2528-9705

Örgütsel Davranış Araştırmaları Dergisi
Journal Of Organizational Behavior Research
Cilt / Vol.: 3, Sayı / Is.: S2, Yıl/Year: 2018, Kod/ID: 81S2452

A DECENTRALIZATION MODEL FOR HEALTHCARE SYSTEM IN IRAN

Behzad ABBASI HAROFTEH[1]*, Hamidreza BANDY[2]

[1] Ph.D., Public Policy Making, University of Tehran, Tehran, Iran.
[2] M.A, German studies, University of Tehran, Tehran, Iran.

***Corresponding Author:**
Email: behzad.abbasi1986@gmail.com

ABSTRACT

Background: As one of the key aspects of policymaking in healthcare, making reforms has long been considered as a significant subject by many countries, and governments have paid close attention to the important role of implementing efficient reforms in their health systems. In Iran, healthcare policy is highly centralized and decision makers have always been seeking for solutions to improve equality and productivity. The aim of this research was to identify the affecting factors in this area of policymaking and to develop a model of healthcare decentralization for Iran. Methods: In this study, in order to design a theoretical and feasible model of decentralization for healthcare, a descriptive-survey approach was used and qualitative research methods were employed. In the first phase, we used meta-synthesis and at the second stage, data were analyzed through thematic analysis. Results: We initially reviewed 31 remarkable studies in the field of healthcare decentralization. Then, nine studies were selected as the final selection to carry out meta-synthesis analysis. After the final prerequisite factors for a successful decentralization in healthcare were extracted and categorized, a questionnaire was designed based on these factors to conduct interviews. Thematic analysis was used to analyze data from interviews with 15 healthcare experts and decision makers including former and current executive managers at the ministry of Health and Medical Education. Conclusion: We identified the main factors of decentralization in the process of health policymaking. Based on these, we created a model of decentralization comprised of 12 stages, considering the main aspects of healthcare decentralization.

Keywords: *Healthcare, Decentralization, Health Policy.*

INTRODUCTION

In the recent years, many countries have undergone reforms in the organization of their healthcare mechanisms. Plenty of theoretical models and frameworks for decentralization have been introduced and developed through years; however, few studies have assessed, analyzed, or measured the scope and range of decentralization within the health sector (Saltman et al., 2007).

Decentralization has been considered as an instrument to enhance the performance of healthcare systems and as a solution to services that concern local needs and demands. Funding and/or management decisions can also be transferred to lower layers of government by launching decentralization in their health sector. Governments seek to increase their efficiency and to confine health costs (Mosca, 2006). A review on the research literature demonstrates evidently that moving towards decentralization or centralization, or even maintaining a decision-making system considering both, is an issue of governance based on

Geliş tarihi/Recieved: 19.11.2017 – Kabul tarihi/Accepted: 04.02.2018 – Yayın tarihi/Published: 21.08.2018

political, social, and economic management systems, where ideological tendencies of governments can also be involved (Vaezi and Abbasi Harofteh, 2018).

Healthcare system in Iran is almost centralized in nature. The government, with the aim of improving equality in access to services and funding (based on public resources), delivers its services according to national priorities. Constantly changing health and population data show the significance of implementing a decentralized healthcare system to functioning according to local needs and preferences. In this article, prerequisite factors of a healthcare decentralization reform have been identified within the related research. Contributing to the theoretical dimension of this research (theoretical aspects), management experiences in higher healthcare policymaking, and administrative levels in Iran determine the feasibility of the model, which is the result of this paper (feasibility aspect). For this, we acquired data from interviews. Combination of these two aspects show the significance of this study. Moreover, in the Iranian health system, unsuccessful decentralization efforts are evident and its inefficiency is an output of failure to achieve the defined objectives, which are depicted in the high-level documents of health policy. Thus, the necessity of creating a practical model for healthcare decentralization in Iran is extremely felt.

Different dimensions of healthcare decentralization (both negative and positive) have been examined in various sectors. Hausken and Ncube (2018), have conducted a research aiming at identifying service delivery flaws in four African countries. They found that clinicians spend very little time with patients per day (Hausken and Ncube, 2018).

From an economic point of view, Huang *et al.* (2017) have found that expenditure decentralization can have positive impact on citizen satisfaction regarding public healthcare. Their study shows that decision-making at lower levels is more efficient concerning local needs (Huang et al., 2017).

In their article, Mauro *et al.* (2017) have studied recovery plans (RPs) for Italian health system and argue that since the objectives of hospitals RPs in Italy have lost their significance, decentralization process in the Italian healthcare would predictably reach to its critical point. These plans constitute a remarkable part of decentralization in the Italian healthcare (Mauro, Maresso and Guglielmo, 2017).

Fossati (2017) studied institutional developments such as decentralization in Indonesia and concluded that these reforms can exert remarkable impacts on incentives for political elites to provide social services in many sectors, including healthcare (Fossati, 2017).

Cavalieri and Ferrante (2016) have selected Italy as a case study, where decision power in health sector is surrendered to regions. They stated that the effectiveness of decentralization in enhancing healthcare services is dependent on context features of implementation (Cavalieri and Ferrante, 2016).

In her thesis, Bailey (2016) has explored access to healthcare services in Honduras with a qualitative approach and asserts that under a decentralized health system, improvement in healthcare access has been achieved (Bailey, 2016).

Costa-Font and Parmer (2016) believe that decentralization in form of local democracy has enhanced access to preventive child healthcare in India since 2005. Di Novi *et al.*, (2015) concluded that in healthcare sector, fiscal decentralization of tax decisions to lower levels seems to have positive impacts. Reducing inefficiencies of healthcare policies and bringing

effectiveness in terms of local and regional disparities in health system (Di Novi et al., 2015) are two main objectives being achieved.

