

## Health in the Occupied Palestinian Territory 1



# Health status and health services in the occupied Palestinian territory

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We describe the demographic characteristics, health status, and health services of the Palestinian population living in Israeli-occupied Palestinian territory, and the way they have been modified by 60 years of continuing war conditions and 40 years of Israeli military occupation. Although health, literacy, and education currently have a higher standard in the Israeli-occupied Palestinian territory than they have in several Arab countries, 52% of families (40% in the West Bank and 74% in the Gaza Strip) were living below the poverty line of US\$3·15 per person per day in 2007. To describe health status, we use not only conventional indicators, such as infant mortality and stunting in children, but also subjective measures, which are based on people's experiences and perceptions of their health status and life quality. We review the disjointed and inadequate public-health and health-service response to health problems. Finally, we consider the implications of our findings for the protection and promotion of health of the Palestinian population, and the relevance of our indicators and analytical framework for the assessment of health in other populations living in continuous war conditions.

### Introduction

"The conditions in which people live and work can help to create or destroy their health".

*Commission on Social Determinants of Health<sup>1</sup>*

WHO's Commission on Social Determinants of Health<sup>2</sup> has drawn attention to the effects on health of low income, inadequate housing, unsafe workplaces, and lack of access to health facilities. Conflict is an additional hazard to health, not only because it causes injury, death, and disability, but also because it increases physical displacement, discrimination and marginalisation, and prevents access to health services. Constant exposure to life-threatening situations in a conflict setting is an additional, specific social determinant of health, which can lead to disease.<sup>3,4</sup>

This is the first of five reports about the health status and health services in the Israeli-occupied Palestinian territory—the West Bank (including Palestinian Arab East Jerusalem) and the Gaza Strip. We emphasise the complexity of factors that contribute to Palestinian health and health-system problems: ongoing colonisation—ie, continued land confiscation and the building of Israeli settlements on Palestinian land; fragmentation of communities and land; acute and constant insecurities; routine violations of human rights; poor governance and mismanagement in the Palestinian National Authority; and dependence on international aid for resources. These and other factors have distorted and fragmented the Palestinian health system and adversely affected population health.

Here, we describe the demographic characteristics and the health status of the Palestinian population living in the occupied Palestinian territory. We have used not only conventional indicators, such as infant mortality, but also subjective measures based on people's experiences and

perceptions of their health status and quality of life. We draw on the human-security framework to analyse and understand the effects on health and wellbeing of the sociopolitical conditions in the occupied Palestinian territory.

First developed by the UN development programme (UNDP) for the 1994 human development report, the human-security framework is used to explore multiple threats and new causes of insecurity.<sup>5,6</sup> This framework focuses on people and their protection from social, psychological, political, and economic threats that undermine their wellbeing.<sup>7</sup> Also, it emphasises the capability of people to manage daily life, and the importance of social functioning and health. The framework has important implications for health and human development<sup>8</sup> because health is a vital core of human security and is susceptible to various threats and insecurities, such as destruction of infrastructure, lack of access to health services, food shortage, job insecurity, and poor quality of health care,<sup>9</sup> all in addition to the toll of death, morbidity, and disability caused by war.

We also briefly look at public-health and health-services responses to prevailing health problems, which will be dealt with in detail in the last report of this Series.<sup>10</sup> We conclude by considering the implications of our findings for protection and promotion of health of the Palestinian population, and the relevance of the indicators and analytical framework we have adopted for the assessment of health in other situations of constant conflict.

### Historical overview

The term Palestinians refers to the people who lived in British Mandate Palestine before 1948, when the state of Israel was established, and their descendants. As documented by several Israeli historians,<sup>11</sup> more than

*Lancet* 2009; 373: 837–49

Published Online  
March 5, 2009  
DOI:10.1016/S0140-6736(09)60107-0

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This is the first in a [Series](#) of five papers on health in the occupied Palestinian territory

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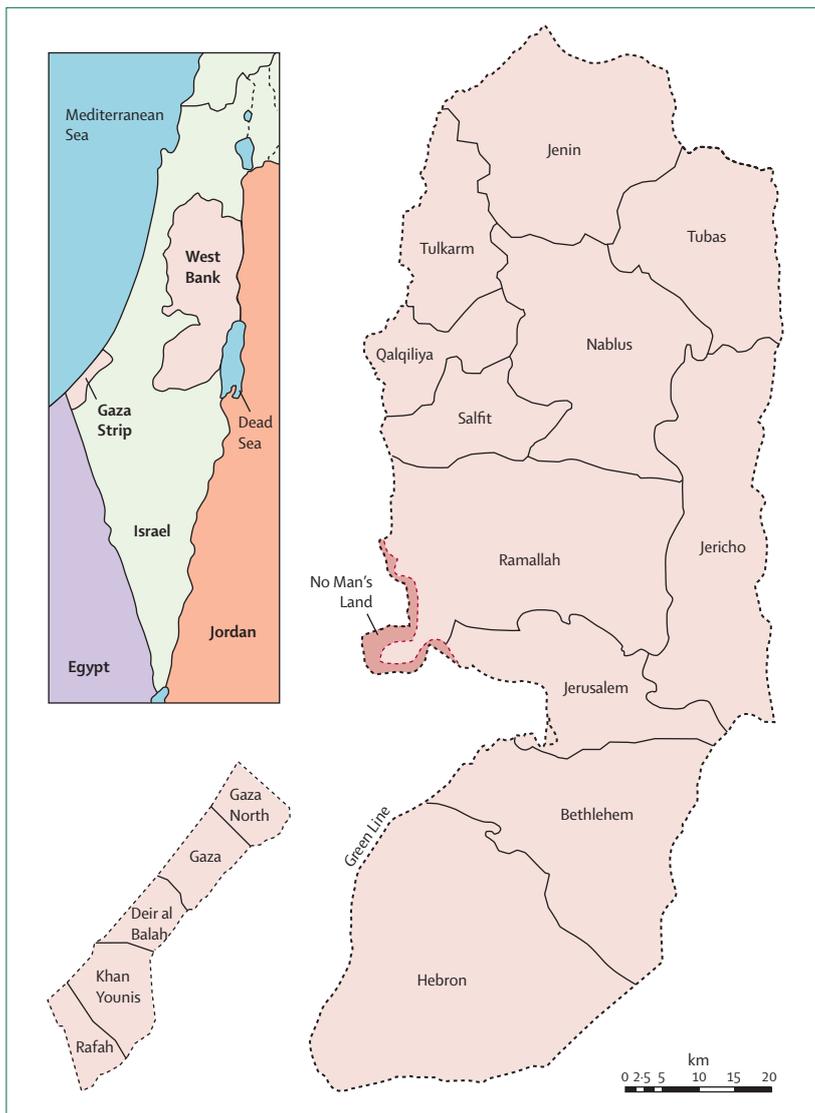


