Health Inequity

Health Inequity:

A Crucial Issue Worldwide

Edited by
Abdesslam Boutayeb
and Abdellatif Maamri

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TABLE OF CONTENTS

LIST OF ILLUSTRATIONS

LIST OF TABLES

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INTRODUCTION

During the last two decades or so, health equity has become a central issue in many countries around the world. However, being a multidimensional problem, it is not easy to define and measure (Boutayeb 2021, 3–9). Indeed, as stressed by Amartya Sen (1998 Nobel prize in Economic Sciences), the equitable right to health is not limited to the provision of services and healthcare for all - it also requires the equality of capacities to convert the possibilities offered into concrete achievements. Individuals and societies must have the capability to lead the kind of life they desire (Sen 1985, 15–29). Consequently, health inequity is not solely confined to the difference between rich and poor countries.

> The Commission on the Social Determinants of Health (CSDH) stressed that 'Where systematic differences in health are judged to be avoidable by reasonable action they are, quite simply, unfair. It is this that we label health inequity. Putting right these inequities – the huge and remediable differences in health between and within countries – is a matter of social justice. Reducing health inequities is, for the Commission on Social Determinants of Health, an ethical imperative. Social injustice is killing people on a grand scale'. (WHO-CSDH 2008, 4).

In fact, in the quasi-totality of countries, health inequities are seen in terms of gender, milieu of residence, education level, wealth quintiles, and ethnicity groups (Boutayeb 2021, 3–9), (WHO-CSDH 2008, 4), (Working Group for Monitoring 2018, 3, 7–10). It is now well established and widely admitted that health equity is linked with Social Determinants of Health (SDH), which indicates the conditions in which an individual is born, grows, works, and ages. Thus, acting efficiently on Social Determinants of Health appears as the best pragmatic strategy to reduce health inequities as much as possible (Working Group for Monitoring 2018, 3, 7–10), (World Health Organisation 2011, 3–7).

The present book gives an illustration of health inequity in different domains and its link with Social Determinants of Health like milieu of residence, education level, wealth quintile, and ethnicity.

The first chapter is devoted to health inequities and Social Determinants of Health in countries of the WHO Eastern Mediterranean Region. It gives striking examples of inequities between countries in terms of vital indicators

like life expectancy, maternal mortality and infant mortality. The author of this chapter has also presented a multitude of inequity issues within countries, based on the effects of SDHs like milieu of residence (urban-rural), literacy and education level, income and ethnicity.

In the second chapter, the author considers specific inequalities in diabetes, reporting unacceptable inequalities in the diagnosis, treatment and monitoring of diabetes between different ethnic groups mainly in the USA and the UK. The effect of education, wealth, milieu and region of residence on diabetes prevalence was also analysed in some countries. Obviously, this chapter is linked with the previous one since the Eastern Mediterranean Region is one of the regions with the highest prevalence of diabetes.

The third chapter deals with the deepening of inequalities by the COVID-19 pandemic, showing that this infectious disease not only affected vulnerable people in terms of health conditions and death but also economically and socially burdened individuals and families with low or no income. The authors of this chapter point out the necessity of building a resilient health system.

The fourth chapter complements the third chapter by concentrating on the ways to improve access to family planning services in Morocco in the context of the COVID-19 pandemic. Practical and adapted recommendations are given by the authors.

The fifth chapter reviews and analyses the role of public health programs in achieving health equity in Morocco. The author indicates that Morocco was one of the first countries to implement public health programs aiming to reduce health inequalities by acting on SDHs. However, there is still a lack of health equity marked by a disparity in both health indicators and the supply of care between settings and regions.

The sixth chapter is dedicated to persons aged 60 years and over in Morocco, and inequity in the conditions of life. The authors show that, among older people, the most vulnerable persons cumulate disadvantages which are emphasized by socio-economic inequalities, territorial disparities and health inequities. In order to overcome this unacceptable situation, the authors suggest that health policy makers in Morocco should act urgently and efficiently on social determinants of health to ensure healthy lives and promote well-being for all people of all ages.

