How to Easily Report Pearson’s r in APA Format

Authored by

stats writer

December 4, 2025

When preparing manuscripts or reports for publication, correctly reporting statistical results is essential for maintaining clarity and rigor. Specifically, when presenting the outcomes of a Pearson correlation coefficient (Pearson's r) in APA format, researchers must report several key statistics: the correlation coefficient itself (r), the sample size (n), the precise significance level (p-value or p), and often, the associated effect size (r^2). It is best practice to embed the core findings directly within the text of the paper, supported by a brief interpretive statement. For instance, a clear report might state: "The Pearson correlation coefficient, r = .57, was statistically significant, p < .001, n = 123, r^2 = .33, confirming a moderate, positive linear relationship between the two measured variables."

Understanding the Pearson Correlation Coefficient (r)

The Pearson Correlation Coefficient, commonly symbolized as r, is the most widely used measure in statistics for quantifying the strength and direction of the linear association between two continuous variables. Calculating r helps researchers determine if, and how strongly, changes in one variable predict changes in the other. It is a fundamental tool across psychology, economics, and social sciences for establishing basic relationships before moving on to more complex modeling.

The correlation coefficient r is designed to produce a standardized metric, meaning its value always falls within a specific range, independent of the scales used to measure the original variables. This standardization makes correlations easily comparable across different studies and contexts. Understanding this fixed range is critical for accurate reporting and interpretation according to APA format guidelines.

The value of r is always constrained between -1.0 and +1.0, inclusive. These boundary values indicate perfect linear relationships, while values closer to zero indicate weak or nonexistent linear correlations.

-1 indicates a **perfectly negative linear correlation** between two variables (as one variable increases, the other decreases consistently and predictably).
0 indicates **no linear correlation** between two variables, suggesting they are linearly independent.
1 indicates a **perfectly positive linear correlation** between two variables (as one variable increases, the other increases consistently and predictably).

Key Components of APA Correlation Reporting

When adhering to APA format (7th Edition guidelines), statistical results must be reported with enough precision that the reader can fully verify the calculations and understand the magnitude of the finding. For a Pearson correlation, this necessitates including the test statistic (r), the

degrees of freedom (df), the calculated p-value, and a clear statement regarding the direction and strength of the relationship.

The primary statistical elements required for a complete APA-style report of a correlation include:

The **Correlation Coefficient (r)**: The calculated value, which serves as the primary measure of the relationship's magnitude and direction.
The **Degrees of Freedom (df)**: This value is essential context for the test statistic. For Pearson's r, df is calculated using the total sample size (N) minus two ($N - 2$).
The **Significance Level (p)**: The probability associated with the result, indicating whether the observed correlation is statistically different from zero.
The **Effect Size (r^2)**: Although r itself is an effect size measure, reporting r^2 (the coefficient of determination) often provides valuable context regarding the proportion of shared variance between the variables.

Always ensure that statistical symbols (r, p, N, df) are italicized (conventionally, though often font-dependent in plain text) and presented with appropriate spacing and decimal precision as detailed in the APA manual.

Applying the Standard Reporting Structure

Researchers should utilize a consistent, parenthetical structure when integrating correlation results into the narrative text. This enhances readability and makes the findings easy to locate and verify. It is essential to first introduce the variables being assessed and the statistical procedure used before presenting the numerical result.

We use the following general structure to report a Pearson's r in APA format. Note the critical placement of the degrees of freedom immediately following r, enclosed in parentheses, which is a mandatory APA convention:

A Pearson correlation coefficient was computed to assess the linear relationship between and .

There was a correlation between the two variables, r(**df**) = , p = .

This structure ensures that the reader receives both the initial context (the specific variables being correlated) and the comprehensive quantitative result (the magnitude and statistical significance). If the correlation is nonsignificant (typically $p > .05$), this outcome must be clearly stated, reflecting a failure to reject the null hypothesis.

APA Formatting Rules: Decimals and Notation

Adherence to strict formatting rules enhances the professional presentation of statistical results. APA guidelines stipulate specific conventions regarding decimals, leading zeros, and the reporting of exact probabilities. Violating these rules, even slightly, can lead to ambiguity and may require revision during the publication process.

Keep in mind the following specific stylistic and mathematical conventions when reporting Pearson's r in APA format:

Round the p-value to **two or three decimal places**. If the p-value is extremely small (e.g., $p = 0.00004$), report it using the inequality sign as p < .001. Never report p = .000.
Round the value for r to **two decimal places**. For example, $r = 0.482$ should be reported as $r = .48$.
Drop the leading zero for the p-value and r when the value cannot exceed 1.0 (e.g., use r = .77, not r = 0.77). This rule applies universally to coefficients and probabilities.
The **degrees of freedom (df)** must always be reported accurately, calculated as $N - 2$.