Brock *et al.*, (2015) found that fiscal decentralization in many aspects such as Infant Mortality Rate (IMR), has not been able to overcome the associated health problems (Brock, Jin and Zeng, 2015).

Doshmangir *et al.* (2015) have reached to three main themes, concerning the Iranian experience of healthcare decentralization, including the implementation approach, policy itself, and policy context. They mainly focused on the implementation of hospital decentralization and stated that ignoring these factors can hamper the implementation of healthcare decentralization in Iran (Doshmangir et al., 2015).

It has been discussed that most public services such as health services have to be organized and controlled based on their local needs. This is the decentralization of health service management (Çınar, Eren and Mendeş, 2013). The core of decentralization is established upon the notion that smaller organizations function qualitatively with the higher levels of agility and accountability than larger ones (Bossert and Beauvais, 2000; Saltman and Bankauskaite, 2006). However, some European countries have switched to recentralization process (Tediosi, Gabriele and Longo, 2009). The paradigm of decentralization and recentralization introduces a significant issue for the management of healthcare services (Saltman and Bankauskaite, 2006; Saltman, 2008; European Observatory on Health Systems and Policies, 2006).

Theoretically, it is said that the decision to decentralize is contingent on balance between its benefits and costs. From the empirical literature, we imply that decentralization leads to efficient and better health outcomes (Alves, Peralta and Perelman, 2013). Practically, the decentralization effects are dependent on local resources and management capacities and subject to change in nature (Leer, 2016).

Abbasi Harofteh (2017) concludes that considering geographical territory, ethno-social texture, topographical features, spatial planning, jurisdictive and political structure of Iran, and decentralization in major policymaking processes can generally increase the efficiency of the system to improve service quality and delivery concerning stakeholders' needs and preferences in different regions and has turned to a necessity in the public decision-making (Abbasi Harofteh, 2017).

Decentralization is technically seen as the transfer of power, authority, and responsibility from the central government to lower levels of governing units. This reform is efficient in balancing the exchange of power between central and local government (Baldersheim and Ståhlberg, 1999). These local units are, then, seen as decision-making units in terms of public decisions and service. However, a supervision of feedbacks has to be organized.

It is believed that decentralization introduces more compact and fluent organizations to the public sector. Services can be improved by decentralization through a combination of higher insight into local requirements, preferences and sector providers, highly accountable decision makers, and competition among regions (Alves, Peralta and Perelman, 2013). McConville *et al.*, (2018) argue that the extensive devolution of healthcare authorities towards community level has engaged many actors and stakeholders such as community nurses or the patients themselves (McConville, Hegarty and Davis, 2018).

Key factors for decentralization differ based on decentralization process, and organization type, which is to be decentralized (McIntyre and Klugman, 2003). It is also important that

there is no global rule or form of decentralization to apply, but there is often a remarkable association among the different types.

In heath sector, decentralization has been seen as a typical reform in many countries since 1980s and is believed to enhance the performance of healthcare systems (Mosca, 2006). In the recent time, decentralization of financial and political power has been considered as an effective instrument to improve outcomes of the healthcare sector in many different countries (Magnussen, Hagen and Kaarboe, 2007). Winchester and King (2018) claim that governmental agencies in South Africa have reflected global healthcare strategies such as decentralization in order to achieve higher levels of local primary care provision and to improve healthcare access.

Theoretically, these are three main reasons or motives, which can justify or explain dependence of health systems on decentralization agenda and plans, including (a) legitimacy issues, (b) performance issues, and (c) self-interest issues (1; 2).

However, the early stages of implementation may show that decentralization per se does not always improve the efficiency, equity, and effectiveness of the health sector. For example, Dassah *et al.*, (2018) believe that factors such as inadequate training and lack of updates/refresher courses, lack of testing frameworks or guidelines and treatment protocols, less clear communication between central and regional units, rising workload and ineffective documentation of test results and treatments can negatively affect the decentralization process of healthcare services.

Studies show that an "incorrect" decentralization can put more pressure on people and inequality of access to healthcare services may arise in lower levels (Menon, 2006). Gomez *et al.* (2008) claim that insufficient attention to the technical or financial aspects of decentralization in Brazil has caused a number of limitations and restrictions in the healthcare sector.

Nonetheless, decentralization similar to any reform in health sector cannot be considered as a target, it is rather an instrument in this respect.

Regmi (2018) believes that decentralization, representing a problematic concept, is associated with methodological challenges and, therefore, shall be regarded as a “context-specific” and “multidimensional” decision. The current healthcare policymaking system in Iran, due to its low equality index, inappropriate use of the resources, insufficient accountability towards users and stakeholders, failing to achieve its predefined objectives etc., seems to be highly inefficient. A reform in different fields of healthcare policymaking process in Iran is proven to be inevitable mainly in organization and structure, economic resources and budgeting and health programs. Crook *et al.* (2001) argue that decentralization has bridged the gap between government and people. Accountability was improved and policies concerning common needs of citizens were enhanced.

In Iran, the ultimate responsibility of reaching a healthy society is assigned to the government. In addition to healthcare system, which facilitates physical health, there are many other governance sectors that carry a more significant responsibility with more levels of power and are in charge of spiritual, mental, and social health, such as cultural institutions, economic sector, education, food supply, accommodation, etc. (Iran’s Health Roadmap, 2010). In the 1990s, some healthcare decentralization plans were decided to launch by the government in Iran (Doshmangir et al., 2015; Jafari et al., 2011). In 2004, a program was conducted to

develop the board of trustee's hospitals. This was an inefficient decentralization plan, which was incapable of tackling problems rooted in the centralized health system of Iran. The discussion above has drawn attention of healthcare policymakers for a long time, but less effective efforts have been made and organized actions are rare.

