A practical guide to publishing research for veterinary nurses

Abstract
Publishing research findings is the final stage of completing a research project and doing so allows these findings to be shared. In line with the progression of the veterinary nursing profession, nurses should consider these findings and apply them to their own practices. This will further demonstrate the use of objective evidence-based practice. This paper has been designed to be a practical guide for nurses who have completed a research project and who are wanting to submit their findings for publication. The peer-review process is described to allow nurses to understand the stages that will follow paper submission.

Key words: peer review, ethical issues, author guidelines, scientific writing style, author contributions

Veterinary nursing research is a relatively new area, particularly influenced by emphasis on nurses to evaluate their current practices and develop nursing techniques. In very recent years, there has been increased evidence of nurses publishing research, possibly due to the introduction of the veterinary nursing degrees where students complete dissertations in the final year. However, research should not be only completed by nurses completing the degree; there are many opportunities for nurses in practice to conduct quality research projects and publish them accordingly. This paper provides an overview of the considerations authors should make when preparing to submit a research paper for publication.

The need to publish research
Although preparing a paper for publication can be one of the most difficult stages of completing a research project (Kurmis, 2003), it can also be regarded as one of the most important as publishing allows for research findings to be shared. Authors should consider the extent to which the research adds to current subject material, as this will allow for scientific advances (Chiswick, 2004). Through publishing research, authors can add new information to an existing body of knowledge, or add knowledge to a novel area of veterinary nursing. While it is anecdotally common for researchers to want to make ground breaking conclusions, it is perfectly acceptable to publish research which has produced similar findings to previous studies.

The peer-review process
The peer-review process is a system where submitted papers are reviewed by an expert in the area the paper focuses on. Often reviewers will be on the journal’s editorial board, although in some circumstances external reviewers will be invited to review if the paper is based on their area of expertise. The purpose of the peer-review process is to ensure the integrity of the research completed and to ensure the findings are appropriately presented to interested parties (Lipworth et al, 2011).

The initial review report is the most critical as there are typically four possible responses: accept; accept with minor revisions; accept with major revisions and reject. It is very rare for a paper to be accepted with no revisions on the initial submission; it is more common for minor or major revisions to be required. As long as the paper is not rejected, the author can expect to amend and resubmit the paper a number of times until the reviewers have accepted all changes made. In general, many submitted papers do not make it through the peer-review process and are rejected (Ortinau, 2011). Common reasons for research papers to be rejected are: poor experimental design; lack of consideration for animal ethics; and inappropriate handling of statistics. Therefore, if nurses wish to publish research, it is imperative for projects to be planned and completed with rigour and accuracy.

Selecting a journal
Before submitting a research paper to a journal, it is especially important for authors to ensure the suitability of the research paper for the journal. There are a number of reasons for this, mainly to maximize chances of publication; for example, it would be inappropriate to submit a paper assessing the effects of different pre-medications on blood pressure to a journal on animal behaviour.

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It is valuable for authors to spend time reading journals to get a feel for the type of papers that are accepted and therefore published. When doing this, authors should also note the characteristics of the papers, such as structure, writing style used and citation and referencing styles. The Veterinary Nurse considers all research papers completed by nurses for publication, appreciating the scope and variety of research which nurses can complete.

**Table 1. Examples of a non-scientific writing style versus a scientific writing style**

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Non-scientific writing style</th>
<th>Scientific writing style</th>
</tr>
</thead>
<tbody>
<tr>
<td>Precision</td>
<td>The average weight of the dogs changed after being fed diet X.</td>
<td>The average weight of the dogs decreased after being fed diet X.</td>
</tr>
<tr>
<td>Simplicity</td>
<td>The results of this study indicate that diet X can aid weight loss.</td>
<td>The results of this study show that diet X can aid weight loss.</td>
</tr>
<tr>
<td>Familiar</td>
<td>CO has a detrimental effect on quality of life.</td>
<td>Canine obesity has a detrimental effect on quality of life.</td>
</tr>
<tr>
<td>Humane/fair</td>
<td>Owners who failed to comply with the diet...</td>
<td>Owners who did not comply with the diet...</td>
</tr>
</tbody>
</table>

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**Journal requirements**

All journals have their own author guidelines, which can be found on the journal's webpage. This is an invaluable document when preparing a paper for submission as it clearly specifies the requirements that a particular journal has. It is therefore essential for authors to read these guidelines and refer to them throughout writing the paper, especially as journals have slightly different requirements; papers that do not meet the specified requirements may be rejected.

**Title choice**

The title is one of the most important parts of a paper as it attracts the readers’ attention. Titles can be presented in a number of different forms such as questions, quotations and statements (Hartley, 2007). For research papers, it is often preferable for titles to indicate the type of methodology used or the findings of the study.

While a title can be creative to draw attention, it must also be an accurate representation of the paper (Ortinau, 2011). This is especially important when the title refers to the findings of the research completed. For example, if a study found a non-significant difference between the analgesic A and analgesic B, it would be inappropriate for a paper to have a title such as ‘Analgesic A provides better pain relief than analgesic B’ even if some difference was observed.

Some journals specify how many words can be included in a title. If this is not specified, a general guide is for the title not to exceed ten words (Ortinau, 2011), ensuring that titles are kept concise.

**Line numbering**

While it may not be a requirement of the journal for submitted papers to be line numbered, it is highly useful for reviewers. By using line numbers, reviewers can make comments to a specific location in the paper. It is perhaps even more useful for the author when addressing the comments made by the reviewers; by identifying the exact line where an amendment is suggested, the author can easily locate the line and make the necessary changes. This can speed up the process of amending the paper and the author can ensure that all suggestions made by the reviewers have been addressed. It is advisable to start line numbering after the title and author information to allow for this to be removed for peer review.

