Social Determinants of Reproductive Health in Morocco

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Abstract

Moroccan population has known a growing demographic trend. However, beyond the global tendency, reproductive health remains characterised by inequalities and disparities between urban and rural, rich and poor, developed and deprived regions.In this study, we relied mainly on data and statistics provided by the last five censuses, the four Demographic Health Surveys, Multiple Indicator Cluster Surveys, reports of international bodies and publications dealing mainly with health and development in the Arab World. During the last decades, fertility declined due to different parameters. Infant mortality decreased and should reach the corresponding Millennium Development Goal whereas maternal mortality has stayed nearly constant. The achievements accomplished in reproductive health remain insufficient. Family planning and contraception policies need to reach more women; and antenatal and postnatal care should be enhanced especially towards poor women living in rural areas and deprived regions.

Résumé

La population marocaine a connu une croissance démographique soutenue. Cependant, au-delà de la tendance globale, la santé reproductive demeure caractérisée par des inégalités et disparités entre urbain - rural, riche - pauvre, régions développées- régions sous développées. Dans cette étude, nous nous sommes basés sur les données et statistiques fournies par les recensements, les Enquêtes de Santé et Démographie, les Enquêtes à Indicateurs Multiples, les rapports des organismes internationaux et les publications traitant essentiellement des thèmes de santé et développement. Durant les dernières décennies, la fertilité a baissé pour différentes raisons, la mortalité infantile a diminué et devrait atteindre les Objectifs du Millénaire pour le Développement mais la mortalité maternelle est restée presque constante. Les efforts accomplis en matière de santé reproductive demeurent insuffisants. La politique de planification familiale et de contraception doit toucher plus de femmes, les soins prénatals et postnatals devraient augmenter pour atteindre le maximum de femmes et plus particulièrement celles vivant dans les zones rurales difficilement accessibles.

Key words: Reproductive health, social determinants, inequity, regional disparities

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Background

Morocco is a low-middle income country situated in North Africa with coasts on the Atlantic Ocean and the Mediterranean Sea. The Moroccan population has known a growing trend, passing from less than 12 million in 1960 to 30 million in 2005 (Table1)[1]. The rates of total fertility, crude birth, crude death and infant mortality have been decreasing during the last three decades[2]. Accordingly, the age structure is changing and the country is experiencing a transition on different levels (demographic, geographic, economic, political, and epidemiological). As stressed by the Worl Bank "in spite of the progress made in reducing income poverty, social indicators in Morocco are well below those of comparable countries and, within the country, there are enormous disparities in access to social services between urban and rural areas"[3].

Method

In this paper, we relied mainly on data and statistics provided by the last five censuses (1960, 1971, 1982, 1994, 2004)[1], the four Demographic Health Surveys (1987, 1992, 1995, 2003-2004)[2], reports released by international organisms such as the World Bank[3], World Health Organization (WHO)[4-6], the United Nations Development Programme (UNDP)[7], UNICEF[8] and other publications dealing principally with health and development in the Arab World.

Results and Discussion

Demographic trends

During the last four decades, the Moroccan population has known nearly a threefold increase, from 11.6 million in 1960 to 29.9 million in 2004. However, the annual growth decreased from 2.8% between 1960 and 1971 to 1.4% between 1994 and 2004. The urban/ rural repartition has also known an important evolution, shifting from a rural (70%) dominance in 1960 to an urban (55%) dominance in 20041 (Table 1).

According to the last census in 2004, the Moroccan population is young, with 38% under the age of 15 years and 21% between 15 and 24 years. Table 2 shows that the country is undergoing a demographic transition leading to a new age structure with less people in the youngest class (0-14) and an increasing size of the elderly class (60+). During the next decades, the situation will be challenging for policy makers who will have to deal with the needs of young people in terms of education, health and employment; and to provide welfare and social care for the growing class of elderly people. Fertility and mortality are the main determinants of the age structure evolution, whereas the shift from rural to urban dominance is caused by socio economic parameters such as access to employment, social services, health and education facilities, etc...

