

The background of the slide is a light gray gradient with several realistic water droplets of various sizes scattered across it. The droplets have highlights and shadows, giving them a three-dimensional appearance. The main title is centered in a large, bold, red serif font.

STATISTICAL PACKEG

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Content :

- **Definition of statistical package .**
- **Basic structure of SPSS .**
- **Vertical Bar Charts , Pie Charts and Histograms .**
- **Chi-square Test .**
- **Uses Of SPSS In Healthcare .**

Objectives :

- **By the end of this seminar student will be able to :**
- **Defined Statistical package .**
- **Explain basic structure of SPSS , Vertical Bar Charts , Pie Charts and Histograms .**
- **Describe Chi-square Test .**
- **List Uses of excel , statistical package in healthcare .**

Introduction :

- **SPSS** (statistical package for the social sciences) Is one of the most popular statistical packages which can perform highly complex data manipulation and analysis with simple instructions .

Definition :

➤ **SPSS** (statistical package for the social sciences) Is a software package used in statistical analysis of data.



3 : hedge

Visible: 4 of 4 Variables

	hedge	ardvk	giraffe	moose	var	var
1	1	3.00	8.00	5.00		
2	2	7.00	8.00	1.00		
3						
4						
5						
6						
7						
8						
9						

Data View

Variable View

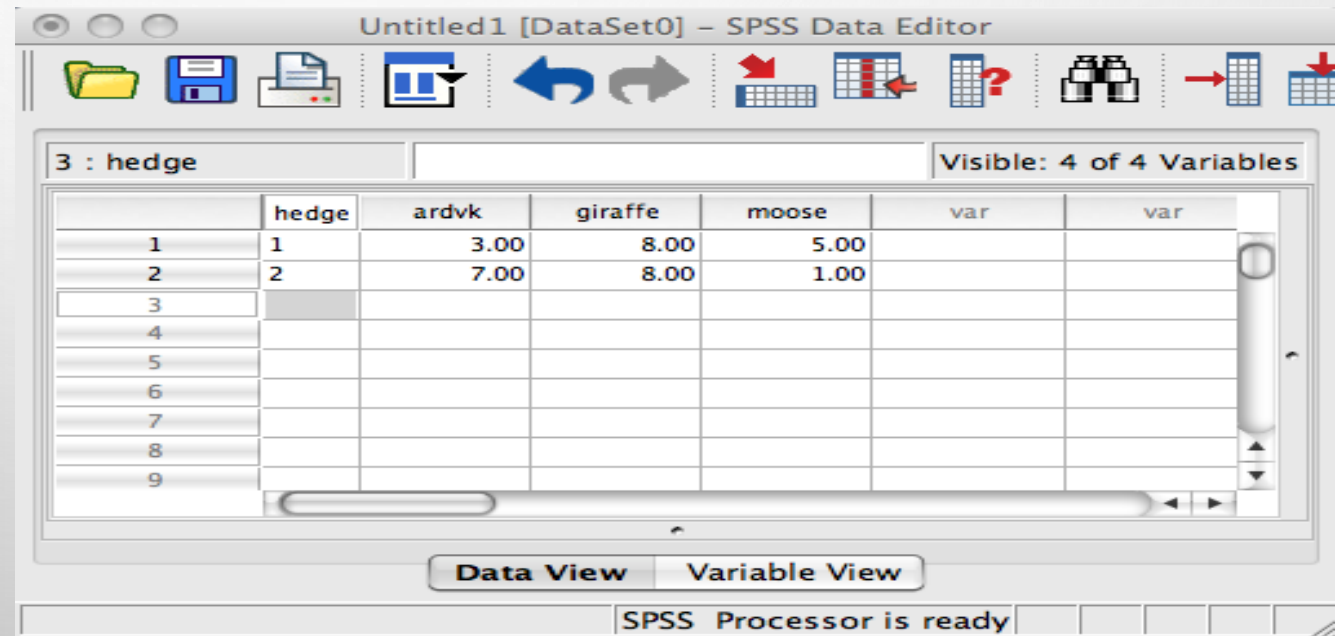
BASIC STRUCTURE OF SPSS :

