Jordan National Behavioral Risk and Chronic Disease Survey
Jordan 2004 / 2005

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Ministry Of Health
Justification for study:

• Jordan has made the epidemiological transition from infections diseases to chronic diseases as the leading causes of morbidity and mortality.

• As Jordan develops new programs to reduce the risk factors for chronic diseases such as smoking, physical inactivity, overweight and obesity.

• Timely and ongoing information is needed to measure the magnitude and trends of these chronic diseases and their risk factors.
Main Goal

To improve the health of population by reducing mortality, and morbidity, from non-communicable diseases.
Objectives

a) To establish an NCDs surveillance system.

b) To measure the self-reported prevalence of selected risk factors for chronic disease such as smoking, physical inactivity, nutrition...etc.

c) Measure the prevalence of diabetes, hypertension, cholesterol, triglyceride, and obesity using physical and biochemical measures.
Study Design:

- national cross-sectional survey, and approved by the Ministry of Health

- The sampling frame was representative nationally and stratified by governorate, major city, and other urban and rural areas.

- A multi stage sampling designed by department of statistics to select the households.

- In each house one adult aged 18 years or older was selected randomly and interviewed.
Methodology

• Field work was conducted between October 1st and December 31. A total of 3,334 adults were interviewed (Behavioral Sample). Response rate was 94.7%.

• A representative sub sample were randomly chosen from the original sample for step II & III. They were asked to fast from midnight preceding their visit to a local health center where blood pressure, weight, height, and waist circumference were obtained.

In addition, a blood sample was collected and sent to a central laboratory where total cholesterol, HDL-C, LDL-C, triglycerides, and fasting blood glucose were determined.
Methodology

• Response rate for step II & III were 80%.

• Standardized training was provided to the attending physicians of the selected local health clinics and standard equipment for measurements were provided and used.
Response Rate

Total Sample (3520 Persons)

- Behavioral Sample
  - Response Rate: 95%

- Bio-Chemical Sample
  - Response Rate: 80%
Stepwise instruments were used in the following sequence:

Step 1:

- Core and expanded Demographic questions
- Core and expanded behavioral measurements; except for alcohol consumption questions.

Note: Optional questions were added to this step about Cholesterol awareness, Diabetes awareness, heart diseases, oral health, eye sight, women health, and medical services.
Step 2:

Core physical measurements, including:
• weight and height
• Blood pressure
• Waist.

Step 3:

Core biochemical measurements including:
• Blood glucose level.
• Total Cholesterol level,
• and expanded HDL-C and LDL-C
• Triglyceride level

Note: Step 2 and Step 3 were applied according to WHO standards.
Field work:

The field working team consists of six groups, each group consist of 3 persons:

- Epidemiology training resident.
- Research assistant.
- Driver.

• The teams visited the selected houses, enumerated the total number of persons 18 years or over in the selected households and selected the eligible participant in a random fashion and directly interviewed them.
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عدد افراد الأسرة 18 سنة فما فوق

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Field work:

- If the eligible person was not available at the time of visit, the team would try to schedule a time when that person would be available and would return to the house a second time or third time.

- Households were dropped out of the sample after visiting the three times without a response.

- Standardized training was provided to all team members.
Data Management

Field supervision:
The questionnaire was checked and reviewed by a field supervisor.

Reviewed questionnaire:

Data entry: every questionnaire was checked and entered to the computer so only valid data were possible. Further checked were carried out every 200 questionnaire.

Data cleaning were performed.

Data was analyzed using SAS Software.
Thanks you
Results

Prevalence of smoking

<table>
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<th>Sex</th>
<th>Percentage</th>
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<td>Male</td>
<td>51%</td>
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<tr>
<td>Female</td>
<td>7%</td>
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<td>Total</td>
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Age at starting smoking

- Male
- Female

- <= 10: Male 2.9, Female 1.4
- 11-14: Male 14, Female 12.2
- 15-18: Male 48.8
- 19-24: Male 23.4, Female 28
- 25-29: Male 7.2, Female 15
- >=30: Male 5.8, Female 20
Distribution of current smokers according to average of cigarettes smoking per day

- Less than 10 cigarettes/day: 30%
- 10-20 cigarettes/day: 59%
- More than 20 cigarettes/day: 11%
Distribution of study population according to numbers of days Vigorous physical activity spent during a week

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<th>No. of Persons</th>
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