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SHRI B. M. PATIL MEDICAL COLLEGE, HOSPITAL & RESEARCH CENTRE, VIJAYAPURA

A Report on Workshop

"Statistical Analysis using Jamovi Software"
Organized by
R & D Cell, BLDE (DU)

Date: 15/6/2023   **Venue: CAL, Laboratory, Dept. of Pharmacology**

Participants: Academicians, Faculty, Research Scholars, PG Students from all disciplines.

The workshop started with the welcoming to the speaker and the team by Dr. Nirmala G, Co-Ordinator, (R & A), BLDE (DU). Introduced today's workshop speaker Dr.Ganasoundari by Dr. Chandrika Doddihal, Dy.Director, R & D Cell, BLDE (DU) and the workshop inaugurated by Dr.Akram A. Naikwadi, Professor & HoD, Dept. of Pharmacology & Member Secretary, IEC, BLDE (DU) along with the other dignitaries on the Dias.

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Objectives of the workshop:

1. Learn to analyze data and statistics using jamovi
2. Understand statistical analysis using Jamovi.
3. The significance of Data and its effective analysis is unavoidable to have a good piece of research and to make a fruitful decision. From students to scholars, individual researchers to research institutes throughout the world come across this data analysis part to carry out their research.

The aim of this workshop is to provide hands on training in understanding the concepts in data science and statistical analysis using Jamovi.

The Jamovi is free and open statistical software to bridge the gap between researcher and statistician. It provides Graphical User Interface for R Programming which is one of the most widely used open-source statistical package in the field of Data Science across the world. It is a compelling alternative to costly statistical products such as SPSS, Stata and SAS, etc.

Major Topics covered:

1. The scope of workshop is to cover theoretical discussion and practical exposure on the following aspects of statistical analysis using Jamovi (A GUI for R Programming).
2. Introduction to R, RStudio and Jamovi
3. Importing and handling data
4. Data Visualization (Histograms, Box plots, Density plots, Dot plots, Bar plots, etc.)
5. Descriptive Statistics (Summary Measures)
6. Hypothesis Testing – I (Parametric)
7. Hypothesis Testing – II (Non-Parametric)
8. Analysis of Variance (One-way ANOVA, Two-way ANOVA)
9. Correlation Analysis
10. Simple and Multiple Linear Regression Analysis
11. Reproducible Research in Open Science Framework using Jamovi

jamovi is a free, open-source application that makes data analysis easy and intuitive. jamovi menus and commands are designed to simplify the transition from programs like SPSS but, under the hood, jamovi is based on the powerful statistical programming language R.

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jamovi has a clean, human-friendly design that facilitates insight into your data and makes it easy to share your work with others. In this introductory course, you'll learn how you can use jamovi to refine, analyze, and visualize your data to get critical insights.

Jamovi features:

1. ANALYSES
2. STATISTICAL SPREADSHEET
3. R SYNTAX
4. TEACHING
5. COMMUNITY
6. REPRODUCIBILITY
7. CREATE YOUR OWN

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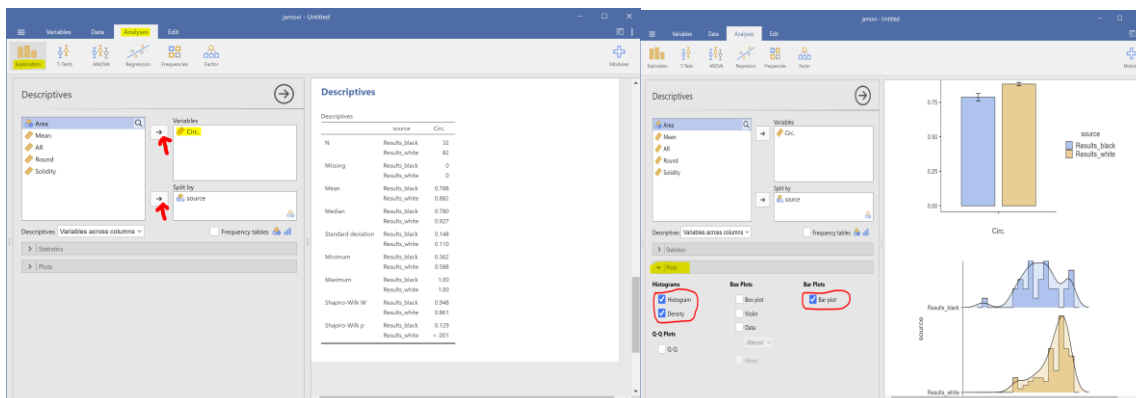SHRI B. M. PATIL MEDICAL COLLEGE, HOSPITAL & RESEARCH CENTRE, VIJAYAPURA

Statistical analysis software exists for decades. So why care about "just another one". Well, for one main reason: simplicity. And I mean simplicity by a clean interface and an easy usage. Besides that, Jamovi is open-source and developed in R, a powerful programming language to perform statistical tests.