Figure 1: Governorates in the occupied Palestinian territory

three-quarters of the Palestinian population were forcibly dispossessed and expelled between 1947 and 1949, becoming refugees in neighbouring Arab states.<sup>12</sup> This traumatic situation—called the *nakba* (or catastrophe) by Palestinians—is engrained in the collective memory, and is still felt by third-generation refugees, especially those living in refugee camps.<sup>13</sup> Since then, Palestinian identity has been reinforced through resistance to dispossession and extinction.<sup>14</sup>

Palestinians identify themselves as Arabs because of the common language and culture with other Arab nationalities, but maintain their distinctive identity as Palestinians.<sup>15</sup> Most Palestinians are Muslim (94%), about 6% are Christian, and only a few are Jewish.<sup>16</sup> At present, about 4.5 million Palestinians are refugees from the 1948 Arab–Israeli war and their descendants are registered by the UN Relief and Works Agency for

Palestine Refugees in the Near East. Almost a third of Palestinian refugees still live in camps inside and outside the occupied Palestinian territory,<sup>17</sup> although these camps are now urban settlements, not tents.

The occupied Palestinian territory is the term used by the UN for those parts of Palestine occupied by Israel after the Arab–Israeli war of 1967 (panel).<sup>18</sup> It consists of the West Bank, including East Jerusalem (figure 1), and the Gaza Strip, and has a population of 3.77 million, 1.8 million of whom are registered refugees.

In 1991, a peace conference on the Middle East was convened in Madrid between Israel and Palestinians and Arab states. Several subsequent negotiations led to mutual recognition between Israel and the Palestine Liberation Organisation and, in 1993, the Declaration of Principles on Interim Self-Government Arrangements,<sup>19</sup> otherwise known as the Oslo Accords.

The Oslo Accords aimed to achieve a resolution to the conflict and established the Palestinian National Authority for a transitional period, during which negotiation of a final peace treaty would be completed.<sup>20</sup> On the basis of these accords, the authority assumed control over some, but not all, areas of the West Bank and Gaza Strip. The agreement divided the occupied Palestinian territory into three zones. The Palestinian National Authority assumed control of all civilian administration, including health, and became responsible for security in zone A, which includes the main urban areas of the West Bank, but only about 3% of the land. The Palestinian National Authority has civilian authority, but shares security responsibility with Israel in zone B, which includes about 450 Palestinian towns and villages, and covers about 27% of the West Bank. The authority has no control over the remaining 70% of the occupied Palestinian territory, zone C, which includes agricultural land, the Jordan valley, natural reserves and areas with low population density, and Israeli settlements and military areas.<sup>21</sup> Fundamental issues, such as the status of East Jerusalem, refugees and the right of return or compensation, Israeli settlements, security arrangements, and borders were left for later negotiations.<sup>22</sup>

The Palestinian National Authority did not have, and still does not have, sovereignty over borders, movement of people and goods, and control over land and water.<sup>23</sup> Over time, the authority became troubled by other shortcomings, including corruption, absence of collective decision making and integrated planning, and the appointment of excessive numbers of civil servants as reward for the so called revolutionary heroism, political support, or both, causing a major drain on the national budget.<sup>24</sup>

By September, 2000, the Palestinian National Authority collapsed with the second Palestinian uprising (*intifada*). The uprising was fuelled by widespread discontent, on the one hand for the shortcomings of the authority, and on the other for the acceleration of Israeli confiscation and colonisation of Palestinian lands in

defiance of international laws.<sup>25</sup> These developments undermined an already fragile system of public services, including health services.

Since 2000, life for Palestinians has become much harder, more dangerous, and less secure. Under the justification of protecting Israelis from Palestinian violence, a massive wall is being constructed between Israel and the West Bank, incorporating areas of the West Bank into Israel, and hundreds of Israeli military checkpoints have been established accompanied by curfews, invasions, detentions, the use of lethal force against civilians, land confiscations, and house demolitions, all of which have made ordinary life almost impossible. These events entail the systematic collective punishment of the Palestinian population living in the occupied Palestinian territory. According to the Israeli human-rights organisation B'tselem, almost 5000 Palestinians—mainly civilians, including more than 900 children—have been killed by Israeli military action between September, 2000, and June, 2008, and over 1000 Israeli civilians and military personnel have been killed by Palestinians,<sup>26</sup> mainly in suicide attacks. Many people were seriously wounded and disabled.<sup>27,28</sup> During the preparation of this report, almost 1400 Palestinians living in the Gaza Strip were killed, and thousands injured, with many civilians among the casualties. The high burden of injury and trauma on individuals, health services, and society is discussed more fully by Batniji and colleagues<sup>29</sup> in this Series.

Evidence exists of severe damage to infrastructure and institutions, homes, schools, private businesses, cultural heritage sites, and the Palestinian National Authority ministry buildings, equipment, and data-storage facilities, especially during the Israeli invasions of West Bank towns in 2002. The UN, the World Bank, and the Government of Norway have estimated the loss, due to infrastructural and physical damage during the March to April Israeli military invasions of 2002, at about US\$361 million.<sup>30</sup> Israeli invasions have also caused widespread food and cash shortages, psychological distress, and serious interruption of basic services, including crucial health services.<sup>31</sup>

Since 2002, the construction of the separation wall has continued, in defiance of the international commission of jurists' decision that the wall constitutes a serious violation of international human-rights law and international humanitarian law.<sup>32</sup> The Israeli high court of justice has repeatedly ruled that the route of the wall should be dictated by security considerations and not by Israeli settlement expansion plans.<sup>33</sup> The construction of this wall has meant the confiscation of thousands of hectares of fertile Palestinian agricultural land, restrictions on freedom of movement, division of communities, and worsening economic conditions. In 2006, although still not defining the state's borders, Israel announced that the route of the separation wall followed official aspirations for a new border.<sup>34</sup> This

#### Panel: A brief history of the occupied Palestinian territory

##### 1917

The Balfour Declaration stated that the British Government favours the establishment of a home for the Jewish people in Palestine, emphasising that nothing should be done to undermine the civil and religious rights of non-Jewish communities in Palestine.

##### 1920–48

British Mandate of Palestine.

##### 1948

First Arab–Israeli war. Creation of Israel on most of British Mandate of Palestine, with two-thirds of Palestinians forcibly dispossessed and dispersed, and made into refugees in neighbouring Arab countries.

##### 1950–67

West Bank annexed by the Hashemite Kingdom of Jordan. Gaza Strip came under Egyptian military administration.

##### 1967

Arab–Israeli war. Israel occupied the rest of Palestine (the West Bank, including Palestinian Arab East Jerusalem, and the Gaza Strip) and parts of Syria.

##### 1987

First Palestinian popular uprising (intifada) against Israeli military occupation.

##### 1993

The signing of the Declaration of Principles on Interim Self-Government Arrangements (the Oslo Accords), and handing over of selected spheres of administration, including health care, to an interim Palestinian National Authority. This authority was intended to govern parts of the West Bank and Gaza Strip during a transitional period when negotiations of a final peace treaty would be completed.

##### 2000

Interim political solution exploded with the second Palestinian uprising, fuelled by widespread discontent with the failure of the Oslo Accords to address accelerating Israeli confiscation and colonisation of Palestinian lands in defiance of international law, and by the shortcomings of the Palestinian National Authority.

##### 2002

Israel's military incursions of the West Bank, and the ransacking of several Palestinian ministries and institutions, including the Palestinian Central Bureau of Statistics, the Palestinian Ministry of Education and Higher Education, various other research and cultural institutions, and radio and television stations.

(Continues on next page)

means that Israel will have annexed about 10% of the West Bank, including Palestinian farmland and key water sources, and incorporated most Israeli settlements. Israeli military closures and their effects on the movement of goods and people have become increasingly severe in the occupied Palestinian territory, causing an economic crisis (with the gross domestic product per person in 2007 falling to 60% of its value in 1999):<sup>35</sup> rising unemployment and a serious decline in living standards,<sup>36</sup> all of which are associated with negative health outcomes.<sup>37,38</sup> The Israeli military closures restrict Palestinian access to basic services, such as health and education, and separate communities from their land and places of work. In the West Bank, the physical

For Israeli military closures of the West Bank see [http://www.ochaopt.org/documents/WestBank\\_December\\_07\\_20080106\\_web.pdf](http://www.ochaopt.org/documents/WestBank_December_07_20080106_web.pdf) and [http://www.ochaopt.org/documents/Gaza\\_Strip\\_Closure\\_Map\\_A3\\_December\\_2007.pdf](http://www.ochaopt.org/documents/Gaza_Strip_Closure_Map_A3_December_2007.pdf)

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## 2005

Israel withdrew its settlements from the Gaza Strip in August, 2005, but continued to retain control over access to the Gaza Strip by land, sea, and air.

## 2006–08

Democratic election of Islamic Hamas to majority in the Palestinian National Authority. Israel and key western states responded by boycotting its administration.

Diplomatic ties and international donor funding were cut, and Israel withheld Palestinian tax revenues, which together form about 75% of the budget of the Palestinian National Authority.

Israeli military closure policies intensified, and fragmentation continued to be reinforced. By February, 2008, and after the Annapolis summit, the closure system was tightened even further and included over 600 checkpoints and barriers erected by the Israeli military on roads to restrict Palestinian movement, compared with about 518 such barriers to movement in 2006.

## November, 2008 to January, 2009

The truce with Hamas is broken (Nov 4, 2008). Israel invades Gaza Strip (Dec 27, 2008). Destruction of infrastructure and buildings, including homes, universities, schools, clinics, mosques, and welfare organisations. Hundreds of civilians are killed and thousands injured, intensifying Gaza's humanitarian crisis.

separation has been tightened even further; by June, 2008, over 600 checkpoints and barriers to movement had been erected by the Israeli military on roads to restrict Palestinian movement, compared with an average of 518 in 2006.<sup>39</sup>

The failure to reach a permanent peace agreement and the continuing expropriation of land for settlements and roads, which has continued unabated since 1967, the failure to establish an independent Palestinian state, and the disillusionment of the population with the Palestinian National Authority could explain the unexpected majority of parliament seats achieved by Hamas (the Islamic resistance movement) in elections for the Palestinian

legislative council in January, 2006. Despite the overwhelming electoral support for Hamas, Israel and key western countries responded by boycotting and isolating the newly elected administration because of Hamas' refusal to meet three criteria: recognition of Israel's right to exist, renunciation of violence, and adherence to interim peace agreements with Israel.<sup>40</sup> Diplomatic ties and international donor funding were cut, and Israel withheld Palestinian tax revenues, which together form about 75% of the budget of the Palestinian National Authority.<sup>41</sup>

The withholding of taxes and international aid created a severe political and financial crisis, with the Palestinian National Authority unable to pay the salaries of 165 000 civil servants. This situation led to intermittent strikes by civil servants, including health personnel; worsening service provision; severe shortages of medication and equipment; and a health-system crisis.<sup>42</sup> Poverty and dependence on food aid increased. The World Food Programme indicated sharply reduced access to food, with evidence that a third of Palestinian households were food insecure and highly dependent on assistance.<sup>36</sup> The consequences of this situation were institutional decline, degraded governance, economic crisis, breakdown of social networks, and growing internal violence.

In February, 2007, a national unity government was formed with representatives from the two main Palestinian parties: Fatah (the Palestinian national liberation movement) and Hamas.<sup>43</sup> But the national unity government was not accepted by Israel, most European countries, and North America, and soon collapsed.<sup>44</sup> An emergency government was established, and Israel and the international community finally ended the boycott of the Palestinian Authority. However, factional clashes continued and in June, 2007, Hamas took control of the Gaza Strip.<sup>45</sup> Israel had withdrawn its settlements from the Gaza Strip in August, 2005, but retained control over access to the Gaza Strip by land, sea, and air. A separation wall or

	Occupied Palestinian territory	Jordan	Lebanon	Syria	Egypt	Israel
Total population	3 770 606	5 700 000	3 900 000	19 900 000	73 400 000	7 300 000
Number of registered Palestinian refugees	1 765 499	1 880 740	411 005	446 925	..	..
Number of Palestinian refugees living in camps	669 096	330 468	217 441	120 383	..	..
Number of Palestinians living in Israel	..	..	..	..	..	1 184 466
Palestinians aged <15 years	45.7%	37.0%	27.0%	37.0%	33.0%	28.0%
Palestinians aged ≥65 years	3%	3%	8%	3%	5%	10%
Male average life expectancy at birth (years)	71.7	71.0	69.0	71.0	68.0	78.0
Female average life expectancy at birth (years)	73.2	72.0	73.0	75.0	73.0	82.0
Infant mortality rate (per 1000)	25.3	24.0	17.0	19.0	33.0	3.9
Average number of children per woman	4.6	3.5	2.3	3.5	3.1	2.8
Adult literacy rate (aged ≥15 years)	93.9%	91.1%	88.0%	81.0%	61.0%	97.1%
Combined primary, secondary, and tertiary gross enrolment ratio	82.4%	78.1%	84.6%	64.8%	76.9%	89.6%
Average unemployment in individuals aged ≥15 years	21.5%	15.0%	10.0%	12.0%	10.0%	8.5%

Table 1: Demographic and socioeconomic characteristics of the population living in the occupied Palestinian territory and neighbouring countries<sup>47–65</sup>



Figure 2: Palestinian total fertility rate and trends between 1968 and 2003

Data are from Khawaja,<sup>66</sup> the Palestinian Central Bureau of Statistics,<sup>49,50,67</sup> and other sources.

fence surrounds Gaza and, since the takeover by Hamas, Israel has maintained a strict siege, with people and goods allowed in or out only for essential humanitarian purposes.<sup>41,44</sup> Incursions by the Israeli military continued until a limited truce was agreed in June, 2008. The truce was broken on Nov 4, 2008.

The effects of the siege on economic and social conditions in Gaza have been devastating. There is a great shortage of fuel and cooking gas, and power cuts are frequent. Economic activity has almost completely ceased. Unemployment was around 33% of the active workforce in 2007, and rose to 37% in 2008. The percentage of Gazans who live in deep poverty has been steadily increasing, rising from nearly 22% in 1998 to nearly 35% in 2006. With the continued economic decline and the implementation of even stricter closures on Gaza, the poverty rate in 2008 is expected to be higher than it was in 2006. Food insecurity has continued to rise reaching 56% in 2008. 60% of households regard emergency assistance as a secondary source of income, with increased numbers of families relying on assistance, making present coverage by main assistance providers insufficient.<sup>35,46</sup> The Israeli military invasions in December, 2008, to January, 2009, of the Gaza Strip severely intensified this pre-existing humanitarian crisis.

### Health of Palestinians in the occupied Palestinian territory

Table 1 shows data for the 3.77 million Palestinians living in the occupied Palestinian territory, including comparisons with neighbouring countries. 46% of the population younger than 15 years of age, an indication of the high fertility rate and falling infant mortality. The

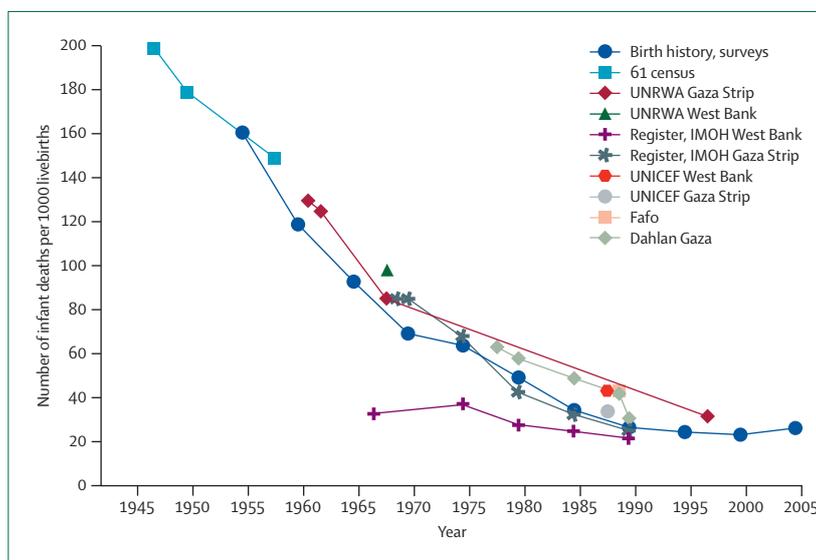


Figure 3: Number of infant deaths per 1000 livebirths between 1945 and 2005<sup>49,50,67-73</sup>

IMOH=Israeli Ministry of Health. UNRWA=UN Relief and Works Agency.

fertility rate was very high during the 1960s until the early 1990s, then declined. Since 2000, fertility has remained stable at about five children per woman (figure 2). Infant mortality rates fell until the mid-1990s (figure 3), contributing to the high proportion of children in the population.<sup>74</sup> Health of children and data quality are discussed in more detail by Abdul Rahim and colleagues<sup>74</sup> in this Series.

Palestinians are undergoing a rapid epidemiological transition.<sup>75</sup> Non-communicable diseases, such as cardiovascular diseases, hypertension, diabetes, and cancer, have overtaken communicable diseases as the

	Physical domain 1	Psychological domain 2	Social domain 3	Environmental domain 4
OPT*	14.2 (3.2)	13.3 (2.5)	14.8 (3.1)	11.2 (2.3)
All countries	16.2 (2.9)	15.0 (2.8)	14.3 (3.2)	13.5 (2.6)
Argentina†	12.1 (2.2)	10.6 (2.9)	10.8 (3.5)	10.7 (2.3)
Israel	15.5 (3.0)	14.2 (3.0)	13.0 (3.8)	12.6 (2.6)
Netherlands‡	18.3 (3.0)	16.6 (2.8)	15.8 (3.3)	15.9 (2.8)

Data are mean (SD). Domain means are estimated on a range from 4 (low quality of life) to 20 (high quality of life). The sample of occupied Palestinian territory was derived through a three-stage random sampling procedure, selecting 1008 responders who were ≥18 years old from all governorates and localities in the West Bank and Gaza Strip.<sup>88,89</sup> The WHO field trials included adult participants recruited from outpatient facilities and the general population.<sup>90</sup> OPT=occupied Palestinian territory. \*The difference between the mean for the occupied Palestinian territory and overall mean from all countries surveyed by WHO was significant ( $p < 0.05$ ) for all domains. †Lowest score. ‡Highest score.<sup>89,90</sup>

**Table 2: Quality of life scores in the occupied Palestinian territory and selected other countries**

main causes of morbidity and mortality. The prevalence of HIV/AIDS is very low, and the population is deemed free of poliomyelitis, as judged by WHO criteria. Communicable diseases of childhood have already been mostly controlled with effective immunisation programmes.<sup>76</sup>

