

WRITING TO PUBLISH – ISSUES FOR CONSIDERATION

Dr. Saravana Kumar and Dr. Karen Grimmer-Somers
Centre for Allied Health Evidence
University of South Australia

Given the increasing focus of Evidence Based Practice in health care, research publications provide an important avenue in accessing best research evidence from the literature. Hence, research publications can inform clinical practice and potentially aid in the provision of quality health care¹. With the rapid access to, and usage of electronic media, research evidence from all corners of the globe can be used in local, national and international contexts. The Philippine Journal of Allied Health Science provides access to research evidence to all stakeholders in health care in the Philippines, with the ultimate aim of improving the quality of health care service delivery. The Journal Board is to be congratulated in this endeavour.

There is consensus among stakeholders involved in the production of health care journals that publications should meet uniform quality standards prior to being accepted for publication². Generally, formatting and editorial standards are explicitly provided to authors by the journals and standards relating to the content of the publication are assessed by some form of peer review, co-ordinated by the journal. However, for new authors, the process of writing for publication can be a daunting experience, particularly if they have had no exposure to formal tertiary training on scientific writing. Therefore it is timely to reflect upon strategies associated with appropriate scientific writing for publications.

For the purpose of this editorial, this topic is divided into three sections. The first section, ***suitability for publication***, discusses whether your research is suitable for publication. The second section, ***preparing the manuscript***, discusses processes underpinning the development and subsequent submission of the manuscript to the journal. The third and final section, ***resubmitting the manuscript***, discusses the processes underpinning re-submission of your manuscript (if you choose to do so) after it has been peer-reviewed by the journal. Authors of previous publications on this topic have followed this approach^{1,3}.

Suitability for publication

Several issues need to be considered when reflecting upon the suitability of your research for publication. Firstly, authors need to consider the type of manuscript that would most suit the research undertaken. This can range from an opinion letter to a full fledged meta-analysis based on a systematic review¹. To some extent this will also be dictated by the journal to which the manuscript is submitted. Some journals will not accept certain type of publications (such as a literature review) and it is often specified in the "Instructions to Authors" section. Prior to preparing the manuscript, it is also important to consider the key issues relevant to the research undertaken^{1,3}. These include:

- Who are the intended audience?
- Are the results of your research important to health care stakeholders? If so, who are they?
- Are the aims and objectives of your research clear and well defined?
- Which journal are you planning to submit this manuscript to?

The journal you plan to submit your manuscript to will be guided by reasons. Some of them are the topic of your research and its intended message, the intended audience of your message, your professional links with the journals and the matching of the aims and scope of the journals with the aims of your research¹.

Preparing the manuscript

Preparing the manuscript can be a time consuming process, especially for novice authors. The authors should firstly read articles in the journals in which they would like to publish for guidance on manuscript preparation, as journals have individual requirements for manuscript submission. While there are some uniform requirements [such as formatting, line spacing, sequence of sections such as title page, abstracts, key words, text, acknowledgments, references, appendices, tables and figures (on separate pages)], differences may exist in the total number of words permitted, referencing standards and authorship². Once the authors have become familiar with the submission requirements by the journal, they can get ready to write the manuscript. Dixon³ provides a good framework for this process by setting out four stages in the writing process.

- **Stage one – Define the work** (This process sets out specifications for your manuscript which includes word or page count, key parts of the paper, tables and figures you propose to include in this manuscript)
- **Stage two – Do the thinking** (Think very clearly about what message you want to convey in this manuscript. Dixon³ proposes 10 key questions which will help in identifying key ideas and messages)
- **Stage three – Do the planning** (Plan which information will go where in the overall structure of the manuscript. Traditionally, a research manuscript is divided into key components such as objective, background, context and setting, research design and methodology utilised, results obtained, discussions and conclusions. Also plan which information can be provided as tables and figures)
- **Stage four – Do the writing – and rewriting** (Writing is a skill and practice makes it perfect. Therefore you will have to write and rewrite your manuscript many times)