Almost every field in science uses statistical analysis as a tool to validate or refuse a hypothesis. Thus, popular commercial software, like SPSS, SAS, Origin, , Prism, as well as Excel itself, have been and are used. They are all very powerful platforms, but their initial interface with too many menus and buttons may intimidate new users (besides the price). There is a free similar option to SPSS called PSPP, but since it mimics the latter, their interfaces are similar. Other options would be using programming languages like Python and R, but that still wards off all non-programmers.

Recently, two options free and open-source emerged as a solution to this: JASP and Jamovi. They are very much alike, but here I will focus on this last one for no particular reason.

Descriptive analysis:

For analysis! It is always a good idea to take a look at the data before performing statistical tests. So, let's go to "Analysis -> Exploration" and observe descriptors about a certain feature. In our case, we are interested in Circularity, so click on the variable "Circ." and then click on the arrow at the top to put this feature in the "Variables" box. We also want to see this feature separated by our black/white elements, so click on the variable "source" and then click on the second arrow to put it in the "Split by" box. You will already see a table on the right side showing some statistics like mean, median, etc.

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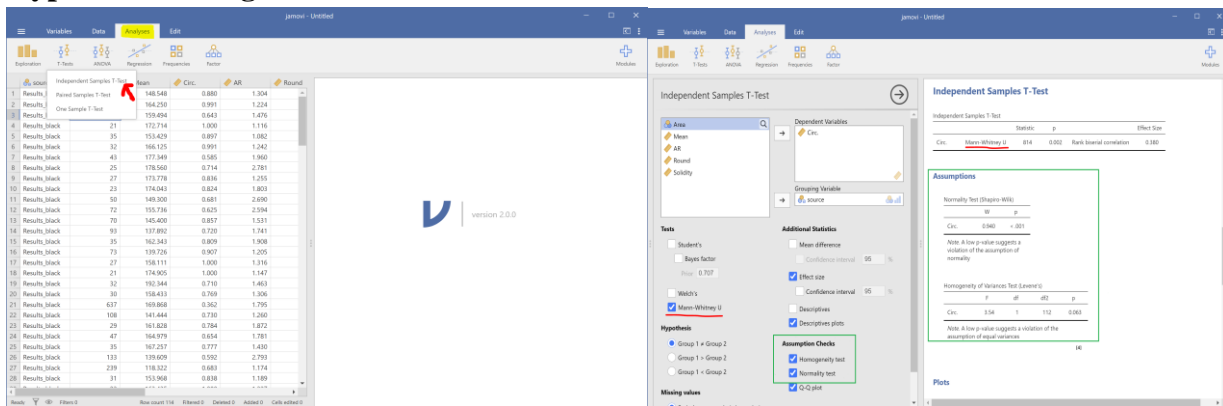
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Hypothesis testing: T-tests:

Correlation analysis:

Another analysis we could run is correlation. Let's check if roundness and aspect ratio are correlated. In the Analyses tab, click "Regression -> Correlation Matrix". Then just assign the variables "Round" and "AR" to right box, chooses the correlations you want, like Pearson and Spearman, and activate some plot by checking checkboxes.

Feedback:

1. Get familiar with Jamovi: A free GUI for R Programming

2. Understands statistical analysis using Jamovi

3. Explore how to analyze research data using Jamovi

4. Explore how to represent data using basic graphs using Jamovi

5. This workshop helped the participants in applying applying various statistical techniques using Jamovi.

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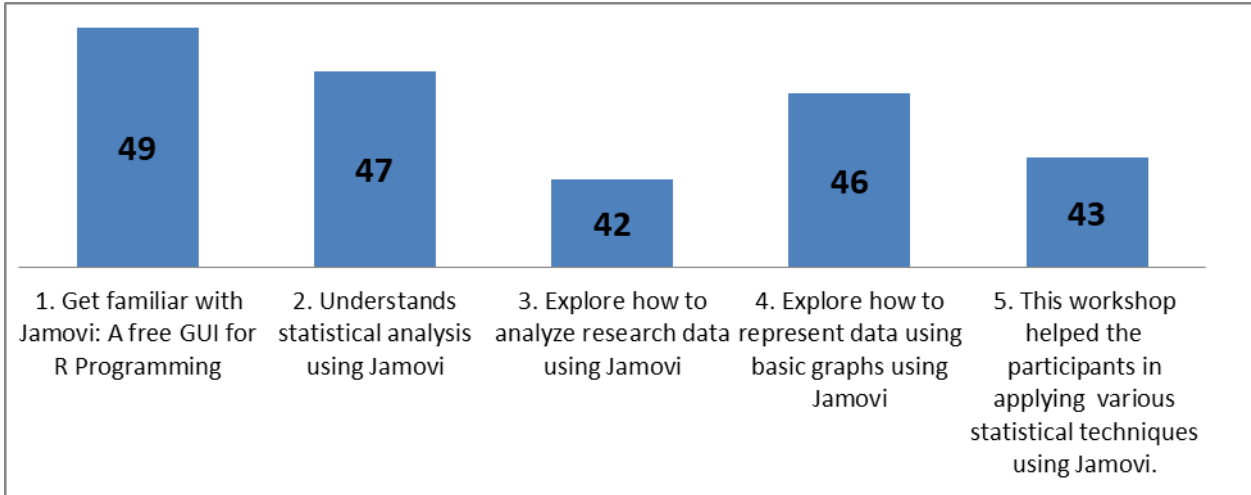
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Reported By:

Dr. Nirmala G.
Co-ordinator, R & A, BLDE (DU).