Standards of health, literacy, and education are generally higher in the occupied Palestinian territory than in several Arab countries, but substantially lower than in Israel (table 1). By contrast with the decline between 1967 and 1987, infant mortality stalled at around 27 per 1000 during 2000–06, the same as that reported in the 1990s (figure 3), which suggests a slowdown of health improvements, a possible increase in health disparities,<sup>77</sup> or an indication of deteriorating conditions.<sup>78</sup>

The rate of stunting in children younger than 5 years (defined as height for age >2 SDs below the median of the US National Center for Health Statistics and WHO Child Growth Standards<sup>79</sup>) has risen from 7.2% in 1996<sup>80</sup> to 10.2% in 2006.<sup>81</sup> Stunting during childhood is an indicator of chronic malnutrition, and is associated with increased disease burden and death,<sup>82</sup> including

compromised cognitive development and educational performance,<sup>83,84</sup> and obesity and chronic diseases in adulthood.<sup>85</sup>

The incidence of pulmonary tuberculosis increased in the Gaza Strip from 0.83 per 100 000 in 1999 to 1.31 per 100 000 in 2003. The incidence of meningococcal meningitis also rose in the West Bank and Gaza Strip from 3.0 per 100 000 in 1999 to 4.6 per 100 000 in 2003, and that of mental disorders rose by about a third, from 32.0 per 100 000 in 2000 to 42.6 per 100 000 in 2003.<sup>86</sup> Data for mental disorders are obtained from yearly health reports, which consistently indicate increases in the frequency of most diseases.<sup>87</sup> However, whether these data show real changes, including those due to the violence and social damage of Israeli occupation, or due to better information-gathering methods and coverage, is unclear. Furthermore, such data do not distinguish between mild and severe disorders.

To assess the quality of life in Palestinians living in the occupied Palestinian territory, the WHO quality of life-Bref<sup>88</sup> was used in a 2005 survey, containing a representative sample of adults from the general population, after addition of some questions relevant to the Palestinian context.<sup>89</sup> Life quality in the occupied Palestinian territory proved lower than that in almost all other countries included in the WHO study (table 2). Furthermore, the study showed that most responders had high levels of fear; threats to personal safety, safety of their families, and their ability to support their families; loss of incomes, homes, and land; and fear about their future and the future of their families (table 3).

Feelings in the population include *hamm*—a local Arabic term that combines different feelings, such as the heaviness of worry, anxiety, grief, sorrow, and distress—frustration, incapacitation, and anger. Feelings of deprivation and suffering were also high. Most people reported being negatively affected by constant conflict and military occupation, closures and

	Sample (n)	Not at all	A little	Moderate amount or more	Very much or extremely
To what extent do you fear for yourself in your daily life?	1008	19% (1.24)	24% (1.35)	27% (1.40)	30% (1.44)
To what extent do you fear for your family in your daily life?	1004	5% (0.69)	9% (0.90)	19% (1.24)	67% (1.48)
To what extent do you fear for the safety of your family?	1004	5% (0.69)	12% (1.03)	19% (1.24)	64% (1.51)
To what extent does your family fear for your safety?	1007	4% (0.62)	9% (0.90)	17% (1.18)	70% (1.44)
To what extent do you currently feel threatened by not being able to provide for your family?	994	7% (0.81)	16% (1.16)	24% (1.35)	53% (1.58)
To what extent do you currently feel threatened by losing your family income?	980	8% (0.87)	15% (1.14)	19% (1.25)	58% (1.58)
To what extent do you currently feel threatened by losing your home?	999	23% (1.33)	19% (1.24)	12% (1.03)	46% (1.58)
To what extent do you currently feel threatened by losing your land?	633	21% (1.62)	18% (1.53)	14% (1.38)	47% (1.98)
To what extent do you currently feel threatened by displacement or uprooting?	1000	24% (1.35)	16% (1.16)	16% (1.16)	44% (1.57)
To what extent do you feel worried over your future and the future of your family?	1008	3% (0.54)	11% (0.99)	18% (1.21)	68% (1.47)

Data are percentage (SE). The Palestinian Quality of Life Study, December, 2005. Data were calculated by the authors using the Palestinian life quality dataset.

**Table 3: Insecurities and threats in a random sample of the population of the occupied Palestinian territory**

siege (including the separation wall), and inter-Palestinian violence.

In a study based on 3415 adolescents of the Ramallah district,<sup>91</sup> Palestinian students reported the lowest life-satisfaction scores compared with 35 other countries (figure 4). Collective exposure to violence was associated with negative mental health. After adjustment for sex, residence, and other measures of exposure to violent events, exposure to humiliation was also significantly associated with increased subjective health complaints. Such subjective data should be interpreted with caution because subjective measures can be complicated by people understanding and responding to questions in different ways.<sup>92</sup> However, self-rating of health measures offer “something more—and something less—than objective medical ratings”,<sup>93</sup> especially because of the incomplete understanding of what true health is.

In May, 2002, in a survey of a representative sample of households in the five West Bank towns invaded by the Israeli military during March and April, 2002,<sup>31</sup> responders reported high psychological distress at home, including sleeplessness, uncontrollable fear and shaking episodes, fatigue, depression, and hopelessness, and enuresis and uncontrolled crying episodes in children. Distress was highest in Ramallah (93%), Tulkarm (91%), Jenin (89%), Bethlehem (87%), and Nablus (71%). It was also associated with the imposition of curfews, bombing and shooting, loss of home, displacement, degradation of quality of housing, including interruption of utilities such as electricity and water, and the consequent destruction of food supplies, shortages of food and cash, and no access to medical services.

According to the UN, studies done in the Gaza Strip in 2008 also showed high distress and fears, especially in children.<sup>94</sup> Children were highly exposed to traumatic events, such as witnessing a relative being killed, seeing mutilated bodies, and having homes damaged. These studies also reported several psychosocial problems, including behavioural problems, fears, speech difficulties, anxiety, anger, sleeping difficulties, lack of concentration at school, and difficulties in completing homework.

Palestinians are people who were never safe,<sup>95</sup> even before the 1967 Israeli occupation of the West Bank and Gaza Strip. The trauma of the 1948 nakba—the dispossession and dispersion of Palestinians—is imprinted in the collective consciousness to this day. Moreover, Palestinians' quality of life is very low, and their daily lives are constantly under threat. People live in alarm and pain because of current life events, but also because of the history of mass trauma that is part of their collective consciousness. Their sense of future is shaped by past and present violations. Their experiences of violations inform their future, and expectation of danger and threats prepares them ceaselessly for how to respond,<sup>96</sup> and to undertake daily life.