Writing style is important when preparing your manuscript. Irrespective of which journal you choose to submit your manuscript to, there are certain do's and don'ts which you need to follow^{1,3}:

Do's	Don'ts
<ul style="list-style-type: none">● Key sentences as guides to sections in your manuscript.● Use short words and short sentences.● Consider international readership.● Explain abbreviations.● Check spelling and grammar (with software help where available).● Make sure your conclusions match your aims. It is very common to get side tracked when preparing the manuscript that you end up making claims you never intended.	<ul style="list-style-type: none">● Avoid jargon, unnecessary punctuations such as commas.● Minimise use of "the" and avoid using thesaurus to include complex phrases.

When submitting your manuscript to a journal, ensure that you have completed all the requirements for submission. Some journals provide you with a checklist outlining the submission requirements. Increasingly electronic submissions are becoming the norm. However, there are some journals which still mandate hard copies. If this is the case, send the required number of copies of the manuscript along with a covering letter, co-signed by all authors, to the editor with contact details of the corresponding author. Additional documentation may include whether the manuscript is being submitted elsewhere (duplicate manuscript), whether this research or part of this research has been published elsewhere, originality of the work, conflict of interest, statement on the contribution by individual authors in the preparation of the manuscript and agreement to be authors and copyright release forms (if reproducing previously published work)². The Journal of the American Medical Association (JAMA) website provides detailed overview of this process⁴.

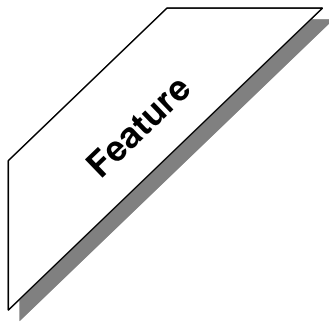
Resubmitting the manuscript

Upon submission of your manuscript to a journal, the editorial staff will assess it to ensure its compliance with the journal's aims and scope, meeting all the quality standards and complies with submission requirements as specified in the 'Instructions to authors'³. If your manuscript passes this screening process, the manuscript is then forwarded for peer review. The aim of peer review, a process increasingly blinded to limit bias in the publication process, is to improve the quality of the manuscripts which are published³. Upon completion of the peer review, the manuscript may be accepted without any changes, accepted under the premise that authors satisfactorily respond to comments by reviewers or rejected outright. If authors decide to respond to the reviewers' comments, the onus falls on the authors to ensure sufficient information is provided which satisfactorily addresses reviewers' comments. When resubmitting the manuscript, authors need to clearly highlight each comment made by reviewers and specify where and what change in the manuscript has been undertaken. In order to do this effectively, it is suggested the authors list each comment made by the reviewer and highlight their individual response to these comments. In the resubmission letter to the editor, the authors have to ensure the editor is well aware of what changes have been made to address the reviewers' comments.

The success of getting research published is underpinned to a large extent by the quality of the manuscript produced. While the process of writing a manuscript for publication can be a daunting experience for a novice author, if best practices are followed and certain pit falls avoided, the chance of getting the research published is highly probable.

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EVIDENCE-BASED PRACTICE IN FILIPINO ALLIED HEALTH CARE: A BRAVE NEW WORLD

Professor Karen Grimmer-Somers PhD
Director, Centre for Allied Health Evidence
University of South Australia
City East Campus, Adelaide 5000
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The University of Santo Tomas is to be congratulated in establishing the Philippine Journal of Allied Health Sciences (PJAHS), the official publication of the Center for Research on Movement Science. With the quality team of academicians and clinicians heading the publication process, and with the journal's strong committed mission of improving clinical practice, health care quality and health outcomes for physically challenged individuals in Asia, this initiative will certainly not only succeed, but bring credit to the health science disciplines in the Philippines.

The Philippine Journal of Allied Health Sciences, having been established under the framework of peer review, with structured timely publication via the internet, states a clear commitment to encourage quality publications by engaging academics around the world to assist in the reviewing process. The staff at the Centre for Allied Health Evidence, University of South Australia wish the PJAHS publication team well in its endeavors, and look forward to seeing the journal go from strength to strength.

The mission statements of key allied health academic journals around the world stress and put premium on the foremost purposes of a journal which are to disseminate high quality information about best practice in health care, and to provide a forum for academic debate. To do this in a formal and scholarly manner is the challenge which the PJAHS subsequently must face. Evidence-based practice is such a commonly-used term these days that its meaning is often overlooked; a practice which is underpinned by evidence^{1,2}.

Evidence can come from a variety of sources: from research findings, from well documented clinical practice, from patients' stories and from clinical reasoning³. On this basis, good health research evidence cannot be anecdotal or in layman's terms, the "*this works for my patients and I don't have to prove anything to anyone*" evidence. The most vitriolic debates published in journals have often been between proponents of different intervention approaches, based only on anecdotal evidence and personal belief. There is no solution if two therapists argue different strategies that "*work for my patients*" without providing satisfactory evidence underpinning these claims.

A challenge in allied health evidence-based practice is to identify the best source of evidence. This is called the "*so what?*" factor. Sackett et al² famously suggests that evidence-based practice is the judicious use of the best available evidence when making individual patient treatment decisions. In the hierarchy of quantitative evidence, it is commonly accepted that the best form of primary research is the high quality randomized controlled trial, because it addresses effectiveness questions using research approaches which minimize bias. One version of the hierarchy of evidence was proposed by Lloyd-Smith⁴ in 1997 for occupational therapists (Figure 1).

Figure 1. The hierarchy of evidence as proposed by Lloyd-Smith (1997)

Level 1a	Meta-analysis of randomised controlled trials
Level 1b	One individual randomised controlled study
Level 2a	One well-designed, non-randomised controlled study
Level 2b	Well-designed quasi-experimental study
Level 3	Non-experimental descriptive studies –comparative/case studies
Level 4	Respectable opinion

This highlights, as do other versions of the hierarchy of quantitative evidence, that secondary evidence (systematic reviews and meta-analyses) is given top priority as it is considered to have the least bias, whilst the least biased primary research design is the randomized controlled trial. This counterpoints the “respectable opinion” which is regarded as the most biased form of evidence.

Other versions of quantitative evidence hierarchies are found in the National Health and Medical Research Council in Australia⁵, Harbour & Miller⁶, Oxford Centre for Evidence Based Medicine⁷ and the Scottish Intercollegiate Guidelines Network⁸. On the basis of the hierarchy of quantitative evidence, allied health journals cannot allow themselves to be placed in the position of publishing anything other than peer reviewed scholarly works that encourage informed debate. The initiative of the PJAHS in seeking peer review for all papers, which are expected to meet critical appraisal criteria, will pre-empt the issue of publication of personal opinion, except perhaps in cases where the opinion is an invited commentary.

One of the most common research designs is the experimental study which asks effectiveness questions (*‘how well does this treatment work for this group of patients?’*). A high quality effectiveness study is one where attention is paid to the minimization of bias. Bias is a generic name for a range of flaws which can for the research into to error, neglect or intention, and which can consequently muddle the findings⁹. The desire to minimize the potential that the study findings occurred by chance is why randomised controlled trials promote random selection of subjects, random allocation to treatment groups, the use of a control group for comparison, blinding of subjects, measurers and therapists, adequate sample size, minimum subject drop-out throughout the study and adequate reporting of findings.

Critical appraisal instruments for effectiveness studies universally give better scores to studies which attempt to address these issues^{10,11}. However there are many instances in therapies research where randomization, controlling or blinding are not possible^{12,13}. This may occur because of the environment in which research occurs, the intervention being tested (which may not lend itself to the use of a control group), or the almost possibility of blinding of patients or therapists due to the nature of the intervention being applied. Therefore even if an RCT is able to be conducted it may not provide the best evidence because it is an inappropriate research design or imposed constraints that make the findings artificial, the *‘so what’* factor.

