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EPID 160

Principles of Epidemiology

Strategy of Epidemiology

Basic strategy: The comparison of two or more groups.

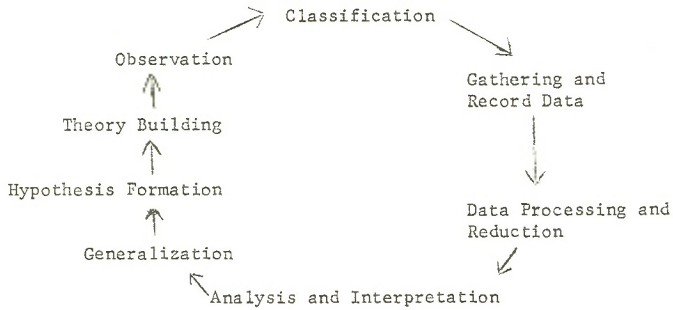
Limit of study: A group or aggregate.

Techniques: Usually those of an observational rather than an experimental science.

Essential differences between observational and experimental approaches:

<u>Experimental</u>	<u>Observational</u>
1. Factor(s) of interest to investigator under control of investigator and can be manipulated by him.	Factor(s) of interest to investigator not under his control and cannot be manipulated.
2. All other factors can be held constant or assigned at random to experimental and control group.	All other factors cannot be held constant. Randomization possible only to a limited extent.
3. Antecedent - consequent relationships obvious.	Antecedent - consequent relationships may not be obvious.
4. Evidence for cause clear under conditions in which all other factors are constant.	Evidence for cause less clear (based on association), but applicable to "real life" where all other factors not constant association may be: a) Non-causal (secondary) b) Causal: i) Indirect } Relative terms dependent upon existing state of knowledge ii) Direct } iii) Configurational

Steps in Observational Science



Observation and Classification

Classification on basis of health status (case history approach).

Classification on basis of attributes (cohort approach).

Advantages and disadvantages of each approach.

Relative and attributable risk.