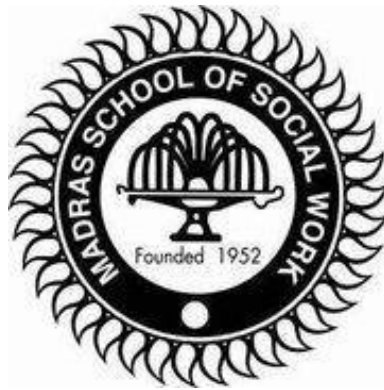


**MADRAS SCHOOL OF SOCIAL WORK  
(AUTONOMOUS)**

32, CASA MAJOR ROAD, EGMORE, CHENNAI-08

**P.G. DEPARTMENT OF SOCIAL WORK (SHIFT - II)**



**HR ANALYTICS WORKSHOP**

07 - 09 March 2022

## Table of Contents

<b>S.No</b>	<b>Content</b>	<b>Page No</b>
<b>1</b>	<b>Invite</b>	<b>3</b>
<b>2</b>	<b>HR Analytics Report</b>	<b>4-11</b>
<b>3</b>	<b>Photos</b>	<b>12</b>



# MADRAS SCHOOL OF SOCIAL WORK

(AN AUTONOMOUS INSTITUTION AFFILIATED TO THE UNIVERSITY OF MADRAS)

P.G. DEPARTMENT OF SOCIAL WORK (SHIFT-II)

## WORKSHOP ON HR ANALYTICS

March 7 th to 9th 2022.

(10 am to 4 pm)



RESOURCE PERSON

**P. SANTHANAM.**

Director, Transbiz Consulting.

FACULTY CO-ORDINATOR

Ms. A. Priya Doris

Assistant professor

P.G. Department of Social Work.(Shift-II)

PROGRAM HEAD.

Dr. J. Damen Queen

Assistant Professor & Program Head

P.G. Department of Social Work. (Shift -II)

<b>Madras School Of Social Work (Autonomous)</b>		
<b>POST GRADUATE DEPARTMENT OF SOCIAL WORK (SHIFT - II)</b>		
<b>SOFT SKILL TRAINING – HR ANALYTICS 07-03-2022 to 08-03-2022</b>		
<b>Reg. No</b>	<b>Name</b>	<b>Status</b>
2015782091001	AARTHIM	Completed
2015782091002	AISHWARYA N	Completed
2015782091003	AKSHITHA MANOJ	Completed
2015782091004	AKSHYA R	Completed
2015782091005	ANDREW JAI RAJ A	Completed
2015782091006	DEEPIKA	Completed
2015782091007	DIVYA SHREE M	Completed
2015782091008	KAVI PREETHA K	Completed
2015782091009	MAHATHI K	Completed
2015782091010	MAHENDRA BHARATHI S	Completed
2015782091011	MALINI S	Completed
2015782091012	MARIA ZITA M	Completed
2015782091014	ROOTH KARUNYA J H	Completed
2015782091015	SARAVANAN K	Completed
2015782091016	SHARATHNARAYANAN S	Completed
2015782091017	SINDYA T	Completed
2015782091018	VINDHYA T	Completed
2015782091039	ANGELINE GD	Completed
2015782091040	R YASWANTH	Completed

# **Workshop on HR ANALYTICS**

**DAY 1:** 07/03/2022

**TIMING:** 10:00 AM TO 4:00 PM

**RESOURCE PERSON:** Mr. P SANTHANAM, Director, Transbiz Consulting

## **Objectives of the Workshop**

- Basic introduction to HR analytics.
- To provide the student trainee insights by analysing the data with metrics and get insights from the data in the field of Human resource management.
- The various scales on measurement, factor analysis, reliability, types of measures, sampling techniques, sampling error was discussed.

