Formulation of hypotheses

This article has been translated from WikiSkripta; the **formatting** needs to be checked.

Definition

- A **Hypothesis** *is an assumption* whose **validity** *we must verify before proceeding with further scientific work.*
- Provisional theory is based on descriptive research/statistics, clinical observations, analytical studies, laboratory research, theoretical modeling.[1]

Hypothesis formation methods

Differential method

- If the frequency of occurrence of a disease in two comparative populations (sets) is **significantly different'' and if it is possible to identify a factor that is present in one set and not in the other, then we can label this factor as** 'cause of disease.
- *Example:* **higher incidence of ca of the cervix in married women - and vice versa** lower' *incidence in nuns.*

Match Method

- If we can find a **common factor'** *in a number of different populations that are characterized by the occurrence of a disease, then this factor could be the* cause of the disease.
- *Example: Semmelweis came to the conclusion that the cause of teenage fever was some kind of "dead poison" found '*on the hands *of the attending obstetric staff.*

Method of analogy

- If there are ``certain similarities *in the distribution of the observed disease with another disease for which we have more complete information, it would be possible to judge that both diseases have* ``some common causes. We use a **deductive way of thinking**.

Companion Difference Method

- The change in the frequency of the disease occurs in parallel with the *change in intensity* of the given factor.
- *Example: incidence of **lung carcinoma** increases with the number of **cigarettes smoked**'.*[2]

Links

ws:Formulace hypotéz

Related Articles

- Methodology in epidemiology

1. TIMMRECK, Thomas C.. *An Introduction to Epidemiology.* 3. edition. Sudbury : John and Bartlett Publishers, 2002. pp. 205-210. ISBN 0763700606.
2. BENCKO, Vladimir, et al. *Epidemiology, teaching texts for students of the 1st Faculty of Medicine UK, Prague.* 2. edition. Prague : Charles University in Prague – Karolinum Publishing House, 2002. pp. 16-24. ISBN 80-246-0383-7.