Mother and the child: Malnutrition in Morocco

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Malnutrition has swept across many countries and has made a great effect on Morocco’s health population. Malnutrition comes from the choice in a person’s dietary health pertaining proteins and calcium; resulting, with an insufficient amount of healthier foods. The purpose of this paper is to show that the country of Morocco in northwestern Africa has undergone two main nutritional health risks for many years. One health risk is the deficiency of children who also suffer from kwashiorkor, rickets, and iodine deficiency. The other form of malnutrition is obesity that the women are suffering from. Obesity has become a rising disorder in many countries such as Morocco and Tunsisia. Obesity is a disease that is connected with diabetes mellitus, hypertension, and cardiovascular diseases. These diseases have lead to morbidity and mortality. These high risk health problems of deficiency and obesity have been a contributing factor to the Moroccan mortality rate of women and children. Primarily, the reason for educating women in Morocco was to lower the fertility; simultaneously, schools educate women on better health care for them and their children.

Malnutrition of a child living in Morocco can be based on many things. A child could have come from a low income family with a very high household number, unsanitary conditions, the mother could have given birth to children too close together, and/or the child is not receiving enough protein as an infant. DHS survey said that in 1987 that seventy-five percent of children in the rural area were malnourished. The infant mortality rates are nearly double the size in rural areas than in urban areas. The infant

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1 Weissman. (1994)
2 Agueniou et al. (2001)
3 Spratt. (1992)
death usually occurs within the first twenty-eight days of life. Chronic diarrhea usually appears in children between the ages of twenty-eight days and five years of age. DHS also said that malnutrition was the leading cause of deaths in 1989. The infant mortality rate has decreased since 1972 with a number of seventy-three out of one thousand to 1992 at 57.4 out of 1000. Underweight, stunting, and morbidity account for ninety-seven percent of the infant mortality rate. By 1987 thirty-one percent of children suffer from moderate to severe malnutrition.4

<table>
<thead>
<tr>
<th>Incidence of Malnutrition in Morocco</th>
<th>Children 0 - 5 years of age</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1987 DHS</td>
</tr>
<tr>
<td>Weight/Height/Age</td>
<td>Weight/Height/Age</td>
</tr>
<tr>
<td>Urban</td>
<td>8.0</td>
</tr>
<tr>
<td>Rural</td>
<td>19.7</td>
</tr>
<tr>
<td>Total</td>
<td>14.0</td>
</tr>
</tbody>
</table>


Malnutrition occurs mostly during the time when the baby is being weaned from the mother. One of the Moroccan traditions that hurt a child’s health is salt taboo. Moroccan tradition when having a baby is not to bring or to have any salt in the house during the first week of a baby’s life. Moroccan’s believe that if salt is brought into the house, then the spirits will be angry. This is known as the salt taboo. Families wait till the child reaches the age of two before bringing salt back into the house, then the spirits will be angry. This belief comes from the Islamic teachings of the Koran. The weaning

4 Weissman. (1994)
of a child is sometimes broken early when a mother learns that she is pregnant with another child. Many Moroccans believe that it is poisonous to nurse an infant from a pregnant mother. This causes problems, for the child is lacking the sodium they need. This causes the child to get sick with diarrhea and dehydration, leading to hypovolemic thirst, anorexia, and severe malnutrition.\(^5\)

About two decades ago Vitamin D deficiency was recognized as a major problem for young children. The lack of vitamin D harms a child’s bone tissue and creates problems for young girls with their pelvic proportions. The small pelvic area causes a woman to have complications with births or have a caesarean birth. Keeping a child out of the sun is a contributor to the deficiency. The 1970 national nutritional said that 58 out of 1000 children suffered from rickets in 1968. \(^6\)

Rickets is a very common disease among children and kwashiorkor is also another common disease among children. Kwashiorkor occurs in children between the ages of twelve and eighteen months. Kwashiorkor comes from severe protein deficiency and rickets comes from vitamin D deficiency. The reduction of nutrients from the breast milk and an increase of water will result in the kwashiorkor disease. Iodine deficiency causes retardation in children. Populations that suffer from iodine deficiency tent to have a lower I.Q. level than the general population. \(^7\)