➤ SPSS has three windows for working with data:

1. The data editor window (.Sav)

➤ Shows data in two forms:

- Data view
- Variable view



2. The output viewer window (Spv)

- Shows results of data analysis

The screenshot displays the SPSS Viewer window titled "Output1 [Document1] - SPSS Viewer". The window features a toolbar with various icons for file operations (such as Open, Save, Print, Find, Copy, Paste) and navigation (Back, Forward, Home, End). The main content area is divided into two panes. The left pane shows a tree view of the output structure:

- Output
 - Log
 - Graph
 - Title
 - Notes
 - Active Dataset
 - Histogram of giraffe

The right pane displays the command window with the following text:

```
GRAPH  
  /HISTOGRAM(NORMAL)=giraffe.
```

A red arrow points to the word "Graph" in the command window. Below the command, the text "[DataSet0]" is visible. The bottom of the window shows a status bar with the text "SPSS Processor is ready".

3. Compute Variable :

- **Example: create a new, transformed variable from an already existing variable**
- **-Click transform > compute variable**
- **-Assign the new “target variable” (this will be attached at the end of the variables list)**








	FRLP	Co urs	TestScore	var	var	var
1		1 B	224			
0		0 A	220			
1		0				

Compute Variable

Target Variable:

TestScore_Ex

Type & Label...

-  Student ID Number...
-  Curriculum Type [C...]
-  Grade Level [Grade]
-  Gender [Gender]
-  Free/Reduced Lunc...
-  Course Grade [Cou...]
-  Standardized Test...

=

Numeric Expression:

SQRT(TestScore)



+	<	>	7	8	9
-	<=	>=	4	5	6
*	=	~=	1	2	3
/	&		0		.
**	~	()	Delete		

Continually

- **-If you need to find how to write the function, there is a list of functions on the right .**
- **This procedure will create a new variable at the end of the variable list that is the means of the variables that you chose to include in the computation.**
- **You can select a subset of cases by clicking on the if button .**



Student Num	Curriculum	Curric2	Grade	Gender	FRLP	Course_Grade	TestScore	var
1	Integrated	2.00	11	Female	1	B	293	
2	Evergreen	1.00	11	Male	0	A	235	
3	Evergreen	1.00	11	Female	0	.	.	

Compute Variable

Target Variable: = Numeric Expression:

Student Num

Curriculum

Curric2 [Curric2]

Grade

Gender

FRLP

Course_Grade

TestScore

+

-

*

/

**

<

<=

=

&

~

>

>=

~=

|

()

7

4

1

0

8

5

2

Delete

9

6

3

.

Function group:

- FDF & Noncentral FDF
- Random Numbers
- Search
- Significance
- Statistical
- Scoring
- String

Functions and Special Variables:

- Cfvar
- Max
- Mean
- Median
- Min
- Sd
- Sum
- Variance

MEAN(numexpr,numexpr[,...]). Numeric. Returns the arithmetic mean of its arguments that have valid, nonmissing values. This function requires two or more arguments, which must be numeric. You can specify a minimum number of valid arguments for this function to be evaluated.

