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EDITORIAL

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# What are publication reporting checklists and why are they so important?

Authors of research papers often forget to report specific details about their study, which are important for readers, journal editors and peer reviewers to know. This can have implications such as delaying publication and preventing their work from being cited or replicated by other researchers. The purpose of this short editorial is to highlight the role of publication reporting checklists, discuss the importance of completing these checklists and citing these when submitting a paper to a journal and disseminating findings.

Every research study, literature review, case study, quality improvement or service evaluation project should start with a clear plan. This plan is called a protocol. The protocol should clearly outline the rationale for doing the study/project, what the aims/objectives are, what will be done, how it will be done, how data will be collected, collated and analysed and a plan for dissemination and implementation of the results. By way of an example, protocol development for randomized controlled trials (RCTs) is usually guided by the Standard Protocol Items: Recommendations for Interventional Trials (SPIRIT) checklist.[1] The SPIRIT checklist is a 33 item checklist that makes recommendations on how a study should be planned and conducted.[1] However, even if studies are well planned and conducted, if poorly reported (without transparency), interpretation of the results may be questioned. As a result, the results generated from such research studies are wasted.[2]

Reporting guidelines and checklists have been developed for a wide variety of research types and study designs such as RCTs, observational studies, quality improvement projects, qualitative research, surveys, Delphi studies and systematic reviews.[3] These guidelines and checklists significantly enhance the quality, transparency and consistency of manuscripts. Research that is well reported, and in accordance with the appropriate checklist allows readers, other researchers and reviewers to fully understand how the study was conducted, and will allow researchers to replicate your study if they desire.[4] However, reporting research findings in a transparent manner is also important as an ethical obligation.[5] Reporting checklists can serve as a tool to ensure transparency in reporting in a way that is ethically sound.

Reporting checklists are designed to make it easy for researchers and authors to follow and should be used when planning and also when writing their manuscripts. Some academic journals now require authors to submit the completed checklist of an appropriate reporting guideline for the respective study design at submission, indicating where in the manuscript each item has been addressed.[6] Although currently not mandatory in *Nursing in Critical Care*, it is an important consideration for the future and is already strongly encouraged in our author guidelines. Indeed, in this issue of *Nursing in Critical Care*, at least four articles made explicit reference to a reporting checklist.[7–10]

It is important to note that the completion of these checklists is not a 'tick box' exercise and should be given time and consideration to ensure they are completed correctly. Many claim that the standard of reporting trials and studies remains suboptimal, even at times when a completed checklist has been used.[11] While the reason for this is unclear, it could be due to the difficulty in interpreting some of the items outlined in the checklist or because they can be viewed as bureaucratic and not given considerable thought.[11] Researchers should dedicate time to completing these reporting checklists correctly and be familiar with the accompanying guidelines. Furthermore, it is suggested that critical care nursing education programmes at the postgraduate level should incorporate training and education on these checklists to prepare students for the writing up and dissemination phase of their research. While research education at the postgraduate level always encompasses the planning, design and execution phase of studies, it could be argued that more attention could be given to the communication and dissemination phase to support nurses to publish their findings in high-quality peer reviewed academic journals for the wider community to see, read, cite and even replicate. These checklists should not be viewed as a burdensome administrative task, but a means to enhance the quality of the manuscript and help to ensure a more streamlined peer review process.[12]

The use of reporting guidelines and checklists is also helpful to peer reviewers.[13] Reviewers can refer to the checklist to ensure key methodological principles are adhered to, which can facilitate the review process in a systematic and timely manner. By adhering to these checklists, the likelihood of acceptance to a journal is increased, and the peer review process is facilitated and accelerated. Many research papers submitted to academic journals are rejected on the basis of poor or unclear methodology.[12] However, this may not always be because the study was poorly planned or conducted, but as a result of how the study is reported.[12] Indeed, the function of these reporting guidelines and checklists is to prompt researchers and to remind them of what information should be included in the manuscript, not to tell them how to do research.[4]

So where does one find out which reporting checklist should be used? There are freely available online tools available to support researchers in choosing the appropriate checklist based on study design and type of research being conducted (https://www.goodreports.org/). The Enhancing the QUAlity and Transparency Of health Research (EQUATOR) Network was established to serve as an

  

international initiative dedicated to improving the reliability of published health research. Their website contains a collection of online resources, including a list of all the major health research reporting guidelines and checklists for varying research designs.[14] Further information and resources are available on the EQUATOR Network website.[3] Researchers should consult this website in the planning and reporting stages of their research studies to ensure that they are using the appropriate checklist for their research.

Some of the more commonly used reporting checklists used in health research that may help when submitting to *Nursing in Critical Care* will now be presented. The CONsolidated Standards of Reporting Trials guideline[15] was designed to improve the reporting of RCTs. This is one of the more widely recognized and commonly used reporting checklists in the literature. It is well understood that RCTs, when well designed, conducted and reported, are the gold standard in research. Conversely, RCTs that lack methodological rigour can yield poor quality, biased and unreliable results.[16] One further problem that can arise from a poorly reported RCT lacking methodological rigour is that this can have a knock-on effect on the results of systematic reviews and meta-analyses. If the data presented in an RCT is poor then the conclusions and recommendations of systematic reviews and meta-analyses that incorporate these RCTs cannot be trusted.[16] By applying the reporting guidelines and accompanying checklist, the quality and transparency of RCTs can be enhanced, thus leading to systematic reviews and meta-analyses that provide high-quality synthesis of the available literature to inform clinical practice.

The Preferred Reporting Items for Systematic Reviews and Meta-Analyses[17] (formerly known as QUOROM) were research studies in systematic reviews and meta-analyses. The checklist consists of 27 items that are recommended to be reported.[17] For observational research studies, the Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) guidelines have been developed.[18] The updated STROBE checklist consists of 22 items that relate to the title, abstract, introduction, methods, results and discussion sections of research papers.[18] Other guidelines of interest for authors preparing a manuscript for *Nursing in Critical Care* are the Checklist for Reporting of Survey Studies,[19] the standards for reporting E-surveys (CHERRIES),[20] the Standards for Reporting Qualitative Research,[17] the Standards for Quality Improvement Reporting Excellence for quality initiative/service evaluation papers[21] and the Consensus-based Clinical Case Reporting Guidelines for reporting case studies.[22] There are many reporting guidelines available to authors and it is not possible to mention all of these within this short editorial. Indeed, at the time of writing, almost 500 were listed on the EQUATOR Network website.[3]

In summary, authors should always check the reporting guidelines for their study or project type before writing a manuscript for an empirical study, literature review, quality initiative project or case report. The primary goal of reporting checklists is to help researchers to write manuscripts to a high standard that can ultimately help other researchers when conducting their own research studies. Nursing education programmes with a focus on research education should provide nurses with the skills needed to not only plan and conduct studies, but also how to report the findings of their research to the wider community so that other researchers and readers can easily understand the information that is presented and to potentially cite and replicate the research.

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