

Spatial Analysis of Health Outcomes with GIS software

Supervisor: Dr. Jalal Poorolajal

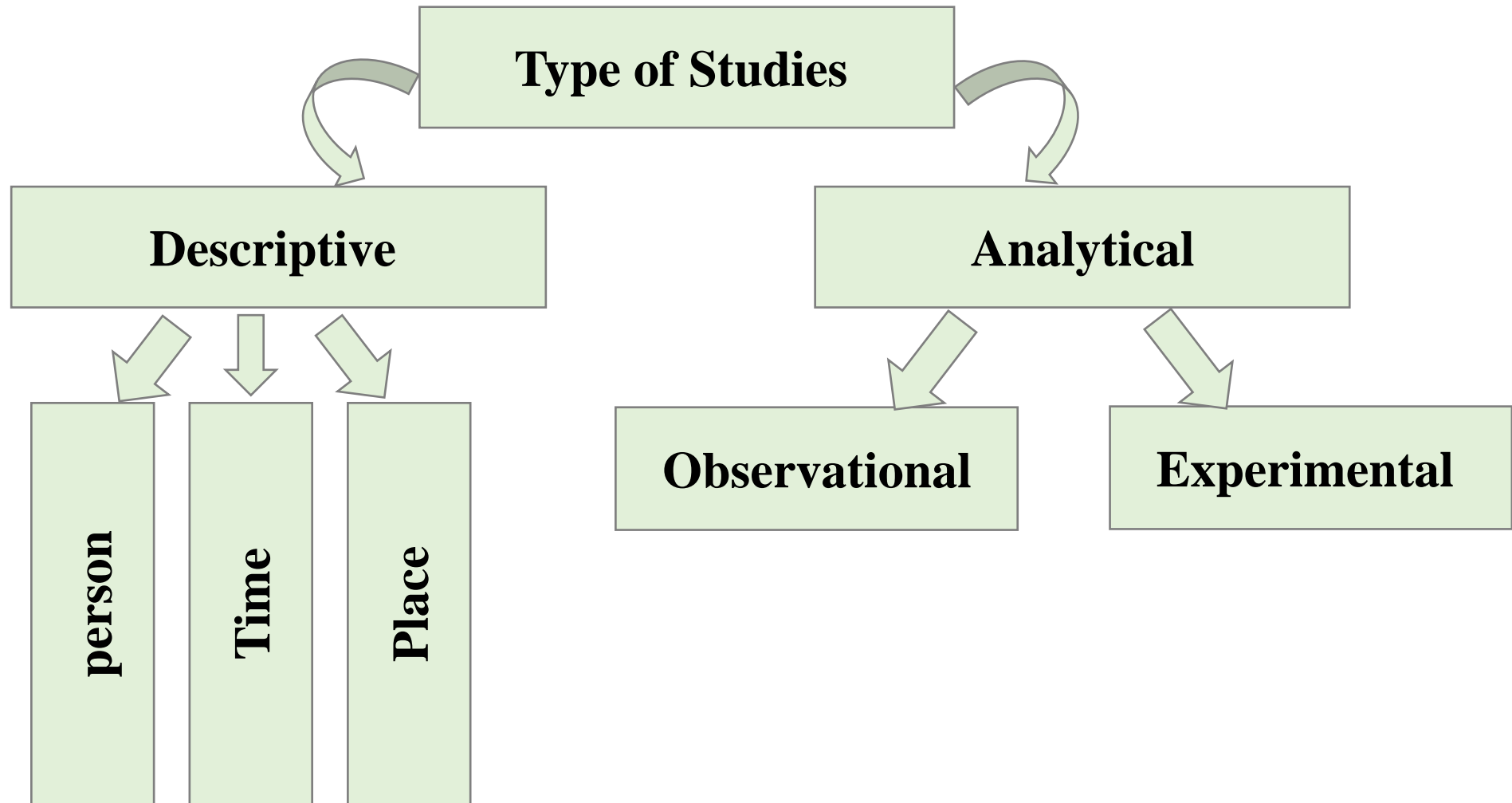
Present by:

Fatemeh Shahbazi

PhD Candidate of Epidemiology
School of Public Health

Hamadan University of Medical Sciences





Descriptive studies: (Person; Who)

☐ Age

☐ Sex

High fetal mortality rate in male infants.