Decentralization in Iran is done by transferring more decision-making power to hospitals. Although this was seen as a proper method, but showed little achievement of its predefined objectives in terms of design and implementation. Funding responsibilities were delegated to hospitals without specifying support from public resources (such as insurance sector), which in turn, caused more inequality in healthcare service. This has, consequently, led to inefficiency of hospitals and loss of political supports (Kabir, Rahbar and Motlagh, 2008). In addition, the necessity of planning a healthcare reform is depicted in many high level documents in Iran. For example, the tenth policy of "Program for Change and Innovation in Health Education" is decentralization in higher health education system (Packages for Change and Innovation in Health Education, 2015).

METHODOLOGY

In the current research, in order to design a theoretical and feasible model of decentralization for healthcare policymaking process in Iran, we applied a descriptive approach and employed qualitative research methods. Initially, we reviewed 31 remarkable studies in the field of healthcare decentralization. Then, nine studies were taken as the main selection to carry out meta-synthesis analysis. After the final prerequisite factors for a successful decentralization in healthcare were extracted from the selected studies, a questionnaire was designed based upon these factors to conduct interviews with experts in this field. Each interview took about one hour, fully consistent with ethical issues in research. We conducted interviews with healthcare experts and decision-makers, as well as former and current executive managers at the ministry of Health and Medical Education. Totally, 15 interviews were conducted during 75 days. Followed by the thematic analysis, we tried to identify the main factors of decentralization in the process of health policymaking. Based on these, we created a model of decentralization, considering the current situation of Iranian healthcare system. We chose purposeful sampling for the process of thematic analysis. Purposeful sampling is the most commonly agreed-upon method of sampling (Seidman, 2006). The outcome of this analysis was a model for the decentralization of healthcare system in Iran.

According to the nature of this approach, meta-synthesis is known as a method for synthesizing knowledge on specific subjects, such as subjects pertaining to users or stakeholders of healthcare-related services, their experiences, and the factors that render their participation and commitment to a health system. The role of systematic review of qualitative studies has been increasingly respected in the recent years and proves its significance; evidence-based practice is respected not only in health sector, but also in social and political decision making (Korhonen et al., 2013).

Meta-synthesis attempts to integrate results from a number of different but inter-related qualitative studies. The technique has an interpretive nature and is an important technique for qualitative researchers and can broaden understanding of the contextual aspects of healthcare (Walsh and Downe, 2005).

The combination of analysis and interpretation from previous scientific works with different methods and techniques can encourage researchers to generate new and innovative ways to the presentation of meta-synthesis techniques (Zimmer, 2006). The term qualitative meta-synthesis refers both to an interpretive product and to the analytic processes, by which the findings of studies are integrated, compared, or otherwise put together (Sandelowski and Barroso, 2003).

The process of thematic analysis begins with thematic patterns being taken into consideration, as well as subjects potentially interesting to the researcher. We employed a deductive-inductive approach. This analysis, in general, is comprised of a recursion between data collection and coding, subsequently, the analysis of synthesized data. Composition of analysis begins right from the first step. Technically, there is no pre-defined or unique way of starting the research of subject in the method of thematic analysis (Braun and Clarke, 2006). In qualitative research, a list of significant criteria should be taken into account regarding the selection of research sample. Actuality or the significance of research topic for the interviewees and their level of knowledge or perception of the problem play important roles in the conduction of research interviews and data collection (Seidman, 2006).

RESULTS

Based on the methods applied for acquiring and analyzing data, the findings were divided into two categories. Meta-synthesis was used for identifying key factors of healthcare decentralization and thematic analysis for designing a model of decision making process in healthcare.

Findings related to meta-synthesis

In this article, we moved forward through a process comprised of seven steps, including research questions, systematic literature review, finding appropriate texts, extracting textual data, analysis and synthesis of qualitative data, quality control, and upgrading findings. The criteria for selecting studies were determined according to Critical Appraisal Skill Program (CASP, 2018) standard checklists applied in healthcare sector consisted of ten criteria: research objectives, logics of methodology, research plan, sampling method, data acquisition, flexibility, ethical studies, data analysis precision, clear research finding, and research contribution. Based on the 50-score scale of CASP and according to the ten criteria mentioned above, those articles which reached a minimum score of 30 were chosen to make our final selection; thus, nine articles out of 31 were selected.

The first part of findings of this study are results of the meta-synthesis for nine articles selected from 31 major articles in the field of healthcare. In this research, factors extracted from each article were classified in three main categories, including political, economic, and human resources. We reached three main categories consisting of 19 factors.

Table 1 – Key factors of healthcare decentralization

Political Factors	Economic Factors	Human Resources Factors
• Local Councils • Equity • National Standards • Health Sector Specific Analysis	• Cost Efficiency • Allocative Efficiency • Budgeting • Gap Between Shares of	• Appropriate Staff Number Appropriate Skills and Experience • Appropriate Inputs to Organizational Performance

• Local Differences • Institutional Capacity • Specific Health Agenda • Accountability and Transparency	Domestic Income • Economic Transparency	• Empowerment • Clear Role Definition • Different Spaces of Acceptable Practice and Accountability

Followed by a meta-synthesis, the factors were presented at a focus group session with five graduate experts specialized in policymaking. This was done in order to attain validity of the meta-synthesis results. For the reliability, we employed the Kappa Indicator: a non-involved expert extracted 17 factors, 15 mutual factors were detected; thus, the Kappa indicator equaled to 0.714, which is within the valid range. Any value more than 0.6 falls within this range.

