this study believe that achieving the set indicators requires creating a safety culture in the organization and ensuring that the behavior of all occupational groups changes. "Despite the fact that good structures have been set up to discuss safety in the hospital, it has always been difficult for us to achieve safety indicators, mainly due to the lack of participation of doctors. Unfortunately, it is thought that safety is only for nurses and staff. "Unfortunately, our managers do not have the necessary capacity to involve doctors" (P7). Prevention and Lesson Approach: Changing the managerial and clinical approach in hospitals towards learning from events and planning and preventing errors and crises from the participants' point of view is one of the results of the accreditation program in hospitals. The empowerment of managers and the inappropriate participation of physicians are far from ideal, but the movement of hospitals in this area is tangible. The following description is from the perspective of the participants. "There are a few issues that have been emphasized in accreditation and we have used them a lot. We are now very strong in scriptwriting and the maneuvers we are holding have helped us a lot to reduce our weaknesses and to plan for it. "But I still feel I have a lot of incomprehensible issues left and I definitely need to go through more training in this area" (P11). Occupational exposure management: Occupational exposure occurs from contact of the eyes, skin, and mucous membranes or within the skin with blood or other body fluids while performing occupational tasks and it makes sense to expect it to occur. These encounters occur among medical and paramedical staff working in medical centers, nurses, paramedics, and service and support staff according to the type of duties assigned. Occupational exposure can lead to a variety of

infections and blood-borne diseases. Participants stated that the implementation of infection control and occupational health standards had a positive effect on reducing occupational exposure. "You see, one of the good things is that occupational health standards have been defined in the area of leadership and management. That means the senior management team of the hospital has to be accountable for their performance to ensure the safety of staff, and as soon as they review these standards, naturally with more duties. We are more familiar with the implementation of the approvals of the Occupational Health Committee than before with the support of our managers "(P13).

### Discussion

The aim of this study was to provide a model for evaluating the performance of the national accreditation model of hospitals. For this purpose, the grounded theory was used to design the model. The concepts and categories of the model are derived from the process of coding the text of interviews with experts with the approach of Strauss and Corbin, in which the axial phenomenon, causal, contextual, intervening conditions, strategy and results are presented. Based on the results of the study, the category of service recipient support was identified as a causal condition. Recipient protection requires an evaluation of national accreditation performance in hospitals. Ramezani et al. (18) in a study conducted to support the rights of service recipients in health care providers through the development of accreditation standards, concluded that the accreditation of hospitals as an external evaluation model, by providing standards that Guides the hospital towards the establishment of a comprehensive and systematic management system and the promotion of patient-centered, safe and quality culture. It is a suitable method that uses it to ensure the observance of service recipients. Mossadegh Rad et al. (19) considered the accreditation evaluation program of hospitals as an important factor in improving patients' safety and respect for their rights, to the extent that it has led to improvements in reducing nosocomial infections and patient mortality. Abedi et al. (20) in examining the effect of accreditation standards on patient mortality concluded that the establishment of accreditation system and

its performance has played an effective role in reducing patient mortality. A study by Holger Ehlers et al on attitudes toward accreditation among hospital staff in Denmark in 2017 showed that the overall attitude of supporting service recipients was particularly important in conducting hospital accreditation assessments. They also referred to the attitude of service providers and assessed it as important in the accreditation process (21).

The present study showed that the category of empowerment of process owners was determined as a condition for evaluating the performance of national accreditation of hospitals. A stepwise study by colleagues (22) in 2018 showed that evaluators and their empowerment have played an effective role in accreditation assessment. A study published by Fotouhi et al. On the evaluation of the views of the executive management team of hospitals in Qom province regarding the third generation of hospital accreditation standards in 1396 showed that coordination and unity of procedure between accreditation evaluators and efforts to attract more physicians it can be effective in achieving the accreditation goals of hospitals (23). A study conducted by Yarmohammadian et al. In 2012 as blind spots in the accreditation program showed that the effective implementation of hospital accreditation evaluation requires the preparation of the infrastructure of this program, time and manpower, especially experts in the field of accreditation. However, due to the lack of experienced and knowledgeable personnel in the field of accreditation, this issue has increased the workload and consequently increased stress among employees and as a result has led to their dissatisfaction. This study stated that the accreditation program has not always been associated with increasing the quality of services, sometimes even had little effectiveness and promoted administrative bureaucracy, and these factors led to the lack of patient satisfaction (24).

