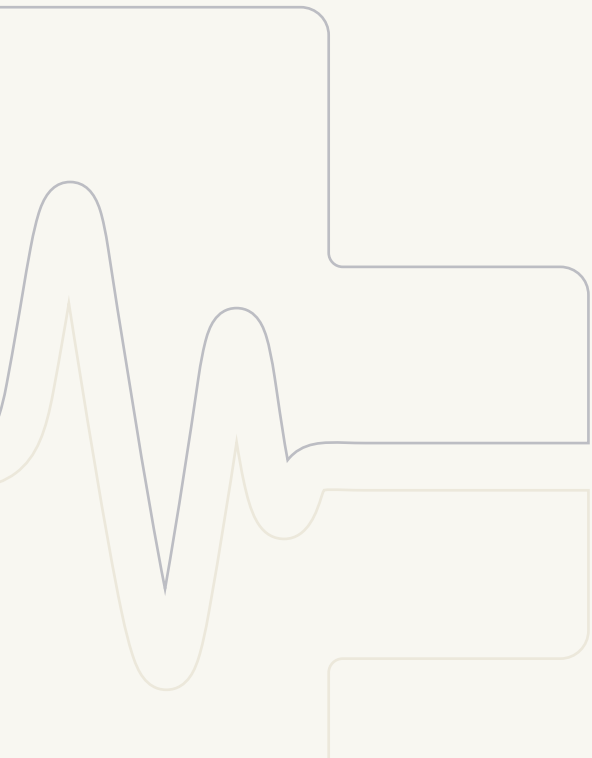




# SOCIAL DETERMINANTS OF HEALTH IN GAZA STRIP

Gaza / Palestine  
March 2021

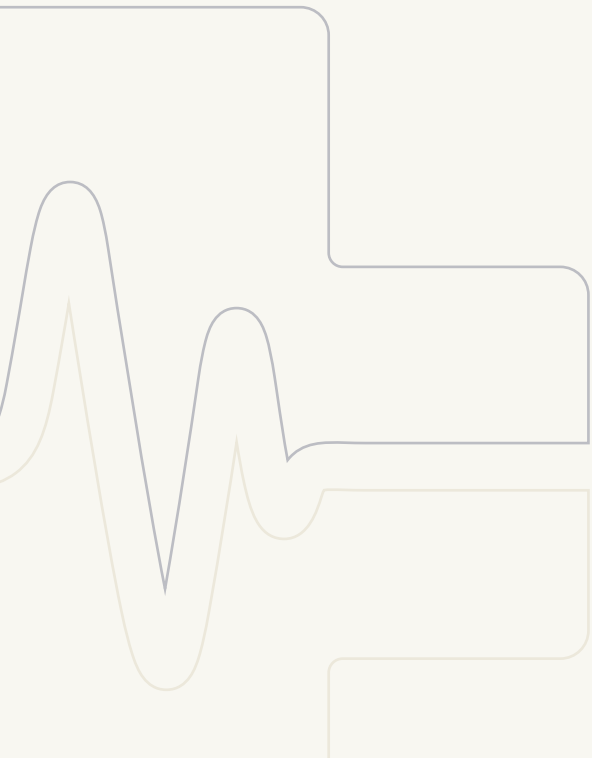






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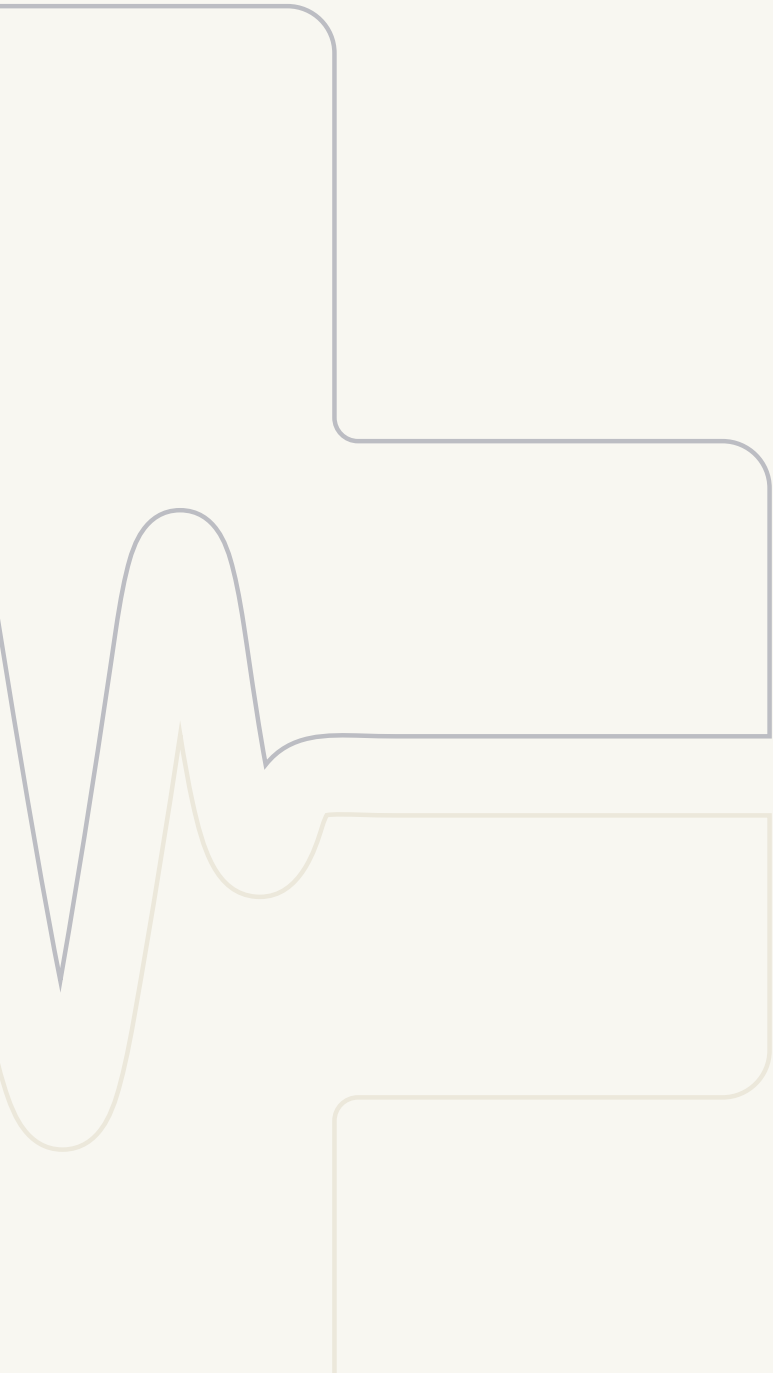
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## LIST OF ABBREVIATIONS

|               |                                                                                         |
|---------------|-----------------------------------------------------------------------------------------|
| <b>ADHD</b>   | <b>Attention Deficit Hyperkinetic Disorders</b>                                         |
| <b>AWD</b>    | <b>Acute Watery Diarrhea</b>                                                            |
| <b>AIESEC</b> | <b>Association Internationale des Étudiants en Sciences Économiques et Commerciales</b> |
| <b>CDR</b>    | <b>Crude Death Rate</b>                                                                 |
| <b>CMWU</b>   | <b>Coastal Municipalities Water Utility</b>                                             |
| <b>CS</b>     | <b>Caesarean Section</b>                                                                |
| <b>DM</b>     | <b>Diabetes Mellitus</b>                                                                |
| <b>FAO</b>    | <b>Food and Agriculture Organization</b>                                                |
| <b>FSIN</b>   | <b>Food Security Information Network</b>                                                |
| <b>GBV</b>    | <b>Gender-Based Violence</b>                                                            |
| <b>GMR</b>    | <b>Great March of Return</b>                                                            |
| <b>GS</b>     | <b>Gaza Strip</b>                                                                       |
| <b>HI</b>     | <b>Health Inequities</b>                                                                |
| <b>HTN</b>    | <b>Hypertension</b>                                                                     |
| <b>IDP</b>    | <b>Internally Displaced population</b>                                                  |
| <b>IFAD</b>   | <b>International Fund for Agricultural Development</b>                                  |
| <b>ILO</b>    | <b>International Labour Organization</b>                                                |
| <b>IMR</b>    | <b>Infant Mortality Rate</b>                                                            |
| <b>INGOs</b>  | <b>International Non-Governmental Organization</b>                                      |
| <b>IPV</b>    | <b>Intimate Partner Violence</b>                                                        |
| <b>MCH</b>    | <b>Maternal and Child Health</b>                                                        |
| <b>Mcm</b>    | <b>million cubic meters</b>                                                             |
| <b>MoH</b>    | <b>Ministry of Health</b>                                                               |
| <b>MoE</b>    | <b>Ministry of Education</b>                                                            |
| <b>MoHE</b>   | <b>Ministry of Higher Education</b>                                                     |
| <b>MMR</b>    | <b>Maternal Mortality Rate</b>                                                          |
| <b>MoSD</b>   | <b>Ministry of Social Development</b>                                                   |





|               |                                                                          |
|---------------|--------------------------------------------------------------------------|
| <b>NCDs</b>   | <b>Non-communicable Disease</b>                                          |
| <b>NGEST</b>  | <b>Northern Gaza Emergency Sewage Treatment</b>                          |
| <b>NGOs</b>   | <b>Non-Governmental Organization</b>                                     |
| <b>NRC</b>    | <b>Norwegian Refugee Council</b>                                         |
| <b>OCHA</b>   | <b>Office for the Coordination of Humanitarian Affairs</b>               |
| <b>OECD</b>   | <b>Organization for economic co-operation and Development</b>            |
| <b>PCBS</b>   | <b>Palestinian Central Bureau of Statistics</b>                          |
| <b>PHIC</b>   | <b>Palestinian Health Information Center</b>                             |
| <b>PHC</b>    | <b>Primary Health Care</b>                                               |
| <b>PMRS</b>   | <b>Palestinian Medical Relief Society</b>                                |
| <b>PNIPH</b>  | <b>Palestinian National Institute of Public Health</b>                   |
| <b>PTSDs</b>  | <b>Post-Traumatic Stress Disorders</b>                                   |
| <b>PWDs</b>   | <b>Persons with Disabilities</b>                                         |
| <b>RWJF</b>   | <b>Robert Wood Johnson Foundation</b>                                    |
| <b>T2DM</b>   | <b>Type 2 Diabetes M</b>                                                 |
| <b>TFR</b>    | <b>Total Fertility Rate</b>                                              |
| <b>SDGs</b>   | <b>Sustainable developmental goals</b>                                   |
| <b>SDOH</b>   | <b>Social Determinants of Health</b>                                     |
| <b>UAWC</b>   | <b>Union of Agriculture Work Committee</b>                               |
| <b>UHWC</b>   | <b>Union of Health Work Committees</b>                                   |
| <b>UNDP</b>   | <b>United Nations Development Program</b>                                |
| <b>UNFPA</b>  | <b>United Nations Fund for Population Activities</b>                     |
| <b>UNICEF</b> | <b>United Nations Children’s Fund</b>                                    |
| <b>UNESCO</b> | <b>United Nations Educational, Scientific, and Cultural Organization</b> |
| <b>UNRWA</b>  | <b>United Nations Relief and Works Agency for Palestine Refugees</b>     |
| <b>US</b>     | <b>United States</b>                                                     |
| <b>WASH</b>   | <b>Water, Sanitation, and hygiene</b>                                    |
| <b>WFP</b>    | <b>World Food Program</b>                                                |
| <b>WHO</b>    | <b>World Health Organization</b>                                         |
| <b>WWTPs</b>  | <b>Wastewater Treatment Plants</b>                                       |



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## EXECUTIVE SUMMARY

To improve the health situation of any population, health authorities have to address the relationship between the community health status and other factors including policies, health services, and individual behavior. The population's health is shaped not only by biological factors but also by social, environmental, economic, political, and personal factors. Therefore, improving health outcomes can be achieved by addressing and enhancing the social determinants of health (SDOH).

The SDOH are *'the circumstances, in which people are born, grow up, live, work and age, and the systems put in place to deal with illness'* (World Health Organization [WHO, 2015]). These circumstances are shaped by a wider set of forces: economics, social policies, and politics. The SDOH are mostly responsible for health inequities (HI) - *the unfair and avoidable differences in health status seen within and between countries*". Health outcomes are influenced by many factors that include genetic and biological predisposition; social, political, and economic conditions; surrounding environment; education, equity, and well-balanced diversified nutrition. Inequalities in social conditions give rise to unequal and unjust health outcomes for the different social groups.

This report aims to address SDOH and HI in the Gaza Strip (GS), and to urge policy-makers and stakeholders to take improving actions in the areas of health, education, housing, social policy, and politics. The report will also help decision-makers to understand the influence of their decisions on

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WHO (2015), Social determinants of health [www.who.int/social\\_determinants/sdh\\_definition/en/](http://www.who.int/social_determinants/sdh_definition/en/)



determining the health of people in the GS.

**The problem** the report tackled is that the effect of social determinants on people's health in the GS is ambiguous. Therefore, the current report was carried out to clarify the impact of different social determinants on the health of people in the GS and to contribute to resolving this problem.