Table 2 – Kappa indicator

		Extracted factors by the researchers		
		Yes	No	Total
Extracted factors by the non-involved expert	Yes	A:15	B: 2	17
	No	C: 4	D: 0	4
	Total	19	2	N=21

$$\text{Kappa}=\frac{A+D}{N}=\frac{15}{21}=0.714$$

Findings related to thematic analysis

After we found that we have reached data saturation in our interviews, we stopped the interview phase to analyze the acquired data. Followed by the phase of transcription, we completed these with our notes and scanned the textual data precisely. We obtained 88 issues and 36 sub-themes. Similar themes in different interviews fell into one category with an indicator. Based on all of the identified themes, a more general classification became possible and 12 main themes were extracted in consistency with the BPR model. Main themes and sub-themes obtained from the interviews are demonstrated in the following table:

Table 3: Model of healthcare decentralization process in Iran

Main themes	Sub-themes
Identification of healthcare decentralization process **(A)**	(1) Preparing draft, mission, and objectives for decentralization project (2) Data and input acquisition from stakeholders (3) Making a team for the conduction of decentralization in healthcare policymaking process
Understanding the environment of healthcare policymaking process **(B)**	(1) Interviewing decision makers in the field of healthcare (2) Interviewing stakeholders in the process of healthcare policymaking (3) Interviewing process executives or owners in different management levels (ministry, province, district, healthcare centers) (4) Collecting existing documentation from the current policymaking processes

Documenting healthcare policymaking process **(C)**	(1) Collecting feedback (input) from all stakeholders and corresponding persons about healthcare policymaking process (2) Drafting a decentralization plan by using healthcare policymaking process reengineering (3) Upgrading purposes and objectives of decentralization plan
Analyzing environment of the healthcare policymaking process **(D)**	(1) Conducting in-depth analysis of the existing healthcare policymaking procedures and processes (2) Reviewing risks and current assumptions for decentralization process (3) Detecting potential reasons or causes of resistance associated with decentralization project
Flowchart of the current healthcare policymaking process **(E)**	(1) Mapping core processes, tasks, roles, and procedures of healthcare policymaking (Iran) (2) Flowchart of the current healthcare policymaking process in Iran by identifying (inter) dependencies (3) Identifying technological requirements and needs for conducting decentralization project
Detecting weaknesses and strengths of the Iranian healthcare policymaking process **(F)**	(1) Identifying (in) efficient processes in healthcare policymaking (Iran) (2) Detecting gaps, overlaps, and redundancies in healthcare policymaking process (3) Allowing stakeholders and users to suggest ideas and express opinions for the project
Reengineer healthcare policymaking process towards decentralization **(G)**	(1) Designing decentralized features and functionalities of healthcare policymaking process (2) Providing space for active participation of (and collecting feedback from) healthcare policymaking stakeholders and users (3) Obtaining approval of decentralized healthcare policymaking process from all stakeholders.
Flowchart of decentralized healthcare policymaking process **(H)**	(1) Flowchart of decentralized healthcare policymaking process by identifying (inter) dependencies (2) Providing user interface for decentralized healthcare policymaking process in the field of IT
Training, communicating, and collecting feedback **(I)**	(1) Training (and communicating with) users and stakeholders of policy (2) Collecting feedback on decentralized healthcare policymaking process (3) Highlighting main measurement variables and linking them with purpose and objectives of the project
Prototype of decentralized healthcare policymaking process **(J)**	(1) Creating prototype for decentralized healthcare policymaking process (2) Implementing a pilot based on prototype (3) Collecting feedback from users and stakeholders
Implementing decentralized healthcare policymaking process **(K)**	(1) Implementing decentralized healthcare policymaking process (2) Monitoring decentralized process operation and

	providing support (3) Evaluating achievement of process regarding strategic objectives of the reengineered process
Assessment and Report **(L)**	(1) Conducting summative assessment (2) Concerning users' worries and their opinions (3) Reporting on main outcomes (Cost saving, improved efficiency etc.)

The reliability of the output derived from thematic analysis was determined by focus group discussions within two sessions (first session with six and the second with eight participants) involving the managers of the Ministry of Health and Medical Education. Almost all the extracted themes and sub-themes remained reliable. The validity of the model was determined by two indicators Content Validity Index (CVI) and Content Validity Ratio (CVR). The corresponding values of each indicator were within the acceptable range of validity (CVR>0.42 and CVI>0.79).

Sub-themes related to each set of factors derived from the meta-synthesis are categorized in the table below, showing the relevance of each factor to each step of the process in the model)

Table 4: Relevance of findings from meta-synthesis and thematic analysis

POLITICAL FACTORS	Subthemes
Local Councils	B3, C1, G2, I2, J3, L1
Equity	G2, I3
National Standards	B4, G3, I2, J3
Health Sector Specific Analysis	B2, B3, C1, D1, D2, D3, E2, F1, F2, H1, I3, K3, L1, L2
Local Differences	B3, I2, J3, K2, L1, L2
Institutional Capacity	E3, H2
Specific Health Agenda	C1, C2, C3, G1, H1, J1, J2
Accountability and Transparency	G1, H2, I1, I3, K2, L1
ECONOMIC FACTORS	
Cost Efficiency	F1, F2, I3, L3
Allocative Efficiency	F1, F2, I3, L2, L3
Budgeting	I3, K2, L3
Gap Between Shares of Domestic Income	F1, F2, L3
Economic Transparency	I3, K2, L3
HUMAN RESOURCE FACTORS	
Appropriate Staff Number	A2, A3
Appropriate Skills and Experience	A3, I1, I3, K3
Appropriate Inputs to Organizational Performance	I1, I3, K3
Empowerment	I1, K2
Clear Role Definition	A2, E1, I1, I3
Different Spaces of Acceptable Practice and Accountability	I1

DISCUSSION

In this section, we try to discuss the relevance of the findings from the meta-synthesis to our final model of decentralization. For an efficient implementation of healthcare decentralization reform three categories of factors need to be considered in this 12-stage healthcare decentralization process.

