

Analysis of COVID- 19 effects on Elderly People in the Gaza Strip

Context Analysis

The Gaza Strip is located on the eastern coast of the Mediterranean Sea that borders Egypt on the southwest for 11 kilometers and Israel on the east and north along a 51 km border. With a population of more than two million it is the most densely populated area on earth reaching more than 5000/km² with 15,000/km² in some refugee camps.

The Gaza Strip is described as the world's largest open-air prison where Palestinians have lived under blockade since 2007 and are denied access to the rest of the world. About three-quarters of the population are refugees. Eighty percent of the population depend on international aid; 70% are food insecure; half of the population lives under the poverty line, and 60% of youths are unemployed. The water is contaminated; the sea is polluted; the air is polluted; much of the infrastructure is malfunctional; sewage floods in the streets or pours into the sea, there is no facility or designated place for disposal of solid waste, and there is a great problem with disposal of hazardous waste.

Palestinian Central Bureau of Statistics (PCBS), on the occasion of the international day of the elderly (2019), reported that in the Gaza Strip the number of people aged 60 years and above reached 87,648 persons; poverty among the elderly reached 47%; and the percentage of deep poverty was 35%. About 46% of the elderly in Gaza have difficulties/ disabilities the most common being problems with mobility that reached 31%. About one-third of elderly females are widows.

The health system in the Gaza Strip is on the verge of collapse. There is a severe shortage of medicine, consumables, and disposables and COVID- 19 has increased the load on the already strained health system. For the Gazan population of more than two million there is shortage of diagnostic equipment, swabs and test kits, there is only one PCR machine for Covid-19 diagnosis and there is a shortage of personal protective equipment, disinfectants, and antiseptics.

In Gaza, approximately 92,690 people suffer from hypertension and 63,004 from diabetes (OCHA, 2020). The recent spread of COVID-19 in the community required prioritizing emergency interventions to control spread of the virus and to treat those infected, at the expense of the management of non-communicable diseases (NCDs). In Gaza, treatment interruptions are common with 65% of medicines depleted in the first six months of 2019 (OCHA, 2020). Interruptions of treatment of chronic disease lead to rapid deterioration of the patients' condition and can even lead to death.

OCHA (2020). Humanitarian Needs Overview. Opt

Additional challenges facing older people

In 2019, Caritas Jerusalem-Gaza Health Centre, as part of a project for people over the age of 60, screened 2,032 individuals for NCDs and other illnesses. Almost all were found to suffer from at least one chronic disease. 74.3% were found to suffer from hypertension and/or diabetes, and 55.2% were malnourished and obese. In Gaza where medical and other resources are limited priority is given to younger people and the elderly are neglected. We learned that the elderly themselves, especially older women, often forego food and medical care in favour of the young. The Covid-19 virus infects people of all ages but the mortality rate among older persons is much higher than among the young. Spread of the virus is causing unprecedented fear and suffering for older people who live with a triple burden of NCDs, malnutrition (obesity with micronutrient deficiency: iron, zinc, vitamin D, A, E) combined with stress and anxiety. These factors interact to weaken their immune system and make them vulnerable to severe COVID-19 with an increased mortality rate.

Caritas Jerusalem interventions

When the first cases of Covid-19 were diagnosed among people returning to the Gaza Strip they, and all those subsequently entering the Strip, were placed in quarantine to prevent spread of the virus. The Ministry of Health (MOH), in collaboration with NGOs including Caritas Jerusalem who provide primary health care, proposed a plan to relieve pressure on the already severely under-resourced and poorly equipped hospitals, in the event of the virus spreading to the community. According to the plan, Mobile Medical Teams (MMTs), coordinated by the MOH, would provide primary health care to non-Covid-19 patients in their homes. Caritas Jerusalem designed an Emergency Contingency Plan consisting of six MMTs ready to respond if needed.

On 24th August 2020 the MOH announced that new cases of COVID-19 had been diagnosed in a densely populated refugee camp. These were the first to have occurred outside of quarantine centers and raised fears of a dramatic spread of COVID-19 among the overcrowded population of more than 2 million living in a 365 km² strip of land. The MOH declared a state of emergency, imposed a lockdown on the entire Strip and called on participating NGOs to activate their Emergency Plans. Caritas Jerusalem responded immediately. With full personal protection equipment (PPE) they visit the homes of the sick as directed by the MOH response personnel. In addition to the required medical treatment, they provide health and hygiene education and hygiene items to the families, and nutritional supplements and vitamins to elderly people to boost their immune systems.