Finally, the book ends with chapter seven which reviews inequalities and disparities in human development globally and in Morocco particularly. This is an important chapter completing the other chapters and somehow summarising the pathways for optimal and efficient strategies aiming to act on the main social determinants like milieu of residence (urban-rural), level of education, wealth quintiles and territoriality (regions, provinces,

municipalities) in order to reduce all kinds of inequalities, especially those constituting a roadblock for the achievement of sustainable development. The analysis carried out in this chapter is mainly based on disaggregated data provided by human development reports (HDRs), released regularly by the United Nations Development Programme (UNDP) since 1990, and mainly HDR 2019, devoted principally to inequalities in human development in the 21st century and titled "HUMAN DEVELOPMENT REPORT 2019: Beyond income, beyond averages, beyond today: Inequalities in human development in the 21st century" (UNDP 1990, 1–141), (UNDP 2019, 1–366), (UNDP 2021-2022, 1–320).

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LIST OF ABBREVIATIONS

COVID-19	Coronavirus Disease 2019
CSDH	Commission of Social Determinants of health
DHS	Demographic Health Survey
FAO	Food and Agriculture Organization of the United Nations
HCP	High Commission for Planning
HDI	Human Development Index
IHDI	Inequality-adjusted Human Development Index
HDR	Human Development Report
GII	Gender Inequality Index
IDF	International Diabetes Federation
ILO	International Labour Organisation
IMF	International Monetary Fund
MICS	Multiple Cluster Index Survey
NCD	Non-communicable Disease
OECD	Organisation for Economic Co-operation and Development
OOP	Out of Pocket
UNDP	United Nation Development Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNESCWA	United Nations Economic & Social Commission for Western Asia
UNFPA	United Nation Population Fund
UNICEF	United Nations Children's Fund
UDHR	Universal Declaration of Human Rights
SDH	Social Determinants of Health
USAID	United States Agency for International Development
WHO	World Health Organization
WB	World Bank

CHAPTER ONE

INEQUALITIES WITHIN AND BETWEEN THE WHO EASTERN MEDITERRANEAN COUNTRIES

ABDESSLAM BOUTAYEB

Introduction

Huge socioeconomic inequalities, health inequities, and territorial disparities are seen between and within countries of the WHO Eastern Mediterranean Region. In general, the quasi-totality of indicators considered shows an inequitable distribution where the six rich Gulf countries (Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates) are opposed to the five least developed countries (Afghanistan, Djibouti, Somalia, Sudan and Yemen), while the remaining eleven countries (Egypt, Iran, Iraq, Jordan, Lebanon, Libya, Morocco, Pakistan, Palestine, Syria, and Tunisia) appear in one medium group or two medium groups. As well as the severe inequities seen between countries, huge inequities and disparities are seen within countries in the Eastern Mediterranean Region.

Method

In this chapter, analysis of inequities is based on data provided by international organisations like the World Health Organisation (WHO), the United Nations Development Programme (UNDP), the World Bank (WB) and the International Labour Organisation (ILO) and well-known surveys such as Demographic Health Surveys (DHS) and Multiple Indicator Cluster Surveys (MICS). Descriptive statistics and indicators like the gap, ratio, Gini index, concentration index, and index of dissimilarity are used for comparison between and within countries.

Results and Discussion

Analysis shows that an inequitable pattern is seen in the quasi-totality of indicators considered, like the maternal mortality ratio and infant mortality rate, life expectancy at birth, the Human Development Index, children's nutritional status, early marriage and adolescent fertility, NCDs, different

levels of education, labour force participation of women, and others. Incredible gaps are found between and within countries. Indeed, the maternal mortality ratio is 276 times higher in Somalia (829 deaths per 100,000 live births) than in the United Arab Emirates (UAE) (3 deaths per 100,000 live births); life expectancy in Qatar (80 years) is 15 years higher than in Afghanistan or Sudan (65 years); the percentage of children stunted is more than 20 times higher in Yemen (47%) than in Qatar (2.3%); the HDI in the UAE (0.89) is nearly double the HDI in Yemen (0.47); the Gross National Income per capita is 44 times higher in Qatar (91560 PPP US$) than in Afghanistan (2085 PPP US$); and similar gaps are seen in most of the considered indicators. Gaps can also be seen within countries: in Morocco, the maternal mortality ratio in rural areas (111 deaths per 100,000 live births) is 2.5 times higher than in urban areas (44.6 deaths per 100,000 live births); in Yemen, girls with no education (17.7%) are 11 times more susceptible to begin childbearing in adolescence than their counterparts with higher education (1.6%); in Afghanistan, men's labour force participation (83.6%) is 4.3 higher than that of women (19.3%); in Iraq, the percentage of stunted children shows a ratio of 2 between the poorest (13%) and richest (6%) children, between children whose mothers have no education (14%) compared to children whose mothers have a secondary level of education (7%); and similarly between children living in Central-South Iraq (11%) and children living in Kurdistan (5%). Similar inequities are seen in Egypt, Jordan, Sudan, Tunisia, Yemen, and other countries.