Better, more believable, or clinically utilitarian evidence may come from a lower hierarchically ranked research design which is more feasible, more realistic and more clinically useful in terms of addressing the research question, despite the potential for a larger degree of bias. It may even be (horror!!!) a case study. It is possible that the lower the *‘so what’* factor in research, the more likely it is that research findings will be believed and adopted by clinicians. This then is the dilemma of bridging research processes with clinical requirements!

Adequate description of diagnosis, interventions and outcome measures are areas which require ongoing attention when reporting allied health effectiveness research. Addressing these issues will assist in bridging research and clinical cultures. Too often, journals publish studies using such wide **diagnostic inclusion criteria** which underpin recruitment of a heterogeneous sample (take, for instance, low back pain sufferers). Non-significant overall findings from intervening in a heterogenous group may be attributable more to variable responses by subjects, which may mask the true effect of the intervention, rather than the lack of effectiveness of the intervention.

Considering subjects with non-specific low back pain, they could be sub-grouped into those with mechanical onset of pain compared with those with traumatic onset, or insidious onset, those with chronic pain compared with acute pain, those with niggling pain compared with severe pain. The intervention may well have a different effect on one subgroup compared with another, but researchers would never know unless they understood the diagnosis well enough to subgroup it appropriately during analysis.

A common complaint about allied health effectiveness studies is that reports of **interventions** are not sufficiently well described to be reproducible in other settings. No longer is it acceptable to report on ‘an exercise program designed by an experienced therapist’, which lacks a careful description of what the exercises are prescribed, so that they can be replicated by therapists in other settings. Still considering an exercise intervention, not only are readers interested in the nature of the exercises, but they may also

be interested in their frequency of administration, repetitions, subject compliance, and progression as subjects improve. Inadequately described interventions do not lead to generalisable study findings, as matter how well constructed the study was, or how robust the sample size is, if readers cannot interpret the findings into their own setting, the study has little meaning for them (introducing the 'so *what*' factor again).

Inadequate **measures of outcome** can let a good effectiveness study down. It is recognized widely that effectiveness studies require broad-ranging measures of outcome that reflect the requirements of more than one stakeholder². For instance, impairment measures as described by the World Health Organization¹⁴ (such as range of movement, or swelling) may mean more to therapists than to patients or referrers, because these measures reflect the therapy approach of what impact the body impairment has on a patient's function.

Patients on the other hand may be much more interested in outcomes such as pain, or capacity to undertake specific functional tasks, or a reduction in their medication, or to be able to return to work successfully, as these outcomes reflect the impact of their condition on their world. Researchers conducting and reporting effectiveness studies should be aware of the need to measure outcomes across a spectra of concerns, otherwise the readers could ask the 'So *what*' question and put the study aside.

The Philippine Journal of Allied Health Sciences has set a great example to other allied health journals by critically appraising studies submitted to it for review, and sending the critical appraisal scores out to reviewers along with the paper (if the paper meets the threshold criteria). This establishes several messages. For authors, it highlights the key methodological issues that need to be considered during study conceptualization and reporting¹¹. Authors trained in undertaking and reporting good quality studies will automatically lift the standard for others.

Given that the PJAHS will accept student and graduates' papers, this ensures an understanding of quality research starting in the undergraduate years. For readers, quality methodology focuses them on a good study, and educates them on how to read studies critically and efficiently. It helps to address the 'so *what*' factor. For other journals it sets a standard for seeking and accepting good quality papers for publication.

The Philippine Journal of Allied Health Sciences is a bold enterprise which has already raised the profile of allied health in Asia and in the wider allied health community. It offers a timely forum for publication of good research and clinical practice evaluations. It provides an opportunity for debate about appropriate research designs related to appropriate research questions, and for informed decisions to be made on how best to describe diagnostic criteria, interventions and outcome measures. It offers incentives for efficient local publication which will draw positive attention from referrers, patients and policy-makers. Well done University of Santo Tomas on this wonderful initiative!

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