SPSS Dissertation Workbook

Which Test Should You Use?

A calm, step-by-step guide to choosing the right statistical test — with a decision tree, checklists, APA templates and a worksheet for your own study.

FREE WORKBOOK

Results Chapter · resultschapter.com

Your Results Chapter, Explained Simply

How to use this workbook

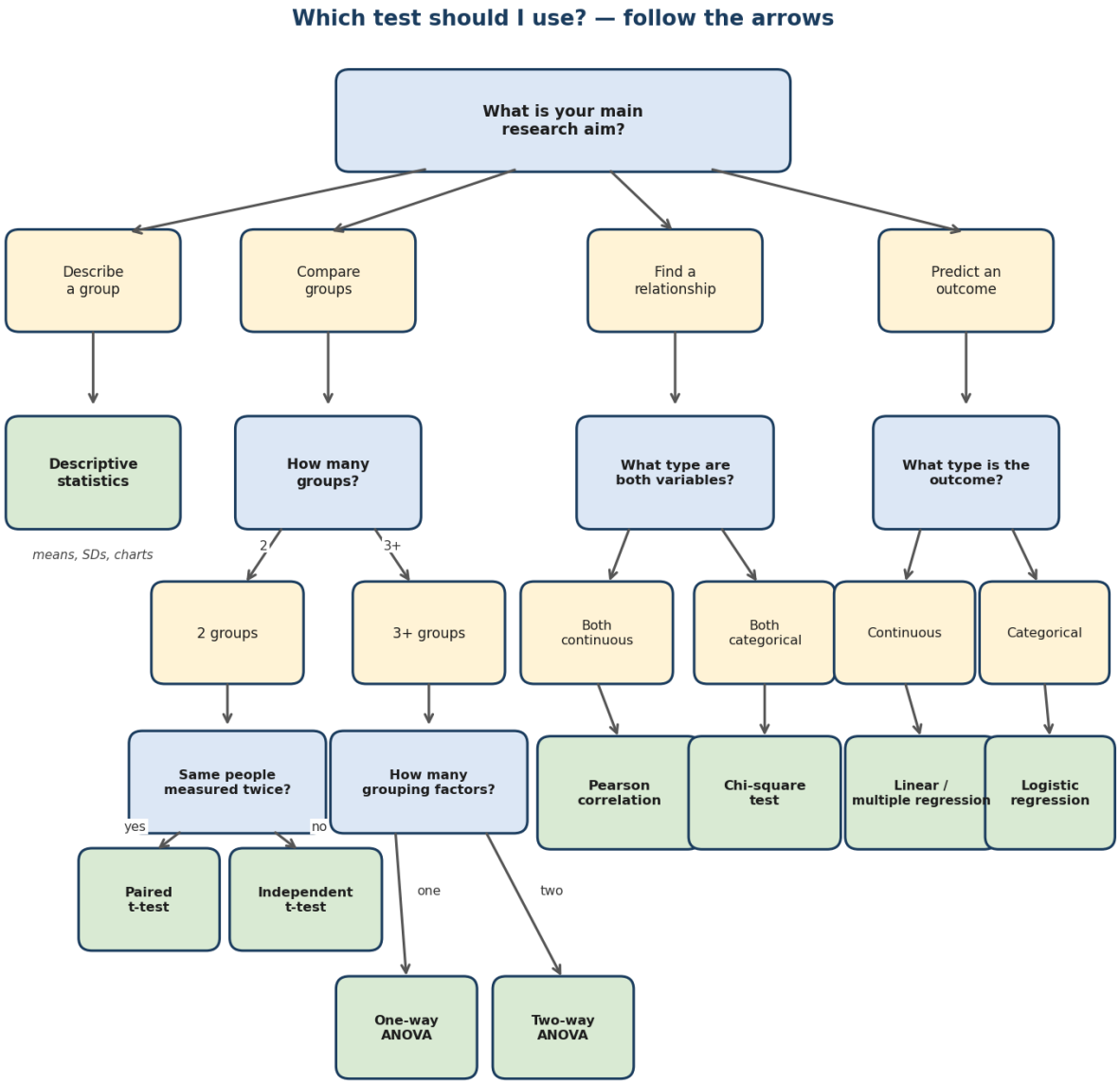
Nine out of ten results-chapter problems start with one question: **which test is right for my data?** This workbook answers it in about fifteen calm minutes.

1. Write your research question at the top of the worksheet (page 7) — in plain words, not statistics.
2. Follow the decision tree (page 3) and circle the test it points to.
3. Check the test-finder table (page 4) and run that test's assumption checklist (page 5).
4. Use the APA sentence starters (page 8) to draft your results paragraph.
5. Still unsure? Bring your worksheet to us on WhatsApp — we will point you to the right free guide first. No pressure, ever.