Political features of countries including bureaucratic procedures and administrative processes as well as the local capacities to make independent decisions, in addition to political will of central government play key roles in the success of decentralization reform in implementation. Tan (2018) argues that policy capacity and bureaucratic autonomy of the local governments are key factors of an effective implementation of a centrally conducted reform. Del Pino and Ramos (2018) argue that although decentralization can facilitate less popular reforms, regional decision makers and leaders tend to use the created space to avoid their strict application. Some decentralization theorists prefer a high degree of local power over a wide spectrum of public services including health services (Shah, 2004; Shah, 2006; Yilmaz, Beris and Serrano-Berthet, 2008).

Local councils are officially in charge of the running mechanism of healthcare delivery, including both private and public sector, as well as responsible for taking appropriate actions in the planning of local/regional healthcare components and systems. These decision-making units are governed by councils, consisted of democratically elected representatives, who have extensive constitutional rights to steer the healthcare sector (Glenngård et al., 2005). Equity means paying close attention to equal access to healthcare which would lead to higher levels of effectiveness at both local and national levels. Many argue that restrictions in local governance might be necessary to ensure basic rights such as equal access to healthcare (Fredriksson and Winblad, 2008). Also, national standards should include differences at the local government level in the process of priority setting and sharing of authority between the central and local levels (Lakshminarayanan, 2003). However, we should note that health sector experts have opposed that higher attention to local taste may conflict (or deviate from) overall health system function, such as equity issues (Bossert and Mitchell, 2011). Many countries have undergone reforms with no sector-specific analysis before their implementation (Berman and Bossert, 2000). Concerning the situation and features of each district can enhance the participation of stakeholders and also increases their commitment and accountability. Local governments are also relatively autonomous units; this may result in an uneven distribution of power and responsibilities, which can impact healthcare (Fredriksson and Winblad, 2008). Decentralized solutions are believed to lead to increased welfare by allowing local authorities to act in accordance with local preferences and local cost structures (Magnussen, Hagen and Kaarboe, 2007). If there is imperfect information on both costs and preferences, ambiguity arises. This ambiguity is reflected in the wide variety of health system solutions (Gilbert and Picard, 1996). Thus, a solution can be employing IT infrastructures to facilitate data collection and process monitoring. A major hurdle to the successful launch of decentralization is the scant institutional capacity at both local and central levels to play their roles. Inadequate capacity-building abilities cause various levels of health service delivery between different local government units. It is a factor that can minimize effectiveness (Lakshminarayanan, 2003). UNDP (1998) defines capacity as the ability of individuals, organizations, or systems to perform appropriate functions effectively, efficiently, and sustainably. The term “Institutional

capacities" refers to capacities at a full range of aspect of organizational, financial, human etc. (Boffin, 2002). The processes and functions that should be decentralized must be defined. Monitoring also ensures the effectiveness of the reform (Lakshminarayanan, 2003). This functions as a long-term plan for executives of decentralization reforms; thus, in case complexities occur, managers and local directors can be referred to this agenda. The existence of such agenda is a sign of government's determination to fully implement the plan. Since transparency and accountability to locally elected units would perhaps linger in highly bureaucratic systems, more effort in decentralized contexts is required to motivate local health units and personnel to be more accountable and responsive to locally selected officials (Bossert and Mitchell, 2011). A real space for autonomous planning depends on the local government. Finance for healthcare is the responsibility of the local government administrative system. There is space for significant differences in terms of the domain, across which the local health system has control over its own resources autonomously, independently from the central government. Existing capacities of each district's health system can identify its own health problems in order to plan the allocation of resources (Atkinson et al., 2000).

From an economic perspective, generally, more decision-making power is transferred to local units in more developed countries. In many OECD countries, sub-national governments collect a large amount of tax revenue and assume the responsibility of providing essential public services such as health, education, and welfare (Kim and Dougherty, 2018). Kleider (2018) states that decentralization can lead to divergence of subnational social expenditure. On the other hand, subnational governments seek to decrease their social spending and some tend to increase it (Kleider, 2018). Cost efficiency assessments are based upon the same data set as technical efficiency, but inputs are measured as costs rather than staffs. Biørn *et al.* (2003) also offer a broad range of these measures. Cost efficiency is a main factor in decentralization because public goods/services that are locally consumed should be locally produced. Adapting to local cost structures guarantees cost efficiency, adapting to local preferences guarantees allocative efficiency. The associated local benefits and costs in the local level are two factors included in the plans meant for improving allocative efficiency (Magnussen, Hagen and Kaarboe, 2007). For example, activity-based funding is defined as the number and composition of hospital treatments, which is seen as main criteria for funding and grants (Berman and Bossert, 2000). Some studies figured out that the rise in healthcare expenditures has been the greatest in regions with fiscal autonomy. The higher healthcare expenditures under decentralization may, however, reflect higher costs (Alves, Peralta and Perelman, 2013). If local levels are inefficient due to less financial support and if the state systematically has to bailout their deficits, we may predict a weak decentralization (Hagen and Kaarbøe, 2006). This should be regarded from two different perspectives. Firstly, giving up decision power of expenditures and, then, transferring responsibility of decisions concerning the revenues. Each part should be precisely planned by the central government. Actually, the difference between shares of domestic income is not only an essential dimension of the decentralization, but also an issue concerning all public services (Çınar, Eren and Mendeş, 2013). Disparities in income should constitute a remarkable part of planning process. In a realm that is governed by opportunistic decision makers, the reform of decentralization might be an effective mechanism to hinder corruption or optimize provision of public services, such as healthcare (Belleflamme and Hindriks, 2005).

