UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

COURSE SYLLABUS

Metodology of Socio-Health Analysis

2223-1-K0101D002

Aims

The primary goal of the course is to provide the basic tools of medical statistics, epidemiology, and public health. The course aims also to provide students with the tools needed to understand the meanings, purposes and organizational models of care at a local level to identify the role of the nurse and midwife in the context of public health, community and family.

Contents

MEDICAL STATISTICS AND STATISTICS IN EXPERIMENTAL AND TECHNOLOGICAL RESEARCH: Statistical units, sample, population, variables and data, construction of tables and graphs. Descriptive statistics: indices of location and dispersion. Probability: union and intersection, discrete and continuous random variables, the Binomial and the Normal distribution. The process of inference: point estimation and sampling distributions; interval estimation and confidence intervals; the test of hypothesis. GENERAL AND APPLIED HYGIENE: Causes of disease and risk factors, infectious diseases, chronic degenerative diseases. Vaccine prophylaxis, chemoprophylaxis. Measures of disease and exposures in epidemiology. Types of epidemiological studies: observational and experimental studies. Meta-analysis. COMMUNITY MIDWIFERY: Midwifery community care history and fundamentals. Midwifery community care theory. The italian context: “consultori familiari”. National Health Service and “POMI” guidelines. The foreign midwifery community care. Hospital and territory integration. COMMUNITY NURSING: Organization of local services and their integration with social networks and hospitals: analysis of the context. The regional welfare and the territory system. Models of taking charge and prevention activities. Nursing territorial assistance organization related to the social context.

Detailed program

MEDICAL STATISTICS – Introduction to Statistics: types of variables; construction of tables and graphs (for one or more variables). Descriptive Statistics: indices of location (mean, median, mode, percentiles); indices of dispersion (deviance, variance, standard deviation, coefficient of variation); random and systematic errors as related to any measurement process: indices of precision and accuracy; correlation and simple linear regression. Probability: definitions of probability; conditional probability and independence; probability of the union and intersection of events; examples of applications in the clinical context (sensitivity, specificity and predictive values of a diagnostic test); the Binomial distribution; the Normal distribution. Inference: sample and population; sample estimates and population parameters; sampling distributions of estimators (distribution of the sample mean); confidence interval. STATISTICS IN EXPERIMENTAL AND TECHNOLOGICAL RESEARCH – Hypothesis testing: the logic of hypothesis testing; type I and II errors, p-value; confidence intervals and hypothesis testing: statistical vs clinical significance; example of tests. GENERAL AND APPLIED HYGIENE - The goal of this course is to present a practical approach to community assessment and to teach public health skills that can be used to identify, measure, and prioritize health care needs for defined communities, target populations. The course is aimed at students who will be involved in decisions process about the efficient allocation of community health resources. These are the main objectives of the course: health as a relative concept; mechanisms through which the determinants of population health operate; principles of prevention and health promotion; primary, secondary and tertiary preventive services; healthcare systems (Beveridge, Bismarck etc.); analysis of demographic trends and their influence on epidemiologic determinants; analysis of healthcare demand and needs; health status measurement; trends in diagnosis of chronic diseases and treatment patterns; disease management and integrated care; epidemiologic indicators (incidence, prevalence, absolute risk, risk difference, relative risk, odds ratio, NNT); sources of information; types of epidemiologic studies; outcomes research; healthcare planning tools; principles and methods of health technology assessment (HTA); value-Based Healthcare. COMMUNITY MIDWIFERY - Midwifery community care history and fundamentals; midwifery community care theory; the italian context: “Consultori Familiari”; National Health Service and POMI guidelines; the foreign midwifery community care; hospital and territory integration strategy. COMMUNITY NURSING - Socio-political and normative interpretation for a critical reading of actuality and organizational models of the XXI century in reference to the local context: excursus of models: from model to model tasks for goals, the model aims to model processes for case management, assistance territorial; organization of local services: the needs and complexity for service in the territory; some strategies for the future through critical management services on the territory and examination regulations of the regional social health plan.

Prerequisites

Defined by the degree regulation.

Teaching form

Lectures and practicals.

Textbook and teaching resource

MEDICAL STATISTICS AND STATISTICS IN EXPERIMENTAL AND TECHNOLOGICAL RESEARCH - Fowler J., Jarvis P., Chevannes M. (2006) Statistica per le professioni sanitarie, EdiSES; Pagano M., Gauvreau M. (2003) Biostatistica, Idelson-Gnocchi; Bossi A., Cortinovis I. (1996) Statistica medica. Esercitazioni, Città Studi Edizione. GENERAL AND APPLIED HYGIENE - Auxilia F, Pontello M. (2011) Igiene e Sanità Pubblica, Piccin. COMMUNITY MIDWIFERY - Dahlen H. G., Barclay L. M., Homer C. S. E. (2010) The novice birthing: theorising first-time

mothers' experiences of birth at home and in hospital in Australia. Midwifery, 26: 53-63; Federazione Nazionale dei Collegi delle Ostetriche (2008) Guida all'esercizio della professione di ostetrica, 2 ed., Torino: ed. C. G. Edizioni medico scientifiche; Fahy K., Foureur M., Hastie C. (2008) Birth Territory and Midwifery Guardianship. Books for Midwives; Kirkham M. (2003) Birth centres: a social model for maternity care. London: Books for Midwives; Marchi A. (2007) Il Parto: piano di assistenza, linee guida e EBM: Strumentazione in Ostetricia e Ginecologia. Firenze: Ed. SEE; Schmid V. (2007) Salute e nascita, la salutogenesi in gravidanza. Milano: Ed. Urra-Apogeo; Walsh D. (2007) Evidence-based care for normal labour and birth, a guide for midwives. Oxon: Routledge, 14-28. COMMUNITY NURSING – Lecture notes; slide presentations and learning materials provided by the lecturer; Ermini R., Ciuffi D., Bielli S. (2006) Gestione integrata ospedale-territorio dei percorsi della riabilitazione. Mondo sanitario 13 (1-2): 8–14. Abstract; El-Hamad I., Pezzoli M.C. (2005) Centro di Salute Internazionale e di Medicina Transculturale (CSI). Infermiere Oggi 15 (2): 42–54. Abstract.

Semester

First year, first semester

Assessment method

No ongoing tests.

The evaluation will consist of a written test that will be used to ascertain the level of knowledge and ability to understand the topics covered during the course and to be able to solve problems.

Therefore the student will have to answer to:

MEDICAL STATISTICS AND STATISTICS IN EXPERIMENTAL AND TECHNOLOGICAL RESEARCH: Open Response Questions (with numerical exercises) and multiple choice test

GENERAL AND APPLIED HYGIENE: multiple choice test

COMMUNITY MIDWIFERY: multiple choice test

COMMUNITY NURSING: multiple choice test

The final score will be obtained by a weighetd mean, with weights equal to the CFU of the corresponding module.

Office hours

Agreed with teachers by e-mail.

Sustainable Development Goals

GOOD HEALTH AND WELL-BEING | QUALITY EDUCATION | GENDER EQUALITY