StatHand

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An Application to Guide Statistical Decision Making

Introducing StatHand

- Quantitative research methods underpin professional competence in psychology, but many students struggle with the process of selecting appropriate statistical analyses for common research questions, hypotheses and data types.
- StatHand is a free cross-platform mobile application that aids this process by prompting the student to focus systematically on each structural feature of their research problem.
- Once an appropriate statistical analysis has been identified, StatHand advises on its computation (including effect sizes and assumption testing), interpretation and reporting, and provides links to further resources and examples.
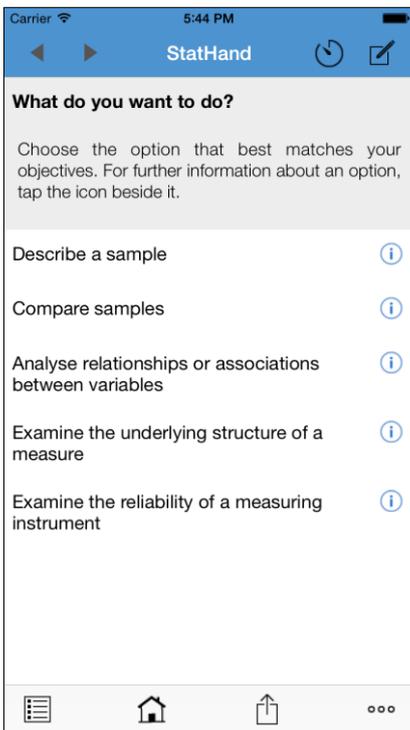

Figure 1. The StatHand application Home screen on an iPhone. Tapping an *Information* icon reveals additional explanatory text for each option.
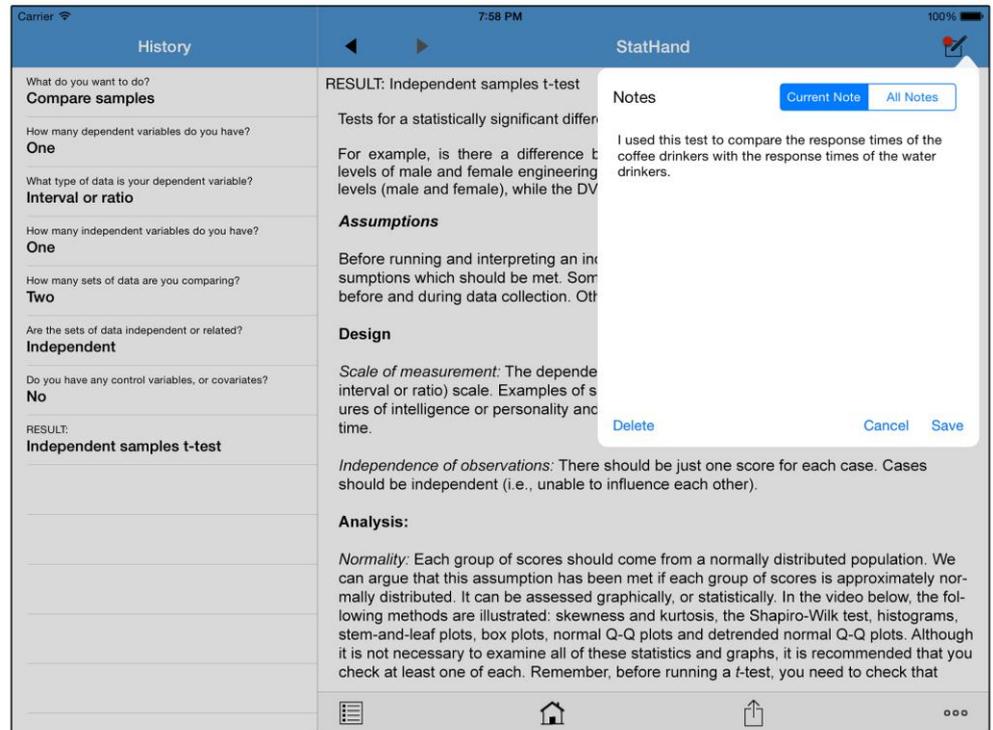

Figure 2. The StatHand application in landscape mode on an iPad. The sequence of decisions leading to an independent samples *t*-test is displayed in the *History* tool in the left panel. The *Notes* tool is depicted in the upper right corner of the screen, whilst the icons at the bottom of the right panel provide access to a searchable *Index*, the *Home* screen, and options to *Share* (i.e., print, email or upload) the annotated sequence of decisions leading to the current page.

Additional Resources

- *Instructors resources:* PowerPoint slides, active learning activities etc.
- *Publications:* Peer-reviewed works establishing a rationale for StatHand, outlining its feature set, advising on its integration into the curriculum and describing its efficacy (forthcoming).

Evaluation

- Student focus groups and instructor interviews support the subjective appeal and useability of StatHand.
- An experimental evaluation found that StatHand promotes performance accuracy, reduces cognitive load, and is instructionally efficient relative to a range of alternative aids for statistical decision making.

Find out More

- Download StatHand free from the iOS App Store.
- Use the web application at www.stathand.net.
- Read 'Introducing StatHand' in *Frontiers in Psychology*.

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