The role of HR is notably highlighted in healthcare decentralization policy, for it is the only area of policy, which is directly associated with levels of health risk. Decentralization needs a review of curricular content and processes and can determine how the role of healthcare specialists is defined (Gaede, 2018). Optimized planning, extensive knowledge, and adequate preparation in addition to effective monitoring could increase the odds for an efficient decentralization, improving HRM in the health sector (Liu et al., 2006). In Tanzania, more power is delegated to the faith-based hospitals in order to tackle major budget and Human resource challenges (Maluka, 2018). A balance between staff and other resources must exist, when personnel costs consist a portion of over 60% of the total budget (Martinez and Martineau, 1998). Getting the right number and types of staff to recruit has become an important dimension in order to create this balance. Within regions, the loss of (most experienced) personnel leads to reduction in productivity of health workers (Youlong, Wilkes and Bloom, 1997; Martineau, Gong and Tang, 2004). Tang and Bloom (2000) discuss that head count and payroll costs can be considered as indicators of appropriate number of staff. The HRM action including control on staff recruitment and transfers in line with health service needs seems somehow mandatory. There are a number of HRM actions regarding appropriate skills and experience such as attracting well-skilled and experienced persons, applying Merit-based selection approach, offering relevant in-service training. If we assume that Human Resource Management policies are associated with appropriate health service targets, optimized HRM leads to improved health outcomes. It is believed that guaranteeing complementary inputs including supplies and tools are identically essential management functions to achieve performance (Liu et al., 2006). Managers must be prepared for their new responsibilities and functions, which is an aspect of clear role definition process. Additionally, transfer of skills to the lower levels seems to be of great importance. Implementation of healthcare decentralization should be accompanied by the existence of managerial skills in sub-regions (Mosca, 2006). When health decentralization policies are to be implemented, unclear definition of roles and responsibilities of the different actors can be problematic. Since the task of decentralizing authorities is a long-time project, the lack of specific walkthroughs and guidelines on the process of decentralization may cause chaos (Mosca, 2006). One concern regarding the social organization and political culture is to identify where different groups of actors demonstrate the borderlines of unacceptable practice by public employees within health systems. There are three types of entities capable of exerting influence on the continuity of healthcare provision. In the local context, it is the local government, the health office or secretary, and the health professionals. The amount of health staff participation with the district may have an effect on whether a space for autonomy is evolved into a more responsive and accountable health system (Atkinson et al., 2000).

It is argued that a public organization is capable of being governed like a private enterprise. Sometimes this approach becomes essential in the New Public Business (Khaleghian, 2004). Abbasi Harofteh (2017) states that implementing Process Reengineering is a major subject in the field of public policymaking and widely highlighted in the high level documents in Iran. Business Process Reengineering (BPR) prepares opportunities for higher levels of management to downsize their workforce and to alter the existing organizational culture, which consists of values, norms, methods, approaches, and preferences (Schein, 2010). One of the main objectives mentioned in the high-level document titled “Change in the Iranian healthcare

system" is increasing productivity and improving efficiency and effectiveness through implementing revisions and reengineering structures and procedures. In this regard, the BPR model has been applied accordingly to create our research model. A Process Reengineering includes a series of logically related functions, through which actors process the inputs to outputs in order to achieve predefined objectives. This process can be seen as a set of temporal sequences from related actions, which fully describe an entity in a system (Abbasi Harofteh, 2017). For an efficient and effective implementation of decentralization in healthcare, a high level of compatibility and consistency is needed among all actors, processes, and components. In our model, we suggest actions to improve the implementation of such policy. At the stage of defining visions and missions, one constructive suggestion is to consider optimal indicators of spatial planning while drawing a perspective for decentralization project. For the next phase, which is the identification of decision-making process, dependence merely on a limited set of resources seems insufficient; therefore, a comprehensive understanding of the process regarding the essential resources is vital. In the documentation step, while detecting the processes to decentralize, concerning each region's capacities and preferences separately is of great importance. For analyzing the environment of healthcare policymaking process, employing various methods and different experts are recommended. To draw the flowchart of the existing policy processes, identifying bottlenecks and critical points contribute a lot to the project of decentralization. Appropriate training at the local level can increase commitment and participation of stakeholders at this level. In the process of implementation and evaluation, increased cooperation and communication between central and local governments can lead to a more productive healthcare reform.

CONCLUSION

In order to run a successful healthcare decentralization project in Iran, we need to take a comprehensive approach, for it cannot be implemented partially. To attain the optimum level of benefits from decentralization in healthcare, we must not only consider political subjects, but also need to take the economic, as well as administrative aspects into account to ensure maximum efficiency and effectiveness of such reform. In this regard, we have developed a 12-stage model, beginning with the determination of visions and ending with implementation and monitoring, including all three main aspects of healthcare decentralization: political, economic and human resource management. Another advantage of our model is taking new technologies such as IT solutions into account, regarding the fact that enhancing information and monitoring infrastructures can improve efficiency, transparency, and accountability to a high extent.

Ethical considerations

Ethical issues (including plagiarism, informed consent, misconduct, data fabrication and/or falsification, double publication and/or submission, redundancy, etc.) have been completely observed by the authors.

Conflict of Interests

The authors declare that there is no conflict of interest.

References

Abbasi Harofteh B. A decentralization model for Iran's education policymaking process. (Doctoral dissertation. Faculty of Management, University of Tehran), 2017. In Persian.

Alves J, Peralta S, Perelman J. Efficiency and equity consequences of decentralization in health: an economic perspective. Revista Portuguesa de Saúde Pública. 2013 Jan 1; 31(1):74-83.

Atkinson S, Medeiros RL, Oliveira PH, de Almeida RD. Going down to the local: incorporating social organisation and political culture into assessments of decentralised health care. Social science & medicine. 2000 Aug 15; 51(4):619-36.

