Systematic Review and Meta-Analysis: A Beginner-to-Expert Workshop

Hands-on 3-Day Online Workshop Organized by BioDeskINDIA Research Ecosystem

July- 11 , 12, 13 - 2025

7:30 PM - 8.30 PM IST

Mode : Online (Zoom)

About the workshop

This intensive 3-day workshop is designed to give participants a complete understanding of how to plan, execute, and report a Systematic Review and Meta-Analysis.

- Formulating the research questions
- Developing and registering the protocol
- Conducting the literature searches
- Performing the data extraction
- Quality assessment tools
- Conducting Meta-Analysis using RevMan and R

Participants will learn how to register their protocols in PROSPERO and we will follow PRISMA guidelines for systematic reporting.

Workshop will include live demonstrations and hands-on practice using an example dataset specially prepared for participants.

Who Should Attend

- Students (UG/PG/PhD)
- Doctors
- Faculty Members
- Healthcare Professionals
- Researchers in any discipline
- Anyone interested in conducting Systematic Reviews and Meta-Analyses

Key Speakers

Prof. Delna N S
Director and Founder
BioDeskINDIA Labs

HOD- Department of Allied Health Sciences, Al-Azhar Medical College and Super Speciality Hospital

Dr. Ajita Pillai
Senior Scientist
BioDeskINDIA Labs

Post Doc Fellow
Reliance Life Sciences

Dr. Bhavit Bansal
Senior Research Fellow, Department of Research, Central Council for Research in Yoga & Naturopathy

Program Coordinators

Akshay V P
Research Coordinator
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Research Coordinator
BioDeskINDIA Labs

Sai Shashank Gudla
Research Coordinator
BioDeskINDIA Labs

Lavudya Saiprashanth
Research Coordinator
BioDeskINDIA Labs

Day 1 June 13

Foundations of Systematic Review

- Introduction to systematic review and meta-analysis: evidence-based practice.
- History and evolution of SR/MA.
- Benefits of conducting systematic reviews for students, researchers, and clinicians.
- Introduction to the essential tools and platforms:
  - OSF (Open Science Framework): setting up an account, why open science matters.
  - PROSPERO: navigating the interface, preparing for protocol registration.
  - RevMan (Cochrane software): a quick preview of how data is synthesized.
  - R and Python: introducing the relevance of coding for meta-analysis.
  - Rayyan: creating a new project, uploading citations, collaborative screening.

The session will continue with a deep dive into review frameworks:

- What is a Scoping Review, how it differs from a systematic review, and when it is useful.
- Exploring PICO, PICOS, SPIDER frameworks with real examples.

Participants will practice formulating their own research questions using PICO live.

Day 2 June 14

Protocol Writing, Search & Extraction

- Protocol Development:
- Structuring a protocol document.
- Using PRISMA-P items for a quality protocol.
- Writing objectives, inclusion/exclusion criteria, methods section.
- Registering Protocols:
- Live demonstration of submitting a protocol to OSF.
- Navigating the PROSPERO registration form and required information.
- Literature Search:
- Building search strategies using Boolean operators.
- Conducting a live search in PubMed.
- Exporting results into reference managers like Zotero/EndNote.
- Study Screening:
- Uploading citations into Rayyan.
- Demonstrating blinding, inclusion/exclusion, conflict resolution in screening.
- Data Extraction:
- Creating a custom extraction sheet in Excel/Google Sheets.
- Demonstrating how to extract author, year, sample size, effect measures, outcomes.
- Participants will work with an example dataset provided, mirroring real-world research data to ensure authenticity.

Day 3 June 15

Meta-Analysis & Result Interpretation

- Running a Meta-Analysis in RevMan:
- Inputting data into RevMan.
- Generating Forest Plots.
- Interpreting effect sizes, confidence intervals.
- Performing subgroup analyses.
- Exploring Meta-Analysis in R:
- Installing necessary R packages (meta, metafor).
- Running a basic meta-analysis.
- Viewing Forest Plots and heterogeneity statistics.
- Interpreting Outputs:
- Understanding Forest Plot findings.
- Interpreting Funnel Plots for publication bias.
- Explaining Egger's Test, trim-and-fill methods.
- Discussing fixed-effect vs random-effects models.
- Reporting Results:
- Learning how to write Results and Discussion sections.
- Connecting meta-analysis outputs with narrative interpretation.

BioDesk Research ECOSYSTEM

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Special Perks

- All participants receive an e-certificate
- Best performers will get an exclusive invitation to join upcoming systematic review and meta-analysis projects at BioDeskResearch ecosystem. A FREE collaboration opportunity
- There will be Q&A + Feedback session after every day session

Register now at

www.biodeskindia .om

Workshop Fees

Early Bird fee till May 30:

For Indian researchers **₹859/-**

International researchers **10$**

Fee after May 30

For Indian researchers **₹1299**

International researchers **15$**

BioDesk Research ECOSYSTEM

The BioDesk Research Ecosystem is a collaborative initiative designed to support researchers in producing high-quality, evidence-based research and publishing in high-impact journals. We recognize the challenges faced by researchers and are committed to empowering them with the resources and guidance needed to achieve world-class recognition. Our goal is to promote a culture of rigorous, evidence-based research that contributes meaningfully to the global scientific community