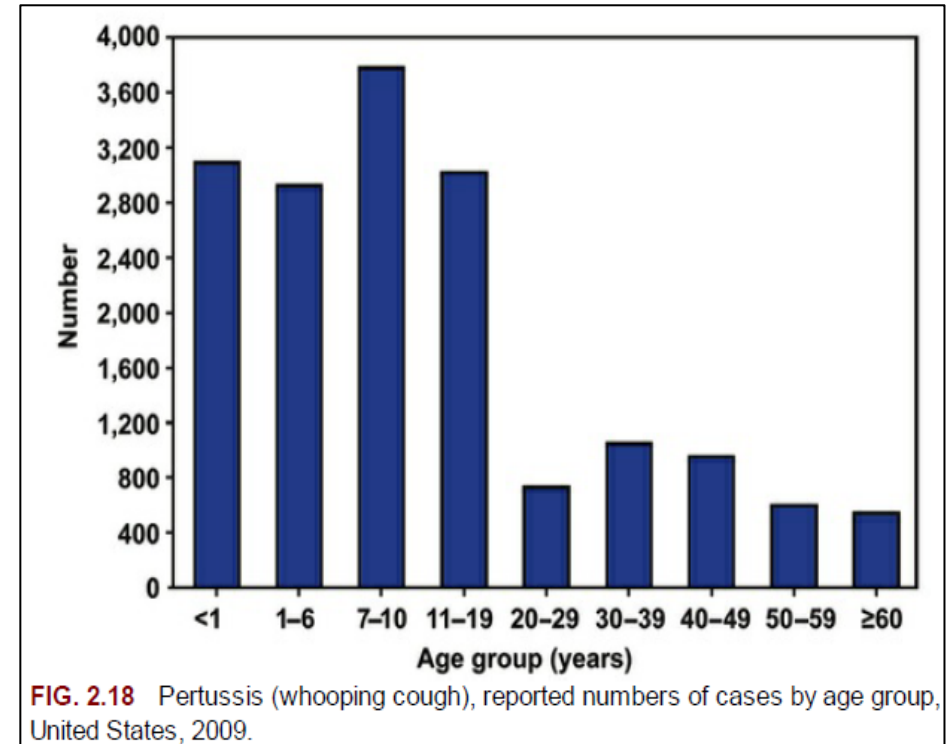
Depression in women is almost twice that of men.

☐ Ethnic & race groups

The high prevalence of Hypertensive heart dis in men

☐ Social class

High rates of schizophrenia in the lower social class.



Descriptive studies: (Person; Who)

❑ Occupation

The association between lung cancer and asbestosis

The high incidence of brucellosis in ranchmen's.

❑ Marital status

High rate of cervical cancer in married people.

❑ Etc.

Blood groups, Personality type of people, Immunological features...

Descriptive studies: (Time; When)

Certain diseases occur with a certain periodicity. For example, aseptic meningitis peaks at consistent yearly rates. Often, there is a seasonal pattern to the temporal variation. For example, diarrheal disease is most common during the summer months, and respiratory disease is most common during the winter months. The question of *when* is also addressed by examining trends in disease incidence over time.

