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Providing a Model for the Participation of the Health Donors in the Direction of Digital Health Developments

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Abstract

Purpose: The purpose of this study is to provide a model for the participation of health donors in the direction of digital health developments. There are different types of this partnership, which necessitates the goal of this paper.

Method: This research has been done qualitatively and it is exploratory. Theme analysis technique has been used. Also, by examining different patterns related to charitable affairs in the country and abroad, a preliminary pattern was drawn by reviewing domestic

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and foreign studies. Using the snowball technique, 47 experts were selected in the qualitative section. Using semi-structured interview tools, 47 experts and philanthropists in Fars province were interviewed. The software used is ATLAS TI.

Findings: Based on the results, 51 codes were identified. These 51 codes were divided into 8 categories of primary content. These 8 themes are codified plan and roadmap, interaction with donors in policy-making, providing legal facilities to donors, streamlining laws for donors, helping with education in the health sector, creating a culture for health, and spending financial resources in the sectors. Priority is given to costs in the prevention department commensurate with the treatment.

Conclusion: Based on the designed model, creating strategy and planning, education and culture, ease of laws and regulations, as well as planning financial resources play an important role in managing the participation of health donors. With clear planning of health programs, benefactors see the clarity of decisions.

Keywords: Donor Participation, Health Donors, Content Analysis, Health Policy.

1. Introduction

The impact of the advancement and development of digital technology in the present era is not hidden from anyone and various aspects of people's daily lives have been widely affected by this change (Rossolatos, 2021). Despite initial resistance, the health sector has gradually shifted towards restructuring and the use of new digital technologies, as numerous predictions and estimates indicate that by the end of 2030, the structure of the health system will change radically (Thompson, 2014). Hospitals, as the most important part of the health system, are not immune to these changes (Kwasnicka et al, 2022). In the current health system, hospitals are the only centers that

provide all the services needed to diagnose the disease and care for patients, and at the same time the latest specialized equipment and services, including medical imaging equipment, pathobiology, genetics laboratories, and operating rooms. Provide intensive care units to patients and clients (Brennan et al, 2016). These characteristics, along with the training of medical staff, especially physicians, have made the hospital the most important part of the health system and have raised its position in the community (Digital Health Strategy, 2018).

When we talk about the evolution of digital health, we mean a fundamental and transformational change in the system's approach to dealing with the health status of society, the process of diagnosis and treatment, and its social, economic, and cultural interactions (Epstein, 2019). The process of treatment and return of the patient to optimal living conditions, especially in the case of chronic diseases, is comprehensive and is not limited to the patient's experience in the hospital. Each person's living conditions, special needs, and the care they need after leaving the hospital are different and unique (Sood et al, 2017). Digital technologies with their unique capabilities in data collection, analysis, and data extraction help the treatment staff to provide the best treatment for each individual (Agarwal et al, 2020). In this approach, the goal is to create the best and most complete experience for the patient so that he can recover as soon as possible and return to his normal life (Fridsma, 2018).

On the other hand, digital technologies have made it possible for people in the community to access information on medical updates and health status (Turner et al, 2017). Relying on these abilities, the new generation of patients has taken control of their health and expects to be directly involved in the decision-making process for the treatment process, an issue that was not acceptable to the medical staff until a few years ago. Given the above, it can be seen that this shift in focus from the treatment process and staff to patients fundamentally changes the role of hospitals in the health system. Hospitals will play a crucial role in the digital health era during the treatment process, i.e.

before hospitalization, treatment period, and recovery period, and this will be possible only by relying on the application of digital technology in health. Religious activities and helping the needy have been common among tribes and nations for centuries, but what is known today as NGO (Non-Governmental Organizations) owes much to the institutionalized effects that have intensified since the second half of the twentieth century. (Tourani et al, 2009). Social NGOs are spontaneous and voluntary individuals in the community who perform part of the government's duties in managing community affairs (Jamali, 2018). NGOs as part of civil society today include more than 3 million organizations, while in the early 1990s only 30,000 NGOs were active and 3,000 NGOs hold advisory positions in the UN General Assembly. In Iran, NGOs are about half a percent of NGOs in the world (Mosadeghrad, 2019). The approach of NGOs is to reduce human suffering, increase the benefits and capabilities of the poor, protect the environment (Harris et al, 2005), develop and increase social and community services and increase the quality of life and most importantly help build a desirable future (Braun et al, 2011).

