

# **Workshop on Quantitative Research using SPSS and AMOS**

## **A Report**

### **About the workshop:**

Quantitative data analysis has become an integral part of research in academia and the corporate. Researchers in the recent times are more inclined to understand the causal relationships between the independent variables and dependent variables in a research context. Researchers are using statistical tools like SPSS to analyze the responses aggregated through field surveys using questionnaires, experimental designs, etc.

Researchers, Faculty members, Management students find quantitative data quite complex because of the sheer nature of the data explaining a cause of effect relationship. In this direction, software assisted quantitative data analysis has become an essential way for many researchers in the past.

. In this direction, this research workshop intended to help Researchers, Faculty members, Management students in building their skills to analyze quantitative data using SPSS and AMOS as software tools. The program is designed to cover all the relevant aspects of quantitative data analysis starting from data preparation, getting to know SPSS workspace, Inferential statistics, Hypothesis testing, Anova, Regression and Factor Analysis (EFA and CFA) using AMOS.,

### **20<sup>th</sup> of Nov 2023, Monday (Online mode); Resource person: Prof. G N Satish Kumar**

The program started with Dr. Nagendra Hegde introducing the workshop and welcoming all the participants and the resource persons to the workshop. The workshop on quantitative research using SPSS & AMOS was formally inaugurated by lighting of the lamp and the recitation of Saraswati vandana. Prof. Satish Kumar started the session with the introduction to quantitative research. He introduced the SPSS workspace. He also covered topics related to Inferential statistics and Hypothesis testing, Anova, one way Anova, using SPSS.

### **21<sup>st</sup> of Nov 2023, Tuesday (Online mode): Resource person: Prof. G N Satish Kumar**

Prof. Satish Kumar started the session on day 2 with the explanation to Chi square test, Anova. The session aroused lot of interest in the participants and participants asked many questions which were answered accordingly by Dr. Satishkumar. Day 2 , the concepts related to one way anova, two way anova , regression , multiple linear regression and logistic regression were covered.

**23<sup>rd</sup> of Nov 2023, Tuesday (Online mode): Resource person: Dr. Urmila Jagadeeswari**

Dr. Urmila started with the basics of factor analysis. She also explained about the aspects of factor analysis and scale development in her discussion. Dr. Urmila explained about how to screen the data for a reliable data set for statistical testing and evaluation. Dr. Urmila introduced the concepts related to structural equation modelling.

**24<sup>th</sup> of Nov 2023, Tuesday (Online mode): Resource person: Dr. Urmila Jagadeeswari**

Dr. Urmila introduced the concepts related to factor analysis and principal component analysis. She also introduced the web information from Gaskination.com and UCLA statistical methods and data analytics. Dr. Urmila also explained about the concepts related to positive correlation and negative correlation. In factor analysis she explained about common variance and unique variance. Dr. Urmila explained the concepts of Principal Component Analysis. She also went on to explain the factor extraction and factor rotation concepts. To end the session, she explained the concepts of reliability and validity.

**27<sup>th</sup> of Nov 2023, Monday (Online mode): Resource person: Dr. Urmila Jagadeeswari:**

Dr. Urmila introduced the topics related to confirmatory factor analysis using the AMOS software. She introduced the workspace of AMOS software and provided information on the various functions that are useful to conduct a confirmatory factor analysis (CFA). The topic was more of understanding how to import data into AMOS and start working on the data to create a model to understand the loadings of each independent variable on the dependent variable. This session was more of practical approach towards learning structural equation modelling using AMOS.

**28<sup>th</sup> of Nov 2023, Tuesday (Online mode): Resource person: Prof. G N Satish Kumar**

Dr. Satish Kumar started the discussion for this session by introducing to the AMOS workspace. He explained the model analysis using AMOS. Prof. Satish Kumar explained the concepts related to path analysis. He introduced the participants with the concepts of Moderation analysis and Mediation analysis.

**29<sup>th</sup> of Nov 2023, Wednesday, (Hybrid mode): Resource person: Dr. Urmila Jagadeeshwari**

Dr. Urmila started the final session of the workshop. She explained the citation methods and issues related to citations. Dr Urmila introduced the importance of learning the citation management tools like Mendeley to do references' and citations without getting into plagiarism issue. Dr Urmila explained working with Mendelay citation management tool. The session was followed by the closing ceremony of the workshop.

Prof. Narendra Babu initiated the closing ceremony of the workshop. He called upon Dr. Subhendu Dey to speak about the workshop. Dr. Subhendu Dey opined that, the workshop was a successful event with good number of participants getting benefited from the quantitative aspects of data analyses' using SPSS and AMOS. Once Dr. Dey finished his talk, Prof. Narendra babu called upon Prof. G N Satish Kumar to talk few work. Dr.SatishKumar obliged to it and said that, the workshop was a success and participants has gained a lot in terms of understanding the topics. Once Prof. Satish Kumar finish his talk, Prof. Narendra Babu called upon Dr. Manish Jain to address the participants. Dr. Manish Jain said that, the workshop was a successful one and he congratulated the participants and the organizing team to have organized a very good. He expressed his thanks to the workshop resource persons. Prof. Narendra babu proposed the vote of thanks and the program ended in a good note.

### **Workshop Closing Ceremony pictures**