Conclusion

The unacceptable inequities between and within countries call for more aid and cooperation from rich countries to the least developed countries, and action on social determinants for a constructive transfer and equitable distribution of wealth in each country.

1.1 Introduction

Among the six regions of the World Health Organisation (WHO), the Eastern Mediterranean Region (EMR) is one of the regions with huge socioeconomic inequalities, health inequities, and territorial disparities within and between its countries. One of the most striking examples is given by the maternal mortality ratio (MMR), which is 183 times higher in Somalia (732 deaths per 100,000 live births) than in Kuwait (4 deaths per 100,000 live births), showing a gradient with an exponential trend (Fig. 1-1) (WHO-EMRO 2022, 1). The 21 countries considered can be subdivided into three sub-groups: the first group containing Lebanon, Libya and the six

countries of the Gulf (Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates), with an MMR less than 20 deaths per 100,000 live births; the second medium group with 8 countries in which the MMR varies between 20 and 70 deaths per 100,000 live births; and the third group formed of Morocco, Pakistan and 5 least developed countries (Afghanistan, Djibouti, Somalia, Sudan and Yemen), with very high rates of MMR. Inequities are also rampant within countries - in Morocco, for example, in 2019, the maternal mortality ratio in rural areas (111 deaths per 100,000 live births) was 2.5 times higher than in urban areas (44.6 deaths per 100,000 live births) (Boutayeb 2011, 3), (Boutayeb, Lamlili and Boutayeb 2021, 74–84), (Boutayeb, Boutayeb and Lamlili 2018, 3–5).

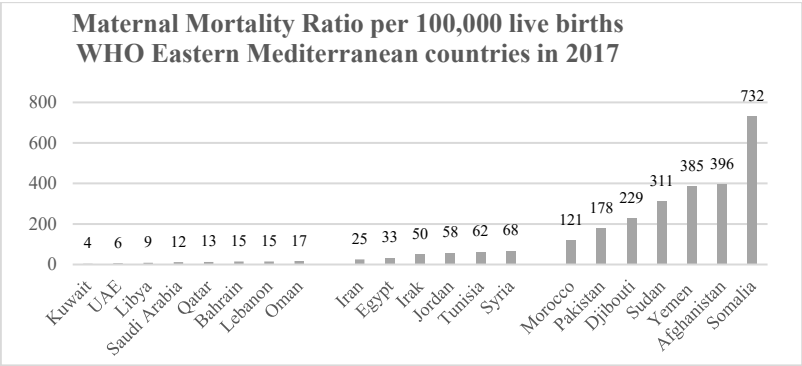

Fig. 1-1: Maternal Mortality Ratio in the WHO Eastern Mediterranean countries in 2017
Source: (WHO-EMRO 2022, 1)

Another illustrative example is given in terms of infant mortality as indicated by Fig. 1-2, which shows that the Infant Mortality Rate (IMR) in Afghanistan (110 deaths per 1000 live births) is nearly 18 times higher than the IMR in Qatar (6.2 deaths per 1000 live births) and, more generally, infants born in Afghanistan, Djibouti, Iraq, Pakistan, Somalia, Sudan and Yemen are much more exposed to death before their first birthday than infants born in the other Eastern Mediterranean countries. With the IMR less than or equal to 10 deaths per 1000 live births, five countries (Bahrain, Kuwait, Lebanon, Qatar and the United Arab Emirates) show a good performance. However, they can still do better, as stressed by the Commission on Social Determinants of Health in the EMR (World Population Review 2021,1–5), (WHO-EMRO 2021, 7–13).