Reproductive trends and health indicators

Life expectancy at birth has increased from 65 years in 1980 to 70.4 years in 2005 whereas the annual population growth rate decreased from 2.6 in the 1980s to 1.3 in 2005. These outputs are results of a decreasing trend in fertility, crude birth, crude death and infant mortality. Indeed, global total fertility (average number of children who would be born to a woman if she were to live to the end of her childbearing years) has decreased from nearly 6 children in 1980 to 2.5 children in 2005 independently of differences urban/ rural and poor/rich women (See Figure 1 for comparison with other countries).

The fertility decline is mainly attributable to factors such as the use of contraception and the delayed age of marriage. For instance, between 1980 and 2004, the percentage of married women using contraception increased from 19% to 63% ; and during the same period, the proportion of married women aged 15-19 (respectively 19-24) declined from 21% to 11% (respectively from 64% to 36%)[2]. However, these factors are interrelated with cultural and socio-economic factors such as the access of young girls to higher education, unemployment, unaffordable expenses of marriage for men (dowry, ceremony, festivity) and high cost of child bringing up. Culturally, more and more girls are having access to higher education and young women are getting jobs with responsibility. Consequently, the age of marriage is delayed and women are opting for fewer pregnancies. Economically, many young men are deterred from marriage because of it's direct and indirect expenses (dowry, festivity, appropriate housing, etc…). Then for young couples who succeed in getting married, the high cost of a decent living standard (food, housing, education, health, transport, leisure, etc…) becomes a real determinant of the

Tables

Table 1: Demographic and urban/rural evolution of the Moroccan population[1]

Year of Census	Population (millions)			Annual growth rate
	Urban (%)	Rural (%)	Total	
1960	3.4 (29%)	8.2 (71%)	11.6	
1971	5.4 (35%)	9.9 (65%)	15.3	2.8%
1982	8.7 (43%)	11.7 (57%)	20.4	2.6%
1994	13.4 (51%)	12.7 (49%)	26.1	2.1%
2004	16.5 (55%)	13.4 (45%)	29.9	1.4%

Table 2: Evolution of the age structure in Morocco[1,2]

Year Age group	1950	1975	2000	2025*
0-14	44.4%	47.2%	34.6%	23.8%
15-59	51.0%	47.6%	59.0%	65.0%
60+	4.6%	5.2%	6.4%	11.2%

* predicted

Table 3. Child mortality rates according to socioeconomic characteristics[2]

Socioeconomic characteristics	Neonatal Mortality	Postnatal Mortality	Infant Mortality	Child Mortality	Infant+ child mortality
Male	33	18	51	9	59
Female	23	14	37	11	48
Residence					
Urban	24	9	33	5	38
Rural	33	22	55	15	69
Mother's education					
Illiterate	33	19	52	11	63
Primary	21	11	33	10	42
Secondary or higher	17	6	23	4	27
Wellbeing quintile					
Poorest	38	24	62	16	78
Middle	25	12	37	10	47
Richest	19	5	24	2	26

Table 4: Evolution of the crude birth rate[2]

Census/Survey	Period	Crude births per1000
Census	1960	53.0
EOM(Survey)	1962	46.1
ENFPF(Survey)	1979-1980	41.0
EDPR(Survey)	1986-88	31.6
ENPS(Survey)	1992	29.2
ENSME(Survey)	1997	23.6
EPSF(Survey)	2003-2004	21.1

EOM : Enquête à Objectifs Multiples (Survey with Multiple Objectives)
ENFP : Enquête Nationale de Fécondité et de Planification Familiale (National Survey on Fecondity and Family Planning)
EDPR : Enquête Démographique à Passages Répétés (Repeted Demographic Survey)
ENPS : Enquête Nationale sur la Population et la Santé (National Survey on Population and Health)
ENSME : Enquête Nationale sur la Santé de la Mère et de l'Enfant (National Survey on Mother and Child Health)
EPSF : Enquête sur la Population et la Santé Familiale (Suevey on Population and Family Health)

Table 5: Share of income or consumption[6,7]

Poorest 10%	2.6%
Poorest 20%	6.5%
Richest 20%	46.6%
Richest 10%	30.9%
Ratio richest 10% to poorest 10%	11.7

