

**National Plans of Action For
Nutrition Section in Bahrain
(NPAN in Bahrain)
1995**

**Nutrition Section
Public Health Directorate
State of Bahrain**

1995

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1- Introduction

The State of Bahrain consists of several islands in the Arabian Gulf, situated 20 kms. east of Saudi Arabia. The total area of Bahrain is 706 sq. km. The island is arid, receiving as low as 22 mm of rain annually (CSO, 1994).

The population of Bahrain in 1994 was 0.56 million (CSO, 1994) of whom 37.5% were expatriates, mostly from the Indian subcontinent. The population is young, with 40% under the age of 15 years, and a median age of 20.2 years. The crude birth rates and death rates during 1990-95 were 26.1% and 3.9% respectively one of the lowest in the Arabian Gulf region. The total fertility rate was 3.75.

Oil and gas, aluminum products, banking, tourism, and food industries are the mainstay of the economy. In 1993, various measures of per capita income were as follows: Gross Domestic Product (GDP) USD 4431, the Gross National Product (GNP) USD 3906, and the per capita income USD 7259.

In the past two decades, there has been a progressive change in socioeconomic development due to oil revenues. This has led to shift in the way Bahrainis earn their livings from agriculture, fishing, and pearl diving to sedentary jobs in the oil and service sectors.

Improvements in sanitation, water supply, housing, literacy, per capita income, food security, and food choices as well as in health care, coupled with the virtual elimination or control of major communicable diseases, have inevitably led to a significant improvement in health status (Musaiger, 1993), as evidenced by low infant mortality (18 per 1000 in 1993), under 5 mortality (22 per 1000 in 1993), low bithweight rate (6% in 1993), and maternal mortality (0.2 per 1000 live births in 1992) rates, as well as a relatively high life expectation at birth (71.9 years in 1991).

Health services in Bahrain are organized into a three tier system consisting of health centers, secondary and tertiary hospitals, primary health care, including high technology medicine. Health services are provided free of charge to the population. With a view to making geographical access to health services equitable and easier, the health authorities have divided the country into four catchment areas (regions), each with a satellite of health centers.

Health status have improved remarkably. This can be noticed through changes in patterns of diseases and increase in life expectancy. The major notified diseases in the past were malaria, parasitic infections, respiratory diseases, severe malnutrition especially among children and other infectious diseases.

Recently, most of these diseases have been eradicated, and non-communicable diseases have become the major health problems.

The aims of this plan is to analyze the nutritional problems in Bahrain and to formulate plan of action to control such problems which comes also in response to recommendations of the International Conference on Nutrition (ICN), Rome, December 1992.

2- Aim

This plan addresses the main causes of major nutrition related diseases in Bahrain, by evaluating its magnitude and suggesting programs and activities for the purpose of combating these diseases and generate scientific data toward establishing nutrition prevention polices in order to promote healthier life style.

3- Health Status

- **Childhood (Pre-schoolers).**

Among Bahraini children under five years of age, in comparison with an international reference population, It was reported that about 10% were stunted, 7% were malnourished in overall terms of their weight for age i.e are under weight, and less than 6% were wasted (Bahrain Child Health Survey, 1989).

Obsity was found prevalent among 12% preschoolers aged from 1 month to 5 years and the highest percentage (30%) occured in the first six months of life (Zaghloul, 1985).

- **Pregnant & Lactating Women**

It was demonstrated that among a representative sample of pregnant women in Bahrain, screening by hemoglobin revealed that 33.5% of the women were anemic and when screened by serum ferritin, 40% of the women had Iron deficiency anemia or were at risk. In addition, results showed that energy intakes was below the average recommended by WHO/FAO, especially during the first trimester (1899 kcal/day) (Moosa K. & Zein, 1995).

- **School Children :**

- **Growth Pattern.** Weights and heights of adolescents in Bahrain aged from 15.5 to 19.5 years were measured to evaluate their growth patterns. The results showed that average heights and weights of Bahraini adolescents were 169.3 cm and 60.3 kgs for males and 156.4 cm and 53 kgs for females. These results were below than the western standards but seemed to be better than their counterparts of the previous generation, i.e; they appeared to be taller and heavier (Mater & Musaiger, 1990).
- **Anemia.** It was reported that 32% of the school children, aged 6 to 18 years were anemic. The prevalence was more in the females (42.8%) than in the males (21.0%) (Amine, 1980). However, the percentage for females later was declined to 24% for the same age group (Blair & Gregorg, 1985).
- **Obesity.** A study among school girls from 7 to 18 years reported that 19% of these girls were obese (Blair & Gregory, 1985).
- **Food Consumption In Schools.** It was Indicated that the consumption ratio of the poor nutritious diet (Junk food) over the balanced nutritious diet is approximately 2:1, both for foods and drinks (Gharib & Al-halwachi, 1995).

