



KARPAGAM ACADEMY OF HIGHER EDUCATION

(Deemed to be University) (Established under section 3 of UGC Act 1956) Coimbatore-641021 DEPARTMENT OF MANAGEMENT

Subject: SPSS (PRACTICAL) Semester: II Subject Code: 18MBAP211

Class- I MBA

COURSE OBJECTIVES:

To make the students,

1. To understand the Importance of SPSS and the features for entering the data according to the variable type.

- 2. To understand and apply the descriptive analytical tools
- 3. To know the Univariate tools and its application
- 4. To comprehend the application of Bivariate analysis
- 5. To understand and compute the multivariate analysis using the package.

COURSE OUTCOMES:

Learners should be able to

- 1. Create datasheet and enter the data
- 2. Compute descriptive statistics using the package and graphically represent the data.
- 3. Perform univariate and bivariate analysis in the software package.
- 4. Perform multivariate analysis in the software package.

5. Demonstrate capabilities of problem-solving, critical thinking, and communication skills to infer the output.

UNIT I Overview and Data Entry

SPSS – Meaning – Scope- Limitation- Data view- Variable view- Data entry procedures- Data editing-Missing.

UNIT II Descriptive Statistics

Descriptive statistics – Frequencies Distribution – Diagram –Graphs, Mean, Median, Mode, Skewness – Kurtosis – Standard Deviation

UNIT III Non parametric and parametric test

Cross tabulation, Chi square, t test, independent sample t test, paired t test.

UNIT IV Analysis of Variance, Bivariate Analysis

ANOVA - One way, Two Way ANOVA, Correlation - Rank correlation - Regression - charts.

UNIT V Multivariate analysis

Factor Analysis, Cluster Analysis and Discriminate analysis

Suggested Readings:

1. Darren George, Paul Mallery (2016), IBM SPSS Statistics 23 Step by Step, Routledge, New Delhi.

2. Asthana & Braj Bhushan (2017), Statistics for Social Sciences (With SPSS Applications), PHI, New Delhi.

3. Keith Mccormick, Jesus Salcedo, Aaron Poh, SPSS Statistics for Dummies, 3rd edition, Wiley, New Delhi.

4. Keith McCormick, Jesus Salcedo, Jon Peck, Andrew Wheeler, Jason Verlen (2017), SPSS Statistics for Data Analysis and Visualization, Wiley, New Delhi.

5. Brian C. Cronk (2016), How to Use SPSS: A Step-By-Step Guide to Analysis and Interpretation, 9th edition, Routledge, New Delhi.



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(Deemed to be University) (Established under section 3 of UGC Act 1956) Coimbatore-641021

DEPARTMENT OF MANAGEMENT

Name: **Dr. S.VIDHYA (Assistant Professor)** Department: **Management** Subject Code: **18MBAP211** Subject: **SPSS (Practical) - Lesson Plan**

Semester: II

Year: 2018-20 Batch

| | UNIT – 1 | | | | | | |
|--|------------------|---------------------------------------|------------|--|--|--|--|
| S. No | Lecture Hours | Contents | References | | | | |
| 1 | 1 | Introduction to SPSS | W1 | | | | |
| 2 | 1 | Meaning | W1 | | | | |
| 3 | 1 | Scope | W2 | | | | |
| 4 | 1 | Limitation | W4 | | | | |
| 5 | 1 | Data view | W3 | | | | |
| 6 | 1 | Variable view | W5 | | | | |
| 7 | 1 | Data entry procedures | W6 | | | | |
| 8 | 1 | Data editing | W6 | | | | |
| 9 | 1 | Missing | W2 | | | | |
| Total no. of Hours planned for Unit 19 | | | | | | | |
| <u>UNIT – 2</u> | | | | | | | |
| 1 | 1 | Descriptive statistics | T: Pg.No: | | | | |
| 2 | 1 | Frequencies Distribution | T: Pg.No: | | | | |
| 3 | 1 | Diagram | T: Pg.No: | | | | |
| 4 | 1 | Graphs | T: Pg.No: | | | | |
| 5 | 1 | Mean | T: Pg.No: | | | | |
| 6 | 1 | Median | T: Pg.No: | | | | |
| 7 | 1 | Mode | T: Pg.No: | | | | |
| 8 | 1 | Skewness | T: Pg.No: | | | | |
| 9 | 1 | Kurtosis | T: Pg.No: | | | | |
| 10 | 1 | Standard Deviation | T: Pg.No: | | | | |
| | | Total no. of Hours planned for Unit 2 | 10 | | | | |
| | | UNIT – 3 | I | | | | |
| 1 | 1 | Cross tabulation | T: Pg.No: | | | | |
| 2 | 1 | Chi square | T: Pg.No: | | | | |
| 3 | 1 | T test | T: Pg.No: | | | | |

