Research in Health & Medical Sciences *Original Article*

2022 December; 1(4)

The empiricism of monitoring, evaluating, and improving the performance of Baqiyatallah University of Medical Sciences in the face of the COVID-19 crisis

Morteza Khaghanizadeh[1], Mohammad Mohammadian[2], Abolfazl Shakibaee[3], Mohammad Saleh Fallah[4], Hadi Esmaeili Gouvarchin Ghaleh[5], Reza Tavakkol[6*]

[1] Center, Life Style Institute, Baqiyatallah University of Medical Sciences, Tehran, Iran
[2] Behavioral Science Research Center, University of Baqiyatallah Medical Sciences, Tehran, Iran
[3] Exercise Physiology Research Center, Life Style Institute, Baqiyatallah University of Medical Sciences, Tehran, Iran
[4] Medicine, Quran and Hadith Research Center, Baqiyatallah University of Medical Sciences, Tehran, Iran
[5] Applied Virology Research Center, Baqiyatallah University of Medical Sciences, Tehran, Iran
[6] Nursing and Midwifery school, Torbat Heydariyeh University of Medical Sciences, Torbat Heydariyeh, Iran.

*** Corresponding author email: tavakkolreza.73@gmail.com**
Received: 2024/5; Revised: 2024/6; Accepted: 2024/6

Abstract

Decision-making has a broad role in choosing educational interventions and health-oriented planning. These decisions can include small decisions or very big and important decisions in the field of health. Considering that 70% of the organization's problems are repeatable, empiricism is of great importance for organizations. The purpose of this research was to document and record the empirical knowledge of monitoring, evaluating, and improving the performance of Baqiyatallah University of Medical Sciences in facing the crisis of the COVID-19 disease.

The current research is a cross-sectional study in 2021 that was conducted with the participation of 11 managers, experts, and supervisors in the field of monitoring, evaluating, and improving the performance of Baqiyatallah University of Medical Sciences in the face of the COVID-19 crisis. According to the qualitative approach of this study, the sampling was purposeful and data collection was done until the saturation limit was reached. Data collection in this study was done using a semi-structured interview by an experienced expert face-to-face and then converted into text. The analysis of the results in this study was done using descriptive statistical tests (prevalence, frequency percentage) and SPSS, EXELE, and MaxQDA software version 20.

The results of the present study led to the extraction of 327 open codes and seven axial codes of events, problems, measures and decisions, results and outcomes, suggestions, scenarios and patterns, and lessons learned. The highest and lowest frequency of open codes were related to the dimensions of the results and outcomes, and scenarios and patterns with 71 and 17 codes, respectively.

One of the effective measures to face and deal with critical situations such as COVID-19 is regular and organized planning. Based on this, knowing the managerial and organizational challenges and the solutions to face those helps the medical staff to achieve physical and mental health, individual and social, and plays an essential role in providing effective services to patients and society.

Key words: Empiricism, Learning, COVID-19.

[Downloaded from jrhms.thums.ac.ir on 2026-10-17]