Bailey E. (2016). Healthcare access under health system decentralization in Honduras: A mixed methods study (Doctoral dissertation, The Ohio State University).

Baldersheim H, Ståhlberg K. Nordic region-building in a European perspective. Ashgate Publishing; 1999.

Belleflamme P, Hindriks J. Yardstick competition and political agency problems. Social Choice and Welfare. 2005 Feb 1; 24(1):155-69.

Berman P, Bossert T. A decade of health sector reform in developing countries: what have we learned. Washington, UNAID. 2000 Mar 15.

Biørn E, Hagen TP, Iversen T, Magnussen J. The effect of activity-based financing on hospital efficiency: a panel data analysis of DEA efficiency scores 1992–2000. Health care management science. 2003 Nov 1; 6(4):271-83.

Boffin N. Health system capacity building: Review of the literature. Antwerp, Institute of Tropical Medicine. 2002.

Bossert TJ, Beauvais JC. Decentralization of health systems in Ghana, Zambia, Uganda and the Philippines: a comparative analysis of decision space. Health policy and planning. 2002 Mar 1; 17(1):14-31.

Bossert TJ, Mitchell AD. Health sector decentralization and local decision-making: Decision space, institutional capacities and accountability in Pakistan. Social Science & Medicine. 2011 Jan 1; 72(1):39-48.

Braun V, Clarke V. Using thematic analysis in psychology. Qualitative research in psychology. 2006 Jan 1; 3(2):77-101.

Brock G, Jin Y, Zeng T. Fiscal decentralization and China's regional infant mortality. Journal of Policy Modeling. 2015 Mar 1; 37(2):175-88.

Cavalieri M, Ferrante L. Does fiscal decentralization improve health outcomes? Evidence from infant mortality in Italy. Social Science & Medicine. 2016 Sep 1; 164: 74-88.

Çınar F, Eren E, Mendeş H. Decentralization in health services and its impacts: SWOT Analysis of Current Applications in Turkey. Procedia-Social and Behavioral Sciences. 2013 Nov 6; 99: 711-8.

Crook RC, Sverrisson AS. Decentralisation and poverty-alleviation in developing countries: a comparative analysis or, is West Bengal unique?, 2001.

Dassah ET, Adu-Sarkodie Y, Mayaud P. Rollout of rapid point of care tests for antenatal syphilis screening in Ghana: healthcare provider perspectives and experiences. BMC health services research. 2018 Dec; 18(1):130.

DEL PINO EL, RAMOS JA. Is Welfare Retrenchment Inevitable? Scope and Drivers of Healthcare Reforms in Five Spanish Regions During the Crisis. Journal of Social Policy. 2018 Mar: 1-20.

Di Novi C, Piacenza M, Robone S, Turati G. How does fiscal decentralization affect within-regional disparities in well-being? Evidence from health inequalities in Italy. 2015.

Doshmangir L, Rashidian A, Ravaghi H, Takian A, Jafari M. The experience of implementing the board of trustees' policy in teaching hospitals in Iran: an example of health system decentralization. International journal of health policy and management. 2015 Apr; 4(4):207.

European Observatory on Health Systems and Policies. Health care systems in transition profiles. Spain, Health System Review 2006; 8(4).

Fossati D. From periphery to centre: Local government and the emergence of universal healthcare in Indonesia. Contemporary Southeast Asia: A Journal of International and Strategic Affairs. 2017; 39(1):178-203.

Fredriksson M, Winblad U. Consequences of a decentralized healthcare governance model: Measuring regional authority support for patient choice in Sweden. Social Science & Medicine. 2008 Jul 1; 67(2):271-9.

Gaede B. Decentralised clinical training of health professionals will expand the training platform and enhance the competencies of graduates. South African Medical Journal. 2018; 108(6):451-2.

Gilbert G, Picard P. Incentives and optimal size of local jurisdictions. European Economic Review. 1996 Jan 1; 40(1):19-41.

Glenngård AH, Hjalte F, Svensson M, Anell A, Bankauskaite V. Health systems in transition. World Health Organization. 2005.

Gomez EJ. A temporal analytical approach to decentralization: Lessons from Brazil's health sector. Journal of Health Politics, Policy and Law. 2008 Feb 1; 33(1):53-91.

Hagen TP, Kaarbøe OM. The Norwegian hospital reform of 2002: central government takes over ownership of public hospitals. Health policy. 2006 May 1; 76(3):320-33.

Hausken K, Ncube M. Service delivery weaknesses within education and healthcare: Applying empirics from Kenya, Uganda, Tanzania, and Senegal. Review of Development Economics. 2018 Feb; 22(1):133-47.

Huang J, Chen L, Li J, Groot W. Expenditure decentralization and citizen satisfaction with healthcare: evidence from Urban China. Social Indicators Research. 2017 Aug 1; 133(1):333-44.

Iran's Health Roadmap. Iran's Ministry of Health and Medical Education. (2010). (In Persian)

Jafari M, Rashidian A, Abolhasani F, Mohammad K, Yazdani S, Parkerton P, Yunesian M, Akbari F, Arab M. Space or no space for managing public hospitals; a qualitative study of hospital autonomy in Iran. The International journal of health planning and management. 2011 Jul; 26(3): e121-37.

Kabir MJ, Rahbar MR, Motlagh MA. Decentralization of Health System in Islamic Republic of Iran. Journal of Shahid Sadoughi University of Medical Sciences. 2008 Jan 1; 16(3):322-.

Khaleghian, P. Decentralization and public services: the case of immunization. Social Science and Medicine, 2004; 59(1), 163-183.

Kim, J., Dougherty, S. (eds.) Fiscal Decentralisation and Inclusive Growth, OECD Fiscal Federalism Studies, OECD Publishing, Paris/Korea Institute of Public Finance, Seoul. 2018.