(optional case selection condition)

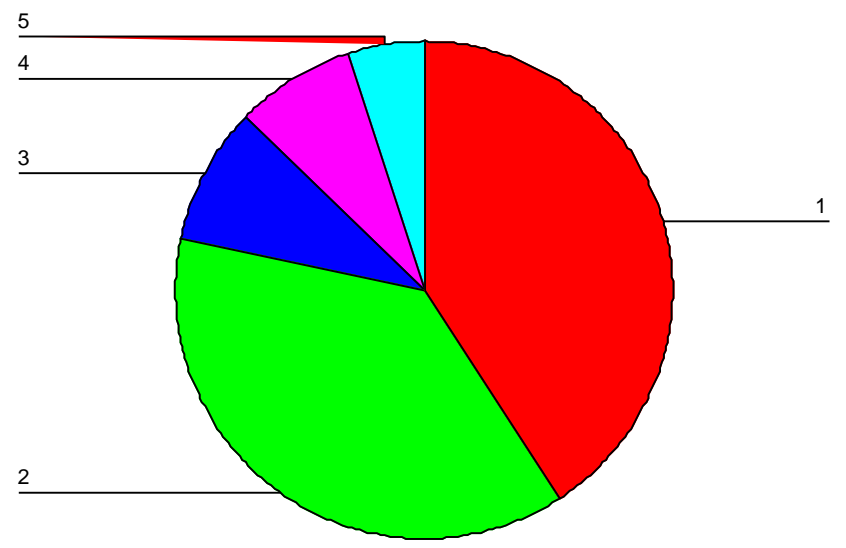
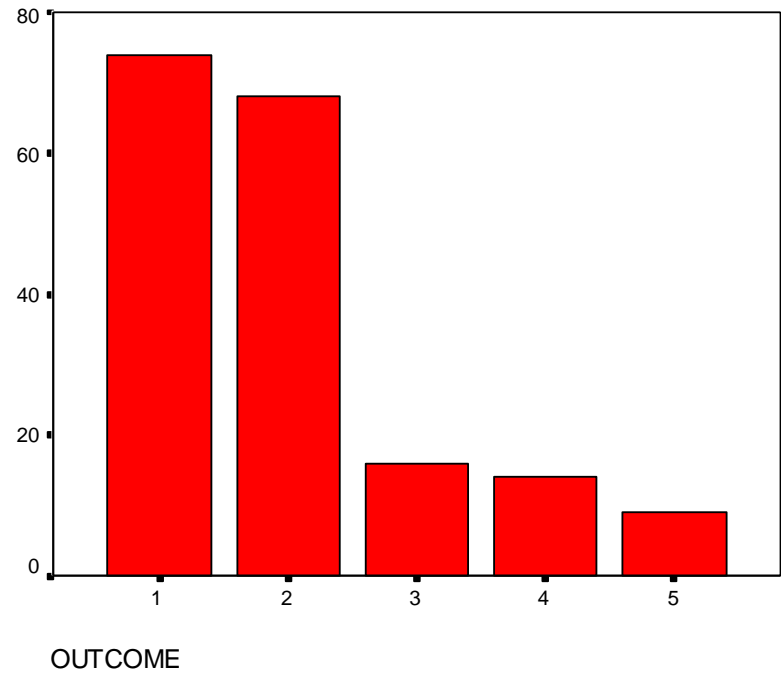
Vertical Bar Charts And Pie Charts :

- **After importing your dataset, and providing names to variables, click on :**
- **GRAPHS → BAR... → SIMPLE (summaries for groups of cases) → DEFINE**
- **Bars represent N of cases (or % of cases)**
- **Put the variable of interest as the category axis**

Continually

- **Graphs → pie... (summaries for groups of cases) →
define**
- **Slices represent N of cases (or % of cases)**
- **Put the variable of interest as the define slices by .**