Lesson Plan 2018-20 Batch

| S. No | Lecture Hours | Contents | References | | | | | |
|-------|--|-------------------------------|------------|--|--|--|--|--|
| 4 | 1 | Independent sample t test | T: Pg.No: | | | | | |
| 5 | 1 | T: Pg.No: | | | | | | |
| | Total number of hours planned for Unit 3 | | | | | | | |
| | UNIT – 4 | | | | | | | |
| 1 | 1 | ANOVA | T: Pg.No: | | | | | |
| 2 | 1 | One way | T: Pg.No: | | | | | |
| 3 | 1 | Two Way ANOVA | T: Pg.No: | | | | | |
| 4 | 1 | Correlation | T: Pg.No: | | | | | |
| 5 | 1 | Rank correlation | T: Pg.No: | | | | | |
| 6 | 2 | Regression | T: Pg.No: | | | | | |
| 7 | 1 | Charts | T: Pg.No: | | | | | |
| | Total no. of Hours planned for Unit 48 | | | | | | | |
| | | UNIT – 5 | | | | | | |
| 1 | 2 | Factor Analysis | T: Pg.No: | | | | | |
| 2 | 2 | Cluster Analysis | T: Pg.No: | | | | | |
| 3 | 2 | Discriminate analysis | T: Pg.No: | | | | | |
| 4 | 1 | Discriminate analysis | T: Pg.No: | | | | | |
| 5 | 2 | Recapitulation and Discussion | - | | | | | |
| 6 | 3 | Model Practical Examination | - | | | | | |
| | Total no. of Hours planned for Unit 512 | | | | | | | |

Suggested Readings:

1. Darren George, Paul Mallery (2016), IBM SPSS Statistics 23 Step by Step, Routledge, New Delhi.

2. Asthana & Braj Bhushan (2017), Statistics for Social Sciences (With SPSS Applications), PHI, New Delhi.

3. Keith Mccormick, Jesus Salcedo, Aaron Poh, SPSS Statistics for Dummies, 3rd edition, Wiley, New Delhi.

4. Keith McCormick, Jesus Salcedo, Jon Peck, Andrew Wheeler, Jason Verlen (2017), SPSS Statistics for Data Analysis and Visualization, Wiley, New Delhi.

5. Brian C. Cronk (2016), How to Use SPSS: A Step-By-Step Guide to Analysis and Interpretation, 9th edition, Routledge, New Delhi.

Website:

- W1- www.uvm.edu
- W2- https://libguides.library.kent.edu/SPSS/DefineVariables
- W3- https://www.investopedia.com/terms/d/descriptive_statistics.asp#ixzz5ImxJfRhp
- W5- http://www.modernanalyst.com
- W5- https://businessjargons.com/hypothesis-testing.html
- W6- http://www.fairlynerdy.com/statistical-significance-summary/