People's participation in charity can be called a kind of social entrepreneurship. The foundation of this social entrepreneurship is voluntary and innovative action with a combination of benevolence (Thoits et al, 2001). These types of entrepreneurs, with altruistic and charitable motives in order to serve others, gain a kind of inner satisfaction and feel passionate about solving people's problems and participating in serving their fellow human beings (Lacey et al, 2001).

Therefore, human beings today, with all their different cultures and insights, recognize endowments and endowment and charitable foundations as a useful phenomenon in the path of growth and excellence of human civilization and all-around development of society and have realized that endowments and other voluntary matters can be effective and beneficial; and be effective in the growth and development of society (Mesbahimoghadam et al, 2009).

Until a hundred years ago, most social matters such as health and education services were provided by the public, and their

dimensions were adjusted by themselves (Musick et al, 2003). Traditional sages and physicians relied on the knowledge of their predecessors and used traditional and indigenous therapies such as herbal medicines to meet the needs of society (Daher, 2001). With the advent of administrative systems and the establishment of a centralized government system, the government gradually became more responsible for administrative and social responsibilities. (Hassan et al, 2000).

Among all social services, the health sector was one of the social sectors that witnessed the organized presence of the people (Nasiripour et al, 2007). Hospitals and charities are engaged in the presence and efforts of charities and provide services, and they can be considered as a link between older grassroots organizations and new forms of non-governmental organizations (Shadpour, 2006). The health system includes all organizations and resources that provide health services. There are six main goals for the health system: providing public access to services, providing quality services, the effectiveness of interventions, system efficiency, ensuring justice and sustainability, and achieving the stated goals. The health system must have four functions: service delivery, and resource production. (Human, physical, medical equipment, medicine, and information), co-sponsor and finance (Mosadeghrad, 2015). In the meantime, financing the costs of the health system is very important, because the need for health services is a vital, urgent need of the people, and delays in providing services or financing them can cause irreparable damage (WHO, 2007). One of the biggest challenges for health managers is funding (Farnia, 2000). The financial resources needed by the health sector are provided in various ways such as taxes, social security payments, private insurance, direct payments, and charities (Meier et al, 2008). However, these needs are widespread and unlimited, and governments alone are not able to meet these needs. Therefore, the active presence of individuals in various stages of society and their so-called socio-political participation is one of the most vital factors in the development of society. In our society,

according to Islamic beliefs and revolutionary necessities, and social desirability, the presence of people in all areas and their participation in political and social dimensions is highly regarded as an important factor in development and construction, and is a religious-political duty of coordination. (Sedighi Arfai, 2012).

Based on this, in Iranian society, most forms of people's participation in the context and structure of religious values have taken place. It helps to overcome difficulties and open closed borders to new paths (Jackson, 1995). Charities are examples of public participation in community development (Vision of charitable organization of Iran health system, 2005). A charity is a non-commercial, non-profit, non-governmental organization that provides financial assistance to other non-profit organizations (including charities) with the aim of preparing and raising the level of other individuals or organizations (public or governmental), and can also provide public services directly (Aghababa et al, 2015). These organizations fund themselves internally and externally, but more than 90% of their funding comes from external sources, especially donors(Harbor et al., 2021). The nonprofit and charitable sector is the third-largest economic sector after government and commerce. In these organizations, individual contributions account for the largest share of revenue, which basically many charities will not be able to provide services without. But trying to attract these donations has become a challenging activity. In the meantime, managing the development and strengthening of charitable organizations has a great role to play in fulfilling the intentions of the benefactors (Zegers et al, 2021).

However, benefactors have received less attention as a factor in promoting health. Because they generally belong to a non-medical and non-health institution and therefore are not considered a source of health activities and interventions and are not considered by health policymakers and planners (Jeffrey et al, 2020). Therefore, in the first step, reviewing the actions and describing their views will help to extract the potential and actual capabilities of these institutions and

will create insight in formulating strategic plans aimed at health categories among health donors. These findings can be used in the next step to design an appropriate model for better participation and optimal management of charitable donations in the field of health. In this study, according to the Corona pandemic period, the composition of the health system, digital tools, and the number of health donors, the presentation of a pattern of participation of health donors is determined in the direction of digital health developments based on Figure 1.

Figure 1: Presenting the model of participation of health donors in the direction of digital health developments

With the outbreak of the Coronavirus, the need for health financing has been increased, and quarantine restrictions under Covid 19 have restricted donors' access to identifying funding needs (Murray et al, 2020). Digital tools and the move to digitalization is a way that, based on the experience of the Coronavirus, can further improve the pattern of donor participation. As a result of this research, it seeks an answer to the question of what is the model of participation of health donors in the direction of digital health developments?