You need nothing except your research question. A pencil helps — this workbook is meant to be written in.

The decision tree

Start at the top, answer honestly, follow the arrows. Circle where you land — that is your test.



Still unsure? Work through the checklists on the next pages — then bring your answers to the worksheet on page 7.

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Test finder

Confirm your tree answer here, then read the matching free case study.

If you want to…	Use this test	Learn it step by step
Compare 2 independent groups	Independent-samples t-test	Coming soon in the case-study series
Compare the same people twice	Paired-samples t-test	Coming soon in the case-study series
Compare 3+ groups (one factor)	One-way ANOVA	resultschapter.com/one-way-anova-in-spss/
Compare groups across two factors	Two-way ANOVA	resultschapter.com/two-way-anova-in-spss/
Relationship between two continuous variables	Pearson correlation	Coming soon in the case-study series
Association between two categorical variables	Chi-square test	Coming soon in the case-study series
Predict a continuous outcome	Linear / multiple regression	Coming soon in the case-study series

Tip: if two rows both seem to fit, re-read your research question — the *main* aim decides. The tree never lies when the question is clear.

Assumption checklists

Tick each box **before** you trust your output. One failed assumption does not ruin your dissertation — it just changes the test (the notes say how).

t-tests (independent & paired)

- ☐ Outcome variable is continuous (scale).
- ☐ Groups are independent — except paired t-test, where the same people are measured twice.
- ☐ Scores are roughly normally distributed in each group (Shapiro–Wilk, or n > 30 per group).
- ☐ Independent t-test only: roughly equal variances (Levene's test, p > .05).
- ☐ No extreme outliers distorting the mean (check a boxplot).

One-way & two-way ANOVA

- ☐ Outcome variable is continuous (scale); factors are categorical.
- ☐ Each person is in exactly one group (independence).
- ☐ Roughly normal scores within each group.
- ☐ Roughly equal variances across groups (Levene's test, p > .05).
- ☐ Two-way ANOVA: at least ~20 people per cell keeps the test stable.

Chi-square test

- ☐ Both variables are categorical.
- ☐ Observations are independent (each person counted once).
- ☐ Expected count ≥ 5 in at least 80% of cells (SPSS footnotes this).
- ☐ If the assumption fails: use Fisher's exact test (2×2 tables).

Correlation & regression

- ☐ Both variables continuous (correlation); outcome continuous (regression).
- ☐ Relationship looks roughly linear (check the scatterplot first).
- ☐ No extreme outliers pulling the line.
- ☐ Regression only: residuals roughly normal; predictors not too strongly correlated with each other.

See it in action — a 60-second example

A student asks: *“Do three teaching methods give different exam scores?”*

Tree: compare groups → 3+ groups → one factor → **one-way ANOVA**.

Checklist: score is continuous, each student in one group, Levene's p = .761 — assumptions met.

Result: F(2, 87) = 14.2, p < .001 — the methods differ; Tukey shows which pairs.

Write-up: one calm paragraph using the starters on the next page.

That is the whole workflow: question → tree → checklist → test → write-up. Now it is your turn.

Your turn — worksheet

Fill this in for your own study, then tick the boxes. Bring this page to us if you get stuck — it tells us everything we need to help.

My research question (plain words):

My outcome variable — and is it continuous or categorical?

My grouping variable(s) — how many groups / factors?

The tree points me to:

Assumptions I will check before trusting the output:

The free case study I will follow:

APA sentence starters

Copy a starter, fill the blanks with your numbers, and you have a results paragraph an examiner will respect.

☐ An independent-samples t-test was conducted to compare _____ in _____ and _____. There was a significant difference, t(__) = __, p = __.

☐ A one-way ANOVA was conducted to compare _____ across _____ groups. There was a significant effect, F(__, __) = __, p __ .001. Post-hoc Tukey tests showed _____.

☐ A two-way ANOVA examined the effects of _____ and _____ on _____. The interaction was significant, F(__, __) = __, p __ .001, partial η^2 = __. [Then describe the pattern in one plain sentence.]

☐ A Pearson correlation examined the relationship between _____ and _____. There was a _____ correlation, r(__) = __, p = __.

☐ A chi-square test of independence examined the association between _____ and _____. The association was significant, χ^2( ) = , p = .

Golden rules: report the assumption check first, give F/t/χ^2 with degrees of freedom, *p* and an effect size together — then translate the numbers into one plain-English sentence.

What's next

You have chosen your test — the hardest decision is behind you. Keep going:

- **Read the worked case study** for your test at resultschapter.com/spss/ — every click, every table, explained calmly.
- **Practise on the free datasets** included with each case study before touching your own data.

Stuck? Get free 1-to-1 guidance on WhatsApp

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Good luck — your results chapter is closer than it feels.