The findings of the present study showed that the appropriateness of hospital resources by implementing the standards, sharing accreditation benefits with service providers, participation of service providers and regulatory regulations were identified in the form of intervening conditions. Ramezani et al. In a study on the development of national

accreditation standards for management and leadership units in Iranian hospitals in 2014 concluded that hospital managers through the implementation of accreditation standards of hospital management and leadership unit can play an important role in establishing accreditation standards for all units Hospital wards, both clinical and non-clinical, provide patient safety and quality improvement (18). In 2018, Mossadegh Rad and Shah Ebrahimi in a study titled with the relationship between accreditation and hospital performance found that the axes of management and leadership, emergency and procurement management had an effective role in accrediting the performance of hospitals (25).

According to the results of the present study, issues such as the competence of assessment teams, the executive structure of accreditation and comprehensiveness, and the barrier of standards were identified as strategic factors. Jafari-Pouyan et al. (2018) positively evaluated the acceptance of accreditation by the evaluators, the spirit of teaching, the reputation and the effort of the individual to develop knowledge and skills in implementing an effective hospital accreditation program (26). Andres et al. studied the hospital experience at Hong Kong in 2019 and concluded that accreditation may improve the patient experience. In addition, quality improvement initiatives related to accreditation may address concerns raised by Hong Kong patients, including participation in care and emotional support from providers (27). With examining the accreditation status of hospitals in Indonesia in 2019, Vardani et al. concluded that higher-level, government-run hospitals are more likely to be accredited regardless of expertise and market competition. Thus, they considered the role of the executive accreditation structure in evaluating the accreditation of hospitals to be effective (28). Coria et al. in compiling the measurement model of the accreditation system of Brazilian hospitals in 2019 found that leadership, staff management, quality management, organizational culture, process orientation and safety are strongly related to the development of health organizations and directly affect the accreditation process. It affects (29). In 2011, Al-Khanizan et al. conducted a study on the effect of accreditation on the quality of health services and found that accreditation programs

improve output indicators and clinical conditions, as well as specific accreditation programs that have a positive effect on specialized clinical processes including sleep medicine, management. Has chest pain and trauma management. He concluded that there is strong evidence that the accreditation program promotes health care processes and that the accreditation program should be supported as a means of improving quality (30).

## Conclusion

This research presented a model composed of categories and concepts that can be used in evaluating the performance of hospital accreditation that can be effective in improving the quality of hospital accreditation.

