



# Journal of the Association of Chartered Physiotherapists in Respiratory Care

## A guide to writing an experimental study

Experimental study: any study that involves the quantitative collection of data will fall into this category whether it is a randomized controlled trial, cross-over study, longitudinal study and so on. Generally, ethical approval is required for these studies and they are often prospective in nature. Experimental studies are designed to answer a specific research question and, unlike case studies, inferences or generalizations can be made to the wider population. Experimental studies form the backbone of evidence-based practice.

Articles should normally be no longer than 2000 words.

The following information provides detail to be included in each section of the article.

### Title

The title should identify the research design, the type of participants, the intervention (if any), the comparison (if any) and the outcome measure used.

e.g. A correlation of grip strength and peak cough flow in people with neurodegenerative conditions.

e.g. A pilot study investigating the effect of inspiratory muscle training versus sham training on inspiratory muscle strength in people with neurodegenerative conditions.

### Abstract

The abstract should provide:

- Your main objective in a single sentence;
- a brief description of the research design;
- the setting of the study e.g. home, primary/secondary care;
- brief inclusion/exclusion criteria for participants;
- a description of the intervention/comparison and the main outcome measure/s used;
- main results with number of participants and data such as mean and standard deviation for each group/condition, difference between groups/conditions, confidence intervals and significance level.
- Overall conclusions of the study



## **Introduction**

This should include a background to the topic being studied including any previous relevant research with gaps /weaknesses identified. This section does not require a long narrative review. The main aims and objectives should be stated, along with any hypotheses.

## **Methods**

This section should provide a clear description to the reader about what you actually did.

- Ethical and/or R&D approval details (see section on ethical approval below for details).
- Participants: from where were they recruited and how were they selected, including inclusion and exclusion criteria
- Randomisation details if necessary
- A detailed description of the intervention
- A description of outcome measures used with references for reliability and validity if available
- Details of blinding if used
- Methods of data analyses

## **Results**

This section should provide a clear description of the findings of the study.

A flow chart may be used to account for the flow of participants through the study including drop outs.

- Descriptive analysis of demographic and main data set including mean and standard deviation/ median interquartile range
- Inferential analysis of main data set including confidence intervals and significance level if appropriate.
- Group analysis of comparisons between groups, mean difference, confidence intervals etc as relevant.

## **Discussion and conclusion**

The first paragraph should summarise the main findings of the study. The findings should then be discussed in relations to previous research and clinical relevance. Areas of weakness e.g. bias, outcome measures and sample should be discussed. Strengths of the study should be discussed and recommendations made.



## **Key points**

Three key points should provide the reader with the value of the study.

## **Acknowledgements**

Acknowledgements should be provided for anyone who was not an author but helped in the preparation of the article and also any funding that was provided for the study

## **Funding**

Funding of the study needs to be acknowledged preferably worded as follows. Either: 'This work was supported by [name of funder] grant number [xxx]' or 'This research received no specific grant from any funding agency in the public, commercial or not-for-profit sectors'. You must ensure that the full, correct details of your funder(s) and any relevant grant numbers are included.

## **Ethical and R&D approval**

Approval for use of an individual's data must be gained from relevant sources. If your manuscript contains any individual person's data in any form (including individual details, images or videos), consent for publication must be obtained from that person, or in the case of children, their parent or legal guardian.

Trust/Health Board R&D approval and if necessary NHS research ethics approval must be documented. If the study was part of an academic award, confirmation of University ethical approval is also required.

If your manuscript does not contain data from any individual person, please state "Not applicable" in this section.

## **References**

These should be referenced using the Harvard system. You are responsible for accurate referencing.

In the text, use the name and year system e.g. As Black and White (1987) have shown..., as already reported (Black and White, 1987)... For three or more authors print the first author's name followed by et al e.g. as Black et al (1987) have shown...

When several references are cited simultaneously, the order should be chronological e.g. Black et al 1997, White and Smith 1987.

In the reference list arrange references alphabetically by first author's surname. Print the names and initials of all authors for references with six or fewer authors; for seven or more authors print the first three and add 'et al'.



The sequence **for a journal article** is: author(s); year; title; journal; volume; first and last page numbers. The layout and punctuation are e.g.

Gosselink, R. 2004 Breathing techniques in patients with chronic obstructive pulmonary disease (COPD). *Chronic Respiratory Disease* 1(3): pp163-172.

**For online journals** i.e. those that are only available on-line or those in press and available online:

Merchant, A.T. 2007. Diet, physical activity, and adiposity in children in poor and rich neighbourhoods: a cross-sectional comparison. *Nutrition Journal* [Online] 6. Available at: <http://www.nutritionj.com/content/pdf/1475-2891-6-1.pdf> [Accessed:10 May 2013].

The sequence, layout and punctuation **for books** are:

West, J.B. 2012 *Respiratory Physiology* 9<sup>th</sup> Edition Philadelphia: Wolters Kluwer Lippincott Williams & Wilkins.

**For a chapter** within an edited book:

Samuels, B. 1979 Pulmonary complications of AIDS. In: Rand, A. and Long, B. eds. *Management of AIDS*. London: Butterworth, pp 387-95

The total number of references should not exceed 20.

## **General formatting of the document for submission**

### **Font and spacing**

All text is Calibri and fully justified.

Title: bold 16pt, 1.5 spacing

Authors, keywords and correspondence: 12pt, all headings bold

Abstract:

- Sub-headings: 14pt, bold, italic
- Text: 12pt, single spaced, italic

Main body of article:

- Headings: bold 14pt,
- Text: 12pt, double spacing
- Any further subheadings within sections: italic

Fig and table titles: 12pt

Note for insert figure/table: bold, italic, capital, red 12pt.

All pages must be numbered



## **Title page**

All submissions should include a title page as the first page of the document. This page must include the following information:

- Title of the article
- The names and initials of each author & institutional affiliation of each author.
- Name, e-mail address and telephone number of the author responsible for correspondence.
- Please provide up to 5 keywords that summarise the major themes of your article.
- Word count (excluding abstract)

## **Abbreviations and units**

Abbreviations should be defined at their first mention. SI units should always be used. For numbers: all numbers under 10 should be written as words except when describing a quantity e.g. PaO<sub>2</sub> 8.5Kpa. Numbers greater than 10 should be written as digits, except at the start of a sentence.

## **Tables and Illustrations**

Tables and illustrations should be sent in separate files. Do not paste figures and tables into the text. Photography and images should be in black and white. Supply images at highest resolution obtainable from source. Do not reduce the file size.

If previously published, acknowledge the original source. It is the author's responsibility to ensure that permission is received from the copyright holder for the reproduction of figures and tables before submission (search for 'permissions' on the publisher's website).

References, explanatory matter and definitions of abbreviations should be explained in a key below the table.

Ensure that each table and figure are cited in the text.

Describe where the table should sit within the text e.g.

**\*\*\*\*\*TABLE 1 NEAR HERE\*\*\*\*\***

or

**\*\*\*\*\*FIGURE 2 NEAR HERE\*\*\*\*\***



## **Submission**

Word documents should be submitted online at

[http://www.acprc.org.uk/publications/acprc\\_journal.asp](http://www.acprc.org.uk/publications/acprc_journal.asp)

or emailed to [journaleditor@acprc.org.uk](mailto:journaleditor@acprc.org.uk) with the files named as follows:

- Main document: Author, date of submission, title of paper e.g. Smith011206Bronchiectasis
- Tables: Author, date of submission, title of Table e.g. Smith011206Table1
- Figures: Author, date of submission, title of figure e.g. Smith011206Figure1