Introduction

Documenting means recording, gathering, arranging and editing, categorizing, and maintaining information and concepts that are the result of a purposeful and accurate activity (1). The common feature of documentation measures is to write down part of human knowledge and awareness (2). Knowledge shows itself in two forms: explicit and tacit knowledge. One form of tacit knowledge is experience (3). The process of facing and recognizing a problem, making a decision, and taking action to implement it in the process of solving a new problem or problem is called experience (4). Experience is the main source of management education, job responsibilities, and challenges at a certain point in time, which can be caused by expressing observations, analysis, measurement, recording, comparison, and classification of phenomena (5). All managers' value learning from their previous mistakes, and successful managers must understand what they did wrong, what the consequences were, and how to avoid similar situations in the future. Although 70% of an organization's problems are repeatable, unfortunately, these cases are less recorded and repeated (7 ,6). A lot of experience can be gained by modeling and learning by observing the systematic way of working of successful people or organizations and analyzing their way of working. Documenting people's methods and learnings is a sure way to transfer personal and social experiences to others (8) . In addition, due to the limited capacity of the conscious mind, humans are not able to memorize and remember all the contents. Therefore, documentation is a reliable way to transfer experiences to others and includes advantages such as reducing time, preventing repetition of previous and sometimes destructive tests (9), reducing costs (10), increasing organizational learning, and creating and maintaining a learning organization (11). The successful completion of the documentation process, like any other process, requires the formulation and implementation of steps (12). From Tavalayi's point of view, the process of documenting experiences has five stages, in the recognition stage, first a team is formed, and after compiling a database of experience owners and fields of knowledge, questionnaires are designed and schedules are determined. Then, in the training phase, while creating awareness, people are taught. In the acquisition phase, knowledge is acquired and in the editing phase, the knowledge is classified and coded. In the last stage, which is the design of the knowledge bank, a system of design and information is entered into it (13). To integrate, compare, and combine the existing research and enrich the existing studies in this field, the main goal of this research is to develop an integrated experience documentation process. Managers have performed various methods in the fields of therapy, education, research, general and specific support, and leadership (7). Experience, which is one of the important sources of knowledge, will lead to the improvement of organizational performance if it is recorded and documented (4). Based on this, the present study was conducted to document and record the empirical knowledge of monitoring, evaluating, and improving the university's performance in the face of the COVID-19 disease crisis, which is an emerging and disruptive phenomenon.

Methods

Study design

The current research is a cross-sectional qualitative study that was conducted in 2021 at Baqiyatallah University of Medical Sciences. The statistical population of this study included managers, experts, and supervisors in the field of monitoring, evaluating, and improving the performance of Baqiyatallah University of Medical Sciences in the face of the COVID-19 crisis. According to the qualitative approach of this research, sampling was done in a purposeful and Convenience sampling.

[Downloaded from jrhms.thums.ac.ir on 2026-10-17]

Data collection

This descriptive study was conducted in 4 separate sections. In the first part, various concepts and dimensions of empiricism in different parts of the world were identified and extracted by reviewing studies. In the next part, by holding meetings with the research working group, the empirical protocol of monitoring, evaluating, and improving the performance of the university in the face of the Covid-19 disease crisis was determined. The Delphi method was used to evaluate the empirical model. In this method, the extracted items were subjected to the judgment and evaluation of experts and experts to be modified if necessary (14). In the third part of the study, semi-structured interviews were conducted face-to-face by an experienced expert. At this stage, the managerial experience of the managers was recorded in the face of the crisis of the Covid-19 disease. Then, in the last stage, using the obtained results, the model of empiricism was introduced.

Statistical analysis

The analysis of the results in this study was done using descriptive statistical tests (prevalence, frequency percentage) and SPSS, EXELE, and MaxQDA software version 20.

Ethical consideration

The present study was carried out in full compliance with ethical considerations based on the ethical guidelines of Baqiyatallah University of Medical Sciences and has the ethics code of number IR.BMSU.REC.1400.121.

Results

In this study, 11 managers and experts in the field of monitoring, evaluating, and improving the performance of Baqiyatallah University of Medical Sciences participated in facing the crisis of the COVID-19 disease. Most of the participants in this study had a work experience of 30 years or more (63.63%) and were official employees (45.45%) of the university. Table 1 shows the demographic information of the participants.

One of the important parts of this study was the analysis of the information obtained through interviews with the participants. For this purpose, this information was analyzed and coded using MaxQDA software. The extracted codes were placed in two categories of open and axial codes. The results of the analysis led to the extraction of 327 open codes in 7 dimensions of incident, problems, measures and decisions, results and outcomes, suggestions, scenarios and patterns, and lessons learned. Among the introduced dimensions, the highest and lowest frequencies were assigned to the dimensions of results and consequences, scenario, and modeling, respectively (Table 2).

