

total hip prosthesis surgeries. Each group consisted of 30 patients (male; female ratio 1:1), aged 55-78 years, with stable comorbidities, including hypertension and diabetes (ASA I-II). Postoperative pain was measured using a scale of 1 to 10 on days 1, 2, and 3, along with the number of patients requiring morphine for pain management.

Results: On day 1, patients in the general anesthesia group reported an average pain level of 7-10, while those in the spinal anesthesia group reported 4-5. By day 2, the pain level in the general anesthesia group decreased to 5-8, compared to 2-4 in the spinal anesthesia group. On day 3, pain levels were reported as 3-5 for the general anesthesia group and 0-3 for the spinal group. The need for morphine on the first postoperative day was nearly universal in the general anesthesia group, while only 50% of the spinal anesthesia patients required morphine.

Conclusions: Patients undergoing total hip replacement exhibit significantly lower postoperative pain levels when spinal anesthesia is utilized than general anesthesia.

Discussion: The study sample is relatively small, but the findings align with existing literature. General anesthesia may not be suitable for patients with pulmonary issues, such as COPD or asthma, making spinal anesthesia a viable alternative. However, spinal anesthesia is not without contraindications, including coagulation disorders, use of antiplatelet agents, infections at the injection site, and certain cardiac conditions.

Keywords: Spinal anesthesia, general anesthesia, total hip replacement, postoperative pain.

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Top 5 Statistical Methods Used in Medical Research

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Abstract

Introduction: Statistical methods are critical tools in medical research, guiding the interpretation and validation of data. Choosing the appropriate statistical technique ensures the reliability and accuracy of research findings. However, improper use of these methods can lead to flawed conclusions. This study aims to review and identify the top 10 statistical methods most frequently used in medical research, highlighting their importance and typical applications.

Purpose: This study's objective is to provide an overview of the most commonly used statistical methods in medical research, offering insights into their frequency of use and applicability in different study designs.

Materials and Methods: This cross-sectional study analyzed 100 selected articles from peer-reviewed medical journals. Each article was evaluated based on the statistical methods employed. The methods were classified such as descriptive statistics, hypothesis testing, and advanced multivariate analyses. **Results:** The top 10 statistical methods identified in medical research were:

Descriptive Statistics (100%); t-tests (58%); Chi-Square Tests (54%); Analysis of Variance (ANOVA) (46%); Correlation Analysis (42%); Regression Analysis (40%); Logistic Regression (36%); Survival

Analysis (28%); Non-Parametric Tests (18%); Meta-Analysis (10%).

Descriptive statistics were the most universally applied, while inferential methods like t-tests and chi-square tests were prominently used to compare group differences. Advanced techniques like survival analysis and logistic regression were common in longitudinal studies and studies involving outcomes with time-to-event data.

Conclusions: Understanding the top statistical methods used in medical research can significantly enhance the quality and rigor of scientific investigations. Researchers must be proficient in selecting and applying the appropriate statistical techniques based on their study design and data type. Further emphasis on statistical training and the involvement of biostatisticians in the research process are recommended to reduce errors and improve the robustness of medical studies.

Keywords: Medical research, statistical methods, descriptive statistics, inferential statistics, regression analysis, survival analysis, meta-analysis,

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OP – 106

Does Artificial Intelligence Affect Scientific Research?

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Abstract

Introduction: Artificial intelligence is the simulation of human intelligence processes by machines, especially computer systems

Rapid advances in artificial intelligence pose challenging questions at science-policy encounters. In fact, it must be recognized that there is a rapidly growing application of AI in scientific research in all life sciences. Many scholars have examined empirical evidence on the benefits and risks facing the science-policy duo today due to the increasing use of artificial intelligence in science. responsible for this technology. Artificial intelligence tools can increase the accuracy of scientific research, facilitating the improvement of evidence-based policy making, but on the other hand, inaccuracies in the input data to the tools that artificial intelligence uses can lead, among other things, to ineffective decision-making.

Keywords: scientific research, artificial intelligence, human researchers

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OP – 107

Research in Medicine, Statistics and Physicians

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Abstract

Introduction: The role of statistics in medical research has been both praised as "the grammar of science" and criticized as mere "make up" for research findings. This dichotomy raises important questions about how statistical methods are applied in medical research. While proper statistical analysis provides the foundation for evidence-based medicine,