| Class: I MBA | | Course Name: SPSS (Practical |
|--|---|---|
| Code: 18MBAP211 | Semester: II | Year: 2018-20 Batch |
| Ex.No.1 | | |
| Date: | | |
| | DESCRIPTIVE STATIS | STICS |
| Aim | | |
| To compute Mean, Mea | dian, Mode and Standard Dev | viation |
| Algorithm | | |
| Step 1: Start the Proces | ss | |
| Step 2: Open the Adver | rt.sav data set from the sample | e files folder |
| Step 3: Advert and sale | s variables are display in data | view window |
| Step 4: Select Description | ive Statistics option from Ana | llyze Menu |
| Step 5: Select Frequen | cies option from Descriptive | Sub menu |
| Step 6: Forward the Sa | lles variable data to Variables | Window |
| Step 7: Select Statistic | s Command button on Freque | ncies window |
| Step 8: Select Mean, M Deviation from Dispers | Median and Mode from Centra sion option and click Continue | al Tendency Option and Standard e command button |
| Step 9: Click Ok butto | n on Frequency Window | |
| Step 10: Stop the proce | ess | |
| | | |
| | | |
| | | |

The above statistical analysis has been verified by using SPSS Package.

Prepared by Dr.S.Vidhya, Assistant Professor, Dept of Management, KAHE

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|-----------|--------------|---------------------|----------------|---------------|-------------------|------------------------|
| Class: | I MBA | | | | Course N | Name: SPSS (Practical) |
| Code: | 18MBAP2 | 211 | Sem | nester: II | Year: 20 | 18-20 Batch |
| Outpu | ıt: | | | | | |
| | | | Statistics | | | |
| Detrend | led sales | <u> </u> | | - | | |
| N | | Valid | | | 24 | |
| IN | | Missing | | | 0 | |
| Mean | | | | | 10.5688 | |
| Median | | | | | 11.0831 | |
| Mode | | | | | 6.71 ^a | |
| Std. De | viation | | | | 1.80001 | |
| a. Multip | ple modes ex | ist. The smallest v | alue is shown | | | |
| | | п | otrondod salos | | | |
| | | Frequency | Percent | Valid Percent | Cumulative | |
| | | | | | Percent | |
| | 6.71 | 1 | 4.2 | 4.2 | 4.2 | |
| | 7.60 | 1 | 4.2 | 4.2 | 8.3 | |
| | 8.71 | 1 | 4.2 | 4.2 | 20.8 | r |
| | 8.75 | 1 | 4.2 | 4.2 | 25.0 | |
| | 8.87 | 1 | 4.2 | 4.2 | 29.2 | |
| | 9.82 | 1 | 4.2 | 4.2 | 33.3 | |
| | 10.38 | 1 | 4.2 | 4.2 | 37.5 | |
| | 10.50 | 1 | 4.2 | 4.2 | 41.7 | |
| | 10.97 | 1 | 4.2 | 4.2 | 45.8 | |
| | 11.15 | 1 | 4.2 | 4.2 | 58.3 | |
| Valid | 11.51 | 1 | 4.2 | 4.2 | 62.5 | |
| | 11.84 | 1 | 4.2 | 4.2 | 66.7 | |
| | 11.86 | 1 | 4.2 | 4.2 | 70.8 | |
| | 12.07 | 1 | 4.2 | 4.2 | 75.0 | |
| | 12.23 | 1 | 4.2 | 4.2 | 79.2 | |
| | 12.25 | 1 | 4.2 | 4.2 | 83.3 | |
| | 12.27 | 1 | 4.2 | 4.2 | 87.5 | |
| | 12.46 | 1 | 4.2 | 4.2 | 91.7 | |
| | 12.57 | 1 | 4.2 | 4.2 | 95.8 | |
| | 12.74 | 1 | 4.2 | 4.2 | 100.0 | |
| | Total | 24 | 100.0 | 100.0 | | |