The results of this study, in dimensions of incident and problem, indicate the rapid and sudden onset of the disease, in such a way that it caused fear to the employees and patients. Rumors inside and outside the country about the dangerous nature of the virus intensified this fear, and the rush of patients and clients to the hospital in the early stages and the poor organization of patients had confused managers and specialists. Also, the workload of the employees had increased a lot and had involved almost the entire university and hospitals affiliated with the university, and all these cases made the management of the COVID-19 crisis more difficult. The results of this study in the dimension of measures and decisions indicate that university and hospital managers and officials were able to take effective measures at the beginning of the COVID-19 crisis. In addition, we can establish Imam Reza's living camp, holding meetings, creating crisis management systems for calling employees, canceling vacations, finding suitable convalescent places for employees, forming an inspection team to monitor the commanders of various units, gathering information for decision-making, as well as the effective actions of the university in using jihadi forces to equip the convalescent home. In the dimension of results and consequences, we see both good and positive results and negative results. For example, in

[Downloaded from jrhms.thums.ac.ir on 2026-10-17]

addition to the fact that the management of the organization has been able to create passion, excitement, and empathy in employees and managers and increase the sense of responsibility, sometimes unprofessional, hasty decisions, and non-compliance with some of the organization's approvals and continuous changes in treatment and care protocols led to disharmony and dissatisfaction.

In the suggestions dimension, managers and officials made suggestions based on their experiences, including the active presence of inspection and control committees on processes, decisions, and the creation of a fair system the formation of coherent decision-making committees and review of care, service, and administrative processes, and holding virtual training sessions to empower employees. The multi-purpose space is a scenario for preventing surprises and restoring specialized and committed human resources. In the dimension of scenario building, the results of this study indicate that in dealing with the COVID-19 crisis, it is possible to follow the example of the era of holy defense and implement various training scenarios to empower employees and avoid surprises in future crises; similar maneuvers can be planned based on the experiences of managers involved in the management of the COVID-19 crisis.

Discussion and Conclusion

The present study was conducted to document and record the empirical knowledge of monitoring, evaluating, and improving the performance of Baqiyatallah University of Medical Sciences in the face of the COVID-19 disease crisis. The empirical results of monitoring, evaluating, and improving the performance of the university in the face of the COVID-19 crisis led to the extraction of 327 open codes in 7 dimensions of incident, problems, measures and decisions, results and outcomes, suggestions, scenarios and patterns, and lessons learned. As the results of this study show, the lack of preparation in facing the crisis, lack of similar experience, lack of specialized forces, inspection forces to control and organize the forces, lack of space for convalescence, and the compulsion to use parking and canteen for this purpose, cause many problems for personnel. The results related to Baqiyatallah Hospital's sudden and quick encounter with this crisis have been similar to other organizations, and the confusion of managers at the beginning has been observed in most organizations. The nature of crises, including the COVID-19 pandemic, is to create rapid tension in societies and produce disruption, uncertainty, complexity, and ambiguity in all organizations, and the behavior of people, statesmen, and experts in different fields will determine the method of solving the problem and managing the crisis. Employees, managers, policymakers, and healthcare researchers should be ready to intervene in patients and crises caused by the spread of the virus. However, it seems that the officials related to the crisis did not have a proper plan for the crisis in the beginning, and accordingly, a coherent plan was not planned for crisis management (15, 16). One of the most important challenges was the rapid spread of the disease. In some cases, a large number of employees were infected at the same time, which caused many problems for the healthcare system (17). Also, the lack of information related to the disease, the ways of transmission, prevention, and treatment, as well as the lack of equipment and careful monitoring of health system challenges during the outbreak of COVID-19 became more apparent (19 ,18). The results of the studies confirm the measures and decisions taken by the administrators of Baqiyatallah University of Medical Sciences during the COVID-19 crisis. Since they organized the Human Forces, effectively utilized existing facilities and spaces to combat the coronavirus disease, fostering motivation and providing necessary welfare facilities. Decisions made for crisis management in a hospital or organization are very critical and must be made quickly. Experienced people should manage the crisis and know that any

[Downloaded from jrhms.thums.ac.ir on 2026-10-17]

wrong decision may lead to many negative consequences (20) .