## References:

- 1.Mardani S, Abebi SJ, Riahi L, Relationship between safety and staff performance in hospital. *Int J Hosp Res* 2013;2:205-12.
- 2.Amerioon A, Tofighi S, Mahdavi SM, Mamghani H, Mesgarpour Amiri M. Evaluation of JOC Accreditation Standard in a military Hospital Lab. *Military Medicine Journal* 2011;13(2): 76-77.
- 3.Parand A, Dopson S, Renz A, Vincent C. The role of hospital managers in quality and patient safety: a systematic review. *BMJ Open* 2014; 4(9): e005055.
- 4.Brubbakk K, Vist GE, Bukholm G, et al. A systematic review of hospital accreditation: the challenges of measuring complex intervention effects. *BMC Health Serv Res* 2015; 15: 280, <https://doi.org/10.1186/s12913-015-0933-x>.
- 5.Moradi R, Nemati A, Bahman ZN, Shokri A, et al. Effect Of Accreditation On The Health Services Delivering In University Hospitals Of Isfahan. 2015.
- 6.Mousavi SM, Arian khesal A, Akbarisari A, Arab M, The effect of accreditation system on the key performance indicators of hospitals affiliated to Tehran University of Medical Sciences: an interrupted time series analysis in 2012-2014, *jhosp* 2017; 16(1):17-26.
- 7.Azami Aghdash S, Sadeghi Bazargani H, Ghasemi B, Mirzaei A, Aghaie MH. Barriers to implement accreditation from the perspective of hospitals' managers in East Azerbaijan Hospitals: A mixed method study, *Depiction of Health* 2013; 4(2):35-42. [Persian].
- 8.Sack C, Scherag A, Lütkes P, Günther W, et al. Is there an association between hospital accreditation and patient satisfaction with hospital care?, A survey of 37 000 patients treated by 73 hospitals. *International Journal for Quality in Health Care* 2011; 23(3): 278-83.
- 9.Shaw CD, Toolkit for accreditation programs. Melbourne: International society for Quality in Health Care (ISQua) 2004.
- 10.Ministry of Health and Medical Education, Standard guidelines for accreditation of hospitals in the country. Tehran: Ministry of Health, Treatment Evaluation Office; 2010.
- 11.Sadegh Tabrizi J, Azami Aghdash S, Abdollahi L, Daemi A, et al. Required Infrastructures to Implement Accreditation in Iran: The Perspective of Top Managers of the Teaching Hospitals in Tabriz and Ardabil University of Medical Sciences, *J Depiction of H* 2013; 4(2); 29-34.
- 12.Salmon JW, Heavens J, Lombard C & Tavrow P, Quality Assurance Project. The Impact of Accreditation on the Quality of Hospital Care: KwaZulu-Natal Province, [www.ihffih.org/Resources/Accreditation-Quality-in-hospitals/Quality-assurance-project-the-impact-of-accreditation-on-the-quality-of-hospital-care-Kwazulu-Natal-province-Republic-of-South-Africa](http://www.ihffih.org/Resources/Accreditation-Quality-in-hospitals/Quality-assurance-project-the-impact-of-accreditation-on-the-quality-of-hospital-care-Kwazulu-Natal-province-Republic-of-South-Africa). 2003, RoSAAa.
- 13.Greenfield D, Pawsey M, Naylor J, Braithwaite J, Are accreditation surveys reliable? *International Journal of Health Care Quality Assurance* 2009; 22(2): 105-16.
- 14.Arab M, Zarei A, Hosseini M, Awareness of patient rights and observance from the patient's point of view: a study in university hospitals in Tehran, *Journal of the School of Health and the Institute. Health Research* 2010; 8(2): 83.
- 15.Golshani A, Ghaedi M, Combined method of qualitative and quantitative methods. *Methods and Models of Psychology* 2012; 2(9): 43-70, (Persian).
- 16.Strauss A, Corbin J, Basics of qualitative research: Grounded theory procedures and techniques. Newbury Park, CA: Sage Publications 1992.
- 17.Silverman D, Instances or sequences? Improving the state of the art of qualitative