2. Methodology

The present study was exploratory in terms of purpose and a study in terms of design in 2021-2022. The research was conducted to investigate the subject and collect the desired data. Since in the qualitative approach, the source of data is people and their perceptions

and meanings of events, the interview method was used to collect the required data and the content analysis method was used to analyze the data, extract the results and present the model. The analysis of the theme reveals important information about the data and research questions. It is a repetitive and distinctive feature in the text that the researcher shows a special understanding and experience about research questions. Beginning and after identifying meaningful propositions related to the research topic is coded.

Participants included: academic and organizational experts (who are also active in government organizations) and were identified and selected using purposive sampling. With this process, 47 elites, experts, and donors of Fars province were interviewed. All of them had at least 5 years of work experience. The number of people interviewed in this research project was 47. These people had bachelor's, master's, and doctoral degrees.

3. Findings

In this study, in order to identify the dimensions of management of health donors from the elite, the technique of interview content analysis has been used. Experts and managers with executive experience in the health sector and health charities were invited to work in Fars province. In the first part, the demographic information of these people is discussed and then the content analysis and coding steps are stated. 68% of respondents are male and 32% of them are female. The education of the respondents and participants in this study is stated. The percentage of people who have a bachelor's degree is 40.5 percent, MA degree is 40.5 percent and Ph.D. is 19 percent. There are three age categories: 17% were 31 to 40 years, 53% were 41 to 50 years, and 30% were 51 years and above.

Table 1: Demographic characteristics

Category		Frequency	Percent
Gender	Man	32	68
	Female	15	32
Educational	BA	19	5/40

degree	MA	19	5/40
	P.H.D	9	19
Age	Age 31 to 40 years	8	17
	Age 41 to 50 years	25	53
	51 and over 51 years	14	30

3.1. What is the component of participation of health donors in the direction of digital health developments?

For the researcher to become familiar with the depth and breadth of the content of the data, it is necessary to immerse oneself in them to some extent. Immersion in data usually involves "repetitive retrieval of data" and active reading of data (i.e., searching for meanings and patterns).

Step 2. Creating the initial code: The second step begins when the researcher has read the data and is familiar with it. This step involves creating the initial code of the data. Codes introduce a feature of data that the analyst finds interesting. The coded data are different from the units of analysis (themes). Encoding can be done manually or through software programs. In this study, coding was done in software. At this stage of the research, each of the interview manuscripts was written by the researcher, which is shown in Table 2:

Table 2: Introduction step

No.	Key points and repetitive
1	Planning and determining digital strategy in the management of health donors
2	Education and interaction with education in the field of public awareness and assistance in health research
3	Paying attention to culture and creating a culture of health
4	More attention to prevention, given that less attention has been paid to treatment and equipment in this area.
5	Continuous communication of officials with donors and

		holding consulting and strategic meetings
6		Identify deprived and underprivileged areas to introduce to health donors
7		Provide facilities and help to donors
8		Planning for financial resources and their uses
9		Facilitate instructions and rules

Finally, through axial coding, 4 categories (main category), 8 indicators (sub-category), and 51 primary codes were obtained. Sample indicators of interviews are presented through thematic analysis.

Table 3: Identification of template codes and themes

Inclusive theme	Constructive theme	Basic theme	Initial code
Managing the participation of donors in the digital health system	Strategies and policies of donors in the digital age	Codified plan and roadmap	Selecting appropriate methods and methods of operation and correct timing of project implementation based on digital goals and perspectives
			Creating a written plan and roadmap to guide health donors
			Empowering insurers, especially rural insurers, by using the capacity of donors
			Explain the goals of the Health Donors Association
			The city council can assist the charity by providing land to build a convalescent home
			The Donors' Association is practically a tool in the hands of the government that seeks to provide services to the people and reduce the burden on the government by setting priorities and attracting donors.
			Planning for the proper use of public assistance and participation and direct this assistance to national health priorities.
			Approaches related to medical universities