| FREQU Compute frequencies distribut of 1: Start the Process of 2: Open the demo.sav data a of 3: Age, marital status, gend w window of 4: Select Descriptive Statist of 5: Select Frequencies optic | Semester: II JENCIES DISTRI tion and skewness set from the sample ler and employ varia- tics option from An | Year: 2018-20 Batch IBUTION and kurtosis e files folder iables are display in data halyze Menu |
|---|---|---|
| FREQU compute frequencies distribu o 1: Start the Process o 2: Open the demo.sav data a o 3: Age, marital status, gend w window o 4: Select Descriptive Statist o 5: Select Frequencies optic | JENCIES DISTRI | IBUTION and kurtosis e files folder iables are display in data nalyze Menu |
| FREQU compute frequencies distribu o 1: Start the Process o 2: Open the demo.sav data o 3: Age, marital status, gend w window o 4: Select Descriptive Statist o 5: Select Frequencies optic | JENCIES DISTRI | IBUTION and kurtosis e files folder iables are display in data nalyze Menu |
| FREQU compute frequencies distribu o 1: Start the Process o 2: Open the demo.sav data o 3: Age, marital status, gend w window o 4: Select Descriptive Statist o 5: Select Frequencies optic | JENCIES DISTRI | IBUTION and kurtosis e files folder iables are display in data nalyze Menu |
| compute frequencies distribu p 1: Start the Process p 2: Open the demo.sav data a p 3: Age, marital status, gend w window p 4: Select Descriptive Statist p 5: Select Frequencies optic | tion and skewness set from the sample ler and employ vari- tics option from An | and kurtosis e files folder iables are display in data nalyze Menu |
| compute frequencies distribu p 1: Start the Process p 2: Open the demo.sav data a p 3: Age, marital status, gend w window p 4: Select Descriptive Statist p 5: Select Frequencies optic | tion and skewness set from the sample ler and employ vari- tics option from An | and kurtosis e files folder iables are display in data nalyze Menu |
| p 1: Start the Process p 2: Open the demo.sav data a p 3: Age, marital status, gend window p 4: Select Descriptive Statistics p 5: Select Frequencies optic | set from the sample ler and employ vari- tics option from An | e files folder iables are display in data nalyze Menu |
| p 1: Start the Process p 2: Open the demo.sav data a p 3: Age, marital status, gend w window p 4: Select Descriptive Statistics p 5: Select Frequencies optic | set from the sample er and employ vari- tics option from An | e files folder iables are display in data nalyze Menu |
| p 2: Open the demo.sav data p 3: Age, marital status, gend w window p 4: Select Descriptive Statist p 5: Select Frequencies optic | set from the sample ler and employ vari tics option from An | e files folder iables are display in data nalyze Menu |
| 5 3: Age, marital status, gend w window 5 4: Select Descriptive Statistics 5 5: Select Frequencies optic | ler and employ vari | iables are display in data nalyze Menu |
| o 4: Select Descriptive Statisto 5: Select Frequencies optic | tics option from An | nalyze Menu |
| 5: Select Frequencies optic | | |
| | on from Descriptive | e Sub menu |
| o 6: Forward the age in years | s and gender variab | oles data to Variables Window |
| 7: Select Statistics Comma | nd button on Frequ | iencies window |
| 5 8: Select Mean, Median viation from Dispersion optic ue option and Select skewne mand button. | and Mode from on also select perce ess and kurtosis fro | Central Tendency Option and Standar entiles tab add (10) value in the percentil om distribution option and click Continu |
| o 9: Click charts Command w normal on histogram [cha k continue button. | l button on frequen art type and select | ncies window select Histograms and clic t percentages in chart values option] ar |
| o 10: Click Ok button on Fre | equency Window | |
| o 11: Stop the process | | |
| | p 7: Select Statistics Comma p 8: Select Mean, Median viation from Dispersion optic ue option and Select skewne nmand button. p 9: Click charts. Command ow normal on histogram [chartsheet continue button. p 10: Click Ok button on Free p 11: Stop the process | p 7: Select Statistics Command button on Frequence 8: Select Mean, Median and Mode from viation from Dispersion option also select percent ue option and Select skewness and kurtosis from nmand button. p 9: Click charts. Command button on frequence we normal on histogram [chart type and select ck continue button. p 10: Click Ok button on Frequency Window pp 11: Stop the process |

Class: I MBACourse Name: SPSS (Practical)Code: 18MBAP211Semester: IIYear: 2018-20 Batch

Result

The above statistical analysis has been verified by using SPSS Package.