The COVID-19 pandemic has changed the face of the world around us with a mutual impact on health, life customs, economy, and politics. In particular, it was a valuable experience for managers and healthcare officials, which significantly improved the ability of managers in this regard due to the unpredictability of the epidemic. The current study uses the experiences of administrators and officials at Baqiyatallah University of Medical Sciences to examine the consequences and problems posed by increasing the immediate hospital capacity, including the referral of critically ill patients, shortages of medical equipment, oxygen, and human resource job burnout. Finally, it provides solutions for increasing the immediate healthcare centers' capacity, improving employee capabilities, forming coordinating committees, establishing unity of command during crises, and preserving human resources as models and lessons learned in this study.

Based on this, we conclude that organized planning, as a preparedness measure, can be effective when facing public health emergencies, such as the COVID-19 epidemic. As mentioned earlier, the era of the Corona pandemic is the era of tests and management challenges, which are mainly caused by incompatibility with pre-prepared conditions and the lack of preparation of managers and employees. According to the mentioned cases, knowing the managerial and organizational challenges and the solutions to face them helps the treatment staff to achieve physical and mental health, individual and social, and plays an essential role in providing effective services to the patient and society.

TABLE 1. Demographic information of the participants

Number	Job Position	work experience (years)	Membership
1	Deputy Inspector of the University	33	Faculty member
2	Head of medical school	25	Faculty member
3	Director of Najmiyeh Hospital	25	Official employees
4	Evaluation expert of the deputy inspectorate of the university	15	Official employees
5	Director of Inspection of Najmiyeh Hospital	26	Official employees
6	Vice President of Education	30	Faculty member
7	Vice President of University Research	40	Faculty member
8	Financial administrative assistant of the research institute	25	Official employees
9	Vice President of University Planning and Program	30	Official employees
10	Program and budget manager/ Vice President of University Planning and Program	26	Official employees
11	Head of the Faculty of Health	33	Official employees

[Downloaded from jrhms.thums.ac.ir on 2026-10-17]

TABLE 2. Frequency of open and axial codes

Axial codes		Open codes	Frequency
Incident		The arrival of the first patient from Qom to Baqiyatallah Hospital	5
		Facing a kind of biological warfare	3
		A conflict beyond normal ability	4
		Disruption of current programs	4
		Simultaneous fear and panic of employees and patients	4
		Confusion of managers and specialists	3
		High workload	2
Problem		Lack of preparation in the face of crisis	9
		Weak organizational decorum	7
		Lack of specialized inspection force	8
		Lack of space for convalescence	6
		Poor employee safety	7
		Weak coordination between managers	8
		Officials' resistance	3
Measures and Decisions		Formation of Imam Reza's biological camp	24
		Formation of the inspection team	17
		Field visits	12
		Inspection supervision	8
		The use of jihadi forces to equip the convalescent home	5
		Management coordination	6
		Modification of some processes	7
Results and outcomes	Positive	Jihadi passion	8
		Empathy and like-mindedness	6
		Virtual space infrastructure	5
		Increase skills and experience	6
		responsibility	9
		Carrying out several empirical projects	7
	negative	Non-expert decisions	6
		Constantly changing protocols	11
		Non-adherence to approvals	5
		Energy erosion	6
		A lot of inconsistency	10
		Physical and mental fatigue	9

[Downloaded from jrhms.thums.ac.ir on 2026-10-17]

Suggestions	Proper organization of inspections	10
	Inspection and continuous monitoring	4
	Effective incentive system	7
	Advisory Committee	6
	Reorganization of processes	8
	Assigning tasks to specialized groups	3
	Longitudinal and transverse training	4
Scenarios and Patterns	Simulation of the era of holy defense	5
	Different training scenarios	2
	Comprehensive field presence of inspection	3
	Multipurpose space	5
	Different scenarios to prevent surprises	2
	Restoration of specialized and committed human resources	4
Lessons learned	Virtual structure in the form of camp	4
	Inspection as the eye and arm of the commander	7
	The commander's front	6
	Maneuver to prepare for crises	3
	Similar to wartime chemical attacks	3
	Jihadi and team work	5