Western influences have been a contributing factor to obesity. The different dietary habits and patterns of consumption cause problems such as diabetes and obesity. In Morocco a woman of large size is considered voluptuous. Even today the Moroccan ideal body image is to be overweight. The Moroccan’s consider the large size as a sign

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\(^5\) Paque. (1984)  
\(^6\) Weissman. (1994)  
\(^7\) May. (1967)
of fertility and social rank. Big is beautiful. ROCHE (a pharmaceutical company) said that in the 1980 prevalence among obesity in women was 23.8% and increased in 1997 to fifty one percent. Obesity has been rising with massive rates. ROCHE took a dietary record of the Moroccan food consumption over the span of two days. The obesity prevalence is 18.3% of women vs. 5.7% of men which means women are three times more obese than men. The BMI (body mass increase) increases with a woman’s age; nevertheless, a woman’s environment has a great deal to do with obesity. Most women began loosing the weight after the age of fifty five. Obesity is very high among the urban women with very little education. Nearly seventy percent of women are illiterate.

The Moroccan diet is different among those that live in rural areas and urban areas. Those that live in the urban areas can afford milk, cheese, and other proteins that people in the low income rural areas can not receive. Obese Moroccan women take in more energy, protein, carbohydrates, and fat than normal weight women; however, the dietary patterns are one in the same. The Moroccan diet is very high on carbohydrates. They take in nearly sixty-five to seventy kcal. The daily caloric intake from 1968 to 1970 was 2,410 kcal. Between 1997 and 1999 the daily caloric intake was 3031 kcal.

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8 Aguenaou. (2001)
Their high caloric intake comes from the consumption of cereals and bread. Another reason for the high caloric intake is because they drink a lot of sweet tea that is very high on calories. Rural people tend to have a higher caloric dispersement because of their agricultural settings. Iron deficiency occurs quiet often among women with multiple and/or consecutive births. This causes their children to also have low iron. The Moroccan diet needs at least 30mg of iron a day and a child may only receive 21-22mg a day.\(^9\) The milk from a mother contains 500 mg of sodium chloride per 100 to 120 grams. After a child is abruptly weaned from their mother their source of sodium chloride and protein is gone. The children are shifted to a new diet of corn, rice, bread, macaroni, sweet tea, and water. No salt is ever added until the child is two. The lack of salt is the one of the reasons why children suffer from kwashiorkor after a hot dry season.

The Moroccan lunch programs cover about one-third of the children that go to school. Their school diet also consists of cereals and pastas. They do not consume very much animal or vegetable proteins and vitamins. They are rarely ever given milk or cheese for lunch because the schools can not afford those things. They only receive milk and cheese from foreign donations. Forty-one to fifty-three percent of school children have suffered from some sort of health problem due to not having enough nutrients.\(^10\)

In 1998, thirty three percent of the workforces were women. After a woman becomes pregnant she does not loose the weight. Most of the women do become overweight after their first child. USDHHS survey says that in 1998 there were more overweight women under the age of twenty five years old. Twenty seven point six

\(^9\) Weissman, (1994) \\
\(^10\) May, (1967)
percent of married women were obese vs. the eighteen point seven percent of single women that were obese.\textsuperscript{11}

\begin{center}
\begin{tikzpicture}
\begin{axis}[
    title={Morocco and Tunisia: Obesity Trends},
    ylabel={BMI Category},
    xlabel={Year},
    xmin=1980, xmax=1997,
    ymin=20, ymax=60,
    ytick={20, 40, 60},
    legend pos=north east,
]
\addplot[red, mark=square] table [x=year, y=Female] {data.csv};
\addlegendentry{Female}
\addplot[blue, mark=triangle] table [x=year, y=Male] {data.csv};
\addlegendentry{Male}
\end{axis}
\end{tikzpicture}
\end{center}