**Citations and references**

In peer-reviewed papers, the inclusion of citations and a reference list is essential. Authors must ensure that all citations and references are included as this demonstrates that previously published work has been considered (Cetin and Hackam, 2005). A citation is where an author’s name appears in the text, whereas the reference list is at the end of paper arranged in alphabetical and chronological order.

The most commonly used referencing system in the sciences is the Harvard referencing system, although there are many variations of acceptable reference format. Authors should always consult the author guidelines for the way in which a particular journal requires citations and references as there are some notable differences; for example, when citing a source from more than two authors, some journals require the Latin ‘et al,’ whereas others require ‘and others’. The Veterinary Nurse author guidelines specify the referencing format that authors are required to follow.

**Ethical issues**

A journal will only publish a research paper if the study has received ethical approval. All studies should receive ethical approval and the appropriate statement made, regardless of study design. To exemplify this, a questionnaire and practical experimental study will clearly have different ethical considerations, but a statement should still be made to show...
that the study was ethically approved. Ethical consideration is an important aspect of publishing (Bloor, 2011) and it should not be dismissed when the study has been completed and the paper is being prepared for a journal.

**Structure**

When preparing a paper for publication, the paper should be structured according to the journal’s requirements. The overall structure essentially consists of the different sections of the paper, and in which order these sections should be presented. It is simple to ensure that the paper meets the structure requirements by consulting the author guidelines. A useful way to ensure that the paper is structured accordingly is to simply type the required headings onto a Word document and complete the paper contents around these headings. Each section of the paper should be structured in a coherent fashion, which aids understanding for the reader.

In the editing phases, authors should ensure that the paper is within the word limit. Guyatt and Haynes (2006) state that medical writers tend to use unnecessary words and advise deleting as many adjectives and adverbs as possible. This will keep the text concise and aid readability, which is an aim of scientific writing. Structure is important to guide the reader through the text, allowing them to take in as much information from the paper as possible.

**Scientific writing style**

Achieving a scientific writing style can sometimes be rather difficult. It is therefore common for all papers, whether research or review papers, to have several redrafts. It is useful to ask somebody who has been totally uninvolved in the research to proof read the paper. This is because, as the person who completed the research, it can often be difficult for an author to notice parts of the paper that are unclear as they will have such a detailed understanding of the work completed. This will be even more advantageous if the person asked to proof read the paper has had previous publishing experience.

Derish et al (2007) identify four characteristics of scientific writing: precision, simplicity, familiar and humane. Authors should check drafts against the criteria shown in Table 1 to help identify areas of the paper which could be improved.

Developing a scientific writing style is a skill that takes time to improve; authors who are new to publishing should invest time in reading published research papers to become familiar with the writing style used.

**Responding to reviewers**

Once the paper has been reviewed, feedback and decisions will be passed to the journal editor, who will then pass this information on to the authors, typically by email. Providing the paper has not been rejected, the editor will specify a deadline for the amended paper. At this point, authors should inform the editor if they will be unable to resubmit in the specified time.

Before making any amendments to the paper, the reviewers’ comments should be carefully read to ensure that the amendments to be made meet their requests. A personal preference of the author is to separate the comments and underneath, write a description of what is to be done. This can then be used as a tick list to ensure all comments have been addressed. Reviewer comments can include deleting parts of text from the paper, corrections, explanations and structural changes so it is vital that attention is paid to detail.

In addition to resubmitting the paper, it is preferable for authors to include a Word document detailing the changes that have been made as well as a ‘clean’ (no ‘track changes’) and a track changes document that include the final version.

**Author contributions and order**

While author contributions and order is an important area, it has now become a rather complex area due to a dramatic increase in the number of multiple-author papers (Osbourne and Holland, 2009). In general, projects will usually have more than one researcher involved due to workload associated with the management and completion of a study. However depending on study design and sample size, it may be possible for just one researcher to complete the project. Should a project have more than one researcher, the roles of each person should have been agreed in the proposal stages and this will have an effect on the final stages of preparing the paper for publication. It is common practice for the researcher who has held the ultimate responsibility and supervision of the project to have their name at the end of the author list. The researcher who has been most heavily
involved in the practical running of the study should have their name first. This is the person who has collected and organized the data, and analyzed them. Author order can sometimes be unclear when there are three or more researchers as there may be some disagreement between the order of the ‘middle positions’ on the author list. In these situations, it is important to fairly discuss the input of each person, both in terms of the study and in terms of writing the paper. It may also be advisable to clearly state the authors of each section of the paper to assist in deciding on author order. These statements are known as contribution statements (Levsky et al, 2007). The Veterinary Nurse does not insist on these statements being made but they may be useful in some circumstances.

In human medicine, guidelines for authorship have been produced by the International Committee of Medical Journal Editors (2009); it is likely that in the future, such guidelines will exist for veterinary professionals.

The publishing process

The publishing process consists of selecting a journal, preparing a paper and submitting it for peer review. Although journals aim for a relatively quick turn-round time, the peer-review process can sometimes take a considerable amount of time. Authors should ensure that they respond to reviewer comments in a timely fashion to facilitate this process. Figure 1 has been designed to provide an overview of the peer review process.

Conclusion

This paper has addressed some of the practical considerations that authors should make when preparing a research paper for submission. Preparing a paper can be a lengthy process which requires authors to be thorough and meticulous if the paper is to be considered for publication. While it is important to appreciate that the process requires great attention to detail, this paper has covered some of the more practical aspects that authors should consider to assist in the preparation of their paper.

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References


Call for research papers

The Veterinary Nurse provides nurses with an opportunity to document and publish their research. Unsolicited manuscripts are welcome and should be submitted via our online submission site at: http://www.epress.ac.uk/vet/webforms/author.php