It is also critical to maintain consistent spacing: use a space on both sides of the equals sign (e.g., p = .03), and ensure all statistical symbols are clearly differentiated from surrounding text.

Interpreting the Results: Strength and Effect Size

A numerical correlation coefficient is incomplete without appropriate narrative interpretation. The researcher must provide context regarding both the direction of the relationship (positive or negative) and its strength or effect size. While r is itself a standardized measure of effect size, it is helpful to provide verbal descriptors of this magnitude.

Commonly accepted benchmarks for interpreting the **strength** of r are often cited from Cohen (1988), though these should always be adjusted based on the specific discipline and context of the research:

r values around pm.10 are considered **small** (weak) effects.
r values around pm.30 are considered **medium** (moderate) effects.
r values around pm.50 and above are considered **large** (strong) effects.

When writing the narrative interpretation, use precise, non-technical language to explain what the correlation means in real-world terms relative to your variables. For instance, if r is strong and positive, state that "Higher scores on Variable A are strongly associated with higher scores on Variable B." This grounding ensures the findings are meaningful beyond the statistical output.

Example 1: Positive Correlation (Hours Studied vs. Exam Score)

A professor collected data for the number of hours studied and the exam score received for 40 students in his class. The calculated Pearson correlation coefficient between the two variables was r = 0.48, with a corresponding p-value of 0.002. This represents a moderate positive association that is statistically significant.

Applying the APA conventions: $N=40$, so $df = 38$. The coefficient rounds to $.48$, and the p-value is reported as $.002$.

Here is how to report Pearson's r in APA format, incorporating the interpretation:

A Pearson correlation coefficient was computed to assess the linear relationship between hours studied and exam score. The findings indicated a moderate, positive correlation between the two variables, r(38) = .48, p = .002. This statistically significant result suggests that increased hours studied are associated with higher exam performance.

Example 2: Negative Correlation (Time Spent Running vs. Body Fat)

A doctor investigated the relationship between physical activity and health metrics, collecting data for the number of hours spent running per week and body fat percentage for 35 patients. The statistical analysis found the Pearson correlation coefficient to be r = -0.37, with a corresponding p-value of 0.029. This is a statistically significant, moderate negative correlation.

Applying the APA conventions: $N=35$, so the degrees of freedom is $df = 33$. The coefficient is reported as $-.37$, and the p-value is $.029$.

Here is how to report Pearson's r in APA format for this inverse relationship:

A Pearson correlation coefficient was computed to assess the linear relationship between hours spent running and body fat percentage. There was a statistically significant negative correlation between the two variables, r(33) = -.37, p = .029. This finding supports the hypothesis that increased running time is associated with lower body fat percentage.

Example 3: Business Application (Ad Spend vs. Revenue Generated)

Consider a scenario involving a marketing analyst who assesses the relationship between monthly advertising expenditure and total revenue generation across 15 operational months. The resulting data produced a correlation coefficient of r = 0.71, with a p-value of 0.003.

The sample size here is $N=15$, meaning the degrees of freedom is $df=13$. The coefficient $r=.71$ is quite large, indicating a strong positive relationship, which is highly significant (p <

.01). The strong effect size suggests that advertising expenditure accounts for a substantial proportion of the variance in revenue.

Here is how to report Pearson's r in APA format:

A Pearson correlation coefficient was computed to assess the linear relationship between advertising spend and total revenue. There was a strong, statistically significant positive correlation between the two variables, r(13) = .71, p = .003. This result suggests that increased investment in advertising is strongly associated with higher total revenue, providing clear implications for marketing strategy.

Conclusion: Ensuring Validity and Transparency

Accurate and standardized reporting of statistical tests like Pearson's r is non-negotiable in scientific communication and professional reporting. By consistently applying APA format conventions--specifically regarding the inclusion of r, df, and the p-value, alongside proper rounding and formatting--researchers ensure their findings are transparent, verifiable, and easily incorporated into meta-analyses or subsequent literature reviews. Precise reporting allows the scientific community to fully grasp the nuances of the observed relationships.

Referencing these detailed guidelines ensures that your statistical presentation meets the highest standards of professional academic writing, lending credibility to your reported findings.

The following tutorials explain how to report other statistical tests and procedures in APA format: