“Fighting COVID-19 in Yemen: The role of Public Administration and Readiness of Healthcare system”

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Abstract:
Countries worldwide are taking proper measures and precautions to control the spread of the novel Coronavirus pandemic (COVID-19). Due to its political and economic isolation and vulnerability, questions are raised about the readiness of the healthcare system in Yemen as well as the effectiveness of the administrative authority to fight COVID-19. This research presents an overview of the readiness in Yemen to fight such pandemics. The research outcome summarizes the critical need to support the health system and its potentials to fight the pandemic in the country. Details on the status of administrative authority and health system are drawn in the research findings.

Keywords: Yemen, authority, COVID-19, health system, readiness.

Introduction:
Annual influenza epidemics are challenges, but some of them are worse than others regardless of how countries or healthcare systems are prepared for it (Osterholm, 2005). Pandemics impact our lives, economies, and societies. Pandemics impose considerable demands on countries and societies for a period of time, which requires such countries to develop precautionous procedures to facilitate the resilience against such pandemics (Paton, et. al., 2008). Developed countries with developed healthcare systems such as the US, France, Italy, Spain and many others were affected due to the spread of the novel coronavirus (COVID-19), let alone the effect on all economies worldwide.

This raises the question about the difference in the response by countries towards such pandemics. At the time that the responses to COVID-19 fighting are very transparent in developed countries, developing countries surely differ in responding to such pandemics from developed countries. This article focuses on the efficiency of Yemen as a least developed country in fighting COVID-19, mainly through focusing on the role of public administration (administrative authority) and the readiness of the healthcare system in the country.
Historical Background:

Yemen is a traditional society. The growth of Yemen as a country has been always associated to the growth of tribes as tribes are deeply rooted in the society of Yemen since its old era (Al Jazeera Centre For Studies, 2010; Almuwallad, 2006). Yemen did not witness a remarkable frame of administration as a country until the sixties of the last century. It has been ruled by dynasties and families whether in parts or whole of the area such as Sulayhid Dynasty (1047–1138), Ayyubid conquest (1171–1260), Rasulid Dynasty (1229–1454), Tahiride Dynasty (1454–1517) and many other dynasties in different parts of Yemen (Assurori, 1997; Bafaqeeh, 1985). The Ottoman Empire ruled the north part of Yemen during (1539 – 1634) and (1872 - 1918), then the Mutawakkilite Kingdom which continued from 1918 until 1962, while the south part of Yemen was under the jurisdiction of Great Britain for 128 years (1839 -1967) (Salem, 1993; CIA, 2018).

On September 26th 1962 “The Arab Republic of Yemen” was announced in the North of Yemen and “The People's Democratic Republic of Yemen” was established on November 30th 1967 in the south. Both republics were united in 1990 under the name “Republic of Yemen” (Nonneman, 1997; Library of Congress, 2008; Salem, 1993; CIA, 2018).

Methodology:

This paper adopts an explorative research method, aiming to provide an insight into the efficiency of the COVID-19 fight in Yemen by the administrative authority and the healthcare system potentials, as well as exploring the readiness to take precautions actions to contain and minimize the effect of pandemics such as cholera and COVID-19.

Research problem and questions:

Developed and developing counties are experiencing unforeseen challenges due to the spread of the novel coronavirus pandemic. This does not imply that the countries that are not badly hit by the pandemic are not under considerable strain.

Countries have been taking measures for the purpose of slowing down the spread of COVID-19, these measures differ from country to country. There are countries that ease such measures currently such as Italy and Saudi Arabia, and there are countries that classify the measures according to affected areas such as in India or they keep the measures going on such as in the US. The difference in the response to such pandemic depends on the policies of each country and their health care systems. This leads to questioning the role of authority in Yemen and the healthcare system potentials in slowing down and controlling the spread of COVID-19 in the country, it also leads to raising the following questions:

The ability of the administrative authority in responding well towards such pandemic.
The factors that may help in controlling (or worsening) the spread of such pandemic.
The readiness of the healthcare system in the country to contain the effect of COVID-19.
Research Objectives:

The research focuses on reviewing the potentials of the administrative authority as well as the healthcare system and its readiness in fighting COVID-19. Therefore, the objectives are:

a) explore the nature and status of administrative authority in the country and their potentials in fighting pandemics.

b) identify the factors that help in controlling (or worsening) the spread of COVID-19 in the country.

c) explore the readiness and potentials of the healthcare system in the country to fight the pandemic.

