Workshop on CEHI
Amman March 28$^{th}$ to 31$^{st}$

Tunisian Protocol Survey

The protocol was built by the national team in concordance with the objectives of CEHI’s project
Ministère de la Santé Publique
Direction d'Hygiène du Milieu et du Protection de l'Environnement

Projet de recherche

Étude nationale
« Santé environnementale des enfants en Tunisie »
Dans le cadre de l'étude pilote initiée par CEHA – OMS

Protocole de recherche rédigé par :
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Septembre 2004

♦ Study design
♦ Survey population
♦ Data collection
♦ Data analysis
♦ Ethical considerations
Study design

- National survey
- Eco-epidemiological study
- Community based
- Descriptive study

Survey population

- Randomized sample country’s representative
- Sampling technique used: Two degrees Cluster with proportional representation methodology used by W.H.O. for the vaccine evaluation (PEV)
- Unit of random = household
Conditions of inclusion

- Family with a minimum one child under 5 years
- Even the study is related to 0 – 14 years old children, the range 0 – 5 is more concerned (more indicators interested in) and less represented in Tunisia (ages’ pyramid)

We dived the country into 7 areas

- 6 geographical regions (EN, WN, EC, WC, ES, WS) ; plus The great Tunis (special area) = 7
- Each region will be represented by a “typical” province
In each region:

- We select at random 30 clusters = “imada”
- In each region we calculated the number of necessary “subjects” \( n \)

How did we calculated “n”: first version

\[
 n = z^2 \times \frac{pq}{i^2} \times k
\]

- \( Z = 1.96 \) (confidence 95%)
- \( P = 0.5 \) (unknown)
- \( i = 7\% \)
- \( K \) (cluster factor) = 2
- 5% increase to avoid eventual refuse
First version

- $n = 450$
- cluster’s size = 15 households
- Total $450 \times 7 = 3150$

It will be time and resources consuming

- One month with three teams for each region
- Means 3 vehicles and oil for each region: no region can provide / no transport budget planned
Second version

- $i = 10\%$
- $n = 210$
- 30 clusters with 7 households each one
- Total = 1470

That means

- Only one team and one vehicle for each region during a month: possible
Arguments

- Less precise at a regional level but enough in the national level: gives the same quality with lower number
- Less costly
- Higher quality of information: questionnaire time consuming (boring)

Data collection

- interview
- Observation
- Surveyors’ guideline
Questionnaire used

- Adapted to the country
- Translated
- Tested by students during country report making and corrected
- One hour consuming
Surveyors’ teams

- Necessity of 2 surveyors: male/female, medical knowledge/hygiene knowledge
- Team completed by a car driver
- Supervision and administrative organization: regional coordinator

Data analysis

- Epi-info
- Descriptive statistics
- Stratification on urban and rural areas
- Indicators
Ethical considerations

- Voluntary involvement
- Medical and social issues
- Confidential information