			Holding charitable meetings
		Interacting with donors in policy making	Having a cohesive organization is essential to managing, attracting, and guiding donors in all areas of health.
			Inter-organizational communication
			Participating in policy making
			Establishing a systematic system to meet the needs of the health sector is essential.
			Paying attention to the wishes and suggestions of health donors and applying their experiences and suggestions
			Communication with donors, transparency of reports
	Terms and Conditions	Providing legal facilities to donors	Creating facilities for donors and not receiving duties and taxes from donors.
			The law should provide justice and equality for all charities.
		easing rules for donors	Authorities should review the rules to streamline charitable affairs and remove barriers.
	Research, education and culture	Creating a culture for health	Identify organizations, institutions, bodies, and nuclei interested in non-profit affairs
			Efforts to identify donors inside and outside the country and use their potential and establish a database of donors with the possible media
			Donating helps to promote a community culture that will definitely reduce health problems.
			Creating a culture of health behaviors by donors for people based on content production
			Relationship between health donors and education for culture and scientific and practical education in the field of health.

			The need to create a culture and inform the public through the financial and intellectual resources of health donors is more effective than spending huge sums to build hospitals and equip medical and health centers.
		Helping with health education	Therapeutic and research priorities Research is recognized as an essential element for performing surgery.
			Use of financial resources in the field of research
			Contribute to the education and culture of the people for their safety and health
			Institutionalizing the cause of helping and benevolence in the general public and the principle of interaction and cooperation with charity in health
			Familiarizing donors with the current situation and the extent of deprivation plays a key role in attracting and managing donors
			Providing advice to charitable people in health, medical and ...
Finances and expenses		Cost of financial resources in priority sectors	Charity hospitals
			charity organizations
			Collaborate with donors over a period of time
			Use of charitable funds
			Monitoring and medical equipment
			Methods of attracting financial resources
			How to spend financial resources; Physical development of health care organizations, supply of equipment and consumables of health care organizations, payment of salaries, etc.
			Necessary control and supervision over activities, plans, and projects related to the field of health in terms of quality and quantity

			The role of health donors in social and health insurance
			More attention to low-income and remote areas by officials and donors
			Assistance to donors by universities and government agencies to advance their activities
			Cooperation and interaction of other devices with donors and avoiding stoning in donors' activities
		Cost in the prevention department in proportion to the treatment	Using the experiences of donors and their previous actions
			Media advertisements to attract good even from abroad
			More attention of health donors to prescribing hospitals and medical centers
			Directing donors to less privileged areas
			The goal should not be to attract credit, but to motivate donors directly by entering the field of health and increase management of financial resources.
			Empowering insurers, especially rural insurers, by using the capacity of donors.
			Prevention of many diseases requires the creation of sports and recreational spaces so that society can act successfully in the discussion of prevention with a sense of calm and increased activity and mobility.
			Following up on some treatments and providing the required medical equipment is terrifying; In the meantime, many patients need help. (Helping people and patients directly)
			The Donors' Association is practically a tool in the hands of the government that seeks to provide services to the people and reduce the burden on the government by setting priorities and attracting donors.

			(Donors are empowering the government and serving the people)

After reviewing and analyzing the texts using the theme analysis method and going through six steps, the sub-main and main themes are obtained according to the table.
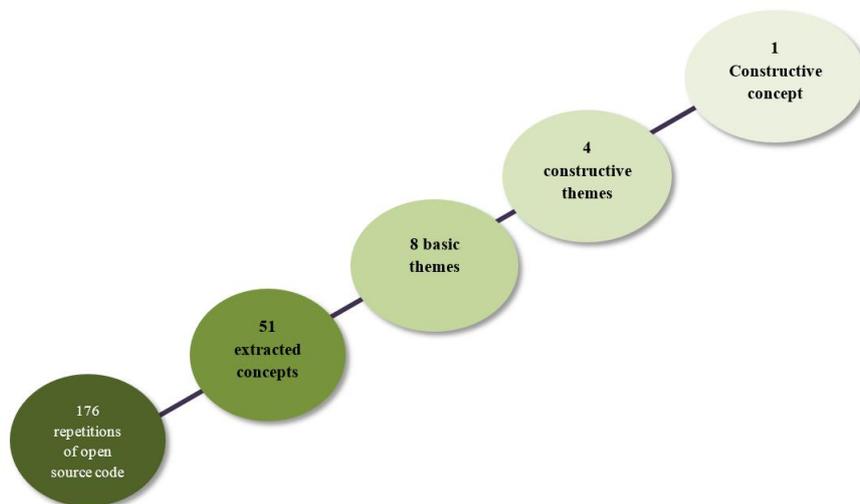