**Methodology:** using qualitative study design, this report sought to address SDOH and HI in GS. It thematically presents findings from review of the relevant literature and in-depth interviews with key informants and decision makers. Data was presented according to the following themes:

*Figure 1: Themes of SDOH in GS.*





## Main Findings:

- » The longstanding Israeli occupation is undermining the socio-economic status of the Palestinian residents, which in turn has a diverse impact on the population's health and wellbeing.
- » Restriction of movement of people and goods is one of the key determinants of health in the GS.
- » The education system shows high literacy rate but low quality. It lacks a proper environment, where it is mainly disturbed by the frequent Israeli escalations and the repeated power blackouts for long hours, education staff salary cuts, early retirement, and the poor socio-economic status of the population.
- » The great majority of Palestinians in the GS depend on humanitarian assistance for survival, with no means to access education, health, clothing, and shelter.
- » More than half of the population in the GS suffer of poverty, which is a main contributor to ill-health.
- » Approximately, two-thirds of youths ages between 19 to 29 years old in the GS are unemployed which affects negatively on their physical and mental health and wellbeing.
- » The people in the GS suffer extreme shortages of water quantity and quality, frequent electricity blackouts, unsanitary disposal of sewage and solid waste with a detrimental impact on their health.
- » Gaza health system lacks a standardized and accurate database for SDOH.
- » The health facilities are overstretched and cannot meet the overwhelming population's medical needs, As the lack of medical supplies



- and medicines constitutes a major threat to population's health.
- » The health system in Gaza lacks comprehensive and well-planned health policies and laws that help in achieving specific health care goals and in enhancing community health and wellbeing.
  - » An alarming disparity exists between women and men involved in the labor market in Gaza, as women have an unemployment rate that is 1.68 higher than men.

## **Recommendations**

1. This report has proposed a set of recommendations for the international community who has a responsibility and legal obligation toward improving the health situation in Gaza, through calling the Israeli authorities to lift the blockade imposed on Gaza and to put an end for the Israeli occupation of the Palestinian territories.
2. This report has proposed a set of recommendations for policy makers to develop effective strategies and practical solutions to address and improve SDOH and reduce HI.



## INTRODUCTION

The history of modern medical science primarily viewed health as the absence of disease or defect. It was a state of being in which all of the body systems were operating “normally.” However, the WHO defined health in 1948 as *“a state of complete physical, mental, and social wellbeing and not merely the absence of disease or infirmity”*. This definition confirms health as a social issue. People view their health from physical, biological, or mental perspective. However, social terms play crucial roles in the determination of health because many of the causes of illness may be directly affected by social factors.

The SDOH are ‘the circumstances, in which people are born, grow up, live, work and age, and the systems put in place to deal with illness’ (WHO. 2015). These circumstances are shaped by a wider set of forces: economics, social policies, and politics. The social determinants of health are mostly responsible for HI - the unfair and avoidable differences in health status seen within and between countries”. Health outcomes are influenced by many factors that include genetic and biological predisposition; social, political, and economic conditions; surrounding environment; education, equity, and well-balanced diversified nutrition. Inequalities in social conditions raise unequal and unjust health outcomes for the different social groups.

It is a fact of modern times that the economically advantaged people in all societies have better physical, mental and social health than the poor

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WHO (2015). Social determinants of health [www.who.int/social\\_determinants/sdh\\_definition/en/](http://www.who.int/social_determinants/sdh_definition/en/)



people. This starts early; it starts at birth with the poorest society having the highest infant mortality rates (e.g. in 2017, IMR was highest in the WHO African Region (51 per 1000 live births), over six times higher than that in the WHO European Region (8 per 1000 live births) (WHO, 2017). The life expectancy in Cameroon in 2018 was 59 years while in Canada 82 years in the same year (World Bank, 2020). This situation continues throughout life as rich people enjoy better access to quality healthcare thus, they get better recovery from illnesses. In poor countries, health is undermined by lack of food, poor sanitation service, unaffordable health services, and financial inaccessibility to health services.

The frequent escalations and violence, Israeli military incursions, and the suffocating blockade that have been magnified during the past 13 years hinder economic growth, deepen poverty, and reduce health services provision. Consequently, the health authorities in Gaza encounter many competing priorities. Their priorities are mostly directed towards curative services on the cost of preventive services. Although, adopting preventive services will eventually reduce the burden of the diseases.

The longstanding blockade on the GS has resulted in aggravating poverty. During Israeli aggressions on the GS, several houses and other residential buildings were demolished resulting in thousands of internally displaced people. The high unemployment rate and even the cut of salary for

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WHO (2017). Infant mortality. Situation and trends [https://www.who.int/gho/child\\_health/mortality/neonatal\\_infant\\_text/en/](https://www.who.int/gho/child_health/mortality/neonatal_infant_text/en/)

World Bank (2020). Life expectancy at birth, total (years). <https://data.worldbank.org/indicator/SP.DYN.LE00.IN>





thousands of government employees deepen poverty. Therefore, people have fallen under long-term pressure and stress that harm both their mental and physical health.

The humanitarian situation and living conditions in the GS have deteriorated day after day. People deeply suffer under the Israeli blockade, which is as bad as the war; it looks like a slow death for everyone in Gaza. The siege drastically damages all aspects of life in Gaza including health, power supply, income, job opportunities, education, and sanitation with very bad consequences on health. Furthermore, the suffocating blockade has greatly disrupted the provision of national health services and stopped people from getting the needed health services from neighboring countries.

### **General Objective:**

- » To promote respect, protection, and fulfillment of the right to the highest attainable standard of health in the Gaza Strip.
- » To help policymakers in the areas of health, education, housing, social policy, and politics to understand the significance of their decisions on health conditions and services in the Gaza Strip.

### **Specific Objectives:**

- » To shed light on the SDOH in the GS.
- » To clarify the Health Inequities (HI) in the GS.
- » To raise recommendations for the decision-makers to improve SDOH and to consider them in the health policies and regulations.



## METHODOLOGY:

Using qualitative study design, this report sought to address SDOH and HI in GS. It thematically presents findings from review of the relevant literature and in-depth interviews with key informants and decision makers. Data was presented according to the following themes:

- » Education access and quality.
- » Economic stability.
- » Environmental factors.
- » Political situation.
- » Health system.
- » Health policies, laws, and regulations.
- » social and cultural factors.
- » Individual behaviors.
- » Biological and genetic factors.

### Data collection tools:

1) **five in depth interviews** were conducted with stakeholders and decision makers from different ministries and sectors as follow:

- » Ministry of Health (MOH).
- » Palestinian Medical Relief Society (PMRS).
- » Ministry of Education (MoE).
- » Palestinian Center for Human Rights (PCHR).
- » Coastal Municipalities Water Utility (CMWU).



Interviews were conducted in Arabic (the national language) using an interview guide. All interviews were audio recorded with the interviewees consent.

2) **Literature review** regarding SDOH in GH was conducted. The report searched international and national documents and published papers as follow:

- » Assessment of Occupational Health and Safety among Scavengers in Gaza Strip, Palestine.
- » FAO, an Introduction to the Basic Concepts of Food Security.
- » FAO, UNICEF, WFP, WHO, IFAD, The state of food security and nutrition in the World.
- » Health cluster Bulletin reports.
- » International Labor Organization [ILO].
- » National collaborating center, Canada, SDOH and public health.
- » Palestinian Ministry of Health (MoH) reports.
- » Palestinian MoH and PNIPH, Illicit Drug Use in Palestine.
- » Palestinian Ministry of Education (MoE) report.
- » Palestinian Central Bureau of Statistics (PCBS) reports.
- » Palestinian Medical Relief Society report.
- » United Nations Office for the Coordination of Humanitarian Affairs (OCHA) reports
- » United Nations Development Program (UNDP) website.
- » United Nations Educational, Scientific, and Cultural Organization (UNESCO) website.
- » United Nations Relief and Works Agency for Palestine Refugees



(UNRWA) reports.

- » United Nations Children’s Fund (UNICEF) in the State of Palestine.
- » United Nations Fund for Population Activities (UNFPA) Evaluation of UNFPA Support to the Prevention, Response to the Elimination of Gender-Based Violence, and Harmful Practices.
- » UNFPA Palestine 2030 Demographic Change: Opportunities for Development.
- » World Bank report.
- » World Health Organization (WHO) Health Access Report.
- » WHO Health Condition oPt.
- » WHO Initial Health Assessment Report.
- » World Food Organization, World Food summit.

## **STUDY FINDINGS**

The report represents the data in two parts, part 1 on SDOH and part 2 on health inequities in the GS.



## PART 1: SDOH IN THE GS

SDOH are a range of factors that influence the health status of individuals and the population. Health determinants in this report include education access and quality, economic stability, environmental factors, political situation, health system, health policies, laws and regulations, social and cultural behavior, individual factors, and biological and genetic factors.

### 1) Education Access and Quality

*“Education is the process of facilitating learning or the acquisition of knowledge, skills, values, beliefs, and habits”* (UNESCO, 2020). The fourth objective of the Sustainable Development Goals (SDGs) places focus on the need to ensure inclusive and equitable quality education and promote lifelong learning opportunities for all. Achieving this goal is very central to the fulfillment of other SDGs. This means that all the SDGs are closely connected, and the fulfillment of a given objective cannot be achieved without the fulfillment of the rest of the objectives. For example, if people have access to high-quality education, they will have better access to the labor market, which in turn will contribute to enhancing the overall social and economic situation in the whole society (Association Internationale des Étudiants en Sciences Économiques et Commerciales [AIESEC], 2019).

People with low literacy levels are more likely to be unemployed and

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UNESCO (2020). SDG Resources for Educators - Quality Education. <https://en.unesco.org/themes/education/sdgs/material/04>. Accessed on November 15, 2020

AIESEC (2019), SDG4: Why does education matter?



poor than people with a high level of literacy. Health status improves with quality education; closely tied to socioeconomic status, and effective education for the children and lifelong learning for the adults is a key contributor to improve health for the individuals (Shanker *et al.*, 2013). People with higher education tend to be healthier than people with a lower educational level. Education leads to better health through various pathways. First, the level of education is highly correlated with other social determinants of health such as the level of income, employment security, and working conditions. Education helps people to move up the socioeconomic ladder and provides better access to other societal and economic resources (Mikkonen & Raphael, 2010).

By contrast, people with limited educational levels are more likely to produce a certain apathy towards their health condition and needs, refrain from participating in health-promotion activities, and fail to make informed decisions about their health. Consequently, people with low education levels are considered the most vulnerable group in any society. This is mainly because they have limited access to the job market and thus, they suffer from poverty, job insecurity, low wages, and insufficient resources and assets, which altogether can limit their access to healthy food, safe housing, and high-quality health services and information. It is very important to remember that the low education level is not the direct leading cause for ill health, yet it negatively affects other socio-economic factors that have a significant bearing on health and wellbeing (Shanker *et al.*, 2013).

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Shankar, J., Ip, E., Khalema, E., Couture, J., Tan, S., Zulla, R. T., & Lam, G. (2013). Education as a social determinant of health: issues facing indigenous and visible minority students in postsecondary education in Western Canada.

Mikkonen J. Raphael D. (2010). Social Determinants of Health THE CANADIAN FACTS



In the context of Palestine, although the illiteracy rate is very low, as it is 3% for individuals aged 15 years old and above, yet the quality of education has not been achieved (PCBS, 2019). In the GS, for the scholastic year 2019/2020, there are 751 schools, and 574,849 students (MoE, 2020). The education system in the GS continues to suffer due to the continuous deterioration of the political, social, and economical situation (OCHA, 2018).

Several factors have a dramatic impact on the education sector in the GS. It comes as no surprise that the Israeli occupation and its on-going political and economic siege on Gaza are the main leading factors for the continuous deterioration of the education sector in GS. Additionally, it must be emphasized that the current state of the Intra Palestinian division harms the education system due to cuts of teachers' salaries, early retirement of experienced teachers, and overcrowding of classes. What complicates the situation is that the educational facilities have been targeted by Israeli military forces, and resulted in severe damage and disruption to 1175 educational facilities (OCHA, 2018).

Because of the damage to educational facilities, the schools in GS are extremely overcrowded and some are operating on double or triple shift systems. For instance, statistics clearly showed that in 2019, the number of students per class is 41.2 compared to 39 in 2018 (UNRWA, 2019). The

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PCBS (2019), On the occasion of the International Population Day 11/7/2019.

الكتاب الإحصائي السنوي للتعليم في محافظات غزة 2019/2020م، غزة، فلسطين

MoE (2020). Data base of Education Survey for the scholastic years 2019/2020. Ramallah - Palestine

OCHA (2018), Education undermined by deteriorating humanitarian situation in Gaza

UNRWA (2019), EDUCATION IN THE GAZA STRIP



presence of such circumstances provides an optimal environment for a high risk of infectious disease transmission. Consequently, there is no doubt that such circumstances put the student's health and well-being at risk (WHO, 2019). More importantly, the absence of an appropriate environment for studying due to the repeated Israeli military attacks on the GS has highly influenced the psychological well-being of the students in the GS.