Kleider H. Redistributive policies in decentralised systems: The effect of decentralisation on subnational social spending. European Journal of Political Research. 2018 May; 57(2):355-77.

Korhonen A, Hakulinen-Viitanen T, Jylhä V, Holopainen A. Meta-synthesis and evidence-based health care–a method for systematic review. Scandinavian Journal of Caring Sciences. 2013 Dec; 27(4):1027-34.

Lakshminarayanan R. Decentralisation and its implications for reproductive health: The Philippines experience. Reproductive Health Matters. 2003 Jan 1; 11(21):96-107.

Leer J. After the Big Bang: Estimating the effects of decentralization on educational outcomes in Indonesia through a difference-in-differences analysis. International Journal of Educational Development. 2016 Jul 1; 49: 80-90.

Liu X, Martineau T, Chen L, Zhan S, Tang S. Does decentralisation improve human resource management in the health sector? A case study from China. Social Science & Medicine. 2006 Oct 1; 63(7):1836-45.

Magnussen J, Hagen TP, Kaarboe OM. Centralized or decentralized? A case study of Norwegian hospital reform. Social science & medicine. 2007 May 1; 64(10):2129-37.

Maluka S. Contracting Out Non-State Providers to Provide Primary Healthcare Services in Tanzania: Perceptions of Stakeholders, 2018.

Martineau T, Gong Y, Tang S. Changing medical doctor productivity and its affecting factors in rural China. The International journal of health planning and management. 2004 Apr; 19(2):101-11.

Martinez J, Martineau T. Rethinking human resources: an agenda for the millennium. Health policy and Planning. 1998 Jan 1; 13(4):345-58.

Mauro M, Maresso A, Guglielmo A. Health decentralization at a dead-end: towards new recovery plans for Italian hospitals. Health Policy. 2017 Jun 1; 121(6):582-7.

McConville A, Hegarty C, Davis J. Mini-Review: Assessing the Potential Impact of Microneedle Technologies on Home Healthcare Applications. Medicines. 2018 Jun 8; 5(2):50.

McIntyre D, Klugman B. The human face of decentralisation and integration of health services: experience from South Africa. Reproductive health matters. 2003 Jan 1; 11(21):108-19.

Menon S. Decentralization and health care in the former Yugoslav Republic of Macedonia. The International journal of health planning and management. 2006 Jan; 21(1):3-21.

Mosca I. Is decentralisation the real solution? A three country study. Health policy. 2006 Jun 1; 77(1):113-20.

Packages for Change and Innovation in Health Education. Iran's Ministry of Health and Medical Education. 2015. (In Persian)

Parmar D, Costa-Font J. Political agency and public healthcare, 2016.

Regmi K. Methodological and practical viewpoints of qualitative-driven mixed method design: the case of decentralisation of primary healthcare services in Nepal. Primary health care research & development. 2018 Jan; 19(1):64-76.

Saltman R, Bankauskaite V, and Vrangbaeck, K. Decentralization in healthcare: strategies and outcomes. European Observatory on health systems and policies series. Open University Press. 2007.

Saltman RB, Bankauskaite V. Conceptualizing decentralization in European health systems: a functional perspective. Health Economics, Policy and Law. 2006 Apr; 1(2):127-47.

Saltman RB. Decentralization, re-centralization and future European health policy. European Journal of Public Health. 2008 Apr 1; 18(2):104-6.

Sandelowski M, Barroso J. Toward a metasynthesis of qualitative findings on motherhood in HIV-positive women. Research in nursing & health. 2003 Apr; 26(2):153-70.

Schein EH. Organizational culture and leadership. John Wiley & Sons; 2010 Aug 16.

Seidman, I. Interviewing as Qualitative Research, A guide for Researchers in Education and the social sciences. New York: Teachers College Press, Columbia University. 2006.

Shah A, editor. Local governance in developing countries. The World Bank; 2006 Jul 27.

Shah, A. Fiscal decentralization in developing and transition economies". Washington, DC: World Bank, 2004.

Tan SY. Bureaucratic autonomy and policy capacity in the implementation of capitation payment systems in primary healthcare: comparative case studies of three districts in Central Java, Indonesia. Journal of Asian Public Policy. 2018 Apr 2:1-21.

Tang S, Bloom G. Decentralizing rural health services: a case study in China. The International Journal of Health Planning and Management. 2000 Jul; 15(3):189-200.

Tediosi F, Gabriele S, Longo F. Governing decentralization in health care under tough budget constraint: what can we learn from the Italian experience? Health Policy. 2009 May 1; 90(2-3):303-12.

UNDP. Capacity assessment and development in a systems and strategic management context. New York: United Nations Development Program. 1998.

Vaezi SK, Abbasi Harofteh B. Providing a Model for Decentralization in the Process of Policymaking for Iran's Education System. Rahbord Farhangi mag, 2018; 7 (26), 67-85. In Persian.

Walsh D, Downe S. Meta-synthesis method for qualitative research: a literature review. Journal of advanced nursing. 2005 Apr; 50(2):204-11.

Winchester MS, King B. Decentralization, healthcare access, and inequality in Mpumalanga, South Africa. Health & place. 2018 May 31; 51: 200-7.

Yilmaz S, Beris Y, Serrano-Berthet R. Local government discretion and accountability: A diagnostic framework for local governance. World bank. Social development department; 2008.

Youlong G, Wilkes A, Bloom G. Health human resource development in rural China. Health policy and planning. 1997 Jan 1; 12(4):320-8.

Zimmer L. Qualitative meta-synthesis: a question of dialoguing with texts. Journal of advanced nursing. 2006 Feb; 53(3):311-8.