Fear of death with no religious burial.

The elderly in Gaza, especially those who suffer from chronic diseases, know they are at high risk and their distress and fear of death is increased because religious burial rituals are not allowed due to the Corona virus.

COVID-19 and Older Persons in the Gaza Strip, Hazards and Risk Analysis

Hazard	Description	Impact	Likelihood	Risk	Consequences
Age					
Old age	Older persons are at a significantly higher risk of severe disease and mortality following infection.	Moderate	High	High	As people age their immune system is weakened, they are malnourished, socially isolated, their needs are often ignored and younger people are given priority in available critical healthcare.
Associated chronic disease					
Non-communicable diseases	Hypertension, diabetes mellitus, heart disease, respiratory diseases, gastrointestinal and liver disease, etc.	High	High	High	The majority of elderly people in Gaza have at least one chronic disease, three quarters have diabetes, hypertension or both. Chronic disease and its treatment weaken the immune system and leave the elderly more susceptible to severe symptoms of COVID-19
Social factors					
Poverty	The elderly in Gaza are too poor to purchase healthy food and hygiene items like disinfectants and antiseptics. They have limited access to proper healthcare, they cannot avoid noise pollution, and it is difficult for them to relax and enjoy life.	Moderate	Moderate	Moderate	Poverty adversely affects the health of elderly people, sick people cannot work to earn money and there is not pension fund or social welfare in Gaza. Close buildings and overcrowding facilitate the spread of respiratory infections including COVID-19
Overcrowding					
Overcrowding	Increased influx of people during emergencies and lockdown, homes become overcrowded and social distancing is difficult to maintain.	Moderate	Moderate	High	Increase in the rate of the droplet and contact microbial transmissions including TB, influenza, and COVID 2019 viral infections

Malnutrition					
Macro and micro malnutrition	The elderly in Gaza suffer multiple burdens of malnutrition. They cannot afford nutritious food, they depend on empty calorie foods so they are obese and malnourished (hidden hunger). They suffer dental problems and nutrient mal-absorption due to intestinal diseases.	High	High	High	Obesity is a risk factor for many chronic diseases including hypertension, diabetes, and cancer. It weakens immunity and predisposes to COVID-19 infection. Micronutrient deficiency and antioxidants (vitamin A, D, E, C, omega-3, zinc, etc.) lead to increased free radicals and weaken the immune system of older people and predispose them to COVID-19 infections
Mental health					
Stress, anxiety, depression, loneliness.	In Gaza, life expectancy of females is higher than males. About a third of older women are widowed and prone to loneliness. Frequent wars, political division, blockade, lockdown and COVID-19 phobia expose older people to longstanding stress.	High	High	High	- Stress hormones (cortisol, adrenaline, etc.) are released. These hormones suppress the immune system and leave older people susceptible to severe COVID-19 infections with increased morbidity and mortality.
Water					
Unsafe water	Only 5% of the water in Gaza is potable and there is shortage of water. People depend on water delivery which is also of poor quality.	High	High	High	Risk of associated infection due to water-related diseases (E.coli, pseudomonas). Risk of waterborne disease in case of an outbreak. These diseases reduce immunity and predispose the elderly to severe COVID-19 symptoms.
Sanitation					
Disrupted environmental sanitation	Lack of proper sewage disposal, lack of sanitary solid waste disposal	moderate	High	moderate	Spread of infectious diseases especially in older people reduces their immune system and predispose them to COVID-19 infection.

Cleaning and disinfecting					
Improper cleaning and disinfecting of the home.	Insufficient materials (detergent, mops, buckets, chlorine). Lack of health awareness and the need to routinely clean and disinfect environmental surfaces Low quality disinfectants.	High	High	High	Spread of infectious diseases, especially COVID-19, among older people.
Handwashing facilities and handwashing behavior					
Lack of regular handwashing.	Insufficient handwashing, improper handwashing	High	moderate	High	Danger of spreading COVID-19 infection. Transmission of infection among COVID-19 patients and their households.
Inadequate personal protective equipment	Insufficient disposable gloves, single-use face masks, Low-quality materials. Lack of knowledge of proper PPE use.	High	Moderate	High	Spread of infectious diseases, including Covid-19, by droplet infection among older people and their carers.

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