Table 6: Health indicators by quintiles[1,2,7,8]

Quintile Health Indicator (around 2005)	Poorest fifth	Middle fifth	Richest fifth
Total fertility rate	3.3	2.5	1.9
Child mortality rate(under five) per 1000 births	78	47	26
% of births assisted by skilled personnel	30	70	95
% of newly mothers who received antenatal care	40	71	93
% of births delivered at home	71	32	6
% of married women using modern contraception	51	55	57
% of adolescents 15-19 pregnant or already mothers	9	8.6	2.6

Table 7: social determinants and urban-rural contrast[2,7,11]

Social determinant	Urban	Rural
% of population below national poverty line	12	27
% of population using safe drinking water	99	56
% of population using adequate sanitation facilities	83	31
% of population able to afford essential medical care	70	55
% of poor women's literacy	39	12

Table 8: Regional disparity[2]

Region	Births attetended by skilled personnel	Births in medical centres	Inhabitants per physician	Illiterate women
Grand-Casablanca	91.1 %	87 %	999	24.3 %
Rabat-Sale-Zemmour-Zaer	85.3 %	89 %	836	33.4 %
Marrakech-Tensift-AlHouz	48.0 %	47 %	3329	64.1 %
Taza-AlHoceima Taounat	48.5 %	45 %	4587	65.4 %
National Average	63.0 %	64 %	2084	50.1 %

number of children wanted. This tendency is found particularly among people with unsecured income (unemployed, part time workers, farmers with non irrigated land), educated couples and those of the middle class.

The previous factors have also affected the crude birth rate which decreased from 5.3% in 1960 to 2.1% in 2004 (Table4). Whereas, the crude death rate has seen a similar decrease from 0.95% in 1960 to 0.63% in 2004, due mainly to a general improvement of health conditions (vaccination, food and diet enhanced with micronutrients, hygiene, eradication and control of communicable diseases).

Infant mortality rate decreased from 140 per 1000 births in 1980 to 37 in 2005. As indicated in Table 3, social status is a major determining factor of survival for Moroccan children. Illustration is particularly given by post-natal mortality which is mainly due to factors such as food, primary health care and hygiene. It is striking to see that for postnatal mortality:

- children belonging to the poorest quintile are five times more likely to die than children living in the richest quintile
- A child of an illiterate woman is three times more likely to die than a child of a woman with secondary or higher level of education
- Post natal mortality is 2.5 times greater in rural areas than in urban cities.

Maternal mortality ratio (MMR) decreased from 332 per 100 000 in 1980 to 228 in 1990 but since then it has remained nearly constant, indicating, in particular, that the goal fixed by the Millennium Development Goal(MDG5) to "reduce by three quarters the MMR between 1990 and 2015" and "achieve universal access to reproductive health" is difficult to realize. As indicated by a WHO review on social determinants of health in seven Mediterranean countries, the main reasons why MMR remained quasi constant in Morocco during nearly two decades can be summarised as follows[9]:

- Poor health infrastructure, with only one maternity bed for 2770 women of childbearing age and only 65 midwives and fully trained attendants for the entire rural population
- The remoteness of health facilities and the absence of roads and means of transport which hinder the emergency referral of pregnant women
- Insufficiency of health personnel, yielding poor quality health services that may deter women from seeking heath care. A 1996 study in the northern provinces of Morocco found that people may be deterred from using health services by the behaviour of health personnel, like poor treatment, disdain and even humiliating behaviour towards patients in general and the socially disadvantaged in particular[10].
- Financial barriers as stressed by a study in 1997/1998 which found that almost a quarter of Moroccan women mentioned money as the reason for not consulting a doctor when ill. The study mentioned also the difficulty for women to make health decisions on their own. Indeed, it was found that 68% of rural women and 34% of urban women had to be accompanied during medical consultation[11].

More efforts are needed to improve health indicators associated with women's reproductive health and maternal mortality, namely: MMR, proportion of births assisted by skilled medical personnel, antenatal care visits, adolescent birth rate, contraceptive prevalence and unmet need for family planning.

Reproductive health and social determinants.

