What is the complete guide for reporting odds ratios?

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The complete guide for reporting odds ratios is a formal description of the steps and considerations involved in accurately presenting and interpreting odds ratios in statistical analysis. This guide includes instructions on how to calculate odds ratios, guidelines for selecting appropriate reference groups, and recommendations for presenting results in a clear and concise manner. It also covers common pitfalls and how to avoid them, as well as best practices for incorporating odds ratios into research reports or presentations. By following this guide, researchers can ensure the accurate and effective reporting of odds ratios, leading to a better understanding of the relationships between variables in their data.

The Complete Guide: Report Odds Ratios

In statistics, an odds ratio tells us the ratio of the odds of an event occurring in a treatment group compared to the odds of an event occurring in a control group.

When reporting an odds ratio, we typically include the following:

The value of the odds ratioThe confidence interval for the odds ratioHow to interpret the odds ratio in the context of the problem

For example, we might report something like this:

There was no significant difference in the odds of contracting a disease between the smoking and non-smoking groups (OR = 1.44, 95% CI).

Note: If a confidence interval for an odds ratio includes

the number "1" then there is not a statistically difference in the odds of an event happening between the two groups. Read a full explanation .

The following examples show how to report an odds ratio in different scenarios.

Example 1: Odds Ratio Between Training Programs

Suppose a basketball coach uses a new training program to see if it increases the number of players who are able to pass a certain skills test, compared to an old training program.

The coach recruits 50 players to use each program and records the number of players who pass using each program.

He finds that the odds ratio between the two programs is 0.599 and the 95% confidence interval for the odds ratio is .

Here is how he may report the results:

There was no significant difference in the odds of passing the skills test between players who used the

new program compared to players who use the old program (OR = 0.599, 95% CI).

Example 2: Odds Ratio Between Drugs

Suppose a doctor recruits 20 patients to try drug A and 20 patients to try drug B to determine if there is a difference in the odds of a patient being able to pass a breath-holding test.

He finds that the odds ratio between program A and program B is 1.78 and the 95% confidence interval for the odds ratio is .

Here is how she may report the results:

There was a significant difference in the odds of passing the breath-holding test between patients who took drug A compared to patients who took drug B (OR = 1.78, 95% CI).

Example 3: Odds Ratio Between Studying Programs

Suppose a teacher recruits 30 students to use a weekly studying program and 30 students to use a daily studying program to determine if there is a difference in the odds of a student being able to pass a specific

exam.

She finds that the odds ratio between the weekly program and the daily program is 1.22 and the 95% confidence interval for the odds ratio is .

Here is how she may report the results:

There was not a significant difference in the odds of passing the exam between the two studying programs (OR = 1.22, 95% CI).

The following tutorials provide additional information on how to calculate and interpret odds ratios: