

The Role of Public Health in Maintaining Human Health

Hassan.M.Magrabi¹, Dhaifallah.A.Allahyani², Hussam.M.Alghamdi³, Hassan.S.Alqahtani⁴, Hussam.S.Alharthi⁵, Abed.M.Al-Kaaldy⁶, Hassan.A.Alharthi⁷, Ali.S.Al-Qarni⁸, Mohsen.H.Almalki⁹, Khalid.M.Al-Harhi¹⁰, Manal.A.Alghamdi¹¹, Abdullah.Z.Alayafi¹².

1. Epidemiological monitoring technician- Al-Mansour PHC-Makkah
2. Epidemiological monitoring technician- Al-Mansour PHC- Makkah
3. Public health specialist- king Faisal medical complex, Taif
4. Public health specialist- king Faisal medical complex, Taif
5. Epidemiology specialist-king Faisal medical complex, Taif
6. Nursing technician-king Faisal medical complex, Taif
7. Public health specialist- king Faisal medical complex, Taif
8. Epidemiology technician- king Faisal medical complex, Taif
9. Epidemiology specialist- king Faisal hospital in Makkah
10. Physiotherapy Technician - Communication and Media Department, Mecca Branch
11. Public Health Specialist - Health Control Center at King Abdulaziz International Airport in Jeddah
12. Public Health Specialist - Health Control Center at King Abdulaziz International Airport in Jeddah

Abstract

in a given country the role of public health is very crucial as the health resources are responsible for the public health at large, this means that if the resources are not sufficient then prevention from diseases become difficult and even the health index of people goes down. This can be interpreted in the form that in developing countries the agencies can either look for improving the public health or work on the prevention programs from diseases or epidemics. Though in case of developed economies the agencies are having the capability of maintaining the both components i.e. running better health programs for public and prevent them from various diseases or plan for future ailments. This present study evaluates the forms and measures of public health in general and in Saudi Arabia. Study is based on secondary data and the presentation in review based.

Keywords: Public Health, Human Health, issues, measure, prevention.

Introduction:

In any given community the health resources are responsible for the public health at large, this means that if the resources are not sufficient then prevention from diseases become difficult and even the health index of people goes down. This can be interpreted in the form that in developing countries the agencies can either look for improving the public health or work on the prevention programs from diseases or epidemics. **Gostin et al (2020)** Though in case of developed economies the agencies are having the capability of maintaining the both components i.e. running better health programs for public and prevent them from various diseases or plan for future ailments. As it is said that 'health is wealth' but people in the present times takes it just a saying and running after the materialistic values of the world; in the process they are losing good health, chances of developing immunity against other related diseases. **Mohamed et al (2018)**

There is a long range of chronological development in the field of public health and is worth evaluating for the future prospect of the same. if the present medical concepts are added to the same then a better policy framework can prevent the occurring the ailments and can even can improve the public health at large. **Sharma et al (2021); Jacobsen et al (2020)** Historical care for public health issues is full of examples of motivation not only for general health but also for good leadership and social competition in the country. An early model of health was described by a public health scientist. In ancient times, civilization had many predictions and methods of healing, most notably the concept of controlling miasma or stagnant air that caused insects to suffer. Vision wrote much about the early practices of isolation, water, environment, nutrition, and social influence. **Savulescu (2021)** The necessary rules of hygiene, which have been the problem and anger of people throughout the ages, entered people's lives together with the prevention of infections, which are well documented in many parts of the ancient world. Thus, urban planning, air pollution management, knowledge and experience of surface water and food and fly contact, which urban people did before the economy, meant that most people died at a later age than is now known about the characteristics of premature death. **Wang et al (2021); Pearson et al (2020)** Before the discovery and technology of antipyretics and antibiotics in the mid-1800s, most deaths were related to adverse events; fewer were due to lack of specific

treatment, especially because of the need for social change. Today these diseases are spoken of with a pretty face, but little is said about their prevention and the fact that they still represent a failure of our values of justice in society. In the literature on public health, the transition from the pre-industrial era to the mid-20th century is marked by a change in population, several times that of the population. Initial progress may have been disrupted by epidemics, economic conditions and poverty, leading to further progress in the years to come. At the beginning of the new millennium, the situation was far from that described in the previous paragraph. Discussions of the postindustrial era of public health deregulation tend to focus on the feasibility and cost-effectiveness of management models and strategies, with little regard for the safety of those who die by neurotic suicide. Financial reports do not address issues of culture and justice. One of the oldest revolutions related to public health can be traced back in China, almost 2000 year back and the records of the same can also be found in the old scripts of the country. This might have taken place to prepare the public for taking part in wars and building monuments for them, also this might have been essential for the economic growth of the country. **WHO (2022)**

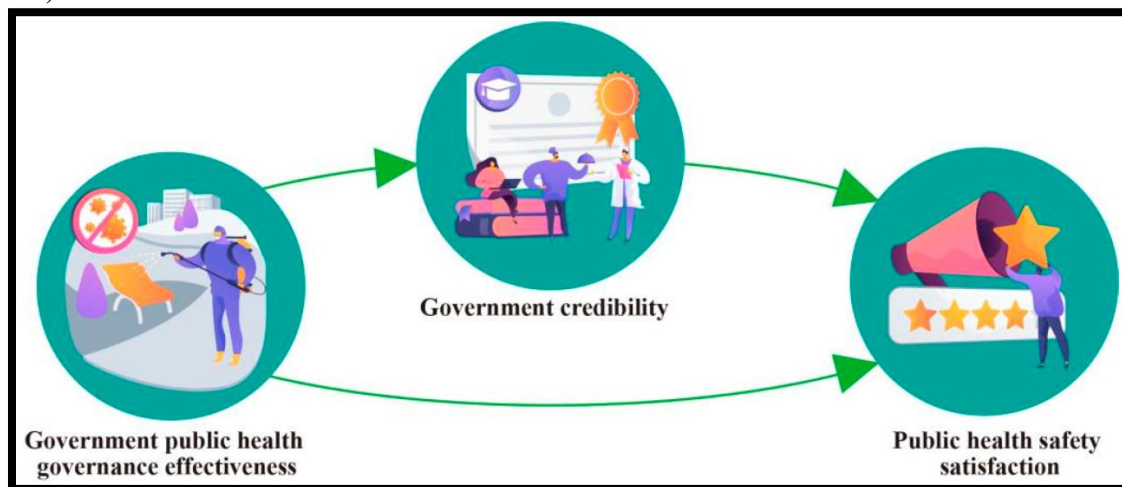
Public Health and Society:

Health of the general public is very important from the point of view that all the residents of the community may reach a particular level of health and the community itself may become capable of earning a particular health equity, as compare to other societies or communities. Then on the other hand healthy people will certainly receive better opportunities of all kinds and contribute in the economic development of the society at large. An important aspect of public health is health decisions, including health, financial, and physical decisions. Public health works to create an environment and conditions in which everyone in society can maintain their health. Collaboration with a variety of relevant organizations, including health officials, is important for public health and prevention. Citizens participate in public health in many ways to solicit ideas or feedback, build partnerships, and engage in public health prevention at all levels. Research and evidence-based practice are fundamental elements of public health and serve to inform public health policy and action. **Herlitz et al (2020); Dennerlein et al (2020)**

Three main principles act as a foundation for public health:

- 1) Prevention;
- 2) Collaboration; and
- 3) Advocacy.

At any given level the public health is in the hands of health workers engaged in different kind of establishment related to medical services. **Asmri et al (2020); Lahariya et al (2020)** As a matter of fact the respective health workers are required to prepare themselves according to the societal needs and standards. This principle focuses on the public health model, which takes into account the interaction of various cultural factors that affect the evolution of people, society and citizens. The concept of public health includes four important aspects of public health: biophysical processes/diseases resulting from individual and environmental influences; These social, cultural and economic influences include social empowerment, community empowerment, food security, transportation, education, public health literacy, empowerment, poverty, income and social status, and discrimination and racism. Education and communication are important in this context because they provide the best way to improve the ability of people and communities to prevent, identify, report and control infectious diseases in public health. **Cadogan et al (2020)**



Source: <https://www.linkedin.com/pulse/role-government-public-health-india-brief-sidra-farooqui>

Figure 1: Role of Government Agencies in Public Health

Any of the given community works on the lines of improvising health services with reference to empower the general public to gain maximum benefits of health-related services. This system is completely dependent on the capability of health-related agencies of the community. Such system of public health is working on the strategies devised on primary, secondary, and tertiary level. Examples of successful projects and programs are also provided to demonstrate the impact in practice. Public health programs that promote health services make health services more accessible. **Haque et al (2020); Mallah et al (2021)**

These systems are often community-based, work well with existing human support models and make effective use of non-medical services. They also play a role in the mainstream health service structure by providing people with choice and professional advice on non-critical activities. A good example of support is using community services to encourage people to overcome drug and alcohol addiction and regain control of their lives. Public health plays an important role in supporting health services and providing basic health services to communities. **Holst (2020); Njidda et al (2018)**

These services are not limited to treatment, but also include support, rehabilitation and preventive measures to solve health problems. There is increasing evidence of the effectiveness and benefits of greenhouses as a suitable service to reduce health risks. Public health, especially environmental health, can play an important role in supporting and implementing prevention strategies. **Barzilay et al (2018); Petersen et al (2000)** The policy basis for these practices and the financing of the new responsibility for health are important. Public Health Initiatives: The goals of public health and the goals of health promotion are interrelated. Public health agencies and health care providers should work together and collaborate.

Major Health Risks:

The identification of human health risks and the symptoms are generally identified by the related health workers and these risks are associated to injuries, certain types of disabilities, premature deaths, and even the social dimension of the same. The health professionals or the health workers are liable to prevent the clinical risks and reduce the risks of human health. **Koplan et al (2013)**

Most of the factors that put people at risk include a variety of personal or lifestyle choices, environmental influences, or social interactions. The list of those that have the ability to change or eliminate health problems continues to grow by monitoring all aspects of human activity. The data is often national or international in nature, based on the experiences of similar medical centers across the country. While there are organizations that attempt to collect similar data in both developed and developing countries, only wealthy countries have the luxury of having health surveillance systems. The long time it takes to maintain important records and disease surveillance and testing. **McGuinness et al (2000)**

Strategical components:

As stated above most of the strategies adopted for the improvement of public health are based on the reduction of known and preventive form of health risks.

- a. Primary: addressing a cause before it becomes an illness,
- b. Secondary: early detection and improving negative health outcomes, and
- c. Tertiary Reducing the impact of an illness

Then the level/stages of prevention, and aim to achieve the common form public health is also very important. Preventive interventions are commonly aimed at health promotion, specific protection, and environmental change.

There is increasing emphasis on public health and public health services because many health problems are caused by policies and practices that make people healthy or unhealthy. Public health education programs, often aimed at:

- Behavior change
- Vaccination/immunization
- Providing a "safe" environment
- Procedural laws and regulations designed to reduce health risks
- Market prices designed to encourage or discourage people from engaging in certain behaviors
- Participation and use research.

Many models and designs have also been developed to guide public health services. Different types of evidence are used to evaluate the effectiveness of interventions, but the decision to use one will depend on many factors, including time, resources, and relevance to the site/context. Some strategies, such as vaccination, may reduce the risk of these diseases. However, some interventions are evidence-based or have had positive results in trials and/or have action plans that show what needs to be done and how it will be done over time. Implementation of strategies can face many challenges

The effectiveness of long-term public health services depends on the evaluation and financing of public health obligations. Public health is the science and art of preventing public disease, developing health policy, evaluating, and improving health strategies and services to help society use a variety of public services. Public health involves

many interactions among the five levels of health (individual/client, health care provider, organization, system, and environment). It identifies a variety of challenges that determine the success of these interventions.

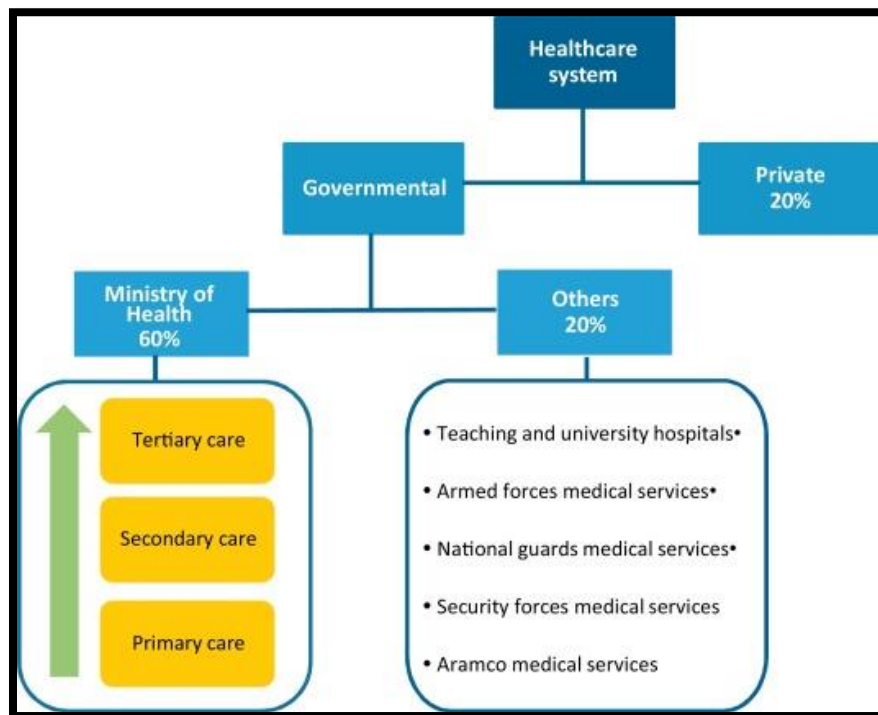
Public Health Scenario in Saudi Arabia:

As evident from the past records that the preventive services related to public health have started in in 1950 for the prevention and control of Malaria, at that time an oil company ARAMCO and WHO joined hands for the same, after some time many other drives were introduced for the prevention and control of bilharziasis, leshmaniasis, trachoma, tuberculosis and other endemic diseases. Then in 1978 Primary Health Care (PHC) system was developed in the country and focused on the delivery of health care system to general public.

Article 31 of the Saudi Basic Civil Rights Law states that the government is responsible for public health in Saudi Arabia and must provide health services to all citizens. Saudi Arabia has made significant progress in health indicators that show that its people are in good health. The Kingdom has invested heavily in health, especially in healthcare, with hundreds of hospitals and primary healthcare centers established throughout the country.

This is associated with major contracts for the provision of services by doctors and medical professionals from all over the world. The country is clearly no exception to other countries in the world, and public health services have had a major impact on public health. What has led to this change is the integration of many public health services that address all determinants of health, including social, economic, environmental, health services and health policy. A critical analysis of the Kingdom’s infant mortality rate over the past 50 years, linked to the country’s economic growth and changes in life across the country, touches on its owners, affecting public health programs such as vaccinations, better hygiene and women’s education.

The Saudi health system is based on medical care, which is clearly reflected in the Saudi Ministry of Health's ten-year health plan. The idea is that one of the shortcomings and weaknesses of health services is to focus on treatment services and not to block use. In fact, the name of the campaign is a word related to health (Patient First). Medical services are the mainstay of the Saudi health budget, and most of the work in the body is devoted to medical care. Similar jobs in community health services, such as city health officers, city health workers, nutritionists, health, cleaning workers, etc., have long been rare in Saudi health services. The system of public health and transportation for health workers is not well established in the hierarchy of the Ministry of Health. See.



Source: Mohamed et al (2018)

Figure 2: Integrated Public Health System in Saudi Arabia

Although the first mention of the term "public health" in the body and its acceptance as an important part of national health services is a good start, the change does not offer clear goals. From this movement it is understood that the work is accepted only in the prevention and treatment of emotions.

Future Prospect:

In the previous times, view of public health is viewed as a horizontal and vertical prevention system related to treatment and prevention efforts in primary health care is far beyond his ideas and concerns. Other areas such as health planning, health law, health services, health security and evaluation Care from the public perspective are not included in this study. Another section in health. We believe that it is time for this work to be recognized and to have a greater impact on the people of the Kingdom. The Saudi Arabian system should consider creating an independent public health institution, independent of the Ministry of Health, that will be responsible for public health. A US-style Surgeon General protects America's health and is accountable to Congress or the British Medical Council reporting directly to Congress are some of the effective ways to protect public health. Let us imagine the next steps that will make the health of the Saudi Arabian population and its related problems in all areas of life a real concern for all policy makers in the body. We imagine a day when every decision made by every department in the kingdom is seriously reviewed by the heads of health institutions. Let us imagine establishing public health rights in every aspect of our daily lives. It is good to have a dream and to follow it. Better late than never.

Conclusion:

The role of public health in the holistic health of community is very important, then the promotion of the same is again very important. Respective health services are liable to improve the health of given population and work on the guidelines and standards provided by other related agencies. Public health helps ensure quality and equitable health care through prevention, participation and advocacy. The changing history of public health highlights the importance of environmental, social and economic health outcomes and the need for collaboration. Despite tremendous progress, challenges such as unemployment, climate change and inequitable access to health care persist. Addressing these challenges requires a sustained commitment to public health investments and a strategy to increase access to health care for all citizens.

References:

