Essay

Lessons learned during COVID-19: The experience of the Institute for Futures Studies in Health in Iran

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Abstract

The Institute for Futures Studies in Health (IFSH) encountered numerous challenges during the COVID-19 outbreak as it was unprepared for such a large-scale disruption. Throughout the pandemic, this institute took measures to produce evidence to respond to questions raised by the Iranian health system. This article examines what the Institute did well and where it can improve.

Keywords

Asking Questions

The COVID-19 pandemic and its consequences disrupted and transformed the lives of many people and organizations. Different levels of society- including individuals, organizations, and the various levels of government- attempted to make appropriate decisions in the face of this new challenge and gained valuable experiences over that period. Now that the initial anxiety of COVID-19 has subsided, we reflect on our performance when confronting this significant challenge. Answering this question is important to the Institute for two reasons. Firstly, the activities of this Institute are centered around the health system and the disruptive emerging issue was strongly related to health and health systems in the world. Secondly, the national mission of this research Institute

is to develop future studies in the Iranian health system, meaning that it needed to demonstrate innovation and flexibility to meet this novel challenge. This article intends to review the path the Institute followed during the pandemic and reflect on lessons learned, as well as to provide suggestions for better dealing with future emerging issues.

The Institute for Futures Studies in Health

IFSH, affiliated with the Kerman University of Medical Sciences (KUMS), plays a key role in foresight activities within Iran's health system. With a national-level mission of improving futures studies in health, this Institute has four main goals: 1) evidence-based decision-making, 2) networking among stakeholders within and outside the health sector, 3) developing capabilities and empowerment of stakeholders, and 4) outlining strategic perspectives on health.

Furthermore, the scientific collaboration of this Institute with various stakeholders is an essential factor in achieving its goals. The effort to achieve these goals led this Institute to establish various research centers and chairs, fostering an interdisciplinary atmosphere that integrates concepts and upholds the fundamental values of science, practice, and social responsibility.

One of the main orientations of the IFSH to realize its national mission was to focus on the concept of "knowledge management". As a result, the NAB framework ("Mapping a better future" in Persian) was developed as the conceptual model of the Institute. Based on this framework, experts in different fields (ideally all stakeholders) make decisions for a better future by using past information and scanning future changes. The model is shown in Figure 1 and its components are presented in Table 1. (Haghdoost et al., 2021)

Fig 1. The NAB conceptual model for knowledge management in IFSH (Haghdoost et al., 2021)

Table 1. The NAB conceptual model for knowledge management in IFSH ((Haghdoost et al., 2021))

Components of the NAB Framework	Its Goals
Health Treasure "GANJINEH"	collecting, preserving, and analyzing past events, trends, and records within the health system. This is achieved by accessing information from the past to the present
Terminology	achieving consensus on key terminologies in long-term plans of the health system
Experienced-based learning	creating a historical memory, by collecting, categorizing, and presenting the best management experiences
Environmental Scanning	finding and analyzing signals of changes such as trends and weak signals, within the health system
Evidence-Oriented Decision-Making	present evidence to policy and decision-makers by conducting systematic reviews of the available evidence.
Harmonized Health Information System	harmonizing, analyzing, and visualizing health data gathered from different sources
Expert Network (NAZAREJAM)	facilitating the participation of experts and the systematic collection of their opinions

The Story Begins: The COVID-19 Outbreak

Mike Tyson once said, "Everyone has a plan in the boxing ring until they get punched in the face."(Tyson, 1987). Like a punch in the face, COVID-19 affected different societies in various ways and created critical situations that required urgent decisions for statesmen and managers. Different countries faced and dealt with the COVID-19 outbreak differently, adopting various measures and making distinct decisions to manage the situation based on their own experience or by imitating other countries(Barberia & Gómez, 2020; Riley et al., 2021)

Heated debates arose among countries regarding issues such as what actions governments should take, whether to impose a quarantine or not, to what extent privacy should be protected, and how to maintain a balance between health and the economy(Capano et al., 2020). Moreover, there were differences in how countries initially accepted and understood the situation

In the early days of the pandemic, the first images of China's quarantine were unbelievable for Iranians. However, in a short period, by February 2020, Iran became one of the epicenters of the disease and emerged as the second focal point for the spread of COVID-19 after China(*Response to COVID-19 in Iran*, 2021). Consequently, COVID-19 management became a hot topic worldwide and significantly influenced all levels of society.

