

ALLAMA IQBAL OPEN UNIVERSITY ISLAMABAD
(Department of Home & Health Sciences)

Course: Design of the Nutritional Epidemiological Studies (7506)

Level: Post Graduate

Semester: Spring 2013

Credit Hours: 3(2+1)

CONTENT LIST

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2. Course Outline Unit 1–9
3. Theory Assignment 01
4. Practical Assignment 01
5. Assignment forms (Eight)
6. Schedule for submitting the assignment & tutorial meetings

Note: If any item from the above mentioned content is missing from your study pack kindly contact:

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ALLAMA IQBAL OPEN UNIVERSITY ISLAMABAD
Department of Home and Health Sciences

Course: DESIGN OF THE NUTRITIONAL EPIDEMIOLOGICAL STUDIES (7506)

Level: M.Sc.

Credit Hours: 3(2+1)

UNIT 1: INTRODUCTION TO NUTRITIONAL EPIDEMIOLOGICAL STUDIES.

- Classification of Nutritional Epidemiological Studies
- Uses of Nutritional Epidemiological Studies in Research.
- Selection of Right Type of Study for the Epidemiological Research

UNIT 2: ECOLOGICAL STUDIES

- Introduction to Ecological Studies
- Indices of Dietary Intake
- Indices of Health Status
- Population or Group Study Techniques in Examining Relationships
- Criteria of “Proof” in Ecological Associations Between Diet and Disease Limitations.

UNIT 3: CROSS-SECTIONAL STUDIES

- Introduction to Cross Sectional Studies
- Uses of Cross Sectional Studies
- Limitations of Cross Sectional Studies
- Design of Cross sectional surveys
- Dietary Assessment in Cross Sectional Studies
- Analysis of Cross Sectional Studies

UNIT 4: COHORT STUDIES

- Introduction to Cohort Studies
- Practical Issues
- Infancy and Childhood
- Adults and Elderly

UNIT 5: CASE-CONTROL STUDIES

- Introduction to Case-Control Studies
- Study Population and Selection of Cases
- Ascertainment of Exposure
- Selection of Controls
- Nested Case Control Studies
- Study Size and Statistical Power
- Analysis and Interpretation

UNIT 6: EXPERIMENTAL STUDIES

- Introduction to Experimental Studies
- General considerations in Experimental Studies
- Analysis and Interpretation
- Designs Used in Experimental Studies
- Systematic Reviews of Clinical Trails- the role of Meta-Analysis

UNIT 7: SOCIO-DEMOGRAPHIC AND PSYCHO-SOCIAL VARIABLES

- Main “Facesheet” Socio-Demographic Variables (Age, Gender, Ethnicity)
- Other Major Socio-Demographic Variables (Social Class/ Occupation, Study Area, Martial Status, Household composition).
- Psycho-Social and other Intervening Variables (Knowledge, Attitude, Practice Values, Social Pressures, Income/Health and Behaviors)
- Criteria for sound variables.

UNIT 8: ANTHROPOMETRIC MEASURES

- Introduction to Anthropometric Measures
- Factors Influencing Growth, and the Use of International Growth References.
- Raw Measurements
- Training, and the Accuracy and Precision of Measurement
- Treatment of the Data Prior to Analysis
- Anthropometry and Nutritional Status

UNIT 9: GENE-NUTRIENT INTERACTIONS IN NUTRITIONAL EPIDEMIOLOGY

- Introduction to Gene-Nutrient Interactions in Nutritional Epidemiology
- Gene-Nutrient Interactions in the Context of Molecular and Genetic Epidemiology
- Types of Gene-Nutrient Interactions
- Ethical Issues

Recommended Books:

- 1) Barrie M. Margetts and Michael Nelson. Design Concepts in Nutritional Epidemiology (1997) Oxford Printing Press.
- 2) Walter Willet, Nutritional Epidemiology, 1998, Oxford University Press.
- 3) Spark Arlene. J. Nutrition in Public Health: Principles and practice, 2007- CRC- Press.