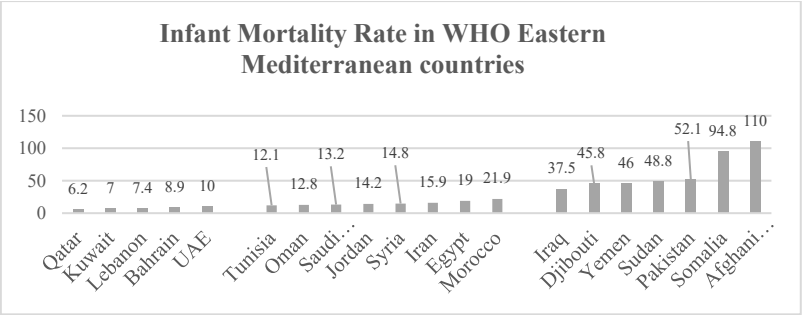

Fig. 1-2: Infant mortality rate in countries in the WHO Eastern Mediterranean Region
Source: (World Population Review 2021, 1–5)

The two previous examples can be completed with a very similar example, showing the huge gap in gross national income per capita (World Bank 2022, 1). As indicated by Fig. 1-3 below, the set of 19 countries considered can be subdivided into three sub-groups: the first group of the six rich Gulf countries, the second group of six countries, and finally the last group of six countries which are Morocco, Pakistan, and the four least developed countries (Afghanistan, Djibouti, Sudan and Yemen).

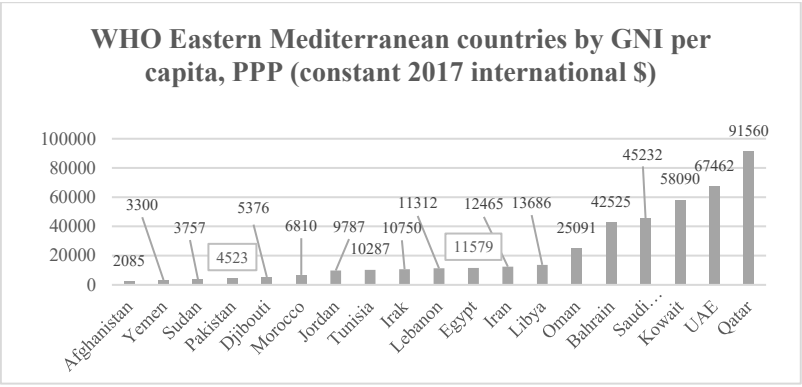

Fig. 1-3: Gross National Income per capita in countries of the WHO Eastern Mediterranean Region
Source: (World Bank 2017, 1)

As well as the huge inequities seen between Eastern Mediterranean countries, there are similar inequities and disparities within each country according to the milieu of residence (urban-rural), income level, education

level and territorial disparities (governorates, regions, states, provinces) (WHO-EMRO 2015, 3–6), (Khadr, Rashad, and Shawki 2019, 15–88), (Kotti, Cherif and Elloumi 2021, 8), (Boutayeb and Helmert 2011, 7), (Boutayeb 2006, 2), (Boutayeb, Lamlili, and Boutayeb 2015, 1588).

1.2 Method

In this chapter, the analysis of inequities is based on data provided by international organisations like the World Health Organisation, the World Bank, the International Labour Organisation and the UNDP, and well-known surveys such as Demographic Health Surveys (DHS) and Multiple Indicator Cluster Surveys (MICS). Descriptive statistics and indicators like the gap, ratio, Gini index, concentration index and index of dissimilarity are used for comparison between and within countries.

1.3 Results and Discussion

1.3.1 Gap between and within countries in terms of the Human Development Index

In addition to what has been said in the introductory section on severe inequities between countries in terms of maternal mortality, infant mortality, and per capita income, Fig. 1-4 below shows that, more generally, the countries of the Eastern Mediterranean region can be classified according to the four levels of human development (low, medium, high, and very high) (UNDP 2020, 343–346). The six Gulf countries have a very high level of human development, while Egypt, Iran, Jordan, Lebanon, Libya, Palestine, and Tunisia have a high level of human development. Iraq, Morocco, Pakistan and Syria belong to the medium human development group, and Afghanistan, Djibouti, Sudan and Yemen are the least developed countries.

Moreover, according to the inequality-adjusted Human Development Index (IHDI), in 2019, the overall loss in the Human Development Index (HDI) due to inequality reached 19.5% in Tunisia, 19.7% in Iraq, 29.7% in Egypt, 31.1% in Pakistan, 31.7% in Yemen and 34.7% in Sudan. It is sad to notice that the loss in the HDI due to inequality is higher in the least developed countries than in countries with high human development (UNDP 2016, 206–209).

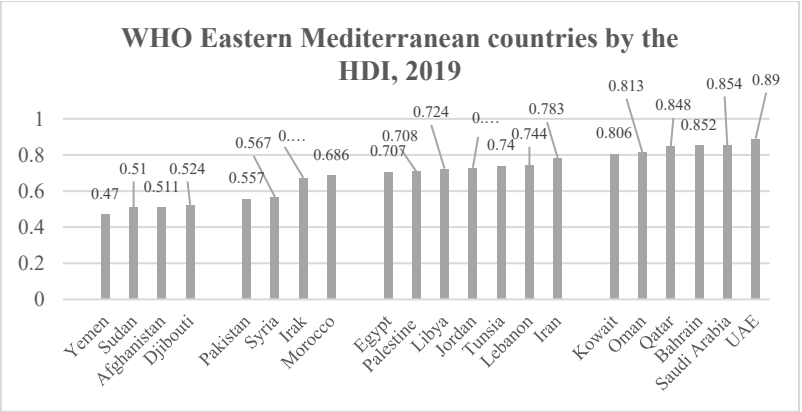

Fig. 1-4: WHO Eastern Mediterranean countries ranked by the HDI, 2019
Source: (UNDP 2020, 343–346)

In addition to the huge gaps in terms of human development between countries, large variations are seen in the distribution of the HDI within each country. For example, in 2017, the HDI computed for the 12 Moroccan regions showed a clear subdivision into three sub-groups of regions, according to the level of the HDI (Fig. 1-5) (Boutayeb, Boutayeb and Lamlili 2021, 26), (Boutayeb, Lamlili, Ben ELMostafa and Boutayeb 2016, 5).

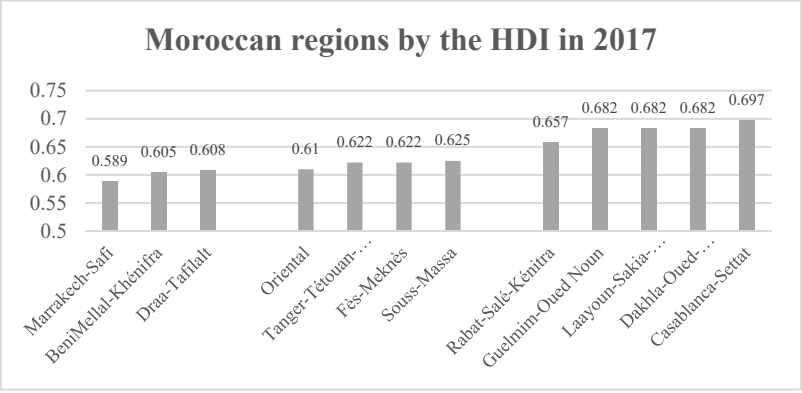

Fig. 1-5: Moroccan regions by the HDI, 2017
Source: (Boutayeb, Boutayeb and Lamlili 2021, 26)

1.3.2. Life expectancy at birth and gaps between countries ranked by the gross national income level

Fig. 1-6 below shows a relation between life expectancy at birth and the gross national income (GNI) per capita in different countries. One can see that rich Gulf countries (Bahrain, Kuwait, Oman, Saudi Arabia, Qatar and the UAE) have an obviously higher life expectancy at birth than the least developed countries (Afghanistan, Djibouti, Pakistan, Sudan and Yemen). However, the nonlinear relation indicates different patterns, which follow here. (1) Countries with a very different GNI per capita like Jordan (9787 $PPP), Saudi Arabia (45232 $PPP) and Kuwait (58090 $PPP) have the same life expectancy at birth (75 years). The same remark applies to Morocco (6810 $PPP), Tunisia (10287 $PPP), Iran (12465 $PPP) and Bahrain (42525 $PPP), which have the same life expectancy (77 years). (2) With nearly the same level of GNI per capita (15579 and 15312 $PPP), Egypt (72 years) and Lebanon (79 years) exhibit a difference of 7 years in life expectancy at birth. As stressed by the Commission on Social Determinants of Health in the Eastern Mediterranean Region, each country can do something, do more, or do better to improve its level of life expectancy in particular, and its equitable level of health in general, according to its income level and socioeconomic conditions (World Bank 2020, 1), (WHO-EMRO 2021, 7–13).