Hence, the hypothesis “the efficiency and readiness to fight COVID-19 in Yemen is at acceptable level considering the current circumstances in the country” is tested.

Data sources:

The study depends on secondary data to be in position to deliver an overview of the current status of the healthcare system as well as the administrative authority in the country. Therefore it focuses on the theoretical and historical background of the public administration in Yemen and its role in the development of measures and responses towards pandemics, so the study relied on the literature related to public administration development in the country during the last three decades while mainly focusing on its current status, plus the reports of international organizations in respect of the status of the healthcare system in the country.

The development of public administration in Yemen:

Due to the isolation of Yemen from the world, its public administration suffered from the issues that any other underdeveloped society would face while getting rebuilt. A priority was given to building and structuring the state organizations in the North of Yemen during the 1960s. Dividing the whole republic into administrative units and practicing the local governance which was introduced to Yemen for the first time(Alharbi, 1987; Alhaddad, 2004). Arab and foreign experts (Russian, German, Czech, American and Egyptian) were recruited during this period because of the weak educational level and the lack of local qualified human resources(Hassan, 1970).

The government established the Ministry of Civil service, and adopted the National Comprehensive Planning program for economic development and three consecutive development plans during (1976-1991) which had insignificant results due to lacking the qualified staff in the administrative system, informational weaknesses in planning and execution, mismatch between the regulated and executed methods, the central administration and the scarcity of administrative leadership(Alfareh, 2002; Alkhateeb, 1996).

The administration system in South Yemen was better than in the North Yemen which was one of the effect of the existence of the British colonialism. However, it was challenging to build a complete administrative system in the south of Yemen that would conduct all tasks and responsibilities because of the internal and external challenges in the political and economic view that was associated with establishing the new country(Ata, 2018; Alqatabri, 2011).
The unification of Yemen integrated both the administrative systems of north and south Yemen, which resulted in inundating the newly-integrated administrative system with employees, leading to creating extra administrative units just to absorb the workforce, this resulted in a dysfunctional administrative system with duplication and replication of tasks and responsibilities (Alqatabri, 2011; Abutaleb, 1994; Shamsan, 2004; AADO, 2002).

Both parts of Yemen witnessed many attempts to adopt and apply the local administration system through a central authority, administrative systems, laws and acts through copying the context of the Egyptian experience in structuring the administrative system for the North Yemen, while the south of Yemen adopted the socialist experience. This resulted in underdeveloped outcomes such as burdening the government of providing all the basic and non-basic services (Sufiani, 2005; Qalamah, 2009; AADO, 2002). Developing the skill and qualification, increasing the level of public participation, the continuous development of local administration regulations, and increasing the central administration existence in districts were major challenges to authority (Qalamah, 2009; Rumaidh, 2007; Doubai, 2017).

Public administration was affected and had many deficiencies due to the integration of two different systems along with the political issues that stemmed from the unification (Shamsan, 2004; AADO, 2002), which led to adopting the comprehensive reform program and Civil Service Modernization Strategy in 1997 as a response to the deterioration, aiming to stabilize the economy by focusing on reforming the public administration (World Bank, 1998; The National Preparatory Committee, 2001).

For reducing and avoiding the negativities and complexions of bureaucracy and eliminating the administrative underdevelopment (Bin Larnab, 1982), the Government of Yemen tended to devote power and authority to develop the administrative system after the merge of two administrative systems at the unification (Republic of Yemen, 1992; Prime Ministry, 1990), but the reform programs were big and ambitious, they had similar aims and goals translated in their agendas, they were a reaction to the current situations and descriptive, goals were not scheduled with a proper timetable. the political agenda gained more attention in such programs than administrative development agenda (Alhezyazi, 1997; Mustafa, 1997). Therefore, administrative reform in Yemen has always been challenged by organizational and administrative impediments (Almutawakkel, 1996; Ba Junaid, 1996; Alhizyazi, 1998), along with political, social and economic impediments (General center for studies and research, 2002; Saeed, 2002; Shamsan, 2005; Updating civil service project, 2001; Ba Junaid, 1996).