- research, In Forum Qualitative Sozialforschung/Forum: Qualitative Social Research 2005; 6(3): 25-39.
- 18.Ramezani M, Zendedel A, Kafashpor A, Sadeghi T, Review article on accreditation standards and effective implementation strategies in Iran–2014. National Nursing Conference 2014; HEALTH01\_093: 1-7.
  - 19.Mosadeghrad AM, Akbari Sari A, Yousefinezhadi T, Evaluation of accreditation effects in hospitals. Tehran Univ Med J 2019; 76 (12) :804-812.
  - 20.Abedi Z, Raeissi Dehkordi P, Riahi L, Investigating the Effect of Establishing Accreditation Standards on the Rate of Mortality of Patients in Selected Hospitals of Mashhad. Journal of Healthcare Management 2018; 9 (3): 77-87, (persian).
  - 21.Holger Ehlers L, Berg Jensen M, Beltoft Simonsen K, Sand Rasmussen G, Braithwaite J. Attitudes towards accreditation among hospital employees in Denmark: a cross-sectional survey, International Journal for Quality in Health Care 2017; 29(5): 693–698, et al.
  - 22.Ghadami L, Masoudi Asl Y, Rahnema M, Hesam S, Investigating the Factors Affecting Hospital Accreditation Scoring Method in Iran. Health Management 2018; 9 (1): 45-59, (Persian).
  - 23.Fotouhi MA, Khoshgoftar A, Bakhshandeh H, Karami G, et al. Evaluating the views of the executive management team of Qom hospitals regarding the third generation of hospital accreditation standards 2017, Journal of Qom University of Medical Sciences 2018; 12(5): 62-70, et al.
  - 24.Yarmohammadian MH, Shokri A, Bahmanziari N, Kurdi A, Blind spots in the accreditation program. Journal of Health System Research 2014; 9(11): 1158-1166, (Persian).
  - 25.Mossadegh Rad AM, Shah Ebrahimi SS, Relationship between Accreditation and Hospital Performance: Using Data Mining Approach. Journal of the School of Health and the Institute of Health Research 2018; 2(1): 1-4, (Persian).
  - 26.Jaafari-pooyan E, Mosadeghrad AM, Salarvand A, Hospital Accreditation Surveyors' Evaluation Criteria in Iran. Payavard Salamat 2019; 13(2): 110-122, (Persian).
  - 27.Andres EB, Song W, Song W, et al. Can hospital accreditation enhance patient experience? Longitudinal evidence from a Hong Kong hospital patient experience survey. BMC Health Serv Res 2019; 19: 623, <https://doi.org/10.1186/s12913-019-4452-z>.
  - 28.Wardhani V, van Dijk JP, Utarini A, Hospitals accreditation status in Indonesia: associated with hospital characteristics mciahpBHSR, <https://doi.org/10.1186/s12913-019-4187-x>.
  - 29.Corrêa JÉ, Turrioni JB, Mello CHP, Santos ACO, et al. Development of a System Measurement Model of the Brazilian Hospital Accreditation System. Int J Environ Res Public Health 2018; 15: 2520.
  - 30.AIKhenizan A, Shawb C, Assessment of the accreditation standards of the Central Board for Accreditation of Healthcare Institutions in Saudi Arabia against the principles of the International Society for Quality in Health Care (ISQua), Ann Saudi Med 2010; 30(5): 386-389.

**Table 1: Demographic information of research participants**

| Variable |        | Frequency(Percent) | Mean(std)   |
|----------|--------|--------------------|-------------|
| Gender   | Female | 0                  | 51.80(2.15) |
|          | Male   | 16(100)            |             |
| Age      | BSc    | 4(25)              | 51.80(2.15) |
|          | MSc    | 6(37.5)            |             |

|                 |         |             |
|-----------------|---------|-------------|
| PhD             | 6(37.5) |             |
| Work experience |         | 14.36(2.42) |

**Table 2. Categories and concepts**

| Dimensions             | Category  | Concept   |
|------------------------|---|---|
| Axis / core phenomenon | Evaluate the performance of national accreditation of hospitals | Systematic evaluation of hospital performance, detection and prioritization of hospital weaknesses, improving hospital performance  |
| Casual condition       | Recipient support   | Responding to complaints and suggestions, timely and continuous access to the treatment team, providing accommodation facilities, respectful behavior, and providing the required information   |
| Strategies             | Competence of assessment teams                                  | Technical knowledge, communication skills, unity of procedure, evaluation within the standards, qualitative messages of the evaluators  |
|                        | Accreditation executive structure                               | Time interval of changes, ranking criteria, validity period of certificates   |
|                        | Comprehensive and barrier standards                             | Balance of structural, process and outcome standards, standard attention to diversity of hospital ownership, standard attention to diversity of hospital services, transparency and comprehensibility of standards, enforceability of standards |
| Context condition      | Empowering process owners                                       | Empowerment of managers, empowerment of employees, empowerment of graduates   |

|                        |   |   |
|------------------------|---|---|
| Intervening conditions | Proportion of hospital resources to the implementation of standards | Proportionality of financial resources, adequacy of equipment resources, adequacy of human resources                        |
|                        | Share accreditation benefits with service providers                 | Hospital income, job stability of managers, motivation of physicians 'participation, motivation of employees' participation |
|                        | Participation of service producers                                  | Involvement of senior managers, Involvement of middle managers, Involvement of physicians                                   |
|                        | Regulatory regulations  | The role of insurance organizations, the role of regulatory laws  |
| Outcome                | The quality of service  | Process improvement, access to appropriate equipment, department / unit performance indicators, central program of managers |
|                        | Safety  | Prioritize safety issues, safety indicators, prevention and learning approach, occupational exposure management             |