Output:

| | St | atistics | | _ |
|----------------|----------|----------|--------------|---|
| | | Gender | Age in years | |
| | Valid | 6400 | 6400 | |
| N | Missing | 0 | 0 | |
| Mean | | | 42.06 | |
| Median | | | 41.00 | |
| Mode | | | 39 | |
| Std. Deviation | on | | 12.290 | |
| Skewness | | | .299 | |
| Std. Error of | Skewness | | .031 | |
| Kurtosis | | | 602 | |
| Std. Error of | Kurtosis | | .061 | |
| Percentiles | 10 | | 26.00 | |
| | | | | |

| Gender | | | | | | | | |
|--------|--------|-----------|---------|---------------|--------------------|--|--|--|
| | | Frequency | Percent | Valid Percent | Cumulative Percent | | | |
| | Female | 3179 | 49.7 | 49.7 | 49.7 | | | |
| Valid | Male | 3221 | 50.3 | 50.3 | 100.0 | | | |
| | Total | 6400 | 100.0 | 100.0 | | | | |



KARPAGAM ACADEMY OF HIGHER EDUCATION, COIMBATORE **Class: I MBA Course Name: SPSS (Practical)** Code: 18MBAP211 Semester: II Year: 2018-20 Batch Ex.No.3 Date: **CHI-SQUARE** Aim To calculate Chi-square test to find association between two variables Algorithm Step 1: Start the Process Step 2: Open the Advert.sav data set from the sample files folder Step 3: Advert and sales variables are display in data view window Step 4: Select Descriptive Statistics option from Analyze Menu Step 5: Select Crosstabs from Descriptive Sub menu Step 6: Forward advert variable to Row and sales variable to Column options Step 7: Click Statistics Command button on Crosstab window, from which select Chi-square option and press continue command button Step 8: Click Cells command button on Crosstab window, in which select row on Percentage option and press continue command button Step 9: Click Ok button on Crosstab window Step 10: Stop the process Result

The Chi-square test result has been verified by using SPSS Package.

| Tests df .000 ^a 2.547 2.294 | Year: 20 Asym 529 529 1 | 18-20 Batch np. Sig. (2-sided) .237 1.000 000 |
|--|-------------------------------------|---|
| Tests df .000 ^a 2.547 2.294 | Asym 529 529 1 | np. Sig. (2-sided) .237 1.000 000 |
| Tests df .000 ^a 2.547 2.294 | Asym 529 529 1 | np. Sig. (2-sided) .237 1.000 000 |
| Tests df .000 ^a 2.547 2.294 | Asym 529 529 1 | np. Sig. (2-sided) .237 1.000 000 |
| .000 ^a 2.547 | Asym 529 529 1 | np. Sig. (2-sided) .237 1.000 000 |
| .000 ^a 2.547 9.294 | 529 529 1 | .237 1.000 000 |
| .000° 2.547 9.294 | 529 529 1 | .237 1.000 000 |
| 2.547 9.294 | 529 1 | 1.000 |
| 9.294 | 1 | 000 |
| | | |
| 24 | | |
| X | | |
| | | |
| | | |

Class: I MBA

Course Name: SPSS (Practical)

Code: 18MBAP211

Semester: II

Year: 2018-20 Batch

Ex.No.4 Date:

INDEPENDENT SAMPLE 'T' TEST

Aim

To calculate 't' test to find whether mean differs between two groups

Algorithm

Step 1: Start the Process

Step 2: Open the accidents.sav data set from the sample files folder

Step 3: Age category, Gender, Accidents and Population at risk variables are display in data view window

Step 4: Select gender and accidents two variables for the analysis and write the hypothesis

Step 5: Select Compare Means from Analyze Menu

Step 6: Select Independent Sample 't' Test from Compare Means menu

Step 7: Forward Quantitative data (Accidents) to Test Variables Option and Qualitative data (Gender) to Group Variables option