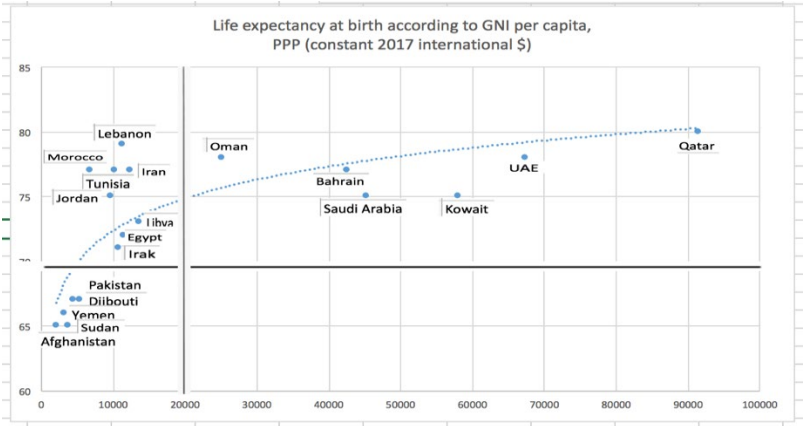

Fig. 1-6: Life expectancy at birth by Gross National Income per capita in countries of the WHO Eastern Mediterranean Region
Source: (World Bank 2020, 1)

1.3.3 Gaps in adolescent fertility between and within countries in the EMR

One of the crucial problems facing health decision-makers in Eastern Mediterranean countries is early marriage and adolescent fertility. On top of this problem in terms of children's rights, Fig. 1-7 shows a very inequitable distribution of the fertility rate per 1000 girls aged 15-19. In 2017, the fertility rate was less than 7 per 1000 girls aged 15-19 in four countries (Kuwait, Lebanon, Tunisia and the UAE) while the rate was between 10 and 20 in a second group (Bahrain, Libya, Oman, Qatar and Saudi Arabia). In a third group (Djibouti, Iran, Jordan, Morocco, Pakistan and Palestine), the rate was between 20 and 50 per 1000 girls aged 15-19 years and finally, the fertility rate was over 50 in Afghanistan, Egypt, Iraq, Somalia, Sudan, Syria and Yemen (WHO-EMRO 2022,1).

Despite the adoption of laws stipulating the age of marriage at 18 years for young men and women in some countries, recent statistics show that percentages of early marriages remain high. This is the case in Morocco where the Constitution of 2011 fixed marriage at 18 years but, in reality, thousands of early marriages are registered each year (Boutayeb, Lamlili and Boutayeb 2021, 84), (Ministry of Health in Morocco 2018), (Boutayeb 2011, 6).

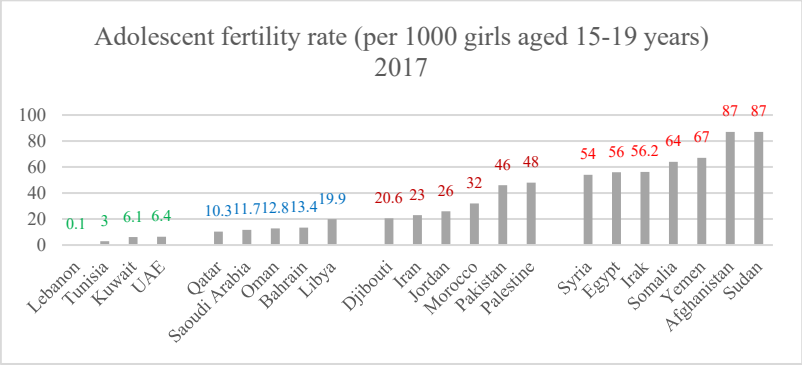

Fig. 1-7: Adolescent fertility rate (per 1000 girls aged 15-19 years), 2019
Source: (WHO-EMRO 2022, 1)

Early marriage and adolescent fertility also show huge inequities within each Eastern Mediterranean country. Fig. 1-8 clearly illustrates the inequitable distribution of the percentage of Moroccan adolescents who had started childbearing according to the usual factors like milieu of residence, level of

education and regions. Severe inequity is confirmed by the very high values of indices of dissimilarity (ID) (Ministry of Health in Morocco 2018, 62).