DIRECTOR
RESEARCH AND DEVELOPMENT CELL
BLDE (Deemed to be University)
Vijayapura-586103.Karnataka

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Attendance sheet

Event: WORKSHOP
Date: 15/6/2023
Venue: CAL, Laboratory, Dept. of Pharmacology (10.00 am to 5.00 pm)
Topic: STATISTIC ANALYSIS USING JAMOVI SOFTWARE

Name	Designation	Mobile Number	Signature
Dr. Preeti. Malapure	Ast. Professor	9113945722	
Dr. Girish Biradarpat	SR.	8474T4569	
Dr. Ishwar Navalgund	Asst professor	6363515256	
Ms. Md. Wasim. M. Khatib	Asst professor	9743841415	
Mrs. Soumya Tunsal	ph.D. scholar	7760027612	
Dr. Rahul Kurungo	PG	6370603653	
Dr. Sayandeep K. Das.	PG.	7892596540	
Dr. Magna Ray	SR	9743941296	
Dr. Shweta. Patil	SR	8217527995	
Murugesh Math	Statistician	7770082496	
Dr. Vijaya. Sorgaon.	Associate Prof	9964569561	
Dr. Aravind Gout pall	Asst prof.	9538466527	
Dr. D. Sai. Akhil	PG	8686077197	
Dr. Y. Rohith	PG 2 (Paediatrics)	9100629096	
Dr. Trimal knlkarni	Asst poof	8147824026	
Dr. A.V. Raghu	Professor	9611092784	

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Name	Designation	Phone	Signature
Dr. Vijayalaxmi Brahol	Sr. Resident	8746046624	
Dr. Vinithira Sri GV	JR-II	9003045540	
Dr. Swati Talwade	JR-II	9945638738	
Dr Jyoti Mantur	Sr Resident	9740233176	
Dr. Renuka Hhyali	Professor	9886492178	
Dr Shravankumar Patkor	Assistant Prof	7760748146	
Dr. Vinay. S. Kundergi	Prof of Urology	9448897524	
Dr. Surekha B. Hippargi	Pathology Prof	9449141966	15-06-23
Dr. Nandini. T	Biochemistry	8971786085	
Dr Anil Bulagond	orthopedic	9945174196	
Dr Rajakumar M Bagewadi	ORTHO PAEDS	7760412276	
Dr Raghunandana Nerisha	Anaesthesia (JR-2)	8847804486	
Dr Sandra Thomas	Anaesthesia (JR-1)	7305613868	
Dr. Savitri m. Nenne	Pathology	9008179806	
Dr DHRUVA AM.	Urology	9902481081	
Dr. Saurabh Thakkar	Urology	9833722704	
Gowri. N. Malipatil	PhD Sdar	9620213651	
Dt. Shree N. Deshpande	Nutritionist	8095994515	
Geetanjali S. Pujeri	Echocardiographist	8884784101	
Dr Shilpa. K	JR-2 ophthalmology	8197339435	

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Dr Pooja . Kalburgi	PG 2	7829328482 7892434392	P.Kalburgi
Mr. Akshaya Hiremath	Lecturer	8748828360	A.S.Hiremath
Dr. VENUGOPAL. H	PG-2	9481306800	Vgy
Dr. Likitha M.J	PG-2	9986999100	LH.
Dr. Keertivardhan D.Kulkarni	Associate Professor	9986896644	
Dr Deepak R. Chinagi	Assistant Professor	9731962699	
Dr. Kaushal Trivedi.	PG-2	9409158369	Ktrivedi
Dr. Satyam Talegaonkar	Ph. 2	9850450496	T
Dr. S. MANIKANDAN	PG-2 (Anes Thesia)	9094901960	Manav.
Dr. M.Veena Vandana	PG-3	7799944789	M.Veena
Dr. Apoorva Gayatri. A	PG (paediatric)	8008265123	Apo

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12-06-2023

CIRCULAR

Heads of the Departments are requested to depute two staff and two to three PG's to attend WORKSHOP organized by Research & Development Cell **on 15-06-2023, at C.A.L. Lab., Department of Pharmacology at 10 am.**

Topic of CME: WORKSHOP ON STATISTICAL ANALYSIS USING JAMOVI SOFTWARE

SPEAKER : DR GANASOUNDARI,
Founder & Managing editor of Rehoboth Academic Services, Bengaluru.

PRINCIPAL.

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Shri B. M. Patil Medical College
Hospital & Research Centre,
VIJAYAPUR-586103

Copy to:

All HoD's of Pre, Para and Clinical departments

The Medical Superintendent, Shri B M Patil Medical College H & RC, Vijayapura

The Vice Principal, Pre, Para and Clinical departments.

The Dean, Research and Development Cell.

Copy for information

The Registrar, BLDE (Deemed to be University), Vijayapura

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