Step 8: Click Define Groups command button and assign 0 and 1 at Group 1 and Group 2 and click continue command button

Step 9: Click Ok button on Independent Sample 't' test window

Step 10: Stop the process

| KARPAGAM ACADEMY OF HIGHER EDUCATION, COIMBATORE | | | | | | | | | | |
|---|--------------------------------------|----------|--------|---------------|---------------|------------|-------------------|-------------------------------|------------|----------------|
| Class: I MBA | | | | Co | | | Course N | Course Name: SPSS (Practical) | | |
| Code: 18MBAP211 | | | | 5 | semeste | er: II | | Year: 20 | 18-20 Bate | ch |
| Result | | | | | | | | | | |
| The above statistical analysis has been verified by using SPSS Package. | | | | | | | | | | |
| Output: | | | | | | | | | | |
| | <u> </u> | | | Indeper | ndent Sa | imples T | est | | | |
| | | Levene' | s Test | | | t | -test for Eq | uality of Mea | ns | |
| | | Variar | nces | | | | | | | |
| | | F | Sig. | t | df | Sig. | Mean | Std. Error | 95% Confid | lence Interval |
| I | | | | | (2- Differenc | Difference | of the Difference | | | |
| | | | ا ا | └─── ! | ' | tailed) | е | | Lower | Upper |
| | Equal variances assumed | .580 | .489 | 6.072 | 4 | .004 | 8780.667 | 1446.068 | 4765.739 | 12795.595 |
| Accidents | Equal variances not assumed | | | 6.072 | 3.641 | .005 | 8780.667 | 1446.068 | 4604.701 | 12956.633 |
| | | | | | | | | | | |

Class: I MBA

Course Name: SPSS (Practical)

Code: 18MBAP211

Semester: II

Year: 2018-20 Batch

Ex.No.5 Date:

ANALYSIS OF VARIANCE (ANOVA)

Aim

To calculate ANOVA test to find whether mean differs among more than two groups

Algorithm

Step 1: Start the Process

Step 2: Open the coffee.sav data set from the sample files folder

Step 3: Image, brand and frequency variables are display in data view window

Step 4: Select brand and freq two variables for the analysis and write the hypothesis

Step 5: Select Compare Means from Analyze Menu

Step 6: Select One way ANOVA option from Compare Means menu

Step 7: Forward Quantitative data (freq) to Dependent list and Qualitative data (brand) to Factor

Step 8: Click Options Command button

Step 9: Click Descriptive option on Statistics and click continue button

Step 10: Click Ok button on one way ANOVA window

Step 11: Stop the process

Class: I MBA Course Name: SPSS (Practical)

Code: 18MBAP211Semester: IIYear: 2018-20 Batch

Result

The above statistical analysis has been verified by using SPSS Package.

Output:

| Freq | | | | | | | | |
|-------|------|-------|----------------|------------|--------------|-----------------|---------|---------|
| | Ν | Mean | Std. Deviation | Std. Error | 95% Confiden | ce Interval for | Minimum | Maximum |
| | | | | | Mean | | | |
| | | | | | Lower Bound | Upper Bound | | |
| AA | 1012 | 76.42 | 35.728 | 1.123 | 74.22 | 78.63 | 1 | 137 |
| BB | 611 | 48.23 | 35.184 | 1.423 | 45.43 | 51.02 | 2 | 111 |
| СС | 862 | 84.87 | 46.501 | 1.584 | 81.76 | 87.98 | 1 | 144 |
| DD | 753 | 65.01 | 29.604 | 1.079 | 62.89 | 67.13 | 2 | 99 |
| EE | 709 | 66.58 | 38.648 | 1.451 | 63.73 | 69.43 | 1 | 119 |
| FF | 715 | 57.54 | 34.333 | 1.284 | 55.02 | 60.06 | 1 | 110 |
| Total | 4662 | 68.05 | 39.051 | .572 | 66.93 | 69.17 | 1 | 144 |