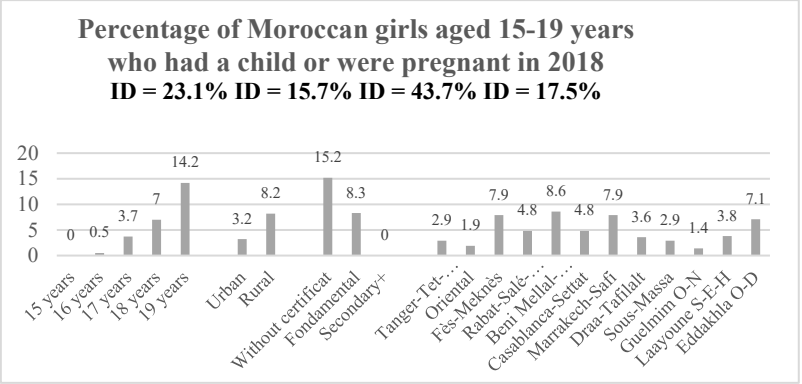

Fig. 1-8: Adolescent girls aged 15-19 years who had started childbearing in Morocco, 2018
Source: (Ministry of Health in Morocco 2018, 62)

Early marriage and adolescent fertility are particularly very highly inversely correlated with the level of education. Indeed, Fig. 1-9 shows that in Yemen, girls with no education (17.7%) are 11 times more susceptible to begin childbearing in adolescence than their counterparts with higher education (1.6%). A similar gap is seen in Iraq, where the adolescent fertility rate is nearly 10 times higher in girls with pre-primary or no education (123) than in girls with upper secondary level education or more. Similarly, in Yemen and Iraq, adolescent fertility is higher in rural areas compared to urban ones, and also varies with regards to region (USAID 2013, 49), (UNICEF 2018, 12).

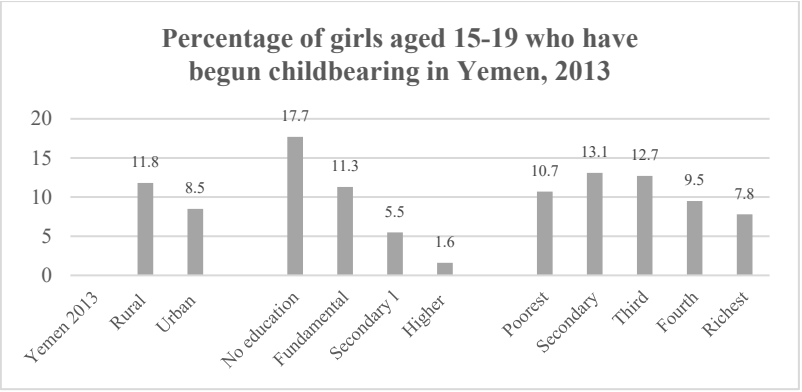

Fig. 1-9: Adolescent fertility in Yemen, 2013
Source: (USAID-DHS 2013, 49)

1.3.4 Children's nutritional status between and within countries in the EMR

Huge gaps between and within Eastern Mediterranean countries can be seen in terms of nutritional status. As illustrated by Fig. 1-10 below, the percentage of children under five who were stunted in 2019 shows an inequitable distribution by countries. It was less than 10% in 9 countries (Bahrain, Iran, Jordan, Kuwait, Lebanon, Palestine, Qatar, Saudi Arabia and Tunisia), between 10% and 25% in five countries (Egypt, Iraq, Libya, Morocco and Oman), and over 33% in six countries (Afghanistan, Djibouti, Pakistan, Somalia, Sudan and Yemen). Once more, the same pattern sets rich countries apart from least developed countries.

Stunting in children under five is also inequitable within countries. For example, the percentage of the poorest Iraqi children suffering from stunting (13%) is nearly double that of the richest Iraqi children (6%) and a similar ratio is seen between children whose mothers have no education (14%) compared to children whose mothers have a secondary level of education (7%). Territorial disparity indicates that children living in Central-south Iraq (11%) are more than twice as susceptible to be stunted than children living in Kurdistan (5%) (UNICEF-MICS 2018, 25–27).