The public administration of Yemen after the unification was characterized by the following:

1- **Administrative underdevelopment** which involves lack of planning, weak performance of the administrative and civil service authority, duplication of authority, less qualified manpower, the spread of administrative misbehavior, extreme centralization, wastefulness in public spending and increase in service cost, personal relations, such as nepotism and mediation and unemployment rate (Zuwailef, 1996; Almekhlafy, 1996; Assalami, 1975; Abdullah, 1998; Ali, 1997). This is deepened in Yemen because of the historical legacy of traditions and habits, lack of concepts and principles of corporate work of government organizations, depending on nonqualified top administration, weakness and vulnerability of
the monitoring and evaluation systems, the impact of the social order on the effectiveness of the administrative system and illiteracy (Ba Junaid, 1996; Assalami, 1975; Ba Junaid, 1996; Alkhateeb, 1996; Rabeea & Mukallad, 1993).

2- **Administrative dropout**, which is seen through the abuse of power and authority, bribery and nepotism, embezzlement, bias and favouritism in the society, disclosure and withhold of information, document fraud and gifting (Rabeea & Mukallad, 1993; Alkaruti, 2001; Najm, 2003; Alkhateeb, 1996). This is deepened in Yemen due to political dropout, evasion of duties and responsibilities and less compensations to employees (Alkaruti, 2001; Alkubaisi, 2000; Zuwailef, 1996; Alyousuf, 2002; Aashur, 1999).

3. **Bureaucracy**, which can be seen through the long routine and multiple procedures in the administrative system, lacking delegation, less confidence as well as understanding of the public job and its responsibilities, the political domination over most decisions especially the administrative system decisions, barriers in the administrative system that were made towards the public and too many committees and unions in the government authorities (Bajunaid, 1993; Bin Larnab, 1982; Dhafir, 2003; Bajunaid, 1993).

**Evaluation of the strategies and five year plans:**

The five year plans started with the start of the comprehensive reform programs and restructuring the national economy, so the first five year did not reach its growth (Almuqbili, 2012). Moreover, the plans focused on maintaining the economic stability more than realizing more economic development (Al-Afandi, 2002; Middle East Online, 2002). They did not pay due attention to redressing challenges and obstacles facing the private sector such as infrastructure, smuggling into the markets, weak legislative framework, higher investment cost etc (Alhawery, 2004; Al-Afandi, 2002). The procedures and the mechanism of executing five year plans created a conflict between their planning and implementation (Al-Afandi, 2002).

Such gaps are caused by overestimation in setting goals for growth, failure to adopt appropriate scientific methods to prepare five year plans and strategies, low level of administrative and technical capabilities responsible for to executing the plan, weak coordination among the government units, deep-seated imbalances in the economy such as the reliance mainly on the oil revenue, and lacking the strategic vision of aims and goals in such plans (Al-Afandi, 2009; Albahry, 2014; Aljazeera, 2010; Salisbury, 2011; Alhayat, 2010; Almoayad, 1992).

**The status quo of the health care system in Yemen:**

Yemen scored 0.463 in Human Development Index and was ranked the 177th country among 189 countries in the latest human development report (UNDP, 2019). Achieving sustainable human development as well as promoting gender equality and tackling poverty are highly relevant to lifting health issues in countries (Clark, 2013). The current conflict in Yemen is destroying infrastructure and the health care system of the country, leading to catastrophes such as the recent cholera crisis in 2018,
leaving many thousands without life-saving treatment (ICRC, 2019; ICRC, 2018). The health-care needs individuals became great that health workers are struggling to provide essential health care (WHO, 2015).

The assessment of Health Resources Availability Monitoring System (HeRAMS) stated that 14 million of the population and less than half of the districts in Yemen are in need of healthcare services due to the lack of access (WHO, 2018). Due to the conflict, the healthcare system in Yemen function with almost 50% capacity (WHO, 2018) which includes 47% of rural hospitals, 58% of health centers, 72% of public hospitals and 48% of health units in rural districts (WHO, 2018). The chart below (Figure 1) illustrates the condition of healthcare centers among cities all over the country whether they are fully, partially working or closed and not working. As there are cities where majority of health centers are closed or partially working.

![Bar chart showing the condition of healthcare centers among cities in Yemen.](chart1.png)

**Figure 1:** The condition of healthcare centers among cities in Yemen. Source: (WHO, 2018).

Most of the healthcare centers lack the infectious diseases services (Figure 2) to be provided to individuals especially in the breakout of pandemics such as the Cholera crisis in 2018 and COVID-19 the current time.

![Bar chart showing the availability of infectious diseases services in healthcare centers in different cities in Yemen.](chart2.png)

**Figure 2:** The availability of infectious diseases services in healthcare centers in different cities in Yemen. Source: (WHO, 2016).
This illustrates the complications in containing any spread of COVID-19 in those districts who lack sufficient access to healthcare services and infectious diseases services.