- **Adults & Elderlys:**

- **Diet Related Non-Communicable & Diseases.**
There is a steady rise in the incidence of non-communicable diseases in Bahrain, associated with improvement in socio-economic status and changes in lifestyle. The percentage of reported deaths in

Bahrain in 1994 due to Cardiovascular disease was 30.9%, followed by Neoplasms 12.5%, and Endocrine & Metabolic diseases 10.7%.

- **Obesity.** The body mass index was examined among Bahraini adults aged 20 to 65 years, and the prevalence was found to be 16% for the males and 31% for the females (AL-Mannai, 1995).

- **Elderlys.**

It has been found that approximately 3.5% of the Bahraini population is aged 60 years or older. Due to the improved overall health condition, the life expectancy has increased from 1981 to 1994 for males from 65.83 to 67.83 and for females from 68.18 to 70.69.

However, there is lackness of data that assess the nutritional status of elderlys among the community or in elderlys care centres.

SUMMARY OF HEALTH STATUS

Table 1: A summary of health status of different population groups in Bahrain based on the most recent and/or available data (1995) .

Life stage	Data Available							
	Nutrient Intake	Anthropometric Assessment	Malnutrition & Nutrition Related Disease					
			Anemia	IDD	Obesity	CVD	Diabetes	Cancer
Pregnant	< RDA: Energy vit. A Folic Acid Iron (1995)	_____	33.5% ↓ Hb (40% IDA) (1995)	_____	_____	_____	_____	_____
Pre-school children (< 5 Yrs.)	Base line to be determined	- 2 SD (Wt./Age) 7.2% 10% stunted. 6% wasted (1989).	Base line to be determined	_____	_____	_____	_____	_____
School children (6-18 Yrs.)	Base line to be determined	Base line to be determined	- 32% ↓ Hb (1980). - 24% ↓ Hb ♀ (1985).	_____	19% of girls were obese (1985).	_____	_____	_____
Adults (19-64 Yrs.)	Base line to be determined	_____	Base line to be determined	_____	Males 16% Females 31% (1995) BMI 30 >	30.9% (1994)	10.7% (1994)	12.5% (1994)
Elderlys (65⁺ Yrs.)	Base line to be determined	Base line to be determined	Base line to be determined	_____	_____	_____	_____	_____

4- Plan of Action

- **Objectives :**

1. To conduct a series of research & studies, in order to assess the nutritional problems and to formulate programs and activities.
2. To conduct nutrition health education workshops, lectures, seminars, ..etc, in order to increase the public awareness.
3. To propose nutritional polices in order to promote healthy eating and life style.

- **Programs :**

A. Formulation of National Food and Nutrition Committee:

Based on National Workshop Recommendations which was conducted during June, 1994. In collaboration with world Health Organization (Regional Office) through JPRM Programs.

B. Nutrition Research projects :

To assess Nutrition status of the following population groups at national level :

- Pre – school children (< 5 Yrs.)
- School Children (6-18 Yrs.)
- Adults (19-64 Yrs.)
- Elderlys (65+ Yrs.)

C. Nutrition Awareness Activities :

A series of workshops, seminars, lectures,etc. to be conducted among different sectors :

Sector	Proposed Activities
MCH/Primary Health Care, Community.	<ul style="list-style-type: none">• A series of Nutrition education workshops with focus on:<ul style="list-style-type: none">- Micronutrient deficiencies.- Breast & complimentary feedings.- Major forms of malnutrition and nutrition – related diseases.- Other related issues.
School Age Children, Teachers, Parents, Community etc.	<ul style="list-style-type: none">• A series of Nutrition education seminars, and workshops with focus on :<ul style="list-style-type: none">- Adolescents nutrition .- Micronutrient deficiencies.- Promoting appropriate diet with special reference to school canteen.- Nutrition education curricula.- Other related issues.
Adults, Elderly and Community.	<ul style="list-style-type: none">• A series of educational seminars and presentations with focus on:<ul style="list-style-type: none">- Promoting appropriate diets & healthy lifestyle.- Preparing a complete educational material related to the topics covered- Dietary assessment of adults & elderlys.- Diet – related chronic disease.- Other related issues.

5- Monitoring & Evaluation

The nutrition section under Public Health Directorate is the responsible body to implement, monitor and annually evaluate this plan of Action in coordination and collaboration with intrasectoral, and intersectoral bodies.

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