The Path Followed by IFSH

The action taken by the IFSH during the COVID-19 pandemic can be summarized as follows:

Running Along with the Rest
Being a research organization affiliated with the Iranian Ministry of Health and Medical Education (MOHME) and the direct link between emerging issues and the health system, the Institute was expected to support policymakers and service providers in producing and managing relevant evidence on a daily and moment-to-moment basis. Therefore, in the early days of the pandemic, due to frequent crises, as well as the pressure and urgency from the MOHME, this Institute voluntarily collaborated with other volunteer research centers affiliated with the Ministry of Health to produce evidence that could address daily requirements. The Institute engaged in activities such as production, analysis, systematic review, documentation, and dissemination of daily information, including COVID-19 treatment and care protocols and guidelines, throughout that specific period.

Being Ahead of The Rest
Further reflection on the Institute's mission led to a more focused approach to activities aligned with this mission, in addition to the previously mentioned ones. In the initial step, efforts were made to predict the population affected by COVID-19 using quantitative and modeling methods for several months ahead, and the results were provided to policymakers. Subsequently, through brainstorming meetings and in collaboration with relevant units in the MOHME, this Institute utilized the capabilities of the NAB framework with a future view to better confront the

effects of the pandemic and implement the following measures.

6.   Documenting evidence of the COVID-19 period systematically for use in future crises

After conducting negotiations with the MOHME and the universities of medical sciences (In Iran Medical Sciences Universities are responsible for healthcare providing), a dedicated section was added to Health Treasure "GANJINEH" to systematically document images, videos, and other evidence related to COVID-19. These documents were collected, classified, and uploaded from 65 Iranian universities of medical sciences that played a crucial role in managing the pandemic. An illustration of the Ganjineh platform, used for documenting evidence of the pandemic, is presented in Figure 2.

Fig 1. The view of the Ganjineh platform (https://healthlib.ir)

1.   Recording experiences related to the management of COVID-19

Following the implementation of the associated system, experiences from across the country in different categories, including disease management, medical education management, prevention, support and logistics, and more, were collected. This allowed for the gathering of reports on each of the mentioned categories. An illustration of the platform used for recording management experiences is depicted in Figure 3.

Fig 3. A view of the platform for recording management experiences. Complied by the authors (https://nazarejam.ir/)

2.   Deepening the short-term and long-term effects of COVID-19

In the environmental scanning system, an expert team constantly monitors new signals in the social, technological, environmental, economic, and political fields, following the STEEP logic. In response to the pandemic, this team made efforts to comprehensively analyze the various aspects of the effects of COVID-19. To facilitate this analysis, the "futures wheel" tool was employed to analyze the various effects of the pandemic (Figure 4).

Furthermore, 25 virtual scientific meetings were conducted with the participation of national experts, aiming to analyze the multifaceted effects of COVID-19. The topics of these meetings were determined through needs assessments, ensuring a comprehensive approach to examining all aspects of the pandemic's consequences. Examples of conference titles are provided in Table 2.
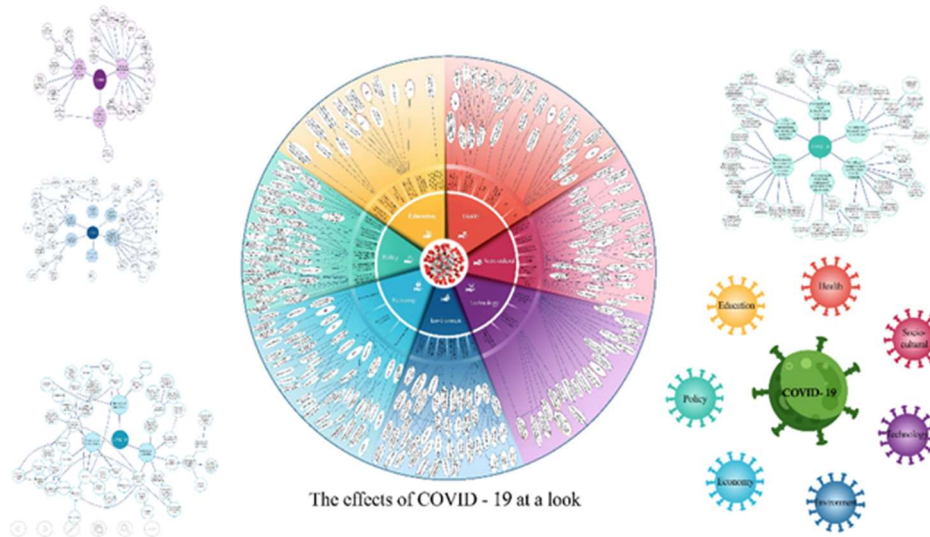

Fig 4. COVID-19 "Futures Wheel" (Prepared by IFSH)

Table 2. Examples of the titles of the scientific meetings held. (Compiled by the authors)