Besides, power cuts are considered as one of the main important elements that have a negative influence on the education process in the GS. It affects school performance, hinders educational quality, and increases the rate of students dropping out. Students who drop out of school are more likely to get involved in harmful and life-threatening habits and increase the rate of early marriage and can lead to a diverse effect on girls' physical, social, and mental health (OCHA, 2018 & UNRWA, 2019).

Chronic disease self-management depends on the educational level of patients. Chronic disease patients with higher educational levels are more adherent to treatment protocols than lower educational levels. A study was conducted to identify the prevalence of chronic diseases in Palestinian people. The study revealed that illiterate people were 4 times or more than those with higher levels of educational attainment who probably suffer from diabetes, hypertension, CVD, and cancer. (Abukhdeir et al., 2013).

WHO (2019), frequently asked questions [https://www.who.int/water\\_sanitation\\_health](https://www.who.int/water_sanitation_health)

OCHA (2018), Education undermined by the deteriorating humanitarian situation in Gaza

UNRWA (2019), EDUCATION IN THE GAZA STRIP

Abukhdeir, H.F Caplan, L.S., Reese, L., and Alema-Mensah, E. (2013). Factors affecting the prevalence of chronic diseases in Palestinian people: an analysis of data from the PCBS East Mediterr Health J. 2013 April; 19(4): 307





Before COVID 19 pandemic, the classrooms were usually stuffed of a large number of students which required teachers to exert more effort to control the class and communicate the information, and this facilitated the spread of infectious diseases. COVID- 19 outbreak in Gaza exacerbated this problem. So, the MoE decided to use e-learning and when COVID- 19 curve is in a plateau, they adapt physical and e-learning (Al Majdalawi Interview)

The department of school health in MoE and the Palestinian MoH coordinate implementation of school health projects. These projects include students' vaccination, periodic students' health examination, visual screening, and dental examination. Water and food are usually tested for safety by individual efforts of the MoE and partly in cooperation with the Ministry of Health laboratories. There are partners who provide great help such as the Union of Health Work Committees (UHWC), Palestinian Medical Relief Society (PMRS), and the Union of Agricultural Work Committees (UAWC). Also, UNICEF made adjustments to the school toilets and corridor for students with special needs to achieve equity (Al Majdalawi Interview).

## **2) Economic Stability**

Economic determinants of health are conditions that reflect the environment in which people are receive education, live, learn, and work. Such conditions have a considerable impact on health and quality of life. Continuing lack of good-quality education, job opportunities, safe

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Al Majdalawi A. Director of Health Education and Health Services/ MoE



working conditions has been widely recognized as leading factors in causing poor health and illnesses. This area includes key issues such as poverty, employment, food security, and housing stability.

## I. Poverty and Inequity

Poverty contributes to poor health, and poor health can lead to poverty - it is a vicious cycle. Poverty negatively affects health in many ways (e.g., poor diet, poor housing, and limited access to employment, other resources, services, and opportunities). In the GS, 53% of the poverty line (living on less than USD 4.6 per day), which is the equivalent to around 1.01 million people, including over 400,000 children (OCHA, 2020). In the GS, more than 80% of households had debts of between USD 1 810 and USD 3 498, made up of unpaid bills for electricity and water, grocery shopping, and lines of credit with friends and relatives (Food Security Information Network [FSIN], 2020).

About 410,000 families are living under the abject poverty line in Gaza and almost 80% of Palestinians in Gaza depend on humanitarian assistance for survival, with no means to access education, health, clothing, and shelter (UNDP, 2020).

It is estimated that 125,967 children under 5-years of age (35%) are at risk of not meeting their full developmental potential due to poverty, poor

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OCHA (2020). Humanitarian Needs Overview

FSIN (2020). Global Report on Food Crisis

UNDP (2020). Poverty Reduction and Economic Empowerment



nutrition, lack of access to basic services, and high levels of family and environmental stress, and exposure to violence. This situation is often further compounded by inadequate care and learning opportunities (UNICEF, 2020). In the Gaza context, people cannot afford the healthcare services they need due to financial barriers and hardships. Consequently, some are avoiding or postponing healthcare services because of its cost, and the rest can expose themselves to severe financial hardships because of accessing services.

## **II. Employment and Work Conditions**

Employment is the state of having paid work through which individuals can satisfy their daily needs. However, people need to work not only because of their need to respond to their daily living requirements, but also to contribute to enhance their self-esteem and confidence, fulfill their potential, satisfy their creative urges, and empower their overall social and professional network. In the context of health, employed people are more able to have safe and healthy housing conditions, buy healthy and nutritious food, provide high-quality education to their children, and access healthcare services without being exposed to financial hardships. The presence of such good circumstances has a positive impact on health outcomes, quality of life, and life expectancy. Good health is strongly associated with employment, yet it should be pointed out that the presence of a healthy workplace environment and safe working conditions also play a significant role in ensuring employees' health. More importantly, the presence of a stressful working environment and

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UNICEF (2020). <https://www.unicef.org/sop/what-we-do/health-and-nutrition>



the lack of balance between workload and working hours harm workers' physical, mental, emotional, and social health and well-being.

The low monthly wages in Palestine continues to be a major challenge, 80% of individuals working in private sector do not reach the minimum monthly wage of 1450 ILS (OCHA, 2020). These unacceptable circumstances left one million Gazans lacking access to basic living conditions and healthy and nutritious food. This justifies the Palestinians' excessive reliance on UNRWA food aid to reach a socially acceptable living standard (UNRWA, 2018).

Employees who are experiencing work-related stress tend to develop cardiovascular diseases, high blood pressure, diabetes mellitus, depression, and anxiety. Furthermore, the workplaces, which are associated with discrimination, bullying, violence, and dissatisfaction cause psychological problems and distresses, affect the employee's productivity, and work capacity.

Additionally, there are some 374 million non-fatal work-related injuries each year (International Labor Organization [ILO], 2020). Unemployment places a double burden on people, as it affects not only their financial stability but also amounts to a considerable threat to their physical, mental, and social health and well-being. Unemployed people are more likely to suffer from physical diseases and illnesses, psychological distresses, family breakdown, and social exclusion. More importantly, lack

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OCHA (2020). The Pandemic's Impact on Daily-wage Laborers in the Gaza Strip, September 2020.

UNRWA (2018). <https://www.unrwa.org/where-we-work/gaza-strip>



of employment drives peoples more to get involved in harmful practices such as smoking, alcohol consumption, and drug abuse. Therefore, the most challenging concern associated with the lack of employment is that unemployed people lack the social and financial ability that enables them to have better living conditions. As a result, they will be forced to live in severe, unbearable, and inhumane living conditions that expose them to serious health risks and threats in the future (Robert Wood Johnson Foundation [RWJF], 2013).

The unemployment crisis has been a persistent problem in the GS for a decade. The Unemployment in Gaza increased from 43% in 2018 to 47% in 2019, with youth unemployment (19\_29) at 64% (OCHA, 2020) which is considered one of the highest rates worldwide. From a national perspective, it can be seen that there are a profound difference and inequality in the unemployment rate between Gaza and the West Bank. As for the same year (2019), the unemployment rate in the West Bank (WB) counts for 15%, which is three times lower than the rate in the GS (PCBS, 2019). Another alarming disparity can be found between women and men involved in the labor market in Gaza, as women have an unemployment rate that is 1.68 higher than men. In this regard, the participation rate in the labor market among women in Gaza is only 25.5%, and the rest of 74.5% are unemployed, compared to the 45% unemployment rate for men (GISHA, 2019).

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ILO (2020). Safety and health at work. <https://www.ilo.org/global/topics/safety-and-health-at-work/lang-en/index.htm>

RWJF (2013). How does employment or unemployment affect health

OCHA (2020). Humanitarian Needs Overview

PCBS (2019). The labor force survey



The high rate of unemployment in Gaza exposes Gazans' health to serious health risks and threats. To support that, a 2009 conducted study concluded that worldwide, unemployed people are more prone to develop medical problems such as elevated blood pressure, diabetes or heart disease compared to those who are employed (Rabin, 2009).

Unfortunately, being employed in Gaza does not necessarily mean that you will be able to secure good living conditions or satisfy your daily needs. The data on occupational health and safety in Gaza are most likely under reported and the magnitude of the problem is under study as well. The MoH (2018) annual report revealed that there were 1685 workers exposed to work accidents. In 2019, a study that examined the level of work-related diseases and injuries among scavengers in the GS showed alarming numbers. As it stated that more than 50% of the waste pickers are suffering from any kind of work-related diseases, 30% of them have developed intestinal diseases, 65% have burns, and the vast majority has been exposed to hazardous material. More importantly, most of the waste pickers have reported that they lack access to drinkable water, safe sanitation units, and proper and safe places for resting or having meals neither at work nor at home (Al-Khatib, *et al.*, 2019).

Al Majdalawi, director of Health Education and Health services - MoE spoke about child labor during the interview saying that *"the Israeli blockade*

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Rabin, R. (2009). Unemployment may be hazardous to your health. Retrieved from <http://www.nytimes.com>

MoH (2018). Health Status. Annual Report. PHIC

Al-Khatib I., Al-Sari M., and Kontogianni S (2019). Assessment of Occupational Health and Safety among Scavengers in Gaza Strip.

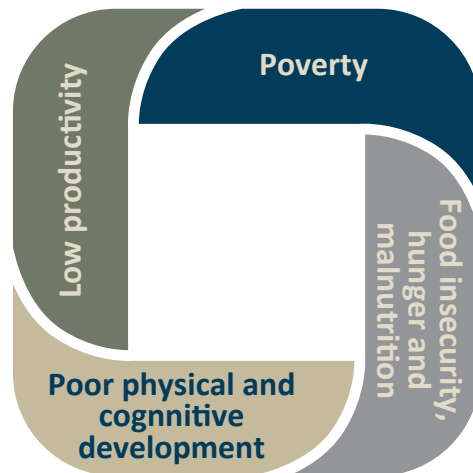


*greatly affects our students, they drop out of schools and are absent from classes to sell simple goods at streets crossing. Their families are too poor to cover their school expenses, stationaries, and transportation”.*

### III. Food Security

Food security exists when *“all people, at all times, have physical and economic access to sufficient safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life”*. - 1996 World Food Summit (Food Aid Organization [FAO], 1996). Food insecurity – defined as *“uncertain access to food of sufficient quality and/or quantity”* (FAO, WFP, UNICEF, WHO, IFAD, 2019).

Figure 2:  
Food insecurity, malnutrition, and poverty are deeply interrelated phenomena



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FAO (1998). World Food Summit. <http://www.fao.org/3/w3548e/w3548e00.htm>

FAO, WFP, UNICEF, WHO, IFAD (2019). The State of Food Security and Nutrition in the World



A vicious cycle as displayed in figure 2, clarified that poverty makes people unable to get access to food, so food insecurity, hunger, and malnutrition develop, this leads to poor physical and cognitive development with subsequent low productivity and poverty.

The lack of economic access to healthy food due to unemployment and poverty is one of the main determinants of food insecurity in the GS. The level of food insecurity remains alarmingly high in Gaza, revealing the long-term impact of the disruptive shocks of recent years, where an estimated 62 % of households are severely or moderately food insecure (OCHA, 2020).

Factors driving acute food insecurity are conflict/insecurity, the prolonged occupation, blockade on Gaza, and Israeli repeated aggressions that have eroded the resilience of Palestinians (FSIN, 2020). The most frequently identified concerns regarding food security and nutrition include loss of the source of income and livelihoods. This is due to severe damage to agricultural lands; perish of animals, inability to access agricultural lands, particularly in the Israeli-imposed buffer zone, and the lack of employment opportunities.

The most vulnerable people include widows/widowers, female-headed households, people living with disabilities, the elderly, and refugees, especially those living in camps. Palestinians increasingly resorted to negative coping mechanisms, such as withdrawing children from school

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OCHA (2020). Humanitarian Needs Overview- oPt

FSIN (2020). Global Report on Food Crisis





(FSIN, 2020). This food insecurity has negatively influenced the children, pregnant, and lactating women who are the most vulnerable; they suffered from malnourishment with vitamin and mineral deficiencies. The national acute malnutrition reached 14% in the GS in 2019. Also, 18% of pregnant and 14% of lactating women were malnourished in 2019. Only 14% of young children in the GS received a minimum acceptable diet for their growth and development. A high proportion was not eating iron-rich foods, increasing the risk of iron deficiency anemia (UNICEF, 2019).

A total of 324,143 children in the GS under the age of five suffer from micronutrient deficiencies, including seven out of ten children under the age of five. There is also a pocket of 36,400 children including those living in the areas along the fence facing access restrictions at a higher risk of having a watery or bloody diarrheal disease and respiratory infections. The combined effect of food insecurity, poor maternal nutrition status, sub-optimal infant and young child feeding practices, increased child morbidity, and inadequate water and sanitation situation may lead to an increased risk of acute malnutrition, as well as impaired physical growth and cognitive development and death (OCHA, 2019).