Figure 2: Coding process in content analysis

Based on the above figure, the research model consisted of a comprehensive theme, 4 organizing themes and 8 basic themes. Four quantitative criteria have been used to examine validity, transferability, verifiability, and reliability: Holstey coefficient, P-Scott coefficient, Kappa Cohen index, and Kerpindorff alpha. The correlation of the experts' point of view with the calculation of the Holsti coefficient (PAO) or "percentage of observed agreement" is 0.830, which is a significant amount. According to the drawbacks of

the Holstey method, the P-Scott index has also been calculated, the amount of which is 0.73. The fourth indicator for assessing the validity of qualitative research is the Kappa Cohen index. Kappa Cohen index in this study is 0.73. Finally, Kerpindroff alpha has been used and its amount in this study is estimated to be 0.88.

3.2.what is the model of participation of health donors in the direction of digital health developments?

Based on the factors identified in the qualitative analysis, an initial pattern has been identified in relation to the participation of health donors in Fars province. This model is based on 4 structured themes and 8 basic themes. Figure 4 shows this model.
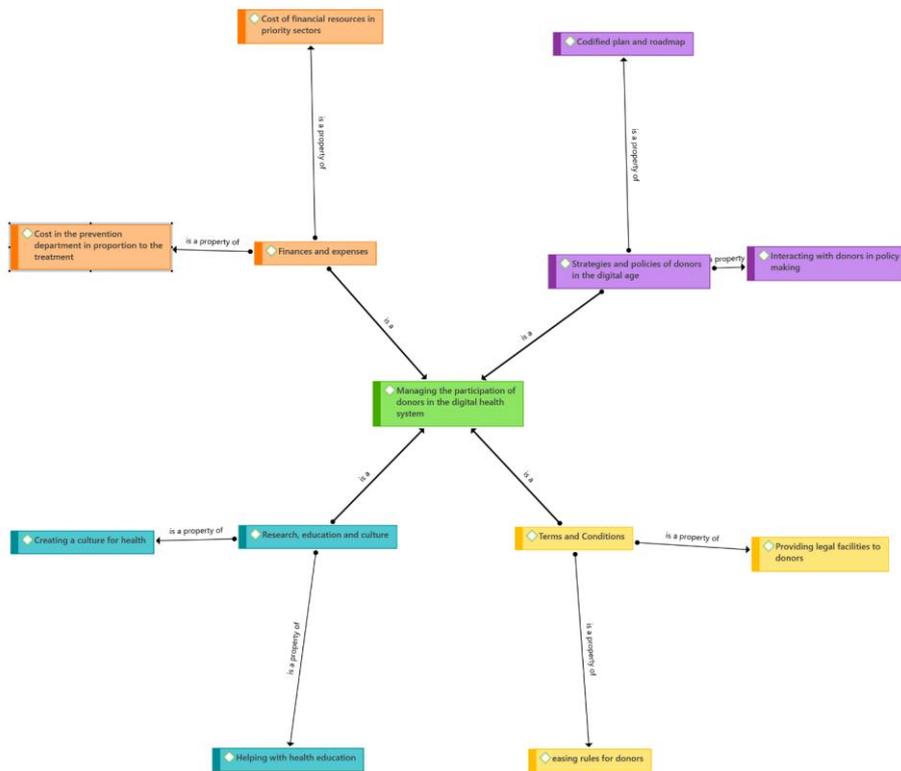

Figure 3: The proposed model of participation of health donors

4. Conclusion

Over the past decade, there has been an unprecedented shift in demand for health data and recognition of the value of data to improve health outcomes for people in low- and middle-income countries. To meet this demand, developing countries began to develop and improve their national data systems. Increasingly, data previously locked into paper systems are now available electronically for distribution and analysis at all levels, a growing set of global digital health public goods is available, and the capacity of humanity in low- and middle-income countries for managing digital tools allows countries to think more ambitiously about how to use data.

These advances are more significant given the high degree of fragmentation, duplication, and inefficiency that characterize many digital health systems in developing countries. We are now at a turning point where significant progress in improving health, economic and gender equality, and achieving sustainable development goals requires greater coordination among donors who fund digital systems (Kishore et al, 2020).