The impact areas of the pandemic	Meeting titles
Social	Socialization of the Fight Against COVID-19
Technological	The Impact of COVID-19 on Virtual Medical Education
Environmental	Post-COVID-19, Human Reconciliation with the Environment or Exacting Revenge on It
Economic	COVID-19 and vulnerable sectors of society
Political	Future scenarios of the COVID-19 pandemic

3.   Post Covid-19 medical sciences education future tour

A "future tour" represents an innovative event organized by IFSH, aimed at making future realities more tangible and immersing the audience in the realm of the future. In the aftermath of the pandemic, a one-day future tour was held, gathering representatives from 60 universities of medical sciences in Iran. The primary objectives were to elucidate the effects of the pandemic on medical sciences education and to formulate appropriate strategies for the future.

During this event, participants engaged in discussions and exchanged views on various aspects of the pandemic's impact on the future of education, based on the geographical distribution of Iran, the participants, totaling 190 individuals, were divided into ten groups (a view of this classification is depicted in Figure 5). Each group focused on researching and discussing a specific educational topic. In the concluding session of the event, each group presented their findings and summarized the results pertaining to the impact of the pandemic on their assigned topic. The aim was to collaboratively gain insights and develop strategies for shaping the future of medical sciences education in the post-COVID-19 era.
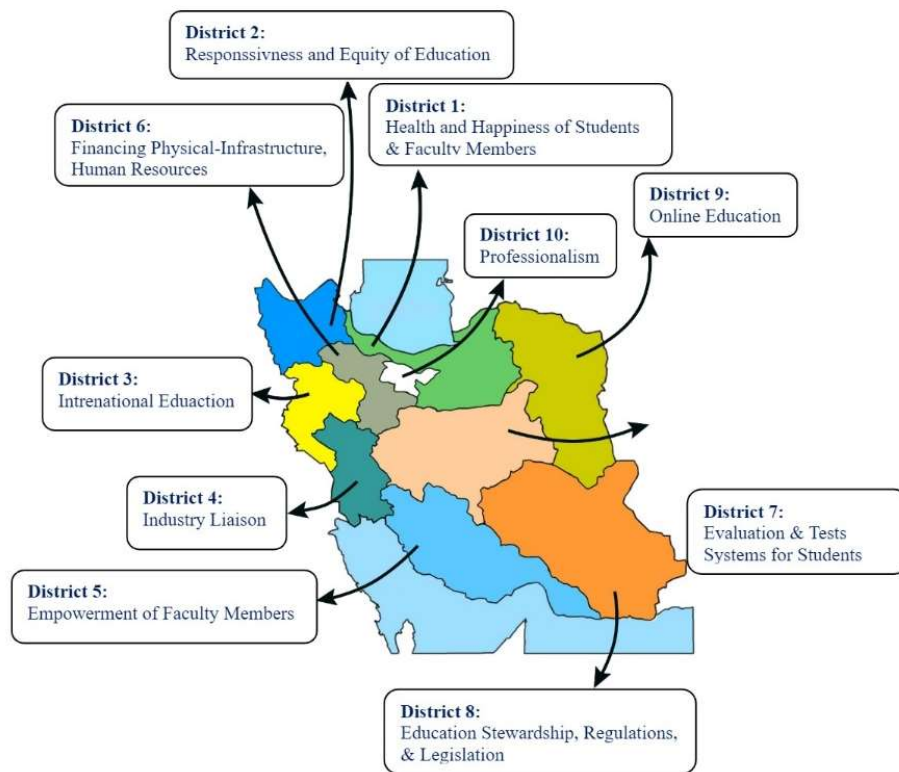
Fig 5. Future of Post-COVID-19 medical education tour. ((Prepared by IFSH)

4. Collecting and analyzing expert opinions on the key questions of the future of the health system

The "NAZAREJAM" website was developed to collect questions and attract the participation of experts. During the pandemic, this platform was used to collect the opinions of Iranian health system experts on the various effects of COVID-19. Each expert on this website has their own dedicated page, and relevant evidence is prepared for them to support their opinions.

Lessons Learned

In developing countries like Iran, foresight institutions, such as IFSH, play a crucial role in pursuing future-oriented development programs. In this regard, paying attention to the path taken in confronting emerging issues can provide useful lessons. So, following the initial crisis of the pandemic, an opportunity was provided to review past activities through several focus group meetings among managers in IFSH.

In these meetings, after identifying and bringing up the problem, the path followed during the pandemic and its experiences were reviewed, which resulted in making some recommendations (following suggestions) for IFSH to better face similar conditions in the future. After that, the research team reached a consensus on using the Causal Layered Analysis (CLA) for analyzing the IFSH path. In the following sessions, experiences were analyzed according to each layer of CLA and tried to integrate the experiences and lessons learned of the IFSH path. The feedback from several international experts was employed to apply an external perspective in order to determine keywords for all layers of CLA.