A survey has been conducted in 2018 revealed that food insecurity affects round 1.2 million people in Gaza as a result of high unemployment rate and poverty. People who are food insecure depend on un nutritious food that lack vitamins and minerals. Poor people could not afford buying

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UNICEF (2019). THE STATE OF THE WORLD'S CHILDREN 2019. Growing well in a changing world Children, food and nutrition

OCHA (2019). Humanitarian Needs Overview- oPt

OCHA (2019) Food insecurity | Fewer Palestinians in Gaza can meet their food needs



high priced nutritious food. Consequently, they are deficient in iron, zinc, vitamin A and D. Based on the former, 30.7% of children under five suffer from anemia and 76.2% of children under five suffer from zinc deficiency in the GS (UNICEF, 2018).

Al Majdalawi: Director of Health Education and Health Services- MoE reported that *“some children come to school without having their breakfast where they are anemic and malnourished”*. To combat malnutrition, the World Food Program (WFP) and UNICEF conducted a nutrition program where they provide meals, including high-energy fortified biscuits for all students to improve their health and their school performance.

#### **IV. Housing Stability**

The GS is considered one of the most populous areas on Earth, thus, green areas are limited. Gaza became blocks of stones where the buildings are closely jammed to each other leaving no areas for recreational activities. Worse is that successive and frequent military incursions resulted in the demolishing of livelihoods and the destruction of agriculture. These limited spaces maximize the presence of air pollutants with bad health consequences.

The number of buildings in the GS is 186,156 and the housing units are 403,259. The population density in Gaza is the highest in the World and reaches 5,162,694 people. The average household size declined to 5.6 persons in 2017 in the GS. In 2017, the percentage of Palestinian

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UNICEF (2018). Children in the State of Palestine



households that a family member owned a home unit was 69.1% in the GS, while the percentage of households in rented homes was 5.4% in the GS (PCBS, 2018). It is worth noting that 22,000 people are still internally displaced from previous hostilities in the GS. They continue to live in precarious conditions including unrepaired damaged houses, caravans, tents, and makeshift shelters (OCHA, 2018)

Housing that has to protect the occupants in the GS is overcrowded, close to each other, lacks provision of potable water supply, lacks provision of proper sanitation and waste disposal leading to transmission of gastrointestinal infections. The presence of indoor and outdoor air pollution leads to increased transmission of the droplet and airborne infections such as COVID- 19, acute respiratory infectious diseases, pneumonia, and tuberculosis. Overcrowding can also lead to household accidents and mental health problems.

Ultimately, the economy in Gaza Strip can only be stimulated by lifting up the blockade and with a peaceful resolution to the conflict. There are cultural issues that also affect educational, social, and economic opportunities for vulnerable groups (women and disabled). The blockade and international isolation have likely slowed progress in these areas too.

### **3) Environmental Factors**

Many people in the GS live in an unsafe environment. Environmental

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PCBS (2018). Preliminary Results of the Population, Housing and Establishments Census 2017

OCHA (2018). 22,000 people in the Gaza Strip still internally displaced from the 2014 hostilities.



pollution is associated with diseases among vulnerable and genetically predisposed people. The surrounding environment in which people live consists of water, air, solid waste, and soil.

### **i. Water and Health in the GS**

Gaza has long suffered from a dual water crisis: a shortage of potable water for drinking, and domestic use, combined with a lack of wastewater sanitation. The availability of “fresh” water in Palestine is amongst the lowest in the world. In the GS, the available water source is groundwater from the deteriorating Coastal Aquifer. Only 5-10% of the aquifer is now yielding drinking quality water. Other sources of water include purchased water from Israel’s National Water Company, Mekorot that represents only a small fraction of Gaza’s total water demand, and small desalination projects (PCBS, 2018). Scarcity of water in Gaza is due to the fact that the aquifer yields approximately 55 to 60 million cubic meters (mcm) per year while water demand in Gaza is 180 mcm per year. Decades of over-pumping with the seepage of wastewater, agrochemicals, seawater intrusion bring nitrate and chloride contamination into the aquifer, which can pose significant health risks if present at an elevated level. As a result, some 97% of the aquifer’s groundwater is already unsuitable for human consumption, according to WHO water quality standards (Efron *et al*, 2018).

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PCBS (2018). Preliminary Results of the Population, Housing and Establishments Census 2017

Efron S., Fischbach J, Blum I, Karimov R., Moore M. (2018). Impact of Gaza Water Crisis: Analysis and Policy Options



Access to safe drinking water in Gaza via the public water network fell to only 10.5% in 2014. Intensive use of agricultural pesticides, along with the inflow of sewage into the Coastal Aquifer, has resulted in a nitrate concentration of 300 mg/L (WHO recommendation is 50 mg/dl). Chloride concentrations are also high. These contaminants present particular risks to children (methemoglobinemia) and pregnant women. Water associated diseases account for approximately 26% of childhood diseases in Gaza (UNEP, 2020)

Because water from the coastal aquifer is both increasingly depleted and polluted, it is no longer the primary source of drinking water for the millions of people living in Gaza. Instead, residents primarily use water taken directly from the aquifer for personal hygiene and cleaning while relying on other sources for drinking and cooking. Poor people cannot purchase delivery water for drinking and cooking; they use piped water without treatment, which exposes them to health hazards such as diarrheal disorders.

An interview with Engineer Monther Shublaq: Director General of the CMWU reported that the GS has limited water resources, limited in the aquifer, which is the main source of water in the GS, whether in the domestic sector or the agricultural sector. The household sector has annual needs of about 100 mcm. This from the underground reservoir, whose production capacity is assumed no more than 55-60 mcm. Annual water consumption for households and agriculture is around 180 mcm. Therefore, there is an annual deficit of about 100-120 mcm in the

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UNEP (2020). State of Environment and Outlook Report for the occupied Palestinian territory 2020



aquifer. This deficit is replaced by an incursion of Seawater in the aquifer causing high salinity (chloride reaches 1000- 1500 mg/L [WHO standard 250 mg/L]. Furthermore, nitrates increase in the water above 200 mg/L (WHO standard 50 mg/L) due to unsanitary disposal of sewage and the use of nitrates in agriculture.

Shublaq suggested a solution for the shortage of quantity and quality of water in the GS. This solution involves the establishment of a wastewater treatment plant to be used in agriculture. The reservoir capacity per year is 55 mcm, but we want 100 mcm and as the population increases, we will need 200 mcm by 2025 and so on. Therefore, a plan was to establish Seawater desalination plants, this plan started with the year 2000, but it was postponed due to instability in the GS resulting as a consequence of the second intifada, the Palestinian division, and the Israeli blockade of the GS.

Shublaq continues to say that CMWU, together with the Water Authority and donors, were able to work on a scheme for three small-scale desalination plants, in northern Gaza, middle Gaza, and southern Gaza, which give approximately 40-45 thousand cubic Meter daily in addition to some good wells. It reaches approximately 70-75 thousand cubic meters. Therefore, 97% of unpotable water is no longer accepted, 85% is still not suitable for domestic use. With the introduction of the idea of a major central desalination plant, the water status will greatly improve.

Shublaq added, the bodies responsible for the water delivery distributed via cars are the Water Authority. A report by OXFAM and the WASH sec-



tor-working group has confirmed that roughly, 75% of the water sold by cars has been polluted and it needs to be monitored. There is coordination between CMWU, water authority, municipalities, and MoH. Furthermore, CMWU responds to the needs of the hospitals. He advised changing the people's behavior by increasing their awareness towards appropriate use of water and invoice payment for the continuity of the service. The challenges CMWU face are frequent blackout of electricity, and many people do not pay their water bills. CMWU needs a financial cover for the operational cost, chemicals, spare parts, and maintenance cost.

Wastewater disposal: people in Gaza have always been faced with the problem of getting rid of the waste they produce. CMWU has only limited available power, which it uses to operate 55 sewage-pumping stations and 5 operational Wastewater Treatment Plants (WWTPs). When the plants cannot treat incoming wastewater, it is discharged into the Sea (Efron *et al*, 2018).

Some 108,000 cubic meters of untreated or poorly treated sewage are discharged into the sea every day. In early 2018, the Northern Gaza Emergency Sewage Treatment (NGEST) facility became operational. The facility is designed to provide a sustainable wastewater management solution for 400,000 residents of northern Gaza communities. However, NGEST still faces two key issues. First, there is a funding gap to cover operations and maintenance costs. The second issue is that NGEST needs a constant power supply to operate sustainably (Efron *et al*, 2018).

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Efron S., Fischbach J, Blum I, Karimov R., Moore M. (2018). Impact of Gaza Water Crisis: Analysis and Policy Options



More than a quarter of Gaza residents live in areas without adequate sanitary sewage infrastructure (PCBS, 2018). The electricity shut down reflects a negative impact on all aspects of life including sewage disposal. Electricity outages also lead to seawater pollution that results in contamination of marine life. According to the Environment Quality Authority in Gaza, by July 2019 around 44% of Gaza's beaches were contaminated compared to 74% recorded in April 2018 (OCHA, 2019)

In the GS, there has been limited operational support for water and wastewater services, due to the electricity deficit, the lack of spare parts, limited infrastructural operation and maintenance, regular interruptions of access to water and sanitation, recent damage to water infrastructure, import restrictions on materials, and decreased funding. A deterioration of WASH infrastructure in schools, as well as public health centers, may pose a significant risk for the emergence of high-threat pathogen infectious diseases such as acute watery diarrhea (AWD) and contribute to the increased prevalence of malnutrition (OCHA, 2019).

Shublaq revealed that the establishment of a wastewater treatment plant in the north receives about 36 thousand cubic meters of wastewater from the northern governorate, processes, and pumps it. A wastewater treatment plant was established in the Bureij area to serve the Gaza governorate and the central governorate, as well as a third plant established according to a strategic plan in the Khan Yunis governorate to serve the city of Khan Yunis and the eastern villages of the Khan Yunis governorate. Currently, a project will begin to treat wastewater and store

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OCHA (2019). Humanitarian Needs Overview- oPt





water to be distributed to Gaza and Jabalia residents and to be used in agriculture.

## ii. Solid Waste Disposal

In the GS, solid waste is usually disposed of in an unsanitary way since there are neither incinerators nor recycling projects. Solid waste is usually dumped or burnt, which leads to contamination of underground water and air pollution. Moreover, there is no control over the use of pesticides, which contaminate the agricultural soil as well as the crops and vegetables (OCHA, 2019). In 2019, an estimated 443 tons of solid waste per day in the GS were disposed of in dumpsites, some of which are located adjacent to agricultural land. This waste contaminates the soils in these areas (UNEP, 2020). Unsanitary disposal of solid waste act as breeding places for rodents and insects that transmit infections to people in the GS.

A study was conducted in the GS to assess the safety among waste pickers revealed that 53.8% were troubled by back pains, 54.8% having trouble breathing, 57.9% having skin diseases, 52.8% complained of sore throat and cough, with high temperature. However, only 30% complained of intestinal infections like diarrhea, constipation, and blood with stool (Al-Khatib *et al.*, 2020).

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OCHA (2019). Humanitarian Needs Overview- oPt

UNEP (2020). State of Environment and Outlook Report for the occupied Palestinian territory 2020

Al-Khatib I., Al-Sari' M., and Kontogianni S. (2020). Assessment of Occupational Health and Safety among Scavengers in Gaza Strip, Palestine Journal of Environmental and Public Health Volume 2020, Article ID 3780431



### iii. Air Pollution

Palestinian Environmental Law 1999 (Article 1) defines air pollution as any change in the characteristics or components of the natural air, which may cause harm to the environment. Air pollution is characterized by the presence of particulate matter in the air atmosphere. In the GS, air pollution originates from the use of electric generators, human activities, fuel combustion from old motor vehicles, and waste incineration (UNEP, 2020). The pollutants with the strongest evidence of health effects are particulate matter (PM), ozone (O<sub>3</sub>), nitrogen dioxide (NO<sub>2</sub>), and sulfur dioxide (SO<sub>2</sub>) (UNEP, 2020).

A study aimed at monitoring the air pollutants (PM<sub>2.5</sub>, CO, CO<sub>2</sub>), noise level, and health effects of air pollution on residents around the power plant in Gaza showed that the concentration of particulate matter and carbon dioxide exceeded WHO standard, while the concentration of carbon monoxide was less than WHO standards. The same study revealed 40% of the population visited the hospital because of a disease that infects the respiratory tract. Other people suffered from a burning sensation in the eyes, shortness of breathing and rapid breathing, and bronchial infection (Matar, 2014).

Al Majdalawi said, at schools, the classrooms are overcrowded with a large number of students with closed windows and no warming facilities. This increases the spread of droplet infections including the spread of COVID-19.

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Matar M. (2014). Monitoring of Air Pollutants Emitted from Gaza Electricity Generation Plant.



#### 4) Political Situation

“Every disease has two causes. The first is pathophysiological; the second, political.”

—Ramon Cajal, 1899

Political instability is one of the key determinants of health in the GS. It has detrimental effects on human health, human rights, and justice. Political instability in GS results from the Israeli occupation, chronic conflict, a tight blockade on the Strip since 2007, and the deep intra Palestinian division, altogether have led to physical, social, and psychological consequences on the population’s health.