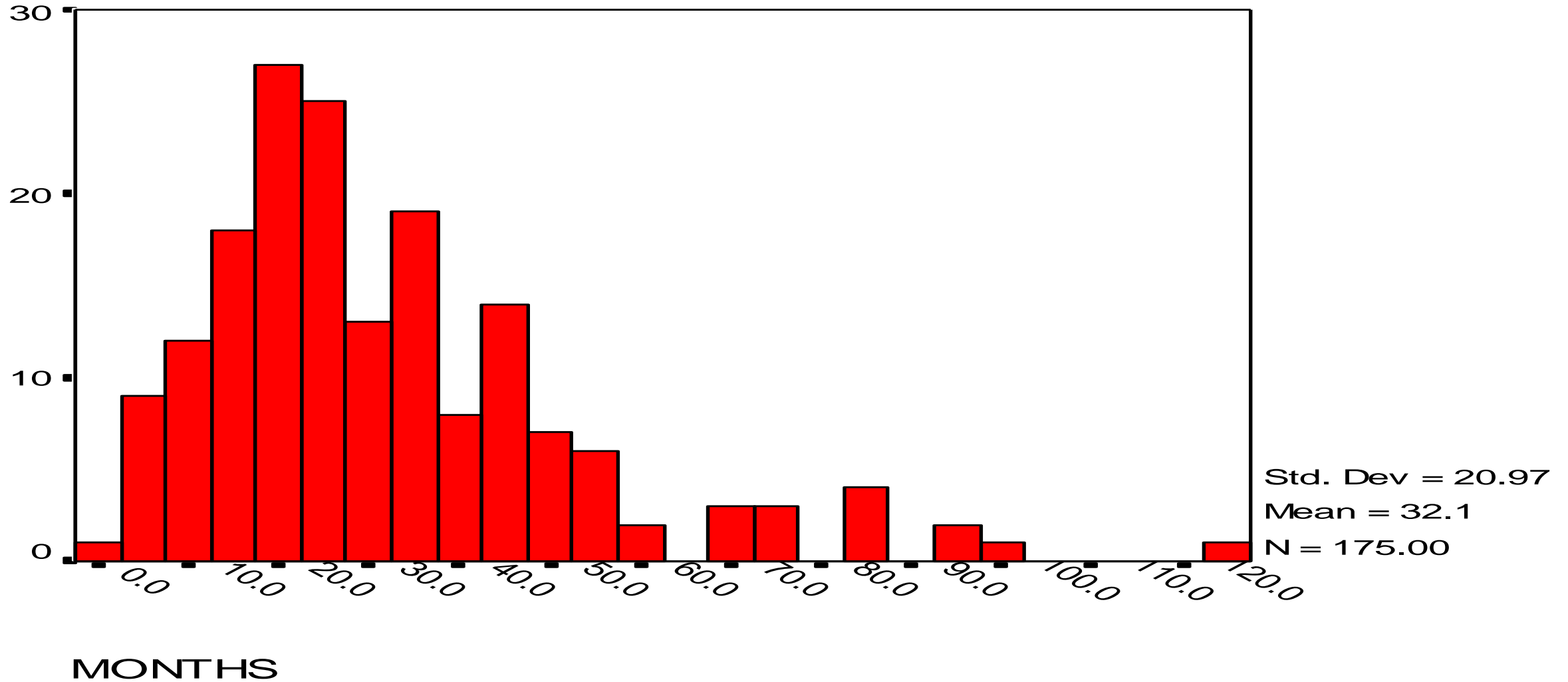
Example 1.5 - Antibiotic Study :



HISTOGRAMS :

- **After importing your dataset, and providing names to variables, click on:**
- **Graphs → histogram**
- **Select variable to be plotted .**
- **Click on display normal curve if you want a normal curve superimposed .**

Example 1.6 - Drug Approval Times :



Chi-square Test :

- **After importing your dataset, and providing names to variables, click on:**
- **Analyze → descriptive statistics → crosstabs**
- **For rows, select the independent variable**

Continually

- **For columns, select the dependent variable**
- **Under statistics, click on chi-square .**
- **Under cells, click on observed, expected, row percentages, and adjusted standardized residuals .**

Uses Of Spss In Healthcare :

- 1. Health services research .**
- 2. Data collection and organization .**
- 3. Data output :**
 - Once data is collected and entered in to the data sheet in SPSS , you can create an output from data .**
- 4. Statistical tests .**

Any Questions ???