- Gostin LO, Friedman EA, Wetter SA. Responding to COVID-19: how to navigate a public health emergency legally and ethically. *Hastings center report*. 2020 Mar;50(2):8-12.
- Mohamed K.M. Khalil, Sulaiman Al-Eidi, Meshary Al-Qaed, Saud AlSanad, The future of integrative health and medicine in Saudi Arabia, *Integrative Medicine Research*, Volume 7, Issue 4, 2018, Pages 316-321, ISSN 2213-4220, <https://doi.org/10.1016/j.imr.2018.06.004>.
- Sharma M. *Theoretical foundations of health education and health promotion*. Jones & Bartlett Learning; 2021 Jul 14.
- Jacobsen KH. *Introduction to health research methods: A practical guide*. Jones & Bartlett Publishers; 2020 Mar 24.
- Savulescu J. Good reasons to vaccinate: mandatory or payment for risk?. *Journal of medical ethics*. 2021 Feb 1;47(2):78-85.
- Wang Y, Zhao L, Gao L, Pan A, Xue H. Health policy and public health implications of obesity in China. *The lancet Diabetes & endocrinology*. 2021 Jul 1;9(7):446-61. [HTML]
- Pearson O, Schwartzkopff K, Dawson A, Hagger C, Karagi A, Davy C, Brown A, Braunack-Mayer A, Leadership Group guiding the Centre for Research Excellence in Aboriginal Chronic Disease Knowledge Translation and Exchange (CREATE). Aboriginal community controlled health organisations address health equity through action on the social determinants of health of Aboriginal and Torres Strait Islander peoples in Australia. *BMC Public Health*. 2020 Dec;20:1-3. springer.com
- World Health Organization. *Global report on health equity for persons with disabilities*. World Health Organization; 2022 Dec 2.
- Herlitz L, MacIntyre H, Osborn T, Bonell C. The sustainability of public health interventions in schools: a systematic review. *Implementation science*. 2020 Dec;15:1-28.
- Dennerlein JT, Burke L, Sabbath EL, Williams JA, Peters SE, Wallace L, Karapanos M, Sorensen G. An integrative total worker health framework for keeping workers safe and healthy during the COVID-19 pandemic. *Human factors*. 2020 Aug;62(5):689-96. sagepub.com
- Asmri MA, Almalki MJ, Fitzgerald G, Clark M. The public health care system and primary care services in Saudi Arabia: a system in transition. *Eastern Mediterranean Health Journal*. 2020;26(4):468-76. qut.edu.au
- Lahariya C. Health & wellness centers to strengthen primary health care in India: concept, progress and ways forward. *The Indian Journal of Pediatrics*. 2020 Nov;87(11):916-29
- Cadogan CA, Hughes CM. On the frontline against COVID-19: Community pharmacists' contribution during a public health crisis. *Research in Social and Administrative Pharmacy*. 2021 Jan 1;17(1):2032-5. nih.gov

- Haque M, Islam T, Rahman NA, McKimm J, Abdullah A, Dhingra S. Strengthening primary health-care services to help prevent and control long-term (chronic) non-communicable diseases in low-and middle-income countries. *Risk management and healthcare policy*. 2020 May 18;409-26. tandfonline.com
- Mallah SI, Ghorab OK, Al-Salmi S, Abdellatif OS, Tharmaratnam T, Iskandar MA, Sefen JA, Sidhu P, Atallah B, El-Lababidi R, Al-Qahtani M. COVID-19: breaking down a global health crisis. *Annals of clinical microbiology and antimicrobials*. 2021 May 18;20(1):35. springer.com
- Holst J. Global Health—emergence, hegemonic trends and biomedical reductionism. *Globalization and health*. 2020 May 6;16(1):42.
- Njidda AM, Oyebanji O, Obasanya J, Ojo O, Adedeji A, Mba N, et al. The Nigeria Centre for Disease Control. *BMJ Glob Health*. 2018;3: e000712. <https://doi.org/10.1136/bmjgh-2018-000712>
- Barzilay EJ, Vandi H, Binder S, Udo I, Ospina ML, Ihekweazu C, et al. Use of the staged development tool for assessing, planning, and measuring progress in the development of national public health institutes. *Health Secur*. 2018;16(S1):S18–24. <https://doi.org/10.1089/hs.2018.0044>
- Petersen LR, Ammon A, Hamouda O, Breuer T, Kiessling S, Bellach B, et al. Developing national epidemiologic capacity to meet the challenges of emerging infections in Germany. *Emerg Infect Dis*. 2000; 6:576–84. <https://doi.org/10.3201/eid0606.000605>
- Koplan JP, Butler-Jones D, Tsang T, Yu W. Public health lessons from severe acute respiratory syndrome a decade later. *Emerg Infect Dis*. 2013; 19:861–3. <https://doi.org/10.3201/eid1906.121426>
- McGuinness C, Secombe DW, Frohlich JJ, Ehnholm C, Sundvall J, Steiner G. Laboratory standardization of a large international clinical trial: the DAIS experience. DAIS Project Group. *Diabetes Atherosclerosis Intervention Study*. *Clin Biochem*. 2000; 33:15–24. [https://doi.org/10.1016/S0009-9120\(99\)00081-8](https://doi.org/10.1016/S0009-9120(99)00081-8)