## **ABOUT TRAINING:**

The training involved inculcating about HR analytics using excel and SPSS software. Human resources is a people-oriented function and is so perceived by most people. But for those who think that the HR team's contributions are limited to extending offer letters and onboarding new hires, human resource analytics (HR analytics) can prove them wrong. When used strategically, analytics can transform how HR operates, giving the team insights and allowing it to actively and meaningfully contribute to the organization's bottom line.

The terms HR analytics, people analytics, and workforce analytics are often used interchangeably. But there are slight differences between each of these terms. It would help you to know the difference to be able to assess the most relevant data to their function.

## **SESSION ACTIVITIES CARRIED OUT:**

- The session started with a basic introduction to HR analytics. The four levels of analytics with examples were illustrated.

- The various scales on measurement, sampling techniques, sampling error, factor analysis, reliability, types of measures were covered.
- Measures of dispersion, its formulae and methods to calculate it were illustrated.
- Various charts like box and whisker were illustrated with example.
- Histogram, bar graph, and its interpretation methods were illustrated.
- Skewness, normal vs non-normal distribution, parametric vs nonparametric tests were covered.
- Developing hypothesis, null hypothesis and alternate hypothesis were illustrated with examples.
- Methods to reject null hypothesis were also covered.
- Steps in testing hypothesis, conditions for rejecting null were explained.
- Various test like t-test, f-test, chi-square test was illustrated with examples.
- Correlation, regression analysis was also illustrated with examples.

The trainer explained us about the scope of HR analytics and the usage of it in HR field. The trainer explained about the three functions of HR analytics which are operational excellence, business excellence, transformational analysis. The trainer explained about the topics of Distribution of data, pattern and distribution, hypothesis testing, logistic regression, predictive, factor analysis and cluster analysis(group).

The trainer taught us about the four level of analytics

1. What happened?
2. Why it had happened?
3. What will happen?
4. How can we make it happen?

**1.DESRIPTIVE:** Describing, reports, MIS, dashboard eg: how many absentism, mancount, attrition, Return Of investment (ROI) of training, KRA-KRA of Training HR: Budget, effectiveness. If it is a technical program-Track no of projects, cost saving. If it is a soft skill program-360 degree

**2.DIAGNOSTIC:** why after training performance not improved

corelation recruitment vs performance, hiring disaster

**Recruitment:**

1.lead time in days

2.cost per hire

**3.PREDICTIVE:** e.g., weather forecast

**4.PRESCRIPTIVE:** building a model and give solution

The trainer taught us about Scales of measurement

**1.NOMINAL:** Named (which shouldn't be ordered) eg. gender, marital status, ethnicity, location, department-Mode

**2.ORDINAL:** Named + Ordered (where we can order it)opinion survey, training feedback)drawback not proportional – Mean + mode

**3.INTERVAL:** Drawback it will go less than 0

## **DAY 2:**

**4.RATIO:** Absenteeism, Attrition, performance appraisal score

The trainer taught us about the **Descriptive statistics:** Describing the whole data,

**Inferential statistics:** Inference about the original data from the sample

SPSS contains all basic statistical tests and multivariate analyses such as

- T-tests;
- chi-square tests;
- ANOVA;
- correlations and other association measures;
- regression;
- nonparametric tests;
- factor analysis;
- cluster analysis.

## **FACTOR ANALYSIS:**

Checking the data is valid and reliable (validity and reliability)-Gallup

The trainer taught us about the Types of sampling method which are probability and non-probability sampling methods and also taught us about how to determine sampling size-Online calculator

The trainer taught us about the SPSS software. **SPSS** means “**S**tatistical **P**ackage for the **S**ocial **S**ciences” and was first launched in 1968. Since SPSS was acquired by IBM in 2009, it's officially known as IBM SPSS Statistics, but most users still just refer to it as “SPSS”.



## DAY 3:

### SPSS - Main Features

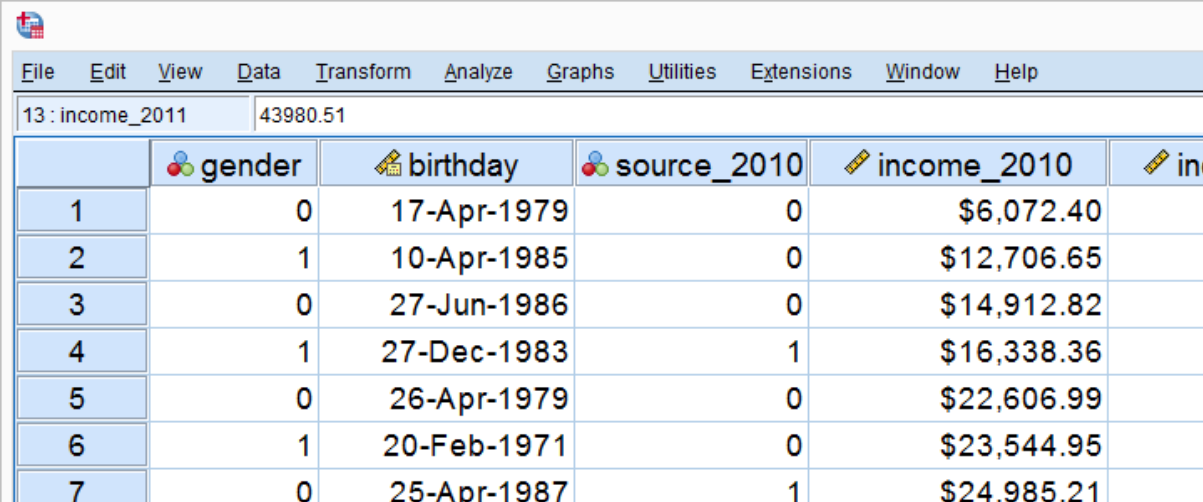
SPSS is software for **editing and analysing all sorts of data**. These data may come from basically any source: scientific research, a customer database, Google Analytics or even the server log files of a website. SPSS can open all file formats that are commonly used for structured data such as

- spreadsheets from MS Excel or **OpenOffice**;
- plain text files (.txt or .csv)
- relational (SQL) databases
- Stata and SAS.

Let's now have a quick look at what SPSS looks and feels like.

### SPSS Data View

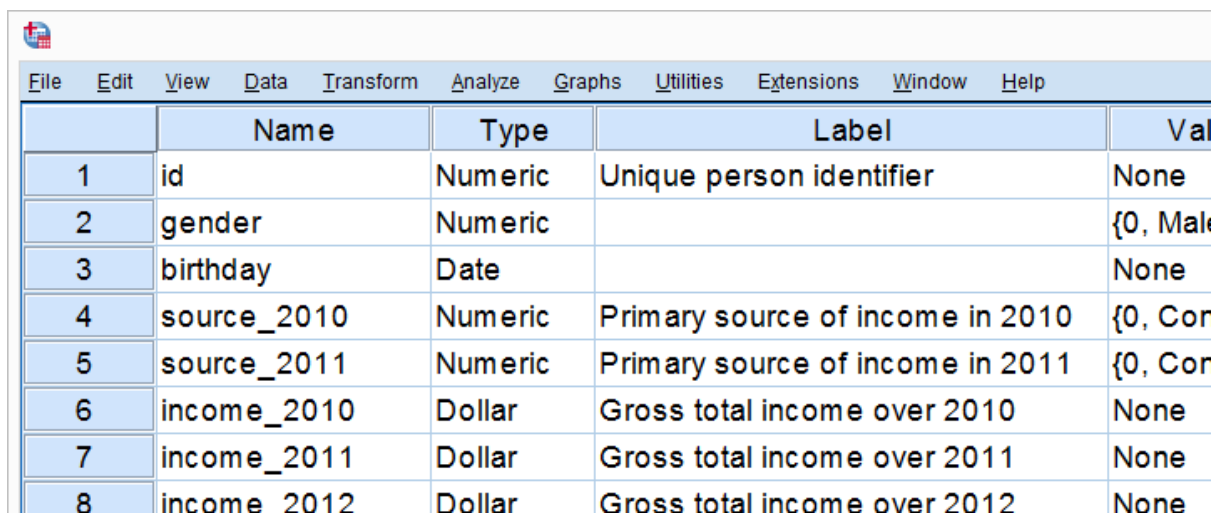
After opening data, SPSS displays them in a **spreadsheet**. This sheet -called data view- always displays our **data values**.