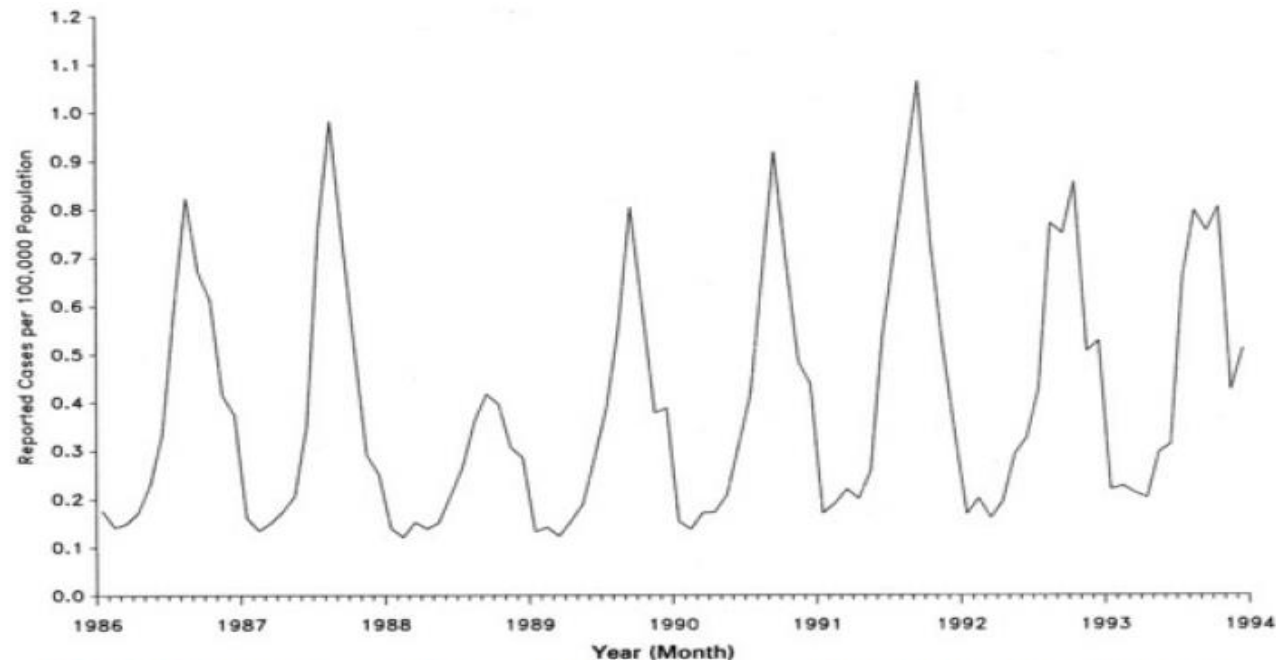
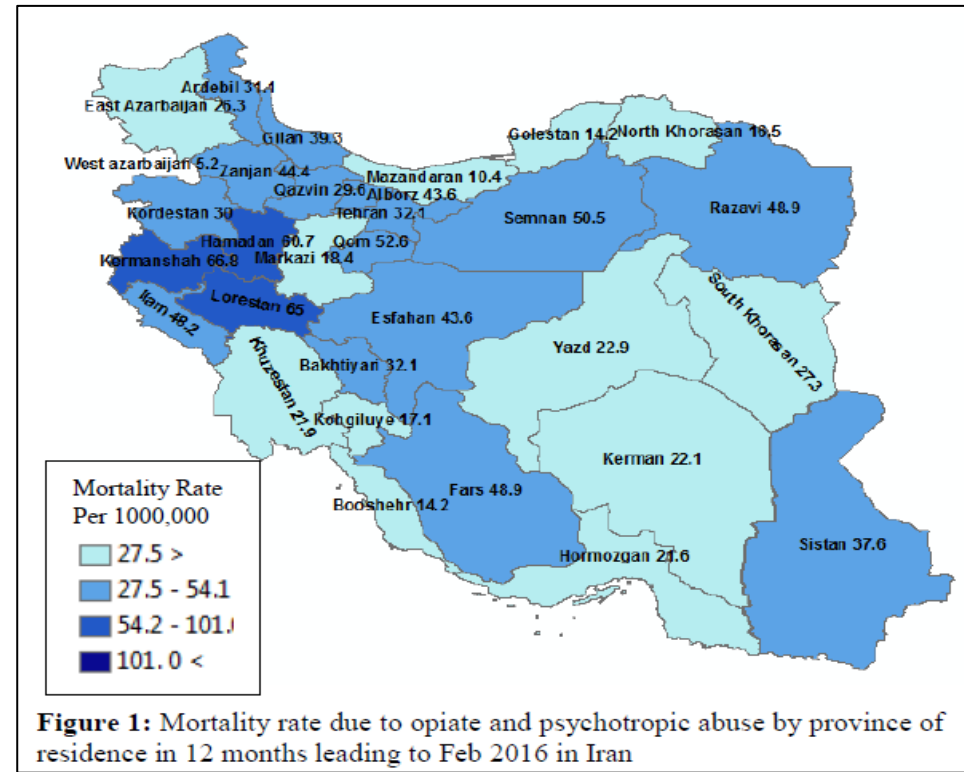
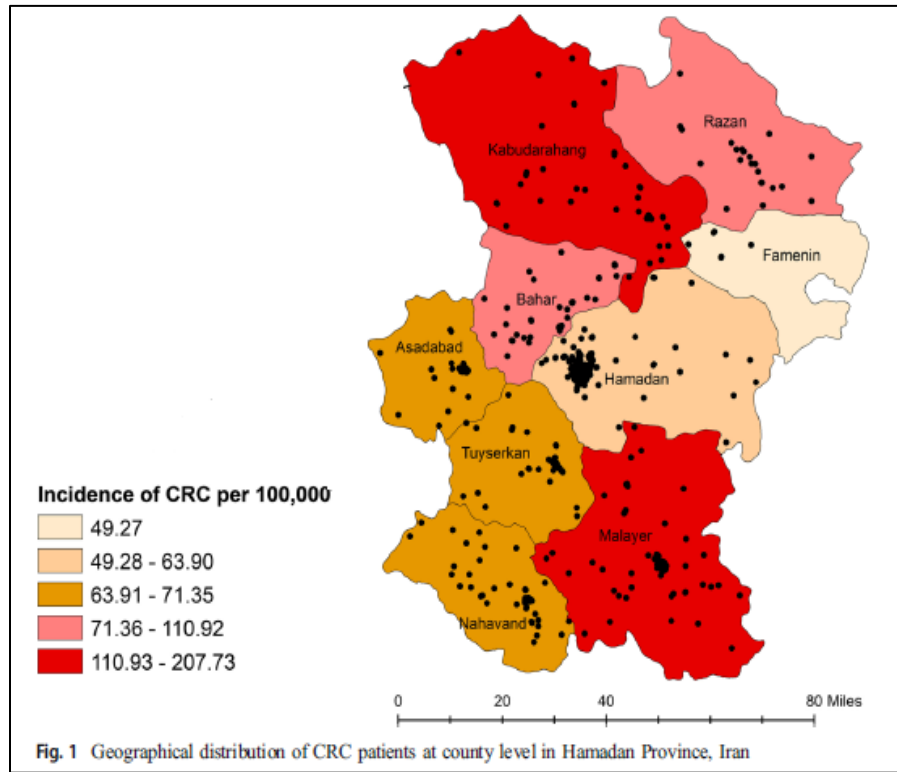


FIG. 2.19 Aseptic meningitis, reported cases per 100,000 population by month, United States, 1986–93.

Descriptive studies: (Place; Where)

Disease is not randomly distributed in time or place. For example, High mortality rate due to drug abuse in Hamadan, Lorestan and Kermanshah provinces.



Geographical Information System (**GIS**)

- ❑ It is used to **build and use maps**, geographic data calculations, and **geographic data management**.
- ❑ Manufacturer: **ESRI** that located in California
- ❑ First version (version 8) **released in 1999**