**Israeli occupation:** Palestine is under Israeli occupation since 1948. The occupying body- Israel is obliged to provide food and medical care and respect the human rights of the occupied population. However, the long-standing Israeli occupation of the Palestinian territory has undermined the economic, social, environmental, and health conditions and deteriorated the residents living conditions. The GS is facing an alarming economic deterioration that has led to the unprecedented rise in the unemployment rate to reach up to 45% in 2019 (PCBS, 2019), which is considered one of the highest rates in the world. Such a high rate of lefts Gazans lives in tight poverty which in turn deprives them of accessing secure housing, safe and healthy food, drinkable water, high-quality education, and quality healthcare services. Consequently, the vast majority in Gaza depends mainly on international food assistance and humanitarian aids and this is posing a considerable threat to the society, as it gave a rise



to the “aid culture”, which is the unhealthy dependence of individuals on humanitarian assistance to satisfy their daily needs. It is a dangerous phenomenon as it may hinder the development of healthy self-reliance and self-determination.

**Exposure to Israeli military aggressions and repeated escalation and violence:** Since 2008, The GS underwent three devastating military aggressions, resulting in thousands of injuries, deaths, and disabilities, as well as a large number of displaced people, and the destruction of health care facilities and infrastructure. In 2008/2009, the military aggressions on Gaza killed 1,419 Palestinians 83% of the dead were civilians, injured 5,300, and public and private property throughout the GS were extensively targeted and destroyed (PCHR, 2010). In 2012, the military aggressions on Gaza Killed 182 during the eight days of hostilities and injured 1399 (WHO, 2012). In 2014, the war on GS killed 2,130 Palestinians, including 577 children, 102 elderly; injured 11,066 persons injured, including 3,374 children, 410 elderly); 51% of all major hospitals and clinics damaged; and 27% of the hospitals closed due to damage or insecurity (WHO, 2014). The Israeli military aggressions on the GS in 2014 and other frequent incursions and aggressions left dozens of thousands of people homeless and in need of immediate assistance; basically, they needed housing, food and water, and health care services. These aggressions left an excessive burden on hospitals in Gaza.

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PCHR (2010). Two years after Operation Cast Lead: Gaza Remains Sealed-Off from outside World, Impunity for War Crimes Prevails

WHO (2012). Initial assessment health report

WHO (2014). Situation Report



Those internally displaced people (IDP) suffered from many physical and mental health problems. The repeated escalations and violence practiced against Gazans had left a huge number of casualties to suffer from physical injuries and psychological stresses and traumas. The health effects of displacement on the health of IDP result from the destruction of their houses and livelihoods and the loss of one of the family members or neighbors. They are exposed to severe stress due to bereavement and loss of what they gain in their lives. This stress increases the prevalence of hypertension, diabetes, depression, and reduces the immunity that left them vulnerable to infectious diseases as COVID-19.

**Air, land, and sea blockade:** Since 2007, when Hamas took over Gaza, Palestinians in the GS remain in the blockade, as they are unable to move freely inside or outside Palestine. The restrictions imposed by the Israeli blockade and the intra Palestinian divide and conflict further complicate the situation. Under the imposed blockade, the daily hardships Palestinians face are having an increasingly adverse effect on physical and mental health, particularly for the most vulnerable. As the blockade has undermined the living conditions and its economic and social fabric. Restriction of movement negatively affects all aspects of Palestinians lives in Gaza. To enter into Gaza or to leave it has become a hope for all Gazans. The imposed longstanding tight blockade turned the GS into the biggest jail in history. Such blockade poses a considerable burden on the health system as it limits the supply of medical equipment and essential medicines, and causes electricity blackouts, which in turn deteriorate the functionality of the health sector, hinder the provision of the services, and disturb the treatment process and medical care. Blockade also



stops international medical delegations from entering the GS to conduct complicated surgeries for victims of the Israeli attacks in collaboration with national health professionals. More importantly, it has denied the national healthcare providers from accessing capacity-building programs outside Gaza.

The blockade also has a negative effect on patients transferred to be treated abroad. To travel for medical treatment across Beit Hanon (Erez) checkpoint that separates Gaza from West Bank, patients need security clearance; it is a complicated process to gain a travel permit via Israeli land to West Bank, mainly because severely ill patients need a family relative companion. Israel does not grant young people or politically active people a permit to travel with the patient. There were 2,198 patient applications submitted to Israeli authorities to cross Erez for healthcare in December 2019. Approved permit applications: 64% of the total. Denied care: 11% of the total. Delayed care: 25% of the total (WHO, December 2019).

On the other side, the blockade has indirectly harmed people's health by narrowing job opportunities outside Gaza. This restriction kills chances for young people, and deepens poverty in the society; it positively reflects upon health. It is also that GS closure has made exports virtually disappear. The negative impact of the blockade is still devastating in all aspects of life including health.

**Great March of Return (GMR):** the rise of the GMR demonstrations began when Gazans started protesting near Israel's Gaza fence demanding to

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WHO (December 2019). Health Access Barriers for patients in the occupied Palestinian



return to their lands from which they were expelled in 1948 and to lift the strict blockade imposed on Gaza and against the United States (US) recognition of Jerusalem as the capital of Israel. The huge influx of injured and the complicated injuries have put extra strain on the health facilities and healthcare providers. Since the beginning of the demonstrations, around 214 people have been killed, including 46 children, and 36100 injured, including 8800 children, and 156 underwent limb amputation due to live ammunition. Furthermore, around 1200 with limb injuries need specialized limb reconstruction treatment coupled with long-term rehabilitation (OCHA, 2020). PMRS reported that the GMR has resulted in 146-mobility disability and 22 visual or hearing impairment (PMRS, 2019).

Another toll of the GMR is its harmful effect on Gazans' mental health, where around 22500 children need psychological support. Additionally, Intimate partner violence (IPV) has increased since the beginning of the GMR, as around 38 percent of women in Gaza have experienced any kind of psychological, physical, sexual, social, or economic violence by their husbands (OCHA, 2020).

The overloaded health sector in Gaza is lacking the resources and capacities to cope with the GMR injuries, accordingly, people with complex injuries were in need to be referred to more specialized care in West Bank, East Jerusalem, and Israel. Yet, injured protesters must undergo a long and complicated process to obtain exit permits from the Israeli Authorities. Since the beginning of the protests, around 604 applications for injured

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ملخص تقرير حول أعداد الأشخاص ذوي الإعاقة في قطاع غزة. PMRS (2020).

OCHA (2020). Two Years On: People Injured and Traumatized during the “GMR” are Still Struggling



people were submitted, yet only 17% were approval, 28% were rejected, and 55% did not get a response at the time of their medical appointment (OCHA, 2020).

**The internal Palestinian conflict** has also complicated the situation. Since 2007, when Hamas took over Gaza, the Palestinian community no longer has a unified Palestinian authority across Gaza and West Bank. Since then, Gaza has faced a deteriorated economic, social, and political situation. The internal division impedes Gazans living conditions and deteriorates the institutions' capacities to deliver basic services such as safe housing, quality health care services, education, water and sanitation, and electricity supply. Furthermore, employees in Gaza authority are partially paid since 2007, which in turn affects negatively their living conditions. Additionally, unpaid employees have job dissatisfaction that negatively affects the quality of provided services (OCHA, 2015).

## 5) Health System

By definition, *“All the activities whose primary purpose is to promote, restore and/or maintain health. The people, institutions, and resources arranged together by established policies, to improve the health of the population they serve, while responding to people’s legitimate expectations and protecting them against the cost of ill-health through a variety of activities whose primary intent is to improve health”* (WHO, 2020). It

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OCHA (2015) Internal Palestinian divide continues to impact the delivery of basic services in the Gaza Strip  
WHO (2020). Health Systems Strengthening Glossary. OCHA (2020). Two Years On: People Injured and Traumatized during the “GMR” are Still Struggling [https://www.who.int/healthsystems/hss\\_glossary/en/index5.html](https://www.who.int/healthsystems/hss_glossary/en/index5.html)





involves physicians, primary health care centers, hospitals, public health services, community health, medical resources, and the environment.

Worldwide, each health system has its characteristic, way of functionality, shape, and form, and those characteristics differ from country to another based on the geographic location, the resources and policies, and social, economic, political, and environmental status of the country (AMAN, 2018). The ideal health system is when people are comprehensively covered and have equitable, affordable, and equal access to high quality and sustainable health services at the time they need it and at the cost they can afford without facing financial problems. Accessibility to high-quality health care services is a very important SDOH and a basic human right.

In the GS, the health system consists of four actors. The main health care provider is the MoH that provides primary services through its 52 primary healthcare centers (PHC), gives secondary and some tertiary care through its 13 hospitals, and purchases some tertiary services from private providers domestically and abroad, in addition to five military health facilities, which are also run by the government and offer health care to military, police personal, and their families. In addition to service provision, the MoH is the responsible body for the health regulations and administration. the second is the UNRWA, which provides a wide range of primary, preventive, curative, and community health services to around 1.2 million refugees through its 22 PHC in Gaza (MoH, 2019).

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AMAN (2018). Towards a Comprehensive Health Insurance Scheme. Ramallah, Palestine

MoH (2019). Annual Health Report



There are also 80 non-governmental healthcare centers, which offer a wide range of preventive, curative, and rehabilitative services. They are widely engaged in health education, outreach programs, and mobile clinics. Out of the 80 centers, 18 provide primary services, while the rest provide advanced and more specialized services. Furthermore, hundreds of private clinics and centers provide different kind of services, which depend on the out-of-pocket payment method (MoH, 2019). In the GS, there are 30 hospitals; bed capacity is approximately 1.7 beds per 1000 population. Non-State actors account for 22% of bed capacity in the GS, and the Military Medical Services provide for 6% of bed capacity in the GS (World Health Assembly, 2019).

The longstanding Israeli occupation and its ongoing conflict and violence, and imposed blockade on the GS since 2007, and the intra Palestinian division has undermined Gaza's health system capacities and pushed it to the brink of collapse. As a result, the health sector in Gaza is unable to meet the population's health needs, which in turn puts their health at high risk. The health facilities are poorly equipped and lacking basic medical supplies. Also, the frequent power cuts hinder the continuity and the quality of health care services. The Health Cluster released that 226 items (44%) out of the essential drugs list and 252 items (30%) of the essential medical disposables, were reported at zero stock at the MoH Central Drugs Store (CDS) (Health Cluster, 2020). Adding to that, cancer drugs constitute an additional burden on the MoH, where in 2019, the

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World Health Assembly (2019). Health conditions in the occupied Palestinian territory, including east Jerusalem, and in the occupied Syrian Golan: report by the Director-General. World Health Organization. <https://apps.who.int/iris/handle/10665/328758>

Health Cluster (2020). Health Cluster Bulletin



MoH reported that only 25 types out of 65 cancer drugs are in stock, which in turn disturbs the treatment journey of 8000 cancer patients in the strip. kidney dialysis patients, ophthalmology departments, and mental health patients further complicate the situation (PCHR, 2019).

Currently, MoH faces a big challenge in responding to the COVID-19 pandemic in the GS due to the high prevalence of risk factors. Also, a fragile public health system with a limited-moderate response capacity particularly limited in the GS where chronic shortages of medicines, disposable, equipment, and trained personnel will have a knock-on impact on the capacity of the health system to adequately respond.

Another alarming concern is that health professionals lack access to special education programs, workshops, and professional training outside Gaza, which negatively affects their medical skills and knowledge and leaves them unable to follow and track the medical innovation. This reduces the quality of health services provided to Gaza residents. What intensifies the situation, is that the demand for health services is on increasing trend both because of the population density, rapid growth, and the continued escalation and conflict that left many Palestinians in need of long and complicated treatment and follow up.

Interview with the director of PMRS- Gaza clarified that the challenges face the health system in Gaza include:

1. The Israeli occupation, the land, air, sea blockade imposed on Gaza,

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PCHR (2019) PCHR Warns of Medicine Shortage in Gaza Strip Hospitals



the persistent Israeli military aggressions and violence constitute a major threat to health system.

2. Attacks against health facilities and medical staff threatens the quality and continuity of health services. He continued to say there is a report issued by international institutions reporting that the occupied Palestinian territories in 2018 were the second most dangerous place in the world for medical personnel after Syria. But, in 2019, the Palestinian Territories became the first in terms of danger to medical personnel.
3. Patients are unable to get access to health services outside Gaza by delaying or rejecting to give permissions through the Erez checkpoint.
4. The intra Palestinian party's division continues to be a key problem, as there are two ministries of health; one in Gaza and the other in Ramallah. This duplication hurts the health system.
5. A great disparity can be found in salaries between employees in Gaza and Ramallah. The salaries of employees in Gaza are less than in Ramallah. During the last 15 years, MoH- Ramallah employed no one in the medical field in Gaza.
6. Due to the continuous emergency situation in Gaza, the donors fund is directed only to humanitarian and emergency projects on the expense of the developmental projects. In addition to that, in addition to the political restrictions and conditional fund imposed by some donors as EU.
7. Poor collaboration and coordination between civil societies organizations and the leading government in Gaza.