Along with the ongoing humanitarian crises in Yemen, the healthcare services have witnessed even more deterioration that pose a major challenge for the healthcare system to effectively fight against COVID-19 especially in the war-torn and affected cities in the country.

The chart below (Figure 3) illustrates the deficiency of the healthcare system in Yemen to the human capital. It shows that the average healthcare workers for every 10,000 individuals is 10 workers. Which is way too low according to the criteria of WHO, as the average healthcare workers for every 10,000 individuals should be minimum 22 workers. That said, only three governorates among 22 governorates have the average number of healthcare workers for every 10,000 individuals.

The same can be said when considering the number of beds for every 10,000 individuals, (Figure 4) illustrates the average number of beds for every 10,000 individuals among cities in Yemen. The criteria of World Health Organization (WHO) states that the average number of beds for every 10,000 individuals should be minimum 10 beds, while the figure below shows that the average number is five beds for every 10,000 individuals in Yemen, only two cities have the average number of beds.
These figures surely indicates that the healthcare system of Yemen is not qualified for early and rapid response to the breakout of infectious diseases and pandemics COVID-109 included, as the quality level of healthcare services are still below the minimum average.

Factors to worsen the spread of COVID-19 and other pandemics in Yemen:

COVID-19 found its way to cause catastrophic results among countries which their healthcare systems are classified among the best in the world. That is said, the spread of such pandemic within a collapsing healthcare system such as in Yemen can lead to more worsened results as the population are already in crisis do to lacking a proper access to healthcare services. The factors that can contribute to disastrous effects due to the spread of COVID-19 in Yemen include:

1. The increase in food insecurity levels in the country.

Yemen has been reeling from food insecurities and undernourishment for the last decade which was escalated due to the political and economic instability(Chatham House, 2011; FAO, WFP & UNICEF, 2019). According to the latest classification of the Integrated Food Security Phase Classification (IPC) (IPC, 2018), 15.9 million which is 53% of the population are facing severe acute food insecurity despite the already ongoing humanitarian assistance. Moreover, 20.1 Million which is 67% of the population are facing severe acute food insecurity without any ongoing humanitarian assistance(IPC, 2018). The food insecurity in Yemen is driven by the conflict events, economic factors such as export shrinkage, reduced oil production and the split of financial authority in both belligerent part of Yemen(MoPIC, 2019).

2. The increase of poverty

Yemen is considered on one of the poorest, least developed and driest countries worldwide. It experiences depletion of land and water resources resulting in poverty and food insecurity(IFAD, 2011). Yemen with a tribal identity, has high levels of poverty among individuals, but the escalated violent conflict that broke out in 2014 worsened and have depressed the living standards further(World Bank, 2017; Pournik & Abu-Ismail, 2011). Reports state that around 80% of population in Yemen live below the poverty line(UNOCHA, 2018).

3. The increase of malnutrition rates which decreases the immunity levels:

The intensified war effected the social service and food distribution mechanism, it has had a significant impact on the general health of individuals(Burki, 2012). Due to the war and instability, around three quarters of the population in Yemen survive through relying on humanitarian assistance, especially with prices of food and essential needs being doubled(Symington, 2019). Even prior the conflict, Yemen used to have the highest malnutrition rates in the Arabian Peninsula (Eshaq, et. al.,2017). Morbidity and mortality can highly be attributed to severe acute malnutrition, malnourished individual die even when medical care is provided(WHO, 2009).
4. The continuity of the war event and conflict escalation:

The continuity of the war currently minimizes the efforts that are being made to avoid COVID-19, which can be summarized in impeding the supply of essential requirements to hospitals, health centers and individuals that can facilitate the fight against such a pandemic.

5. Other factors:

The other factors that make individuals more vulnerable towards the spread of COVID-19 pandemic include the displacement of individuals from one area to another due to the war events, reports say that around three million have left their homes and they live in camps or areas other than their own(UNOCHA, 2018); social factors such as the lack of awareness in pandemics and how to avoid their infection, the apathy among public towards the same, the traditions of the Yemeni society towards social gatherings; the possibility of less commitment from individuals in rural areas towards the precautious procedures to avoid pandemics; and the high demand on healthcare equipment worldwide makes lower income countries short of supply of such equipment essential to avoid or fight pandemics such as COVID-19 and cholera(MoPIC, 2020).