The investment approach to health means the government's active efforts to control people's health through positive economic and social change. Investing in health was initially identified as one of the five priorities of the 1997 Jakarta Health Promotion Conference Declaration, and increasing investment in health required a sincere multi-sectoral effort. The investment approach to health seeks a new form of partnership (Morton et al, 2021). Because in today's complex world, action to promote health cannot be done alone in the health sector (Sarbadhikari et al, 2020). Such an action requires the creation of a strong alliance between the health sector and other active sectors to achieve a just and sustainable social and economic development based on the designed model, creating strategy and planning, education and culture in this field, ease of laws and regulations as well as financial resource planning play an important role in managing the participation of health donors. With clear planning of health programs, donors see the clarity of decisions (König et al, 2021). Examine the

part that needs financing and equipment completion. Because the quality of plans and programs, the effectiveness and efficiency of strategies, and the quality of results are all subject to the decisions made by donors.

Given that cooperation is excellent in any model and type, the importance of the participation of health donors according to the decision-making basis of donors, choosing the type and method of participation in the effectiveness of these partnerships is essential. So with the right planning and strategy, donors incorporate new ideas and new methods into their decisions.

Based on the results, 51 codes were identified. These 51 codes were divided into 8 categories of primary content. These 8 themes are codified plan and roadmap, interaction with donors in policy-making, providing legal facilities to donors, streamlining laws for donors, helping with health education, creating a culture for health, spending financial resources The priority areas are the cost in the prevention department in proportion to the treatment.

Mossadegh Rad et al. (2019) has shown that donors in the Iranian health system provide health services in physical, mental, and social dimensions at the levels of prevention, treatment, and empowerment services. Donors directly provide a variety of health services and non-donors are directly involved in providing support services such as the construction and repair of hospitals and health centers and the repair of medical equipment, so they are consistent with the results of the present question.

Iran is one of the most benefactor countries in the world. Attracting the audience to accompany them in health charitable activities is very important. With the advancement of technology and the creation of social networks and the use of information technology, the possibility of communicating with the audience has greatly increased. In this situation, it is much easier to communicate with charities than in the past, and most of the time there is no need for the physical presence of charities and audiences in health charities. But diminishing the physical presence of audiences and charities can make

health charities face the problem of diminishing the trust of potential and even current audiences. Attracting the right audience at the same time as building trust is important in today's world. The age of communication and technology means the rapid and widespread reception and transmission of messages in the interconnected world, the global village. In this process, advertising, which dates back to ancient times, has a special place for interaction between people and places from the twentieth century onwards. Media is used to communicate (Rossolatos, 2021).

The donor management model can be used to improve health management. Establishment and development of a country's national digital health strategy, policies, and regulatory framework. Strategies include components such as architecture, standards, investment frameworks, privacy, and rigorous operational and regulatory plans. Donor cooperation in Iranian universities of medical sciences and the highest priority is to improve the performance of health management. Increasing popular participation is an important element in good governance in society. Proper management of direct payments and charitable organizations is achieved by identifying the factors that affect it. Based on the four categories of identified factors, the development of non-governmental organizations and charitable organizations leads to the strengthening of social participation in health. In addition to treatment, charitable participation should be strengthened in the areas of prevention and health promotion. Health system policymakers and managers should take steps to strengthen donor participation in the health system. Incentive and support mechanisms are considered useful in this context. There is also a need to create cultural values to strengthen the values, capabilities, needs, and participation mechanisms of donors required by the health care system.

5. Discussion

Financing is very important in health management. The investment approach to health seeks a new form of partnership.

Because in today's complex world, health promotion cannot be done alone in the health sector. Such a move requires the creation of a strong alliance between the health sector and other active sectors to achieve a just and sustainable social and economic development. The nonprofit and charitable sectors, as the third-largest economic sector after government and commerce, make a significant contribution to reducing humanitarian problems around the world. Therefore, the proposed model can help decision-makers to organize the participation of donors.

It is imperative for donors to align their investments with the country's digital health strategies that support national health strategies. This is essential to empower countries to pursue an integrated approach to strengthening health systems, increasing and expanding the provision of quality health services, and improving data (and capacity to use it) to improve health outcomes.

If indeed digital health can become scalable, the Open Digital Health initiative may help closing these gaps. Governments are attempting to systematise digital health efforts looking for evidence-based tools that they can recommend to their healthcare providers and subsequently to patients. There is a need to provide digital health tools that facilitate health promotion and disease prevention; however, the efforts are fragmented and they lack central coordination and multidisciplinary guidelines on best practices. What is missing is clear guidance on the standards of the tools, best methods to evaluate the quality of the tools and their effectiveness. The COVID-19 pandemic has further emphasised the need for a flexible and affordable healthcare system with a strong emphasis on prevention and remote healthcare delivery.

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