The screenshot shows the SPSS Data View window. The menu bar includes File, Edit, View, Data, Transform, Analyze, Graphs, Utilities, Extensions, Window, and Help. The window title is '13 : income\_2011' and the current row is '43980.51'. The data is displayed in a table with the following columns: gender, birthday, source\_2010, and income\_2010. The rows are numbered 1 through 7.

	gender	birthday	source_2010	income_2010	in
1	0	17-Apr-1979	0	\$6,072.40	
2	1	10-Apr-1985	0	\$12,706.65	
3	0	27-Jun-1986	0	\$14,912.82	
4	1	27-Dec-1983	1	\$16,338.36	
5	0	26-Apr-1979	0	\$22,606.99	
6	1	20-Feb-1971	0	\$23,544.95	
7	0	25-Apr-1987	1	\$24,985.21	

## SPSS Variable View



The screenshot shows the SPSS Variable View window. At the top is a menu bar with options: File, Edit, View, Data, Transform, Analyze, Graphs, Utilities, Extensions, Window, and Help. Below the menu bar is a table with five columns: a column for variable numbers (1-8), a 'Name' column, a 'Type' column, a 'Label' column, and a 'Value Labels' column. The data in the table is as follows:

	Name	Type	Label	Value Labels
1	id	Numeric	Unique person identifier	None
2	gender	Numeric		{0, Male
3	birthday	Date		None
4	source_2010	Numeric	Primary source of income in 2010	{0, Cor
5	source_2011	Numeric	Primary source of income in 2011	{0, Cor
6	income_2010	Dollar	Gross total income over 2010	None
7	income_2011	Dollar	Gross total income over 2011	None
8	income_2012	Dollar	Gross total income over 2012	None

An SPSS data file always has a second sheet called variable view. It shows the metadata associated with the data. Metadata is information about the **meaning of variables** and data values.

### Editing Data

In real world research, raw **data usually need some editing** before they can be properly analyzed. Typical examples are creating means or sums as new variables, restructuring data or detecting and removing unlikely observations. SPSS performs such tasks -and more complex ones- with amazing efficiency. For getting things done fast, SPSS contains many numeric functions, string functions, date functions and other handy routines.