PMRS- director said: PMRS conducted many workshops about issues



related to SDOH as the impact of the Israeli blockade on Gazans, aggressions against medical staff, and the economic situation. PMRS usually targets the decision-makers and community leaders. Currently, PMRS- Gaza in cooperation with the PCHR is running the Right to Health Project. This project is targeting about 600 decision-makers and healthcare service providers; it has been conducted for three years. It is anticipated to hold two conferences about the right of health in the GS. The effect of the Israeli blockade on the health system in the GS is detrimental as the shortage of drugs and medical supplies reached 46% of the essential drug list in November 2020. In addition, long hours of electricity blackouts affect the health services especially for patients in the intensive care units, emergency department, and patients on ventilators. The Israeli blockade also stops patients from getting access to healthcare outside the GS, and the medical staff to attend the medical international conferences.

COVID- 19 pandemic has affected health systems all over the World and the GS is not an exception. COVID- 19 in the GS overwhelmed the already strained health system. PMRS and other organizations are implementing projects including training of medical teams on updated protocols by MoH, emergency preparedness, and having Personal Protective Equipment (PPE), also raising community awareness about prevention of COVID- 19 spread. Mobile Medical Teams conducted home visits for isolated patients and contacts in quarantine. Moreover, delivering health awareness for the families and providing hygiene kits. To reduce the load on the MOH hospitals, NGOs hospitals conducted surgical operations for people in need. PMRS- Gaza is an active member of the WHO health



cluster that coordinates the service provision among the health players in the GS.

The director of the Coordination Unit in MoH in the GS stated that the challenges facing MoH in Gaza include a shortage in human resources, no allocated budget for recruitment of health staff, and the effect of political division on the human resources. Health service providers are not paid by the Ramallah government. The blockade is preventing medical personnel from leaving Gaza to have advanced trainings abroad and/or allowing foreign delegations to train medical staff in Gaza. Patients find severe difficulties to leave for treatment abroad. We have difficulties in the computerized system because of the lack of well-trained staff and computers and network. He continued to say, MoH provided healthcare for all people in the GS without discrimination based on equity through free health insurance provided for all poor people, vulnerable people, laborers, widows, martyrs' families, and PWDs. The primary and secondary healthcare reaches all geographical areas of the GS. We provide free healthcare service for children younger than three years of age, for pregnant women, and vaccinations for all.

Director of the coordination unit- MoH in Gaza has developed a comprehensive plan to limit the spread of COVID- 19, this plan includes:

- » Screening of people coming to Gaza by taking a swab for PCR and keep people in quarantine for two to three weeks.
- » Admit COVID- 19 patients at Gaza European Hospital, Turkish Friendship Hospital, and equipped departments at other hospitals in case of



increasing COVID- 19 patients.

- » Rehabilitation of quarantine centers at schools, hotels, and hospitals
- » Training of medical teams providing services for people in quarantine and training of safety measures for contacts and themselves. Training of lab technicians on sampling and PCR examination
- » Cooperate with MoH partners to provide home visits for isolated patients and deliver treatment for households in need through mobile medical teams
- » Coordination between MoH, Mol, and MoSD

## **6) Health Policies, Laws, and Regulations**

Health Policies, laws, and regulations adopted by the government affect individual and population health. The Palestinian MoH is the main health service provider in the GS. MoH is responsible for governing and regulating the health sector to ensure appropriate and effective use of resources for a sustainable health service delivery. MoH coordinates partnerships with other services providers as UNRWA and NGOs partners and forming and stipulating health policies and regulations that are important to keep the population healthy and safe. In Palestine, there is Anti-Smoking Law No. (25) of 2005 that aims to combat tobacco smoking in public places, and prohibit sale, distribution, display or advertisement of tobacco to persons under the age of (18) years (Institute of Law, 2005). However, a force is needed to implement the anti-smoking law. For Palestinians, politics is a key determinant of health. Through inter-ministerial activities, the ministry must address this determinant and another health determinant such as inequity and insecurity, and other social factors including road



traffic accidents and tobacco use. MoH must activate laws against careless driving and tobacco smoking in public places. There are many laws in Palestine related to public health such as Public Health Law No 20 of 2004, Environment Law of 1999, Water Law of 2014, and regulation no (1) about Health Hazards. Also, there is an article (22, 25) and Palestine obligations under the International Covenant on Economic, Social, and Cultural Rights about the right to health.

The director of the PMRS- Gaza stated that the occupation affects all health determinants in the GS. Civil Society Organizations (CSOs) in general play many roles and are not only a provider of health services but also expose the occupation's violations against the Palestinian people to the international community. NGOs also provide to the most vulnerable and poorer people in marginalized areas much free health and social services. Health insurance in the Palestinian territories covers employees, injured people, prisoners, martyrs' families, workless laborers, PWDs, poor people. However, there is a co-payment that poor people cannot afford.

The director of the Coordination Unit in MoH stated that there is:

- » Obligatory health insurance for employees of the government, and municipalities
- » Optional health insurance for syndicates,
- » Free health insurance for vulnerable as laborers, people registered at MoSD, PWDs. If the health service is unavailable in the GS, the patients are

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The Institute of Law (2005). Anti-Smoking Law No. (25). Birzeit University  
<http://muqtafi.birzeit.edu/pg/getleg.asp?id=15396>





referred to other health organizations whether in the GS or outside. Patients' referrals depend on decisions taken by technical health committees.

The same source reported that MoH in Gaza coordinates with the Ministry of Economy regarding food control, communicates with municipalities to solve the drinking water problem, and other public health issues such as food, water, and environmental safety. Also, joint committees to combat addiction, where many issues are cooperated between specialists to work on solving them. The MoH is cooperating with the WHO through the National Institute of Public Health, which focuses on the determinants of health, to conduct workshops and studies to develop solutions to social, economic, environmental, and psychological problems.

## **7) Social and Cultural Factors**

A social network, support, and Interactions, and cultural norms and values are important determinants of health

### **i. Social network, support, and Interactions**

Social support from relatives and friends is usually associated with a solid relationship and strong psychological health. Such social support could be of great significance in helping people solve some problems and if they are facing a personal crisis and need immediate assistance. Social support makes people control over their hard life circumstances. Social support might involve helping a person when they are ill or offering financial assistance when they are in need or it could involve advising



a friend when they are facing a difficult situation (Cherry, 2020). Poor social support leads to loneliness and increases the risk of depression, suicide, cardiovascular disease, and altered brain function. In one study of middle-aged men over seven years, those with strong social and emotional support were less likely to die than those who lacked such relationships (Cherry, 2020).

In the GS, families in Gaza usually provide social support to their members in need. Friends also provide social support and solutions for their friends in crisis. Social network as Zakat committee provides aids to poor people, orphans, and widowed women. Many NGOs and international NGOs in Gaza provide psychosocial activities for traumatized children, women, and disabled people; provide financial support for the poor, orphans, and widows; provide rehabilitation for the partially or totally demolished.

## ii. Cultural norms and values

Culture has a significant impact on our health and wellbeing. In this view, non-medical determinants are taken into account when analyzing the health of individuals and populations.

- Other factors in the lives and environments of individuals may have an influence on their health than access to, or the provision of, medical services. These include determinants such as socioeconomic status, education level, geography, social inclusion and integration, and cultural identity

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Cherry K. (2020). How Social Support Contributes to Psychological Health. <https://www.verywellmind.com/social-support-for-psychological-health-4119970>



Culture is so vital and relevant to any attempt to improve health and reduce health inequalities. Overall, culture is important for addressing inequalities and inequities in health as well as for facilitating culture-sensitive health communication strategies that will ultimately close the gap in the SDOH. Balance and respect are not something inherent within each person but are inherent within the systems of which individuals are a part of, including communities, families, and jobs. All of these systems need balance and respect to function properly and to provide individuals with the means to achieve good health.

Cultural differences create problems in the patient-doctor relationship, physical examination and treatment compliance, and follow up. The perception of physical pain and psychologic distress varies from culture to culture and affects the attitudes and effectiveness of caregivers as much as of patients. Religious beliefs and attitudes about death, which have many cultural variations, are especially relevant to hospital-based treatment. One of the barriers to breast health-seeking behavior is a male health service provider; women presented with breast cancer in the advanced stage when the disease is incurable.

Cancer treatment seeking behavior is influenced by cultural values, social stigma, and fear of cancer complication and death. Healthcare providers need to understand the disparities and the influence of those disparities on health outcomes. The importance of culture on the health behavior of the individual, and will focus on how cultural values of Palestinian patients with cancer and their families affect attitudes toward and decisions about cancer care.



## 8) Individual Behaviors

The top three factors affecting individual behavior are personal, environmental, and organizational factors. Personal behavior includes inherent and learned characteristics. Personal health behaviors refer to those practices by which individuals can prevent diseases and promote self-care, cope with stress, develop self-reliance, solve problems, and make choices that enhance health. There is a growing recognition that personal life “choices” are greatly influenced by the people’s socio-economic environments where they live, learn, work, and play. Many public health and health care interventions focus on changing individual behaviors such as substance abuse, diet, and physical activity. Positive changes in individual behavior can reduce the rates of chronic disease. Positive healthy behaviors can not only extend longevity but also reduce the risk of losing mobility and independence in later life. Promoting the health of individuals and communities is part of the role of the MoH.

**Smoking:** It is already known that smoking, which is an individual behavior, is associated with many human morbidities such as coronary artery diseases and lung cancer. A significant proportion of people in the Gaza Strip is smokers. The prevalence of smoking among NCDs patients is 9% (UNRWA, 2019). In Palestine, tobacco use among youth is extremely high; even among younger youth (aged 15-19), 45% of males and 22% of females currently smoke. Older youth (20-24) levels stand at 72% and 31% respectively (UNFPA & Norwegian Ministry of Foreign Affairs, 2017).

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UNRWA (2019). Annual Health Report. Health Department

UNFPA & Norwegian Ministry of Foreign Affairs (2017). Youth in Palestine: Policy and Program Recommendations to address demographic risks and opportunities.



A study in Gaza targeted 600 adults aged 15 years or older clarified that the prevalence rate of smoking was 26.3%, with a significantly higher rate among males (31%) than females (6.9%) ( $P < 0.001$ ). The mean starting age was  $17.4 \pm 3.9$  years. The influence of friends is the major reason for the initiation of smoking and the most influential factor in convincing smokers to quit was the family (Aldalo, 2016). MoH conducts anti-smoking programs in addition to health education. Still, laws should be stated to ban smoking in public areas, restaurants, schools, universities, and public transportation and not to sell tobacco for people younger than 18 years of age.

**Drug and Substance Abuse:** There is very limited accurate information on substance use in Palestine, due to the social stigma that surrounds it. Even so, there is a clear need to gain accurate information in this arena, considering that substance abuse is known to be on the rise. In the GS, a study found that poverty and unemployment are the root causes of drug use. The reasons for first drug use included being curious, pressure from peers, to withstand hard work or sexual harassment at home, and being deceived into drug use by being told it would provide more energy. Others reported that they first used drugs as a result of feeling stressed about exams or empty, and because of broken relationships, family neglect, poor living conditions, headaches, and unemployment (PNIPH, 2017)

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Eldalo H. (2016). Prevalence and perception of smoking habits among the Palestinian population in the Gaza Strip.

UNFPA & Norwegian Ministry of Foreign Affairs (2017). Youth in Palestine: Policy and Program Recommendations to address demographic risks and opportunities.

PNIPH (2017). Illicit Drug Use in Palestine: A Qualitative Investigation



Very few youth reports having tried any illegal drugs; only 10% of 20-24-year-old males have tried any compared to only 4% of females in this age group. Less than a third of those youth who say they have ever tried drugs say they currently take drugs. Young people in Gaza are demonstrating high addiction to Tramadol, an opioid painkiller, and has been said to affect between 50% and 80% of the adult population. It is used as a way of dealing with the stress, nervous disorders, and psychological problems caused by 13 years of siege and economic blockade. It is a highly dangerous drug, which has devastating effects on the body and can lead to heart disease and liver failure (UNFPA & Norwegian Ministry of Foreign Affairs, 2017).

**Diet behavior:** A cross sectional study concluded that Less than half of interviewed adolescents (45%) were eating unhealthy foods with a greater proportion of females (46.8%) than males (44.4%) (Sarsour et al., 2019). Obesity is rising in Gaza. The majority of diabetic or hypertensive patients are obese. People eat an empty high calories diet (diet deficient in micronutrient as refined bread, potatoes). The micronutrient-rich diet is unaffordable for poor people in Gaza.

**Physical activity** as walking for thirty minutes per day means more than building up muscles and preventing heart disease; its benefits extend to all parts of the body, strong muscles, healthy heart, enhance brain function,

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UNFPA & Norwegian Ministry of Foreign Affairs (2017). Youth in Palestine: Policy and Program Recommendations to address demographic risks and opportunities.