• Fostering a future-orientated perspective among IFSH staff members and other groups in the society

Future orientation leads to a more rational response to emerging phenomena and unexpected events. IFSH has a pivotal role in achieving this goal by promoting a forward-looking mindset and disseminating it throughout society

• Adopting a systematic and long-term approach to crises

To effectively address crises, a long-term and systematic approach, helps the IFSH to consider all aspects and dimensions of a crisis in the long run and avoid impulsive decisions driven by short-term emotions. Not having a long-term approach will limit this Institute to daily affairs. This is even more important in developing countries where there is more pressure and expectation to enter into daily issues. Forming multidisciplinary groups of experts related to deeply analyzing the effects of crises can enhance this approach.

• Reflecting on the past and reviewing previous similar events

The world has faced similar crises so far, including epidemics, such as plague, smallpox, and many other surprising events that affected many societies. Looking at historical crises can help communities in making decisions, choosing the appropriate way to deal with the situations, and adopting an effective action plan. Reviewing past decisions and the paths taken is a significant function of IFSH to learn from history and apply those lessons to current and future situations.

• Identifying threats and opportunities from crises

Every significant event, including crises, presents opportunities and threats to society. By conducting deep analyses of the effects of these events, IFSH can identify and communicate potential short, medium, and long-term threats and opportunities to stakeholders and convey key messages to those involved. Tools like emerging issues analysis and the "Futures Wheel" can be utilized for this purpose.

• Forecasting the possible behavior, expectations, and choices of stakeholders in a time of crisis

In addition to understanding the crisis and its effects, it is essential to know the behavior and expectations of various stakeholders during these situations. Conducting research on stakeholder behavior, expectations, choices, and decisions is crucial for a future-oriented organization like IFSH. Additionally, methods such as CLA can aid in gaining deeper insights into behavior and anticipation of their actions in the future(Inayatullah, 2004).

• Enhancing communications with other futurists

Improving communication between futurists at the national and international levels and exchanging information with other institutes for futures studies is crucial in transferring knowledge and experiences to produce future-based evidence. Collaborative meetings with international specialized groups, such as APFN, APF, WFSF, WFS, etc., can be organized to analyze important future wild cards with a forward-looking perspective.

• Collecting and documenting evidence related to wild cards

One of the main foundations of decision-making in any situation is the use of evidence and information. By helping to collect and maintain information when faced with wild cards, the Institute for futures studies not only help to make decisions at the moment but also facilitate future policy-making and decision-making processes.

Conclusion

As mentioned, using CLA was a consensus on analyzing the IFSH path. CLA, as a theory seeks to integrate empiricist, interpretive, critical, and action learning modes of knowledge, resulting in more effective, deeper, inclusive, long-term policies(Inayatullah, 2004). The IFSH's experience during the pandemic, viewed through the lens of the CLA, demonstrates that these institutions have attempted to create change in various layers, including its Litany, System, Worldview, and Core Metaphor, over time.

The pandemic and IFSH's response can be considered as a transition period, as all CLA levels were changed. The IFSH activities during the first days of the pandemic and the lessons learned from its experiences are depicted in Table 3, according to CLA analysis. In this regard, considering the Litany Layer of CLA, the IFSH behavior was firstly focused on COVID responses, which is expected to improve to anticipate the next crisis in the future. referencing the second level, the first response of the IFSH was providing, analyzing, and documenting available data and evidence. This should be developed into rational responses, an effective understanding of the crisis, anticipating risks, opportunities, and narratives by using future methods and enhancing communication with other futurists.

In the worldview layer of CLA, IFSH initially focused on mere responses, which transformed into facilitating policy and decision-making. In the final level, the core metaphor, the initial assumption of the IFSH was running with the rest, which should be changed to playing a different game and being ahead of the rest. To embed anticipatory skills throughout the health system, new innovative approaches, like the "Futures Tour", initiated by IFSH, should be spread throughout the system.

Table 3. CLA table for IFSH path (Compiled by the authors)

Litany	Measuring covid response	Anticipating the next crisis
Systemic responses	• Data orientation • Evidence-based • Documentation of the data	• Develop rational and not fear-based responses • Taking a historical view to understand crisis more effectively • Using futures methods to better anticipate risks and opportunities • Using CLA and other methods to understand the narratives of others • Enhance communication with other futurists
Worldview	Responds	Facilitates policy and decision-making
Core metaphor	Running with the rest	Playing a different game, being ahead of the rest

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