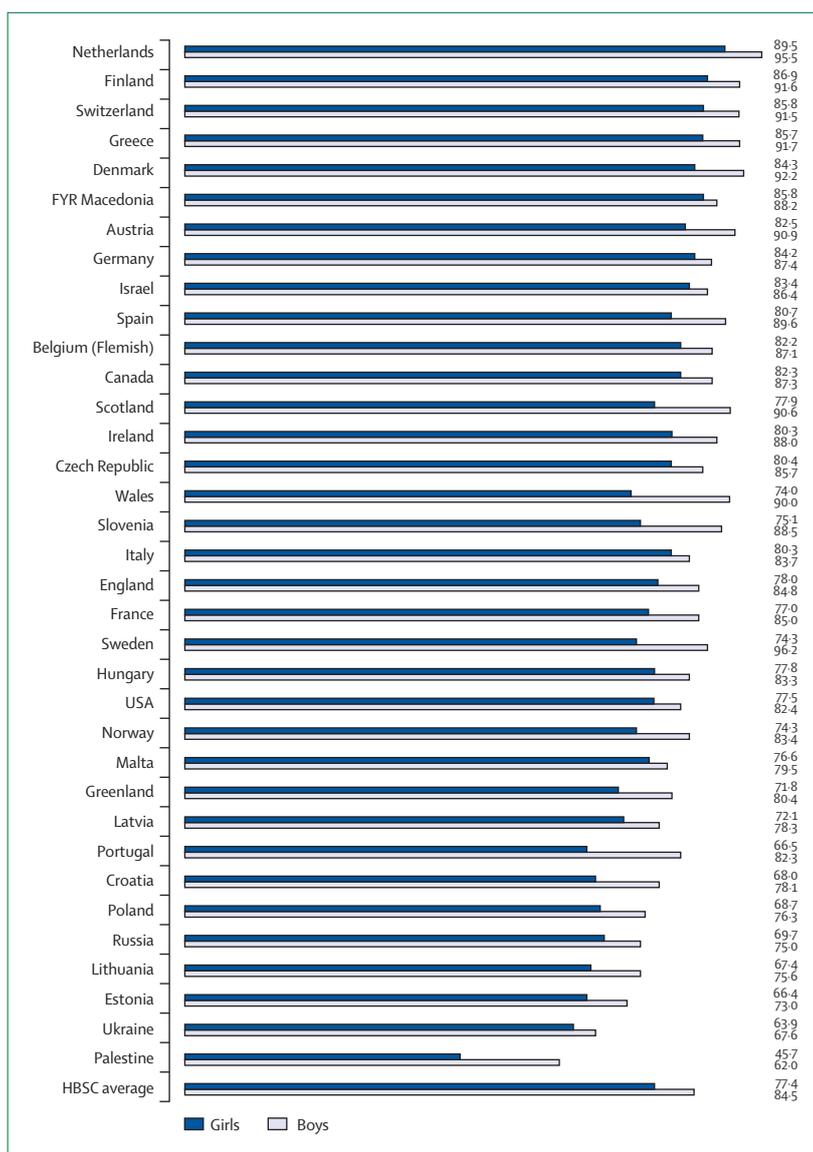


Figure 4: Life-satisfaction scores of 15-year-old students in 35 selected countries  
HBSC=health behaviour in school-aged children.

Palestinians have been enduring social suffering<sup>96</sup> associated with war—a notion that includes sociocultural aspects of the experience of pain, and entails new ways of treatment and management that go beyond biomedical conceptualisations. Social suffering seeks to explain people's realities in ways that cannot be explained by objective measurements.<sup>97</sup> Personal psychological or medical problems are regarded as inseparable from societal issues.<sup>98</sup>

The idea of social suffering combines into a single space conditions that are usually separated into sectors (such as health, welfare, and judicial) because these conditions originate in the overpowering injustices that social forces inflict on human experience.<sup>95</sup> Social suffering removes the artificial division between health

and social issues in ways that promote an understanding of how both individual and collective suffering pose threats to health. In the Palestinian context, the shared experience of violence and trauma has implications for a shared sense of need for community security.

Humiliation is a central tactic of war, often cited by the Israeli and international press as one of the daily experiences that Palestinians must withstand<sup>99</sup> and as a form of Israeli control over Palestinian lives. In the occupied Palestinian territory, violence includes chronic exposure to humiliation, which is associated with negative mental health.<sup>100</sup> Humiliation is a form of violation, identified as a component of the suffering of victims of war in need of acknowledgment and restoration of dignity.<sup>101</sup> The strong sense of family and community in Palestinians of the occupied Palestinian territory has helped them to sustain high community cohesion and communal survival<sup>102</sup> despite the realities described above, including constant humiliation.

### Health system

The current Palestinian health system is made up of fragmented services that grew and developed over generations and across different regimes. During the 19th century, Christian missionaries from the western countries established some hospitals that are still operating in East Jerusalem. During the early part of the 20th century, the British Mandate expanded these services.<sup>103</sup>

The 1948 nakba led the UN General Assembly to establish the UN Relief and Works Agency in 1949.<sup>104</sup> Since then, the UN Relief and Works Agency has been delivering various key services to registered Palestinian refugees, including food aid, housing, education, and health services, not only in the occupied Palestinian territory, but also in Jordan, Lebanon, and Syria.

From 1950 to 1967, the West Bank was annexed by the Hashemite Kingdom of Jordan, and the Gaza Strip came under Egyptian military administration. Although Egyptian and Jordanian state services for education and health expanded, rural areas in the West Bank, where most people lived, remained mainly untouched by these developments.<sup>105</sup> Palestinians responded by building a network of charitable health services. During this period, private Palestinian medical services also grew and developed.<sup>106</sup>

Between 1967 and 1993, health services for Palestinians in the occupied Palestinian territory were neglected and starved of funds by the Israeli military administration, with shortages of staff, hospital beds, medications, and essential and specialised services, forcing Palestinians to depend on health services in Israel.<sup>107</sup> For example, in 1975 the West Bank health budget was substantially lower than that of one Israeli hospital for the same year.<sup>108</sup> The Palestinian response was to create independent Palestinian services through health, women's, agricultural, and student social-action groups,

all promoting community steadfastness on the land (*sumud*). This response also led to the development of a Palestinian health and medical care infrastructure, independent of the Israeli military, that still helps to meet the health needs of the population, especially during emergencies.