Sarsour A., Turban M., Al Wahaidi A., Abed A., and Alkahlout H. (2019). Do gender influence food intake and physical activity patterns among Palestinian adolescents in the Gaza Strip?. *EMHJ – Vol. 25 No. 10 – 2019*



improve mood, reduce weight, and improve fitness. Physical activity reduces the number of chronic diseases as hypertension, diabetes, heart disease, and osteoarthritis. A cross sectional study concluded that only 29.9% of adolescents were classified as active; only 6.4% of girls were physically active (Sarsour *et al.*, 2019).

**Stress coping:** People who could not cope with stressful life events are more prone to hypertension, diabetes mellitus, and heart diseases. It is also that people's exposition to continuous longstanding stress will reduce their immune mechanism with susceptibility to infection and neoplasm. Children living in the Gaza Strip have experienced unusually high rates of psychosocial distress because of the violent response to the Gaza protests and daily attacks they witness. A study conducted found that 68 percent of schoolchildren in areas close to the Israeli perimeter fence have clear indications of psychosocial distress (NRC, 2019).

Traumatic experiences and political violence hurt the Palestinian well-being and increased the rate of psychosocial and mental health problems like post-traumatic stress disorder, anxiety, depression, Attention Deficit Hyperkinetic Disorders (ADHD), conduct, and substance abuse (Abdelaziz & Sanaa, 2018).

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Sarsour A., Turban M., Al Wahaidi A., Abed A., and Alkahlout H. (2019). Do gender influence food intake and physical activity patterns among Palestinian adolescents in the Gaza Strip?. *EMHJ – Vol. 25 No. 10 – 2019*

NRC (2019). Gaza children's mental health rapidly deteriorating. <https://www.nrc.no/news/2019/march/gaza-childrens-mental-health-rapidly-deteriorating/>

Abdelaziz M T, Sanaa S T. (2018) Stress, Trauma, Mental Health and Ways of Intervention of Palestinians in the Gaza Strip. *Degenerative Intellect Dev Disabil.* 1(3). DIDD.000514



## 9) Biological and Genetic Factors

The basic biology and organic make-up of the human body are a fundamental determinant of health. Genetic make-up provides an inherited predisposition to a wide range of individual responses that affect health status. Although social and environmental factors are significant determinants of overall health, genetic factors appear to predispose certain individuals to particular diseases or health problems. Diseases usually occur because of the interaction between genetic predisposition and environmental factors. Some biological and genetic factors harm specific populations more than others. For example, older adults are biologically vulnerable to being in poorer health than adolescents. This is due to the physical and cognitive effects of aging. Examples of biological and genetic social determinants of health include age, gender, and inherited conditions.

### i. Age Structure

The population in the Gaza Strip amounts to approximately two million. They reside in a strip of land area totaled 365 km<sup>2</sup>. The human age structure affects the capacity of health systems and the scale of inequality in health.

In the GS, the individuals aged 0\_14 years old constitute 42.53%, those aged between 15-24 constitute 21.67%, those aged 25- 54 constitute 29.47%, those aged between 55\_64 constitute 3.66, and those aged 65 years and older represent 2.68% (index mundi, 2020). The population density in the Gaza Strip is 4,986 people/km<sup>2</sup> (PCBS, 2018). This means

Index mundi (2020), Gaza Strip Age structure

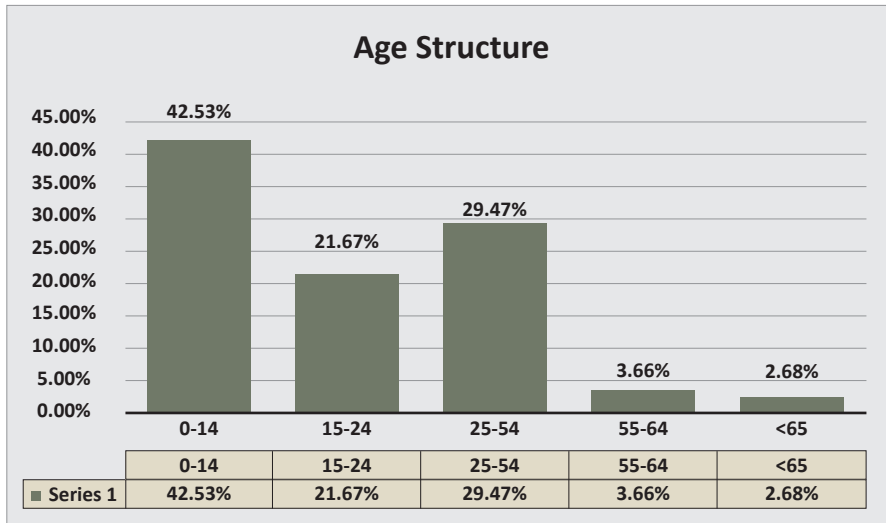
PCBS (2018). Preliminary Results of the Population, Housing and Establishments Census 2017





that a significant proportion of people in Gaza are children and youth, they are the future of the nation when opportunities are available and siege is released.

Figure 3: Age structure in GS



## ii. Gender

The SDOH reflects different effects on women and men. Women seem to have a biological advantage over men in terms of life expectancy. Life expectancy increased for both males and females from 67 years in 1992 to 72.9 years for males and 75.2 years for females in mid of 2019. The percentage of the elderly widowed males reached 5% against 37% for the elderly widowed females in 2017 (PCBS, October 2019). The increase of

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PCBS (October 2019). On the Occasion of the International Day of Older Persons



the life expectancy rate at birth increased the elderly number in Palestine, which requires studying and researching the elderly situation in Palestine and adapting strategies for the management of chronic diseases. Men are more likely to die prematurely than women, largely because of heart disease, fatal unintentional injuries, cancer, and chronic diseases. While women live longer than men, they are more likely to suffer depression, stress overload (often due to efforts to balance work and family life), chronic conditions such as autoimmune diseases, arthritis, allergies, and injuries and death sometimes resulting from family violence. Gender has a vital role in health conditions, where some diseases are more prevalent among males as ischemic heart disease, lung cancer, colorectal cancer, while other diseases are more prevalent among females as autoimmune diseases and breast cancer. From 2014 to 2018, 8326 cancer cases (3747 among males and 4579 among females) were registered. Colorectal cancer is a common type among males while breast cancer among females (MoH, 2020). SDOH inequities represented an increase of life expectancy in favor of females. This could be attributed to the protective effect of estrogen on the CVS, and the stressful life events on males.

Preliminary findings of a survey carried out by the PCBS in the second quarter of 2019, reveal that 29% of Palestinian women in the oPt have reported psychological, physical, sexual, social, or economic violence by their husbands at least once during the preceding 12 months.

Psychological violence is the most common type of abuse detected; affecting 57% of the women who reported some form of violence in



the preceding year. There is further evidence suggesting that domestic violence against women in Gaza has been exacerbated since the start of the GMR demonstrations. Less than 1.5% of women who reported violence by their husbands have sought counseling or legal assistance, 61% of victims reported that they have never told anyone about the abuse. This is a culture of silence (OCHA, December 2019).

To achieve gender equity, women and men should be treated equally, which is different but considered equivalent in terms of rights, needs, opportunities, and benefits. Gender-based violence (GBV) is widespread in Gaza, both within the public and private Spheres.

Preliminary findings of a survey carried out by the PCBS in the second quarter of 2019 reveal that 64%, 55%, 47%, 26%, 11% of Palestinian women in GS have reported psychological, economic, social, physical, and sexual violence by their husbands respectively (OCHA, 2019).

Violence takes various forms including forced marriage, denying emotional needs, forcing children to study and enroll in the careers preferred by parents. Many victims of GBV are reluctant to seek supportive services, or even to seek family support, fearing that doing so might harm their chances of marrying or might expose them to risks associated with the perceived violation of so-called ‘honor’.

Lack of protective legislation, laws, and policies contribute to an apparent

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OCHA (2019). Almost one in three Palestinian women reported violence by their husbands in 2018-2019 <https://www.ochaopt.org/content/almost-one-three-palestinian-women-reported-violence-their-husbands-2018-2019>



increase in GBV. Gender norms see the home as women's natural domain. Multiple gender and social norms also constrain widows (6%), and divorced (2%) women (PCBS, 2020) from engaging in their communities and constrain their free movement. Divorced and separated women are arguably exposed to the most severe social sanctions; they are often viewed as the cause of their misfortune, with divorce largely considered 'shameful' for women, but not for men (UNFPA, 2016).

### iii. Inherited Conditions

Inherited conditions, such as thalassemia, sickle-cell anemia, hemophilia, cystic fibrosis, inborn errors of metabolism, phenylketonuria, etc., run-in families. Even though these inherited conditions are minor, together they become major to affect families and increase the load on the government health system. Another example, women carry the BRCA1 or

BRCA2 gene, which increases the risk for breast and ovarian cancer that affects dramatically

the community and strains the health system.

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PCBS (2020). The situation of the Palestinian women on the eve of the International Women's Day, 08/03/2020

UNFPA (2016). Palestine 2030 Demographic Change: Opportunities for Development



## **PART 2: HEALTH INEQUITIES IN GS:**

Health equity is the absence of unfair and avoidable differences in health interventions and their outcomes among groups of people. Data that are presented according to social, demographic, economic, or geographical factors can help to identify vulnerable populations, form health policies and develop programs, and practices. Health inequalities are the difference in health outcomes between different population groups based on the socio-economic backgrounds of the groups. Such inequalities are estimated to increase morbidity, hinder the quality of life, and reduce average life expectancy. Although addressing SDOH is playing a key role in overcoming and reducing HI and promoting health and wellbeing, yet it is very challenging in Low-Income Countries (LIC) such as Palestine. This section provides some highlights on the following indicator to reflect on the HI between different groups in the context of Gaza:

### **1. Life Expectancy**

The rate differences between males' and female's life expectancy are attributed to both behavioral and biological factors. On one hand, the behavioral differences are associated with the fact that women are less likely to be involved in unhealthy and risky behaviors such as smoking and alcohol consumption compared to men, which in turn make them less prone to cardiovascular diseases and cancer. On the other hand, the inherent biological advantage for the female partially affects longevity, that is presented in the protective effect of estrogen on the cardiovascular system (CVS) which helps in preventing cardiovascular diseases and



promoting life expectancy (WHO, 2020)

## 2. Total Fertility Rate (TFR)

It is defined as *“the total number of children that would be born to each woman if she were to live to the end of her child-bearing years and give birth to children in alignment with the prevailing age-specific fertility rates”* (OECD, 2019). A very important indicator is widely used to measure population growth.

In Palestine, the fertility rate is high, and this is mainly due to early marriage among girls, and norms and values that encourage women to have a large number of children. However, there is a transition to a lower fatality rate in Palestine, as the rate declined from 5.9 in 1999 to 4.1 in 2013 (PCBS, 2019). In GS, the number of women in their reproductive age (15 to 49 years old) is 488,413, which represents 49.1% of all females in the strip. In 2019, the TFR was 3.3 live birth per woman compared to five live birth per woman in 2012 (MoH, 2020).

## 3. Mortality Rates

Mortality indicators are tools that are widely used to measure the population health, access to health care, the functionality of the health system, and health inequalities. Thus, it is a useful guide to detect any health problem and gaps and accordingly take corrective actions and

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WHO (2020). Global Health Observatory, Female life expectancy  
OECD (2019). Total Fertility Rate. <https://data.oecd.org/pop/fertility-rates.htm>



conduct advocacy programs. Mortality indicators include Crude Death rate (CDR), infant mortality rate (IMR), and maternal mortality ratio (MMR). Such indicators are very important tools to measure accessibility, affordability, and acceptability to healthcare services. As high mortality rates are considered an alarming indication of insufficient resources, fragile health system, lack of essential medicines and supplies, and poor socioeconomic status.

**Crude death rate (CMR):** *“it is the mortality rate from all causes of death for a population”* (CDC, 2012). In GS, MoH’s latest report released that the number of deaths from all causes was 5,319 in 2019, 2477 of which were females, while 2842 were males. The males’ death rate is 1.15 times higher than females. Gaza governorate accounts for the highest death rate among all the GS five governorates, which stands at 2.9/1000 population, while the north of Gaza has the lowest rate which is 2.3/1000 population. (MoH, 2020).

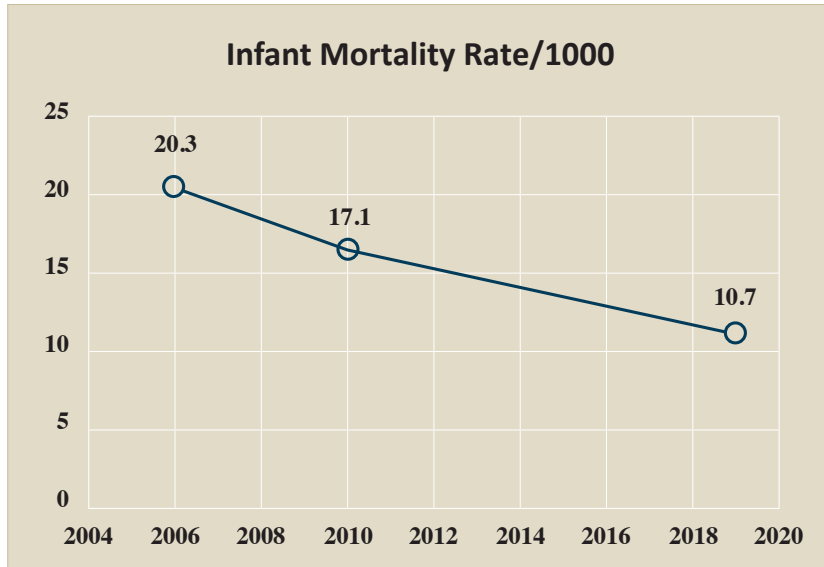
**Infant mortality rate (IMR):** *“it is the probability of a child born in a specific year or period dying before reaching the age of one, if subject to age-specific mortality rates of that period”* (Source: WHO). MoH in 2020 has reported that the IMR in 2019 was 10.7/1000 livebirths compared to 17.1/1000 live births in 2010 and 20.3/1000 livebirths in 2006 (MoH, 2020).