Descriptive





| Freq | | | | | | | | |
|----------------|----------------|------|-------------|--------|------|--|--|--|
| | Sum of Squares | df | Mean Square | F | Sig. | | | |
| Between Groups | 642267.305 | 5 | 128453.461 | 92.501 | .000 | | | |
| Within Groups | 6465661.714 | 4656 | 1388.673 | | | | | |
| Total | 7107929.019 | 4661 | | | | | | |



Class: I MBACourse Name: SPSS (Practical)Code: 18MBAP211Semester: IIYear: 2018-20 Batch

Ex.No.6 Date:

CORRELATION

Aim

To calculate Correlation to find nature of relation between dependent and independent variable

Algorithm

Step 1: Start the Process

Step 2: Open the catalog.sav data set from the sample files folder

Step 3: Date, Sales of Men's Clothing, Sales of Women's Clothing, Amount Spent on Print Advertising and other variables are display in data view window

Step 4: Select Dependent variables Sales of Men's Clothing and Sales of Women's Clothing and Independent variable Amount Spent on Print Advertising variables for the analysis and write the hypothesis

Step 5: Select Correlate option from Analyze Menu

Step 6: Select Bivariate command option from Correlate sub menu

Step 7: Forward all the variables (Dependent and Independent variables) to variables window

Step 8: Click Ok button on Bivariate Correlation window

Step 9: Stop the process

Result

The above statistical analysis has been verified by using SPSS Package.

Class: I MBACourse Name: SPSS (Practical)Code: 18MBAP211Semester: IIYear: 2018-20 Batch

Output:

| | Correi | ations | | |
|---------------------------|--|----------------------------|---------------------------------|---|
| | | Sales of Men's Clothing | Sales of Women's Clothing | Amount Spent on Print Advertising |
| Sales of Men's Clothing | Pearson Correlation Sig. (2-tailed) | 1 | | |
| j | N | 120 | | |
| Sales of Women's Clothing | Pearson Correlation Sig. (2-tailed) | .802 ^{**} .000 | 1 | |
| | Ν | 120 | 120 | |
| Amount Spent on Print | Pearson Correlation | .266 | .436 | 1 |
| Advertising | N | 120 | 120 | 120 |

**. Correlation is significant at the 0.01 level (2-tailed).

| Class: I MBA | Course Name: SPSS (Practical) | |
|-----------------|--------------------------------------|---------------------|
| Code: 18MBAP211 | Semester: II | Year: 2018-20 Batch |

Ex.No.5 Date:

PAIRED 'T' TEST

Aim

To calculate paired 't' test to find whether diet results differs before and after diet study programme.

Algorithm

Step 1: Start the Process

Step 2: Open the dietstudy.sav data set from the sample files folder

Step 3: Patient ID, Age in years, Gender, Triglyceride and Weight variables are display in data view window

Step 4: Select wgt0 and wgt4 two variables for the analysis and write the hypothesis

Step 5: Select Compare Means from Analyze Menu

Step 6: Select paired 't' Test from Compare Means menu

Step 7: Forward wgt0 and wgt4 data set to Paired Variables window

Step 8: Click Ok button on Paired Sample 't' test window

Step 9: Stop the process

Result

The above statistical analysis has been verified by using SPSS Package.

| Class: I MBA | | | | | Course Name: SPSS (Practica | | | |
|---------------------------------|--------------------|-------------|----------------|----------------|-----------------------------|---------|------|---------|
| Code: 18MBAP211 | Semester: II Year: | | | | Year: 20 | 18-20 B | atch | |
| Output: | | | | | | | | |
| | Paired | Samples Sta | tistics | | | | | |
| | Mean | N | Std. Deviat | on Std. Erro | or Mean | | | |
| Weight | 198.38 | 16 | 33. | 472 | 8.368 | | | |
| Final weight | 190.31 | 16 | 33. | 508 | 8.377 | | | |
| | Paired S | amples Corr | elations | | | | | |
| | | N | Corre | ation | Sig. | | | |
| Pair 1 Weight & Final | weight | | 16 | .996 | .000 | | | |
| | | | | | — | | | |
| | | * | | | | | | |
| | | | Paired Sam | oles Test | | | | |
| | ļ, | | Paired Differe | nces | | t | df | Sig. (2 |
| | Mean | Std. | Std. Error | 95% Confide | fidence Interval | | | tailed |
| | | Deviation | Mean | of the Di | fference | | | |
| Pair Weight - Final 1 weight | 8.063 | 2.886 | .722 | Lower 6.525 | Upper 9.600 | 11.175 | 15 | .(|
| | | | | | | | _ | |