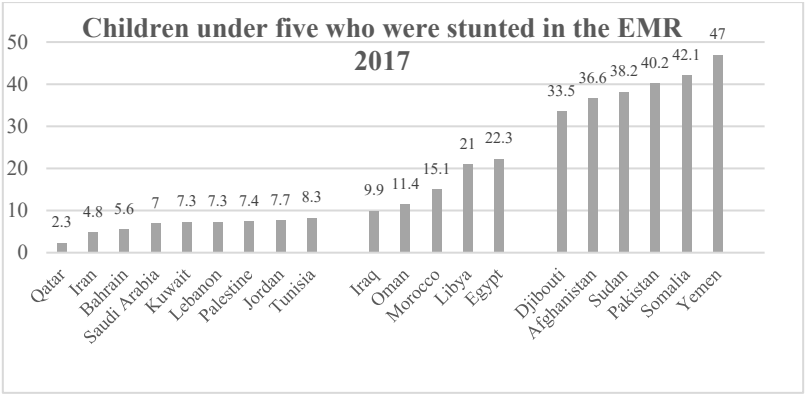

Fig. 1-10: Children who were stunted in the EMR, 2019
Source: (WHO-EMRO 2022, 1)

1.3.5 Obesity in adults aged 18 years or over

Obesity or being overweight lead to adverse metabolic changes such as insulin resistance, and increasing blood pressure and cholesterol. Consequently, they promote cardiovascular diseases (CVDs), diabetes and many types of cancer. During the last few decades, industrialization, economic development, and market globalization have accelerated changes in diet and lifestyles, especially in developing countries in transition. Most of the Eastern Mediterranean countries are engaged in demographic and epidemiological transitions. Consequently, the combinations of a sedentary lifestyle and an unhealthy diet has significantly contributed to a rapid and crucial increase in overweight and obesity especially among women.

Fig. 1-11 below shows that 8 countries have a percentage of obesity in adults over 30%, and in another 7 countries, the percentage of obese adults is between 25% and 30%. The figure also clearly shows that the least developed countries have the lowest percentages of obesity, while countries like Egypt, Jordan, and Iraq exhibit high levels of obesity despite their medium level of income per capita.

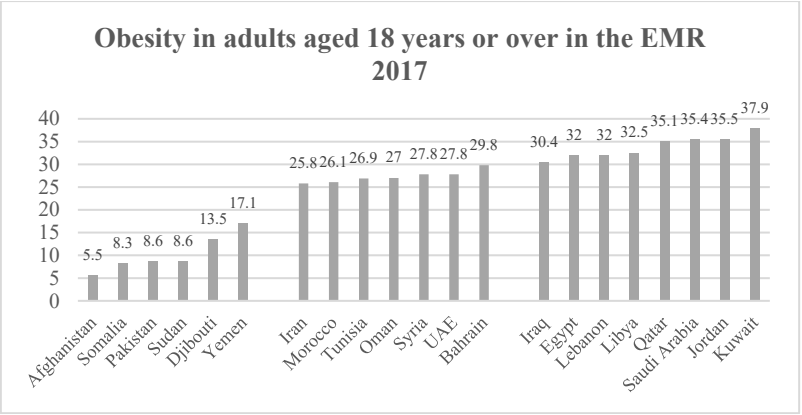

Fig. 1-11: Obesity (%) in adults aged 18 years or over in the EMR, 2019
Source: (WHO-EMRO 2022, 1)

This is especially seen in women. Fig. 1-12 below shows that in Egypt, a large proportion of women aged 15-59 years suffer from obesity. Although the degree of obesity varies with income, education, region, and milieu of residence, obesity remains a challenge for health decision-makers in Egypt.

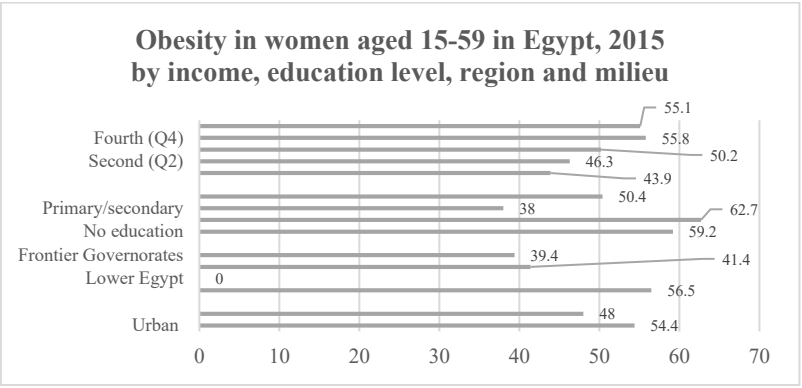

Fig. 1-12: Obesity (%) in women aged 15-59 years in Egypt, 2015
Source: (USAID-DHS 2015, 71)