

JASP

❑ Overpromised Accessibility, Underdelivered Depth

JASP markets itself as a user-friendly GUI for statistical analysis, but this ease of use comes at the cost of **limited methodological depth and flexibility**.

- The simplified interface encourages **black-box application** of statistics without fostering true understanding.
- Advanced users find the software **restrictive**, lacking support for custom models, complex data structures, and scripting.
- The default settings and automated procedures may **lead novices to misuse or misinterpret results**.

❑ Limited Statistical and Meta-Analytic Features

- While JASP supports basic meta-analysis, it **lacks advanced capabilities** such as network meta-analysis, multivariate models, and robust meta-regression.
- The Bayesian methods implemented are **simplistic** and do not cover the breadth needed for nuanced inference.
- Diagnostic tools for heterogeneity, publication bias, and influence analyses are **basic or missing**.

❑ No Integration with Automation or Data Extraction Tools

- JASP operates in isolation, with **no built-in support for literature screening, data extraction, or risk of bias assessment**.
- It offers **no API or scripting interface**, limiting reproducibility and workflow automation.
- Collaboration features are minimal or nonexistent.

❑ Reproducibility and Transparency Issues

- Although JASP allows export of analysis scripts, the lack of full scripting limits transparency compared to command-line alternatives.
- Version control and project management features are weak, hindering collaborative reproducible research.
- Output reports are standardized but **offer limited customization**.

⚠ Accessibility vs. Professionalism Trade-Off

- JASP's low barrier to entry can foster **overconfidence among inexperienced users**, increasing risk of analytical errors.
- Professional statisticians and methodologists often reject JASP due to its **limited scope and control**.
- The software's popularity in teaching may not translate to rigorous research environments.

□ Final Verdict

JASP is a **convenient tool for introductory statistics and teaching**, but it is **unsuitable for complex, high-stakes meta-analyses or advanced research**. Its **simplistic interface, limited features, and poor integration** hinder rigorous evidence synthesis and reproducibility.

Recommendation: Use JASP for learning or exploratory data analysis only. For robust meta-analytic work, prefer more flexible and transparent tools like R packages or advanced workflow platforms.

Better Alternatives to JASP

□ R with Meta-Analysis Packages (metafor, meta, netmeta)

- □ Full scripting flexibility for complex and customized meta-analyses
- □ Supports network meta-analysis, multivariate models, and Bayesian methods
- □ Integrates with R Markdown for reproducible research reports
- □ **Why better than JASP:**

Greater control, transparency, and methodological sophistication

□ Comprehensive Meta-Analysis (CMA)

- □ User-friendly GUI tailored to meta-analysis
- □ Supports subgroup and sensitivity analyses and other advanced features
- □ Widely used in clinical research with strong support
- □ **Why better than JASP:**

More focused and feature-rich for meta-analytic purposes

□ AI-Augmented Tools: Elicit + RobotReviewer

- □ Automate literature screening, data extraction, and bias assessment
- □ Reduce manual workload and increase accuracy
- □ **Why better than JASP:**

Streamlines upstream review tasks typically manual in JASP workflows

□ Systematic Review Platforms: Covidence, DistillerSR

- □ Manage full systematic review workflow: screening, extraction, bias assessment, export
- □ Collaboration-friendly with version control and audit trails
- □ **Why better than JASP:**

Supports entire review lifecycle, not just statistical analysis

□ Summary Table

Tool	Strengths	Why Better Than JASP
R (metafor, meta, netmeta)	Advanced scripting, flexibility, reproducibility	Maximum control and transparency
Comprehensive Meta-Analysis	GUI with rich meta-analytic features	More advanced and focused than JASP
Elicit + RobotReviewer	AI-assisted extraction and bias assessment	Automates and accelerates manual processes
Covidence / DistillerSR	Full systematic review management	Manages complete SR workflow collaboratively

□ Final Recommendation

- Use **R packages** for advanced and reproducible meta-analyses.
- Use **CMA** for GUI-driven, feature-rich meta-analysis.
- Use **Elicit and RobotReviewer** to automate evidence extraction and bias assessment.
- Use **Covidence or DistillerSR** to manage the entire systematic review process.
- Use **JASP** primarily for teaching and simple exploratory analyses.

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