Research findings:

The following is evidenced based on reviewing and analyzing the accessed secondary data.

a) The history of public administration in Yemen is full of struggle and striving to accomplish development, which is caused by merging two different administrative systems that existed in both parts of Yemen prior the unification in 1990.

b) Disruptions and imbalance in running and managing public policies due to lack of awareness among administrative leaders. Moreover, the tendency of the government to accomplish administrative development is compromised which is reflected on the weak and casual efforts made to develop and reform the administrative system.

c) Regardless of the efforts planned of restructuring the civil service system, the application of such efforts was not harmonized with the planned policies and regulations, which resulted in duplication of tasks and responsibilities, personalized processes in the restructuring and creation of new administrative units. This continued to affect recruiting leaders for administrative positions due to the lack of applying the planned procedures.

d) The restructuring and reforming efforts do not suite the needs and requirements of the system, as the structure was set and prepared during the nineties, it also does not involve policies, institutional structures and civil service comprehensively, which implies the need for serious update concerning various gaps in restructuring the three components (policies, institutional structure and civil service) in order to match the aim of restructuring and reforming towards realizing administrative development in the country.
e) More than one billion individuals worldwide live in a state of fragility and conflict (OECD, 2015). Such challenges are more amplified when considering the context of Yemen due to the current conflict that was escalated in 2015. However, even prior the conflict, Yemen had been a lower income country with significant structural, economic, political and healthcare sector vulnerabilities, which is reflected on the widespread of food insecurity and shortage of energy and water supply.

f) The vulnerability of healthcare system in Yemen coupled with the ongoing violent conflict resulted in humanitarian disaster crippling the already weak health system (Qirbi & Ismail, 2017; UNOCHA, 2018). Such condition poses a major challenge towards maintaining the response to health needs and requirements, let alone responding to pandemics. Such vulnerability is reflected on the low potentials such as equipment and human capital which are severely below the average criteria set by the world health organizations (WHO). This negatively impacts the readiness of the country to fight against COVID-19 and control its spread specifically in the war-torn areas in the country.

Based on reviewing the available literature and relying on secondary data from reports in respect of the readiness of Yemen authority and its healthcare system, it can be stated that the level of readiness to fight COVID-19 and other pandemic such as the recent cholera is significantly below the required level. Therefore, the proposed hypothesis is rejected and the opposite is evidenced which is that the healthcare system in Yemen needs major support to be in position to fight the novel Coronavirus (COVID-19) especially when considering the current economically and politically unstable conditions.

**Improving the readiness to fight COVID-19 in Yemen:**

Therefore, from this review of the readiness of the administrative system and its healthcare to fight COVID-19, the following suggestions are made:

1. Strengthening the very limited medical readiness through providing medical equipment and training the cadre through coordinating with the office of World Health Organization.

2. Identifying special teams in all districts to specialize in coordinating matters pertaining to COVID-19 and its battle, so the whole country can be updated on any novel details.

3. Paying due attention towards improving the awareness of the public of pandemics and how to take precautions to control the spread of COVID-19, which can be done through media channels and through coordinating with civil society organizations.

4. Putting political disagreements on hold and uniting to fight the spread of this pandemic that already affected developed countries with effective health systems. This implies avoiding any linkage of supporting the health system with any political agenda, and focusing on supporting individuals in need regardless of the area they belong to or the political opinions they may have.

5. Making sure the private sector is cooperating with the authority to take required measures to minimize the effect and spread of COVID-19.
6. Increasing the coordination with international organizations that provide emergency relief and humanitarian aid to Yemen. The coordination should include providing serious plans containing the requirements of fighting COVID-19 to be applied by the authority and its healthcare system so they can be supported by such organizations.

7. Embracing the experience and measures that have been taken by other countries to minimize the effect of COVID-19 in the global context such as Italy, China and India, the Arab context such as Tunisia and Jordan, or the context of least developed countries such as Libya, Congo Republic and Sudan.

Conclusion:

Yemen has a lot to consider in respect of taking the required measures and precautions which include providing equipment and supporting the human cadre to control the spread of COVID-19 in the country. Therefore, this critical time requires focusing on protecting the public lives, livelihood and planning for economic recovery, which can be done through policies to fight against COVID-19, preparing strategies of crisis management in the country, strengthening social protection programs, supporting food security, improving the role of international development partners in the country, launching economic recovery plans and programs with the cooperation of international organizations and their aid to Yemen.

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