As stressed by the WHO Commission on Social Determinants of Health in its report "Closing the gap in a generation"6, health is influenced by the socio-economic conditions in which people are born, grow, live, work, reproduce and age. In particular, reproductive health is quantitatively and qualitatively determined by conditions such as poverty, income, employment, food security, housing, education, discrimination, and the women status in general. In a previous paper dedicated to human development and health indicators in the Arab region, we carried out a data analysis on life expectancy at birth, infant mortality, maternal mortality, expectation of lost healthy years, deliveries attended by skilled attendants, pregnant women receiving prenatal care, number of inhabitants per physician, percentage of children under weight and data related indirectly to

health such as percentages of literacy and enrollment. It was seen that very few Arab countries do globally worse than Morocco[12]. In another study devoted to infant mortality in 16 Arab countries, socio-demographic, perinatal and economic factors were considered, showing that Egypt, Morocco, Sudan, Yemen and Iraq were classified in the group with the highest infant mortality rate [13]. Figure 2 shows how Morocco compares with other countries in terms of infant mortality and its reduction between 1980 and 2001.

Despite a substantial improvement in health indicators globally during the last decades, the Moroccan administration has embarked on the third millennium under the burden of inequity and large disparities between rich and poor, urban and rural, and developed regions opposed to deprived ones.

Rich-poor:

The country is characterised by huge inequalities in terms of income and consumption. The richest 20 % of the population absorb nearly 50% of income and consumption yielding an 11.7 ratio between the richest 10% and the poorest 10% of the population[7] (Table 5). In terms of reproductive health and its determinants, the gap between rich and poor is illustrated by a multitude of health indicators such as the number of antenatal care visits, use of modern contraception, births attended by skilled medical personnel, adolescents pregnant or already mothers, infant mortality and others [2,8,12,14] (Table 6).

Rural-urban

During more than 50 years of independence, Moroccan policy makers have given little attention to the rural world. Consequently, by the beginning of the third millennium, only 56% of rural populations have access to safe drinking water, 31% have access to adequate sanitation and more than 40% are unable to afford essential medical care. A dramatic urban-rural contrast is seen in access to education, housing, drinking water, sanitation, economic opportunities and social services in general (Table 7). Given the fact that nearly half of the Moroccan population lives in under-served rural areas, the consequences on reproductive health are obviously negative.

Regional disparities:

Sixty years ago, the country's regions used to be classified into two classes: “useful regions” and “non useful regions”. By the dawn of the third millennium, one can still state that “Morocco is a country of contrasts and dualistic development where debilitating urban and rural poverty coexists alongside modern urban centres”[15]. Indeed, as illustrated in Table 8, exorbitant disparities exist between regions in access to basic services such as education and health. A woman living in the deprived region is twice unlikely to give birth in a medical centre or to be assisted by skilled medical personnel than a woman living in a developed region. Similarly, the ratios of illiterate women and the number of inhabitants per physician are nearly 3:1 and 5:1 respectively.

Women status

In developing countries, it is often stressed that economic development will remain disabled unless women status is enhanced to allow them to fully participate economically, politically and socially side by side with men. According to the author of a study in Islamic and Arabic countries[16], the low social and economic status of girls and women is a fundamental determinant of maternal mortality and reproductive health in many Islamic and Arab countries. Aware of the importance of women empowerment, the Moroccan parliament adopted in 2004 a new family code (Moudawana). Hoping to enhance the woman status, the reform stipulates amongst other the following women rights:

- The minimum legal age of marriage is 18 (it used to be 15 for women and 18 for men)
- Polygamy needs the judge's authorisation and the consent of the man's first wife
- The principle of divorce is by mutual consent and the right to divorce is a prerogative of both men and women under judicial supervision
- Responsibility for the family is jointly shared by the husband and the wife.
- Women have the “self marriage guardianship”. They have also the right to impose a condition during the first marriage preventing polygamy.

In the field, however, despite the existence of this ideal framework, pragmatic and executive procedures need a long time before women can pick the fruit.