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WARNING

1. PLAGIARISM OR HIRING OF GHOST WRITER(S) FOR SOLVING THE ASSIGNMENT(S) WILL DEBAR THE STUDENT FROM AWARD OF DEGREE/CERTIFICATE, IF FOUND AT ANY STAGE.
2. SUBMITTING ASSIGNMENTS BORROWED OR STOLEN FROM OTHER(S) AS ONE'S OWN WILL BE PENALIZED AS DEFINED IN "AIOU PLAGIARISM POLICY".

Course: Design of the Nutritional Epidemiological Studies (7506) Semester: Spring 2013
Level: Postgraduate Credit Hours: 3 (2+1)
Total Marks: 100

Assignment No. 1 (Unit 1–7)

Note: Answer the following questions. Distribution of marks is given against each question.

- Q.1 Classify nutritional epidemiology studies. Also elaborate the importance of the right type of study for the epidemiological research. (16)
- Q.2 What do you mean by indices of dietary intake? Discuss importance of indices from nutritional research point of view. (16)
- Q.3 Why cross sectional study is the choice of most nutritional researchers? Summarize its uses and limitations. (16)
- Q.4 Define case control studies. Enlist merits and demerits of each design. How would you differentiate from each other? (16)
- Q.5 What is the importance of studying variable in epidemiological studies? Discuss socio-demographic variables in different study groups. (16)
- Q. 6 Write short notes on the following:
(i) General Considerations in Experimental Studies. (10)
(ii) Confounding Variables. (10)

Assignment No. 2

Total Marks: 100

1. This assignment is of practical nature, you have to prepare / submit a research report based on this assignment in the workshop prior to the final examination.
2. Prepare three copies of the report, one for yourself, one for the tutor and one for the record of Home and Health Sciences Department.
3. Submit tutor's copy to the tutor as per given schedule.
4. This assignment should thoroughly review the conceptual framework of the topic and develop a scientific paper/ report according to the given guidelines.
5. **You have to select any one of the given topics for preparation of this assignment.** Get it approved from your tutor. Make sure that the topic relates to your own community so that the findings of the research conducted may help you to give recommendations to improve health status of your own community and smaller scale initially.
6. You are supposed to present and discuss this assignment in the presence of resource person and the course mates in the workshop, therefore transparencies, chart or any other illustrative material for effective presentation may be prepared.
7. You are advised to review the related literature in the light of selected topic. If you need any guidance you may contact your tutor or the department of Home and Health sciences A.I.O.U., Islamabad.
8. You will not be able to sit in the final examination. In case you are unable to submit this assignment as per given schedule and present it in the workshop at the end of the semester.
9. The instrument/question guide developed for data collection should be discussed with the supervisor and must be annexed with research report.
10. While designing the study keep in view, that the sample size should be statistically representative. The research report should comprise of following sections/ chapters.
 - a) Chapter–I: Introduction (It will include the rationale and background, statement of the problem, objectives, research questions or hypothesis, significance of the study, research methodology and delimitations).
 - b) Chapter–II Review of Related Literature. (You will collect information from the published research articles related to you topic and formulate the chapter as per American Psychological Association (APA) style.)

- c) Chapter–III Material & Methods/Procedure of the study. This chapter will describe the research design, populations, sample, research tools, collection of data, statistical tests used to analyze the data.
- d) Chapter–IV Analysis of Data: It will include presentation and analysis of data and discussion.
- e) Chapter–V Summary, Findings, Conclusions and Recommendations, References will follow the final chapter.

Appendices, if any should be part of your report.

Topics for Research Report:

- Compare the dietary patterns of patients suffering from peptic ulcer with no peptic ulcer subjects.
- Compare and calculate the total per day protein intake in subjects having vegetarian Vs non vegetarian diet.
- Study the use of food supplements in school going children.
- Study the prevalence of iodine deficiency disorders (IDD) in adolescent girls.
- Study the eating habits of lactating mothers. Compare it with the eating habits of non lactating mothers.
- Study the incidence of upper respiratory infections in children under five years of age attending Paediatrics OPD. Write a report based on your findings.
- Study the prevalence of Hepatitis among pregnant women attending antenatal clinic of any Government hospital.
- Study the intake of vitamin-A rich foods in male children with low vision problem.
- Study the intake of Iron rich foods among college going female subject.
- Compare the life style pattern of hypertensive subjects with normal subjects of same socio demographic profile.