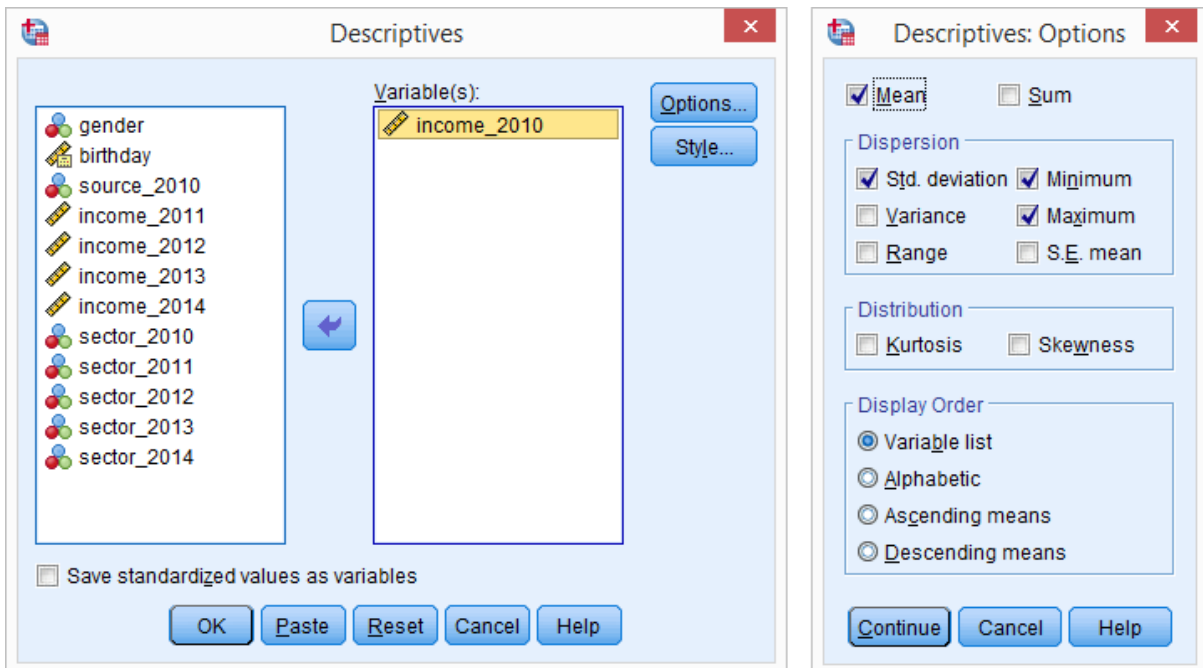
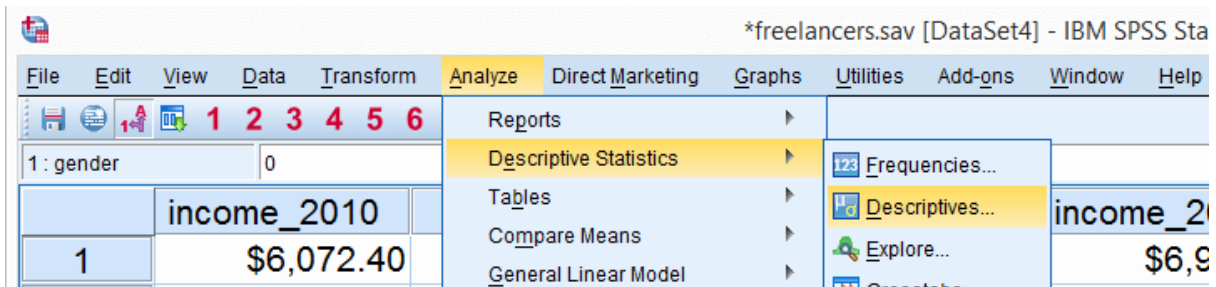
### Tables and Charts

All basic tables and charts can be created easily and fast in SPSS. Typical examples are demonstrated under Data Analysis. A real weakness of SPSS is that its **charts tend to be ugly** and often have a clumsy layout. A great way to overcome this problem is developing and applying SPSS chart templates. Doing so, however, requires a fair amount of effort and expertise.

The session activities included about measuring relationship between two values using Karl Pearson coefficient of correlation and spearman rank order correlation. The data was given by the trainer and the trainees calculated the coefficient of correlation using

the two methods in measuring the relationship. There was also factor analysis or principle component analysis, descriptive statistics, reliability test using Cronbach alpha for finding reliability in data analysis, reliability statistics and dashboard in excel.

## Data Analysis



## LEARNINGS:

### Categories of Measures

- ✓ Cost
- ✓ Time
- ✓ Quantity
- ✓ Quality

- Measures of dispersion
- Skewness
- parametric vs nonparametric tests
- Concepts of Hypothesis:
  - ✓ Developing of hypothesis, null hypothesis and alternate hypothesis was practiced.
  - ✓ Steps in testing hypothesis, conditions for rejecting null were explained.
  
- Tests - as chi-square, t-test, f-test, was taught.
- Correlation
- Regression analysis
- Charts and graphs
- Types of distribution with examples
- Learnt about SPSS software
- Learnt about regression analysis
- Learnt about correlation
- Learnt about the usage of and formula of mean, median, mode