Acknowledgment

The authors would like to thank all the participants in this study and the Baqiyatallah University of Medical Sciences. The present study is the result of a research project with an ethics code of IR.BMSU.REC.1400.121

References

1. Graça NA, Joly BS, Voorberg J, Vanhoorelbeke K, Béranger N, Veyradier A, et al. TTP: From empiricism for an enigmatic disease to targeted molecular therapies. 2022;197(2):156-70.
2. Jones KM, McCoy C. Reconsidering data in learning analytics: Opportunities for critical research using a documentation studies framework. The Datafication of Education: Routledge; 2020. p. 69-80.
3. Jain P, Kumar P, Chakrabarti S, editors. Type-sensitive knowledge base inference without explicit type supervision. Proceedings of the 56th Annual Meeting of the Association for Computational Linguistics (Volume 2: Short Papers); 2018.
4. Mohammadian M, Tavakkol RJIJTMGH. The Empiricism of Human Resource Management of the Selected University of Medical Sciences in Covid-19 Disease Crises. 2023;11(2):252-9.
5. Sober E. Empiricism. The Routledge companion to philosophy of science: Routledge; 2013. p. 160-9.
6. Gerasimov BN, Gerasimov KB. Modeling the development of organization management system. Asian Social Science. 2015;11(20.82:(
7. Craxì LJM. Empiricism and common sense: the management of public health in the Kingdom of Sicily (1575-1860). 2020;4(1):12-9.
8. Feyerabend P. Problems of empiricism. 1965.
9. Renzl B. Trust in management and knowledge sharing: The mediating effects of fear and knowledge documentation. Omega. 2008;36(2):206-20.
10. Zamani A, Ghahramani M, Tofighi J, abolghasemi m. Documenting the experiences of university presidents is a necessity in managing university knowledge. Journal of Research in educational science. 2015;8(27):7-34.

[Downloaded from jrhms.thums.ac.ir on 2026-10-17]

11. Anvari Rostami AA, Shahaei B. knowledge management and learning organization: analyzing the role of knowledge and experience documentation. journal of information technology management. 2009;1.-:(2)

12. Baharifar S-EA. Designing a structure for the documentation of managers organizational experiences. Human Sciences MODARES. 2006;9(3):23.-

13. Tavalayi R. Presenting a local model for documenting the experiences of experts in the petroleum industry of the Islamic Republic of Iran. journal of strategic studies in petroleum and energy industry. 2008;5(2):51-78.

14. Powell C. The Delphi technique: myths and realities. Journal of advanced nursing. 2003;41(4):376-82.

15. Hwang J, Seo SJIJoCHM. A critical review of research on customer experience management: Theoretical, methodological and cultural perspectives. 2016;28(10):2218-46.

16. Raake A, Egger S. Quality and quality of experience. Quality of Experience: Advanced concepts, applications and methods: Springer; 2014. p. 11-3.3

17. Chen M-Y, Chen C-C. Options analysis and knowledge management: Implications for theory and practice. Information sciences. 2011;181(18):3861-77.

18. Daniel J. Education and the COVID-19 pandemic. Prospects. 2020;49(1):91-6.

19. Ciotti M, Ciccozzi M ,Terrinoni A, Jiang W-C, Wang C-B, Bernardini S. The COVID-19 pandemic. Critical reviews in clinical laboratory sciences. 2020;57(6):365-88.

20. Siadat SA, Hoveida R. Identification of the Methods of Documentation and Transferring the Professional Skills of the Experienced Faculty Membersto Young Faculty Membersat Esfahan University. Journal of Research in Human Resources Management. 2015;7(3):227-54.

[Downloaded from jrhms.thums.ac.ir on 2026-10-17]