



Government of Pakistan



Health Service Academy

Training Title:	Quantitative Data Analysis using SPSS
Description	The Training aims to equip learners with the ability of independently carrying out in-depth data analysis with confidence and accuracy.
SPSS Introduction:	Statistical Package for Social Sciences (SPSS) is a statistical software suite developed by IBM for data management, advanced analytics, multivariate analysis, business intelligence, and criminal investigation.
Why SPSS:	SPSS software platform offers advanced statistical analysis, a vast library of machine learning algorithms, text analysis, open-source extensibility, integration with big data and seamless deployment into applications.
Training Outcomes:	On completion of this course, you will develop an ability to independently clean, analyze and treat data, plan and carry out new research work based on your research interest. The course encompasses most of the research techniques employed in academic and professional research in most comprehensive, in-depth and stepwise manner.
Who should attend the Training:	<ul style="list-style-type: none"> ▪ Professionals and Researchers Health, Education, Agriculture Sector ▪ PhD students and researchers looking to master SPSS skills and publish in high impact journals ▪ Professionals looking for career in analytics in corporate sector ▪ Monitoring and Evaluation Experts & Research Managers
Training Duration:	6 Days (03 Weeks)
Classes:	6 Classes (Saturday & Sunday): 3 hours per day
Training Fee	25,000

Topics to be covered:

1. Introduction to SPSS & Basics

- Introduction to SPSS
- Installation of SPSS
- Overview of the SPSS File (Inserting Variables & Cases, Save, Delete, Edit)
- Creating Data Entry File in SPSS
- Missing Data Handling in SPSS
- Understanding of Variables and Data Set
- Entering Survey Data

2. Descriptive Statistics

Descriptive and Inferential Statistics
 Mean, Median, Mode
 Standard Deviation, Standard Error etc.
 Confidence Interval (Lower and Upper values)

3. Data related Basic Operations / Functions

- Frequency Analysis, Descriptive Statistics
- Identifying Duplicate Cases
- Compare Data Sets,
- Transpose Data
- Aggregate Function, Select Cases,
- Weight Cases
- Merge Files (Cases and Variables)
- Compute Variables (Adding, Subtraction etc.)
- Re-coding Variables
- Import and Export of Data

4. Data Analysis Methods

- Custom Tables
- Multiple Response Questions Analysis
- Correlation
- Regression Analysis & Interpretation
- Likert Scale Analysis & Interpretation

5. Graphical Presentations of Data

- Bar Chart, Pie chart, Histogram chart, Scatter Diagram, Boxplot etc.
- Graph/ Chart Formatting

6. Statistical Tests

- Testing the Null Hypothesis with ANOVA
- One-Sample and Independent-Samples T Tests
- Chi-square test