Figure 1: Decline in Total Fertility Rates in Middle East and North Africa countries between 1980 and 2002[17]

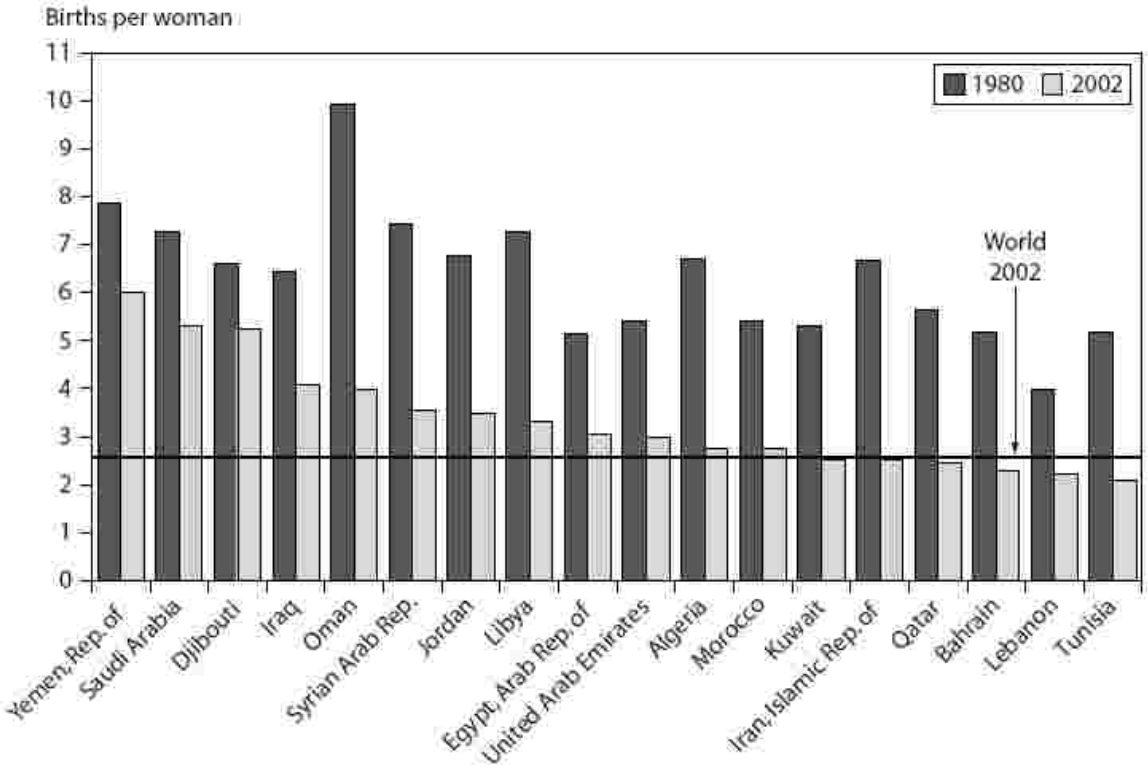
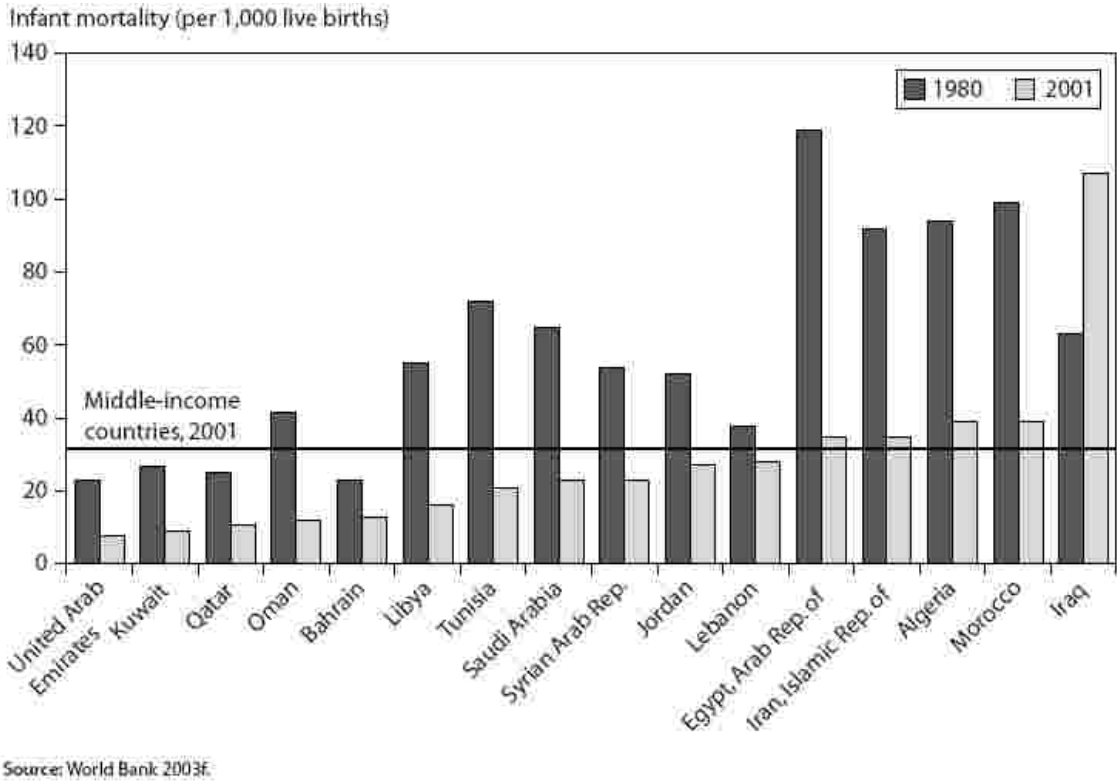
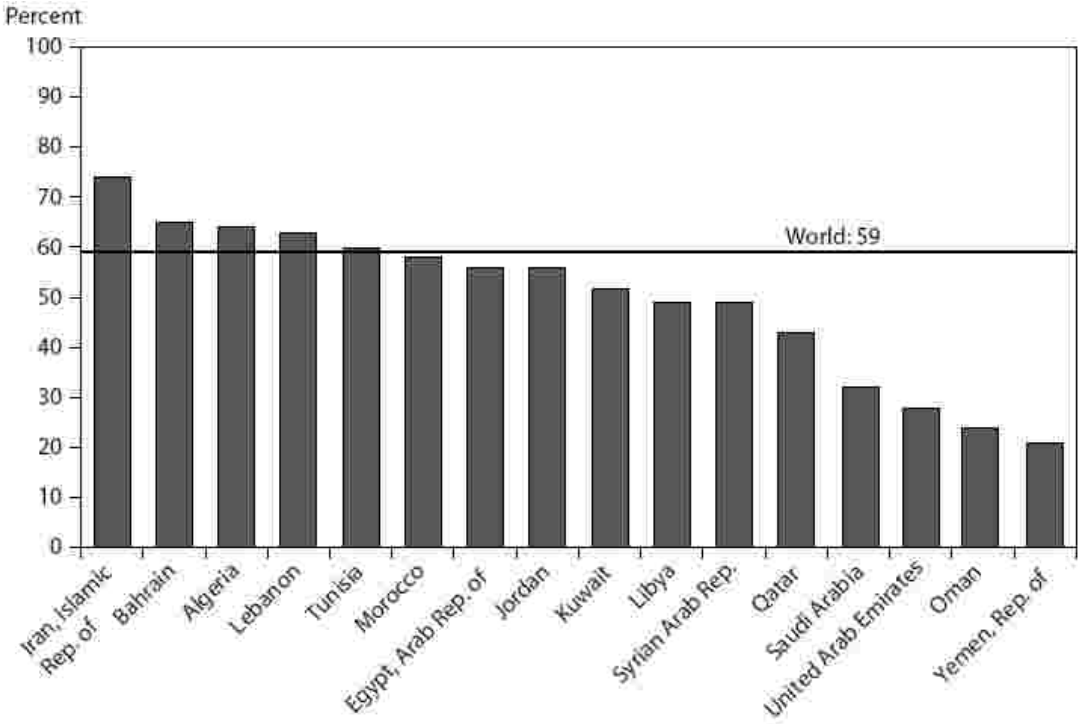


