



Management Development Programme

IIHMR, New Delhi

16 – 18 February, 2009

Data Analysis for Health Research Professionals

Programme Report

A three days program on “Data Analysis for Health Research Professionals” was conducted at IIHMR, Dwarka, New Delhi on February 16 – 18, 2009. A brief overview of the program is as follows:

Day One (16th February, 2009)



The first day was planned to cover the Introduction to Data Analysis for Health Professionals and in depth orientation of the same. There were six sessions planned for the day and they were as follows:

- Pre-Test
- The Research Process
- Data Basics
- Overview of Computer Assisted Data Analysis
- Introduction to SPSS
- Organizing & Modifying Data in SPSS

A pre-test questionnaire was administered to the participants to assess their level of knowledge of data analytics..

The first session was about the Research process that detailed the various stages in a research process. Each of the process steps were discussed in detailed that included finalization of hypotheses, sampling, instruments, analysis paradigm, data collection, data collation and data analyses.

This was followed by session on data basics. Participants were informed of the key concepts related with data. Specific topics covered were variable and variable types, data types and measurement scales, basic data analysis for descriptives and advanced data analysis for association, correlation and regression.

This was followed by session on Overview of Computer Assisted Data. The participants were introduced to the various families of softwares viz. spreadsheets, DBMS and statistical packages. Aspects of analysis in the various softwares were discussed along with advantages and limitations.

The session on Introduction to SPSS, the participants were briefed on the salient features of the package and the user interfaces viz. data view, variable view, syntax editor and the output viewer. The specific advantages of the software over other softwares for quantitative data analysis was discussed.

The next session was on organizing and modifying data in SPSS. In the hands on session, the participants practices on the given data sets on the various functions. Key functions that the participants worked on were importing data from text, excel and DBMS files. After importing the participants worked on defining variable in SPSS.

Day Two (17th February, 2009)



Second day of the program was concentrated exclusively on Basic Data Analysis. There were four sessions planned for the day. They were as follows:

- Organizing & Modifying Data in SPSS (Contd.)
- Univariate Analysis in SPSS
- Basic Bivariate analysis in SPSS
- Advanced Bivariate Analysis

The first session was continuation of the last session of the earlier day. In the session, the participants practices on the data set for use of various data transformation functions. The specific functions included compute, recode, select, split file and merge file functions.

The session on Univariate analysis included a brief description of Univariate Analysis explaining how it provides analytical information about one variable which could be metric or non- metric in nature. It provides facilities such as Frequencies, Descriptive option, Explore option, and Custom table. All these were explained taking various examples. The participants were introduced to

interpretation of various descriptive statistics viz. mean, median, mode, standard deviation, standard error of mean etc.

The session on Bivariate Analysis explained the association between two variables using the SPSS functions of Crosstabs and Correlate. Further the discussion covered Multivariate Analysis describing the pattern of relationships between several variables simultaneously. It included Multiple Linear Regression, Non- Linear Regression, Multivariate Analysis of variance MANOVA which examines the relationship between several categorical independent variables and two or more metric dependent variables and how can we start MANOVA using SPSS.

The fourth session of the day was on advanced bivariate analysis. The session covered Regression and Logistic regression. On the given data set, the participants practiced the various analysis and interpreted the various analysis of development of regression models.

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Day Three (18th February, 2009)



Third day of the program was concentrated exclusively on Basic Data Analysis. There were four sessions planned for the day. They were as follows:

- Presentation of outputs
- Importing of Data to EPI Info
- Basic Analysis using EPI Info
- Anthropometric measurements
- Developing the Evaluation TOR

The session on presentation of outputs dealt with using SPSS functions for representation of outputs. session included discussion about Representation Output Objects ie to deliver a presentable report. It covered Editing output objects, Copy, Export, Edit pivot table, Open pivot table, Modify pivot tables, transpose rows and columns, Delete data, Hide data, Modify table formatting, SPSS and charts, Creating graphs, Printing the output, SPSS help and Documentation.

The session on Importing data to EPI Info dealt with the second data analysis software EPI Info. The participants worked on the software to bring in data from an excel file to the EPI software.

The Session on Basic analysis was for skill building of the participants for use of EPI functions on performing basic univariate and bivariate analyses. The participants used the software for calculating the values of various statistics viz. mean, median, standard deviation and tabulation.

The session on Anthropometric measurements covered issues in Population, Health and Nutrition dealing with demographic transition and research issues related to demography. Demographic transition is a functional model used to depict population dynamics. Further the discussion included Demographic concepts, measures and Techniques. Anthropometric approach to the study of nutrition was explained and covered in detail which included Anthropometric Indices: Construction and Comparison, Constructing and analyzing anthropometric indicators, Analysing anthropometric data,

The session on Developing Evaluation TOR was synthesis of the leanings of the three days to develop a Evaluation TOR. Based on the leanings of the three days, the participants developed draft TORs for evaluation for their projects. The details included objectives, sampling, instruments, analysis and time-frame.

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LIST OF PARTICIPANTS

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