This chart shows how obesity has been rising since the 1980’s and still continues to rise with high risks. This also shows that the prevalence of overweight in Morocco and Tunisia occurs rapidly in men and women.\textsuperscript{12}

Morocco’s culture and dietary patterns are based on their historical and geographical structure. Morocco has suffered through high morbidity and mortality rates, mostly due to malnutrition. Over nearly the last thirty years institutions have been developed to change the Moroccan life style and their food availability. The literacy of a Woman is just as important as the health of a Moroccan woman. When some of the very few Moroccan women are educated, then they tend to produce fewer children with diseases and use more modern health services. There are small attempts being made to

\textsuperscript{11} Benjelloun. (2002)
\textsuperscript{12} Aguenaou. (2001)
provide women with the knowledge of good health care; however, the instructions are hard to give when a woman can not read or she leaves too far away from the schools in the urban areas. In the past literacy in Morocco was taught through Islamic education; although, the male population was the one to receive most of the education. World Bank said that in 1960 the illiteracy rate for females was ninety-six percent and for males was seventy-eight percent. In 1990 the illiteracy rate for females was seventy-eight percent and males were fifty-six percent. These percentages came from people all over the age of ten years old. Moroccan Arabic radio and television help to give out the message of good health in Arabic; although, a majority of the women speak Berber and are not bilingual like their husbands, who were able to attend school.

Education of health through the school systems has helped the parents to provide a healthier environment. Not only do these schools supply mothers and children with the knowledge of good health care, the schools supply dietary supplements and immunizations to help build up their immune system and fight off some of these diseases. The educated Moroccan women are taught to breast feed children for fewer months. The schools are targeted towards the increasing fertility rate and lowering the age difference between children. This practice also leads to the women using birth control and producing smaller family size; nonetheless, the schools contribute to the better eating habits and vitamin D intake for women and children. Women that were not educated were recorded having an average of seven children. Women with education ranged from six to eight point two children depending on their education level of primary education,
secondary education, and junior education, senior education, and higher education.\textsuperscript{13}

Juliana Weissman addresses:

\begin{quote}
(Malnutrition remains a serious problem which contributes to over a third of infant deaths. Malnourished children are more likely to die in infancy, to suffer from physical and mental growth retardation as well as more frequent and more severe illness, to perform worse in school, and to achieve lower levels of productivity on the job as adults. Malnutrition is closely linked to poverty, disease, and ignorance about nutritional requirements and the means to satisfy them. The impact of malnutrition on national development has been well established, and yet because of the multisectoral nature of its causes and consequences, malnutrition has been the concern of everyone and the responsibility of no one.)(2)\textsuperscript{14}

When a country is provided with a better supply of healthier foods it is easier for the society to maintain their population status. The charts and surveys were good as far as giving all the information over the span of thirty or more years. None of the surveys had any information later then 2000. The World Bank survey in the “Women and Literacy in Morocco” article compared the illiterate rate those that were enrolled in class and not by those that were actually attending school. I also noticed in this article that they teach pubic health through the radio and television; however, many women are not bilingual and only speak Berber. ROCHE’s survey in the article “Diet Culture and Obesity in Northern Africa” took a survey of food consumption in a span of only two days. I am not sure if the records would be a little different over the span of two weeks,

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\textsuperscript{13} Spratt. (1992) \\
\textsuperscript{14} Weissman. (1994)
but it is unfair to try to perceive a diet over only two days. People can eat healthier or poorer in just those two days and does not make up a person’s whole diet consumption. None of the articles showed any surveys on physical activity; even though, it has already been stated that very little physical activity occurs among women. The schools have been affective as far as lower the child malnutrition rate. The poor more rural children are the one’s that are being neglected and there needs to be a little more focus towards them. The obesity rate is very much a problem just as it has been for many other countires; although, the knowledge of good health care is the start in to the right direction towards a longer living society.