Figure 2: Infant Mortality per 1000 live births in Middle East and North Africa Countries, 1980 and 2001[14]



Source: World Bank 2003f.

Figure 3: Contraceptive Prevalence in Middle East and North Africa countries 2003 or most recent year[8,14]



Family planning

Noticeable results were achieved by the Moroccan family planning program launched in the early 1960s, followed by the legalisation of contraception in the same period. Indeed, the percentage of women using any contraceptive method increased from 19% in 1980 to 42% in 1992 to reach 63% in 2003. According to the last national survey carried out in 2003/2004, 54.8% of women used a modern contraceptive method and 8.2% used traditional contraceptive methods (periodic abstinence, withdrawal, plants,..). Among modern methods, pills are the most used (40.1%), followed by IUD (5.4%), MAM (2.8%), female sterilisation (2.7%), injections (2.1%), condom (1.5%) and jelly (0.1%). The use of any contraceptive method varies slightly among the different social groups. For instance, modern methods are used by 56% of urban women, compared to 53.2% of rural women; and also used by 53.7% of illiterate women compared to 56.4% of use among women with secondary or higher level of education. The association with wellbeing quintiles shows a modern contraceptive prevalence of 58.3% amongst the poorest women compared to 69.9% in the richest quintile.

In 2003, about 10% of women aged 15-49 years had unmet need and the association with the different social categories was not very high (11% for illiterate women compared with 8% for women with secondary or higher level of education; 11% for rural women versus 8% for urban women, and 12% for the poorest women compared with 8% for the richest women).

Feed-back studies indicate the possibility to improve the efficiency of these services, which are available through vertical programs, by more integrated and comprehensive ones. There is still room for quantitative and qualitative improvements in terms of percentage of women using contraception (63%) (Figure 3), diversification of contraceptive methods and reduction of unplanned pregnancies especially among young women who are behind the estimated 150 000 illegal abortions performed annually. In morocco the abortion is performed in a legal way only for three reasons: mother's health problems, foetal abnormalities, rape or incest. However, women resort to abortion in other cases like: not being able to afford and bring up a baby, having problems with the partner, constraints of education or work, unwanted pregnancy. The problem of abortion becomes a striking and dangerous phenomenon especially when teenage girls and/or young poor women are not able to pay for "illegal assisted" abortion by doctors and hence resort to traditional and dangerous practices with unpredictable results that may lead to death.

According to the Moroccan Association to combat Clandestine Abortion (AMLAC), despite the ban, between 600 and 800 abortions are carried out every day with medical care in Morocco while 200 others take place on the back streets.

Conclusion

During the last decades, Morocco has globally made noticeable achievements in terms of reproductive health. The achievements, however, remain insufficient compared to other developing countries with similar level of economic development[18, 19]. While, due to immunisation efforts, infant mortality has been decreasing during the last four decades and should reach the corresponding Millennium Development Goal (MDG4), the MDG5 seems difficult to realize since maternal mortality has stayed nearly constant during the last 15 years. As stipulated by the 2008 report released by the Wold Health Organisation[4], now more than ever, an efficient primary health care is needed if countries like Morocco are to reach the goal of health for all. Family planning and contraception policies need to reach more women; antenatal and postnatal care should be enhanced, and more skilled medical personnel are needed to assist women during labour, especially for poor women living in rural areas and deprived regions. Generally, reproductive health in Morocco can be improved by adopting targeted and equitable health strategies that aim to enhance the mean status of the whole population but at the same time to reduce regional disparities between developed and disadvantaged regions; inequalities between rich and poor, and marginalisation of the rural population. For a real sustainable development and in the light of the general uprising affecting most of Arab countries, Moroccan decision makers are urged to act on unjustifiable and avoidable inequalities.

Limitations of our research

The present paper is based on available data related to reproductive health in Morocco. It should be stressed, however, that sometimes data may vary from one source to another. For instance, a higher level of maternal mortality rate (140 per 100 000 in 2005) was given by the estimation provided jointly by WHO, UNICEF, UNFPA, and the World Bank [5].

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Dedication: This humble contribution is dedicated to Moroccan women living in rural areas.

Competing interest: The author declares that he has no competing interests.

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