The Palestinian Ministry of Health was established after the Oslo accords in 1994, and inherited, from the Israeli military government, health services that had been neglected. Supported by massive funding from international donors,<sup>109</sup> the ministry has since upgraded and expanded the health-system infrastructure by institution building and human-resource development.<sup>110</sup> The number of hospitals, hospital beds, and primary health-care centres in the country increased, a public-health laboratory was established, and a health-information system and a planning unit were set up. Planning for the development of the health sector began during this period, and entailed some coordination with the UN Relief and Works Agency, local non-governmental organisations, and the private medical sector in developing policies and protocols.<sup>111</sup>

By 2006, the number of hospital beds managed by the Palestinian Ministry of Health had increased by 53% compared with that of 1994, with a similar increase in the number of available hospital beds in non-governmental organisations and private sectors.<sup>76</sup> The Palestinian Ministry of Health currently operates 24 of 78 hospitals, which have 57% of all hospital beds in the West Bank and Gaza Strip (table 4). Also, the number of primary health-care facilities increased between 2000 and 2005 (table 5), with 416 of 654 centres managed by the Palestinian Ministry of Health. 170 facilities opened in less than 13 years. Similarly, the UN Relief and Works Agency facilities have increased in number, but not those of non-governmental organisations.

By 2006, about 40 000 people were employed in different sectors of the health system, with 33% employed by the Palestinian Ministry of Health (table 6). Health-related human resources in Palestinian institutions of higher learning also grew. Although a shortage of health personnel exists in many specialties (especially in family medicine, surgery, internal medicine, neurology, dermatology, psychiatry, pathology, anaesthesiology, nephrology, nursing, and midwifery), there is an excess in others (such as dentistry, pharmacy, laboratory technology, and radiology technology),<sup>76</sup> suggesting the need for rationalisation of the educational programmes of Palestinian institutions of higher learning.

At present, all four main health-service providers (the Palestinian Ministry of Health, the UN Relief and Work Agency, non-governmental organisations, and the private medical sector) contribute to all areas of health care. However, because of various factors, including little health-service development under the Israeli military administration between 1967 and 1993, and poor

	West Bank (population: 2 350 000)			Gaza Strip (population: 1 420 000)			Occupied Palestinian territory (population: 3 770 000)		
	Number of hospitals	Number of beds (1.2*)	Percentage of beds	Number of hospitals	Number of beds (1.4*)	Percentage of beds	Number of hospitals	Number of beds (1.3*)	Percentage of beds
PMoH	12	1316	44.4%	12	1548	75.4%	24	2864	57.1%
UNRWA	1	63	2.1%	0	0	0	1	63	1.3%
NGOs	20	1183	40.0%	8	399	19.4%	28	1582	31.6%
Private	21	399	13.5%	2	34	1.7%	23	433	8.6%
PMS	0	0	0	2	72	3.5%	2	72	1.4%
Total	54	2961	..	24	2053	..	78	5014	100%

Data source was the Palestinian National Authority.<sup>76</sup> NGOs=non-governmental organisations. PMoH=Palestinian Ministry of Health. PMS=Police medical services. Pop=population. UNRWA=UN Relief and Works Agency. \*Hospital beds per 1000 people.

**Table 4: Distribution of hospital beds by health-care provider**

governance and mismanagement of the Palestinian Authority, current services have been unable to provide adequately for people's needs, especially in tertiary health care. Therefore, the Palestinian Ministry of Health continues to refer patients elsewhere (Israel, Egypt, and Jordan), leading to a substantial drain of health resources.

Conventional indicators of health-system function, focusing on the number of patients who use services, the number of hospitals, hospital beds, and primary health-care facilities, and the number of personnel, mask an underlying issue of low quality of care. Several types of health services fail to meet consistent standards for training, equipment, and overall quality. This low quality of care is partly due to restricted mobility inhibiting effective health-system function, management, and accountability; the presence of under-qualified health-care providers; and weak institutional capacity for monitoring and assessment.<sup>109,112</sup> This issue will be addressed more fully in the other reports of this Series.

The Palestinian Ministry of Health recognises its weak role in the organisation, regulation, and supervision of the health sector, and in the coordination of policy making and planning among health-care providers, especially those of the private sector. Several factors, some internal and some external to the health and political systems, account for the inability of the ministry of health to assume the stewardship role needed to build a health system.

First, despite substantial funding and efforts made by the Palestinian Ministry of Health to build a Palestinian health system, the obstacles to planned development have proved too great. Restrictions placed by Israel since 1993 on the free movement of Palestinian goods and labour across borders between the West Bank and Gaza, and within the West Bank, have had damaging effects not only on the economy and society,<sup>113</sup> but also on the attempts of the Palestinian National Authority at system building. The physical separation<sup>114</sup> and complicated system of permits required to go from the

	2000			2005			Increase in PHC facilities
	West Bank	Gaza Strip	Total	West Bank	Gaza Strip	Total	
Population	2 011 930	1 138 126	3 150 056	2 372 216	1 389 789	3 762 005	..
PMoH PHC facilities	316	43	359	360	56	416	16%
NGO PHC facilities	145	40	185	130	55	185	0%
UNRWA PHC facilities	34	17	51	35	18	53	4%
Total PHC facilities	495	100	595	525	129	654	10%
Number of people per PHC facility	4065	11 381	5294	4519	10 774	5752	..

Data are number or percentage. Data source was the Palestinian National Authority.<sup>76</sup> NGO=non-governmental organisation. PHC=primary health care. PMoH=Palestinian Ministry of Health. UNRWA=UN Relief and Works Agency.

**Table 5: Distribution of the primary health-care facilities by health-care provider in 2000 and 2005**

Gaza Strip to the West Bank resulted in the emergence of two Palestinian Authority ministries of health, one in the Gaza Strip and the other in the West Bank. Since 2007, this separation has been further compounded by the political divide between Fatah and Hamas.

Second, the absence of any control by the Palestinian National Authority over water, land, the environment, and movement within the occupied Palestinian territory has made a public-health approach to health-system development difficult, if not impossible. These issues have been exacerbated by the dysfunctional political and institutional systems of the authority; the damaging effects on ministries of using the authority resources for patronage to secure loyalty; marginalisation of the Palestinian Legislative Council; and corruption and cronyism,<sup>44</sup> all of which led to a rapid increase in the number of health-service employees of the Palestinian National Authority without evident improvement in the quality of health services.<sup>111</sup> These factors have adversely affected an already fragile health service.