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الجهاز المركزي للإحصاء الفلسطيني، 2019. الفلسطينيون في نهاية عام 2019. رام الله - فلسطين. PCBS (2019).  
MoH (2020). Annual Report. Health Department. PHIC  
CDC (2012). Principles of Epidemiology in Public Health Practice  
(WHO, World Health Data Platform, GHO)[https://www.who.int/data/gho/indicator-metadata-registry/imr-details/1](https://www.who.int/data/gho/indicator-metadata-registry/indicator-metadata-registry/imr-details/1)



Figure 4: IMR in GS.



**Maternal Mortality Rate (MMR):** *“It is defined as the death of a woman during pregnancy or within 42 days after childbirth, spontaneous abortion or termination of pregnancy”* (Source: WHO). The very critical indicator used to measure the quality of maternal services. In the GS, in 2019, the MMR was 30.8 per 100,000 live births compared to 19.1 in 2018, and 10.2 in 2017 (MoH, 2020). OCHA’s latest report stated that a mother’s health is at stake and the increase in maternal mortality is alarming. As it is an indication of weak and fragile maternal services, lack of essential medicines and supplies, lack of maternal education, and lack of access to family planning services. The political instability and the rise of the

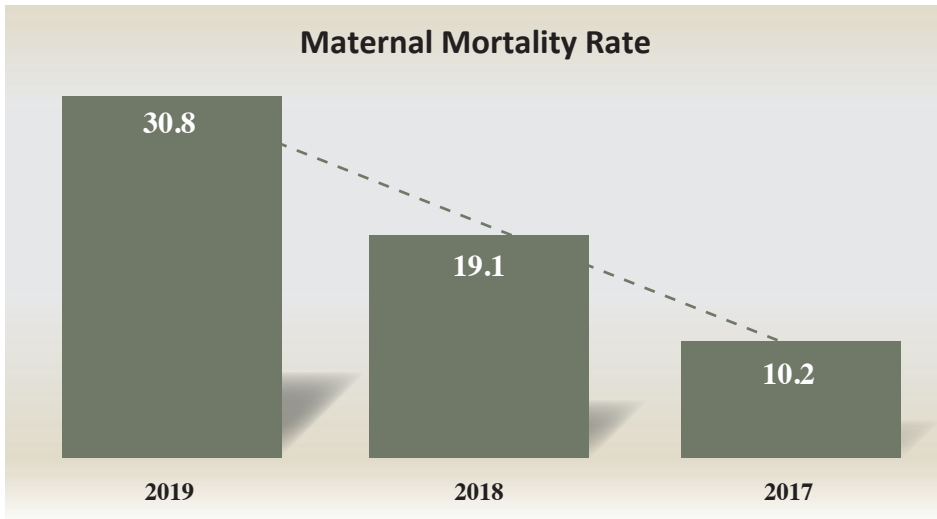
MoH (2020). Annual Report. Health Department. PHIC  
(WHO, World Health Data Platform, GHO)<https://www.who.int/data/gho/indicator-metadata-registry/indicator-details/1>





GMR injured persons have undermined the health system and focus on emergency services at the expense of other services (OCHA, 2019).

*Figure 5: MMR in GS*



#### **4. Morbidity Inequities:**

Morbidity is the diseased state, disability, or poor health due to any cause. Morbidity indicators are used to measure the incidence or prevalence of any disease in any given society. It is very important to look at morbidity indicators and identify Patterns of occurring of any disease to measure inequities existing between different population groups.

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OCHA (2019). Mothers at risk: limited access to medicine and family planning services compromises maternal health in Gaza



*Table 1: overview of two widespread diseases in the GS in 2019 (MoH, 2020)*

| <b>Item</b>                             | <b>Diabetes mellitus</b>              | <b>Hypertension</b>                   |
|-----------------------------------------|---------------------------------------|---------------------------------------|
| <b>Registered cases</b>                 | 62,409                                | 94,358                                |
| <b>Disaggregation by sex</b>            | females, 42.8% 57.2%<br>males         | of females, 39% of males 61%          |
| <b>Age group at high risk</b>           | above 60 years old 46.6%              | Above 60 years old 44.9%              |
| <b>Age group at low risk</b>            | less than 18 years 0.9%<br>old        | less than 18 years old 1.2%           |
| <b>Highest rate<br/>by governorate/</b> | Middle Gaza<br>(population 39.4/1000) | Middle Gaza<br>(population 64.3/1000) |
| <b>/Lowest rate<br/>by governorate</b>  | Khan Younis<br>(population 27/1000)   | Gaza City<br>(population 41.4/1000)   |

## **HUMAN RIGHTS AND RIGHT TO HEALTH IN THE GAZA STRIP**

Human rights are *“rights inherent to all human beings, regardless of race, sex, nationality, ethnicity, language, religion, or any other status. Human rights include the right to life and liberty, freedom from slavery and torture, freedom of opinion and expression, the right to work and education, and many more. Everyone is entitled to these rights, without discrimination”*.

*The human right to health (Article 25), stated that “everyone has the right to a standard of living adequate for the health and well-being of himself and of his family, including food, clothing, housing, and medical*



care and necessary social services, and the right to security in the event of unemployment, sickness, disability, widowhood, old age or other lack of livelihood in circumstances beyond his control. Motherhood and childhood are entitled to special care and assistance. All children, whether born in or out of wedlock, shall enjoy the same social protection". (*UN Universal Declaration of Human Rights*).

Interview with Shaqoura, the Deputy Director of PCHR said, there is no doubt that the human rights in the GS are extremely deteriorating, and this is the result of two main factors: The imposed blockade on GS and the collective punishment of Gazans for more than 13 years. All the occupation practices, all policies, including the three wars on the GS in less than 6 years, and the grave violations against the civilians and their property. all factors that have created a human-made humanitarian crisis. Without the blockade and the occupation measures, the development situation in the GS would be different. The blockade leaves tragic effects on all human rights. Moreover, the right to health is at the forefront of rights that are affected directly and indirectly by the occupation. For example, all infrastructure of the health sector is affected by the occupation due to the lack of equipment, and the targeting of civilian health facilities as hospitals and clinics.

The occupation before the existence of the Palestinian authority left a deteriorating health sector in that there was no health infrastructure capable of responding to the right to health and health needs. After the authority, there was little investment in the health sector, then the

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UN Universal Declaration of Human Rights (<https://www.un.org/en/universal-declaration->



Palestinian division occurred in 2007, which also affects all human rights and directly affects the right to health. For example, all political disputes led to paralysis in the health sector, such as the requests directed to the government employees not to go to work, including doctors, medical staff. There are still practices affecting the right to health because of the division. The other factor is not only limited to direct targeting of health centers, but all facilities related to the right to health have been disabled. The electricity crisis and its impact on the health facilities themselves, the sanitation, and the availability of drinkable water, as all these sectors are linked to the right to health. PCHR promotes the human rights to health by providing training for the healthcare providers in governmental, NGOs, private sectors, and medical students. The training aims to promote the understandings of human health rights to preserve people's dignity in the GS and affect the health decision-making process. Workshops were held to discuss the issues of human rights. PCHR act to condemn the violations against Gazans by the Israeli occupation.

The Israeli occupation has the primary responsibility for violations of the human right to health in the GS, as it obstructs patients' treatment outside the GS, which is subject to massive extortion of patients and their companions. Israel carries out hostile and aggressive actions on the GS by targeting the medical personnel, medical facilities, and ambulances. Likewise, in the GMR, the attack was blatant, targeting the medical personnel. PCHR conducted direct investigations into these issues and found enough evidence to condemn the occupation. Furthermore, the occupation restricts the entry of medical materials and equipment under the pretext of dual-use. The Palestinian authorities also bear part of the



responsibilities. The expenditure on military services exceeds the health sector.

PCHR's role as a human rights organization is to support health institutions, to facilitate patients' treatment abroad when the patients seek to obtain Israeli approvals. PCHR interferes in cases of security refusal of the patient or his companion. PCHR proceeds legally with the occupation forces to ensure that the patient gets permission. When the coordination between Palestinian Authority and Israel was suspended, PCHR coordinated with the International Committee of the Red Cross, WHO, and other international organizations to allow patients to pass by ambulance to reach hospitals outside the GS. Coordination between the Palestinian Authority and Israel has been resumed. PCHR is fighting against discrimination of health service provision. However, there is favoritism to give patients some benefits such as early appointments. The occupation practices discrimination against Palestinians., This is an apartheid regime, while the policies practiced by the occupation for years on the Palestinians of the Gaza Strip are classified as racial discrimination,

In the GS, there is a growing manifestation of violence against women. The official authorities are first required to deal with gender-based violence under specific legal procedures, just like any crime; for example, the so-called honor killings are considered murders and must be treated as murders, not taking advantage of any circumstances to mitigate Judgments and dealing with them is similar to any other crime, although there is a presidential decree in this regard, with great regret, it has not reduced the murders of women so far.



## RECOMMENDATIONS

Various interviews were held with different organizations. Accordingly, the following recommendations were made to touch upon international community, policies, strategies, and organizations

### **Recommendation at the International level:**

The international community has a responsibility and a legal obligation to:

- » Protect Palestinian civilians in Gaza.
- » Put an end to the Israeli occupation of the Palestinian territories.
- » Call the Israeli authorities to end its 13 years suffocating blockade on Gaza.
- » Support implementing developmental projects including infrastructure and construction projects to respond to the population development needs. This may include establishing of large-scale desalination plant to solve the water deficit and solid waste management projects such as recycling projects.

### **Recommendation at the National level:**

#### **Policy-makers level:**

- » The Palestinian government should take serious action to end the long-standing intra Palestinian divide and conflict.
- » The government has to develop effective strategies to address SDOH



and to reduce HI.

- » The government should raise adequate fund to support interventions to improve SDOH.
- » The government must encourage community participation in decision making especially marginalized groups, as these groups tend to bear burdens of poor health and illnesses.
- » The government has to improve the socio-economic status of the population through reduce income inequalities, find job opportunities, improve the standard of living conditions, promote gender equity, provide adequate social and health protection for the people.
- » The government with the international community has to address the environmental health in the GS through carrying out periodic maintenance for power plant by using modern techniques to reduce the emission of air pollutants and establishing sewage water management by recycling and/or sanitary disposal.
- » The government has to improve the quality of education through improving the infrastructure of the educational facilities, providing capacity building trainings for the teaching staff, reducing accessibility barriers; as some children may not be able to regularly attend schools due to poor economic status, geographic barriers, or disability, and providing psychological counselling to students to improve their mental wellbeing and thus improving their overall performance.
- » Strength the research capacity to conduct broad population-based research to address SDH and identify health inequities as well as ensure the availability of skilled and well-trained researchers for SDH.
- » Develop a surveillance system to gather information and data on SDOH for decision-making.



### **Palestinian health system level:**

- » Organize a multi-disciplinary discussion with policy-makers, stakeholders, practitioners, and community members to develop and define policies and guiding principles for SDOH.
- » Conduct advocacy and lobbying campaign that aims at informing and sensitizing key stakeholders and decision-makers to enable them to take serious action and to show commitment toward improving SDOH and tackle HI.
- » Develop SDOH dataset and analytical tool to understand the relationship between social determinants, population health, and the healthcare system.
- » Strengthen healthcare system to ensure the access of all population to high-quality and sustainable health services and information without being exposed to financial hardships.
- » Implement a comprehensive capacity building program for the healthcare actors in the GS (MoH, NGOs, UNRWA, private sector) to help them understand SDOH.
- » Build community awareness on SDOH via mass media campaigns and public initiatives.





## ANNEXES

### Social Determinants of health in Gaza Strip



Israeli forces targeted a school in the Shejaiya area, east of the Gaza Strip, during 2014 war.





Al-Wafa hospital was completely destroyed during 2014 war.



Israeli forces targeted nonviolent Palestinians of the GMR while protesting against the longstanding blockade imposed on Gaza since 2007 and demanding to return to their lands from which they were forcibly expelled in 1948, near the fence separating the Gaza Strip from Israel, leaving a huge number of casualties and deaths.





A picture for untreated sewage flowing into the sea and causing severe contamination



**“The poverty rate continues to rise and threaten all the aspects of life, where around 53 per cent of Gazans lives in poverty”**

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