Class: I MBA Course Name: SPSS (Practical) Code: 18MBAP211 Year: 2018-20 Batch Semester: II Ex.No.9 Date: **FACTOR ANALYSIS** Aim To find out the important factors (or) variables among the various set of variables introduced Algorithm Step 1: Start the Process Step 2: Open the survey sample.sav data set from the sample files folder Step 3: Respondent id number, Labor force status, marital status and other variables are display in data view window and write the hypothesis. Step 4: Select Dimension reduction option from Analyze Menu Step 5: Select factor analysis command option from data reduction sub menu Step 6: Forward all the variables into variables option Step 7: Select Descriptive command window, and select KMO and Bartlett's test of Sphercity option and click continue command button Select Rotation command button on Factor analysis window, and select varimax Step 8: option and click continue command button Step 9: Click Ok button on Factor Analysis window Step 10: Stop the process Result Thus factor test has been verified by using SPSS Package.

KARPAGAM ACADEMY OF HIGHER EDUCATION, COIMBATORE **Class: I MBA Course Name: SPSS (Practical)** Code: 18MBAP211 Semester: II Year: 2018-20 Batch **Output:** KMO and Bartlett's Test Kaiser-Meyer-Olkin Measure of Sampling Adequacy. .729 1528.818 Approx. Chi-Square Bartlett's Test of Sphericity df 325 .000 Sig.

| | | | | Comp | onent | | | |
|--|------|------|------|------|-------|------|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Highest year of school completed | .888 | | | | | | | |
| Highest degree | .838 | | | | | | | |
| Highest year school completed, father | .709 | 342 | | | | | | |
| Highest year school completed, spouse | .705 | | | | | | | |
| Highest year school completed, mother | .705 | | | 337 | | | | |
| How get paid last week | .427 | | | | .312 | | | |
| Hours per day watching TV | 340 | | | 307 | | 334 | | |
| How often does | | | | | | | | |
| respondent read | 338 | | | | | | | |
| newspaper | | | | | | | | |
| Age of respondent | | .860 | | | | | | |
| Age category | | .855 | | | | | | |
| Number of children | | 800 | | | | 311 | | |
| (grouped categories) | | .000 | | | | .011 | | |
| Number of children | | .784 | | | 345 | | | |
| Confidence in medicine | | | .705 | | | | | |
| Confidence in press | | | .641 | | | | | |
| Confidence in television | .309 | | .577 | | | | | |

Rotated Component Matrix^a

| Class: I MBA | | Course Name: SPSS (Practical) | | | | | | |
|--|-----------|-------------------------------|------|------|---------------------|------|--|--|
| Code: 18MBAP211 | Semester: | Semester: II | | | Year: 2018-20 Batch | | | |
| How many grandparents born outside U.S. | | .757 | | | | | | |
| Respondent id number | | 671 | | | | | | |
| Favor or oppose death penalty for murder | | .538 | | 456 | | | | |
| Confidence in banks & financial institutions | .437 | .518 | | | | | | |
| Respondent's income | | | .702 | | | | | |
| Total family income | | | .620 | | | | | |
| Think of self as liberal or conservative | | | | .680 | | | | |
| Confidence in major companies | | | | | .816 | | | |
| Confidence in education | .410 | | | .414 | .443 | | | |
| Happiness of marriage | | | | | | .828 | | |
| General happiness | | | | | .401 | .768 | | |

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 8 iterations.