	Number			Ratio per 1000 people							
	Occupied Palestinian territory			Occupied Palestinian territory				Other countries			
	WB	GS	Total	WB	GS	Total	Jordan	Egypt	Israel	UK	Canada
Physicians	4337	3711	8048	1.8	2.6	2.1	2.0	0.5	3.8	2.3	2.1
Dentists	1355	680	2035	0.6	0.5	0.5	1.3	0.1	1.2	1.1	0.6
Pharmacists	2242	1600	3842	1.0	1.1	1.0	3.1	0.1	0.7	4.5	0.7
Nurses	2452	4200	6652	1.0	2.9	1.7	3.0	2.0	6.3	12.2	10.0
Midwives	..	..	449	..	..	0.1	0.3	<0.1	0.2	0.6	..
Paramedics	7421	3100	10521	3.0	2.2	2.7	1.2	0.1	..	2.8	..
Administrative	4263	3257	7520	1.7	2.3	1.9	3.2	0.1	..	21.2	..

Data source was the Palestinian National Authority.<sup>76</sup> GS=Gaza Strip. WB=West Bank.

**Table 6: Health employees**

Third, the multiplicity of donors with different agendas and the dependence of the Palestinian National Authority on donor financial assistance have also caused programme fragmentation. Most occupied Palestinian territory health budget is financed by donor agencies. The Palestinian Authority is estimated to have received US\$840.5 million in aid between 1994 and 2000.<sup>44</sup> Donors have an influential role in determining the policy of the authority.<sup>115</sup> The American Rand Corporation has indicated that donors prefer to support infrastructural—mostly equipment and construction—over the operating expenses of the Palestinian National Authority health sector,<sup>109</sup> which have increased as a result of expanded infrastructure and the introduction of modern equipment. The consequences of this substantial but uncoordinated investment will be considered in more detail by Mataria and colleagues<sup>10</sup> in this Series.

All these interacting factors have contributed to undermine the ability of Palestinians to build a health system from existing health services. In addition to the need for control over resources for health care, building an effective health system requires sovereignty, self-determination, authority, and control over land, water, the environment, and movement of people and goods, all of which are relevant for the protection and promotion of health. The international community has not appreciated the degree to which the Palestinian National Authority is “less than a state, yet expected to act like a state”.<sup>44</sup>

## Discussion

We have shown that, after a period of improvement in Palestinian health in the occupied Palestinian territory, socioeconomic conditions have deteriorated since the mid-1990s, with a humanitarian crisis emerging in the Gaza Strip and intensifying as a result of the Israeli military invasion in December, 2008, and January, 2009, and because of destruction of homes and infrastructure, the death and injury of civilians, and shortages of food, fuel, medicines, and other essentials, all requiring urgent world concern. We have also described the

severe constraints imposed on the Palestinian National Authority in its attempts to build the Palestinian health care and other systems in response to threats to the health of the population. Ironically, the year when the UN announced its Millennium Development Goals was also the year when the occupied Palestinian territory fell into a phase of political and economic crisis, with widespread poverty and a high prevalence of extreme poverty.

Our analysis of Palestinian health in the occupied Palestinian territory has used not only conventional indicators of health, such as infant mortality and stunting in children, but also survey data for subjective measures of people’s experiences, life quality, and ratings of health status. The human security framework prompted us to consider and analyse health more comprehensively, and has shown some of the indicators that need to be measured beyond body counts and traditional measures of morbidity. Indicators of human insecurity and social suffering seem essential in the study of the consequences for health and wellbeing of war and conflict. We hope that our analysis of the Palestinian experience will assist in extending and informing the debate on the notion of health, and on the way that it is monitored and assessed, especially during conflict. Data summarised here indicate that conventional explanations of poor health need to move to grounds that are often ignored, including the consequences for health of social, economic, and political exclusion, and the lack of basic freedoms, disempowerment, fear, and distress.<sup>116</sup>

Because of the current political and contextual constraints, no comprehensive agenda for improving health and services in the occupied Palestinian territory can be outlined with any confidence. Recommendations for improving Palestinian health-service performance and the quality of care will be outlined in the other reports in this Series, in addition to recommendations to assist international donors to develop policies that are appropriate to the extraordinary contextual needs of the population. Policies must take into account the need to protect Palestinians from the severe insecurities of continuous colonisation and war-like conditions, where the home front is the battlefield.<sup>5,101</sup> Neither the Palestinian National Authority nor the international community have succeeded in protecting Palestinian civilians either from Israeli aggression or from the consequences of recent inter-Palestinian violence.

Our account of Palestinian health under Israeli military occupation—the longest occupation in modern history—also calls for the protection of the basic human rights of Palestinians, in compliance with the Geneva Conventions, including the right to justice and to health. This demand for rights and justice is at the centre of plans to improve Palestinian health. However, it cannot be met by medical and humanitarian interventions alone, because such interventions leave the causes of ill health in the

occupied Palestinian territory untouched. We concur with the judgment of the World Bank that economic growth cannot be achieved and donor assistance will not produce durable results without serious improvements in security, dismantling Israeli restrictions on the movement of people and goods, and achieving progress on Palestinian reform and institution building.<sup>17</sup>

Finally, we return to where we started—the WHO Commission on Social Determinants of Health—and the evidence that it has assembled on the factors that affect health and identifying what can be done to improve health.<sup>18</sup> Our analysis shows that, although substantial aid can alleviate some of the short-term effects of a socioeconomic crisis, it does not tackle the root causes of ill health. Hope for improving the health and quality of life of Palestinians will exist only once people recognise that the structural and political conditions that they endure in the occupied Palestinian territory are the key determinants of population health.

#### Contributors

All authors have contributed to the conceptualisation and writing of this report, and have approved the final version.

#### Conflict of interest statement

We declare that we have no conflict of interest.

#### Acknowledgments

We thank the *Lancet* Palestine Steering Group (Iain Chalmers, Jennifer Leaning, Harry Shannon, and Huda Zurayk) for reading, discussing, and commenting on several drafts of this report; Graham Watt, Andrea Becker, Margaret Lock, and Karl Sabbagh for their valuable comments and support, and Will Boyce for the provision of the life satisfaction figure contained in this report; Medical Aid for Palestinians UK, University of Oslo, Institute of General Practice and Community Medicine, and the Norwegian Programme for Development, Research, and Education for their financial contributions that made the workshops related to this Series possible; and the anonymous reviewers of this report, whose comments improved this final draft substantially.

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