Review

IMPAD-22: A checklist for authors of qualitative nursing research manuscripts

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SUMMARY

Objective: The aim of this paper is to develop a checklist for authors preparing qualitative nursing research manuscripts, specifically focusing on the method section.
Design: Literature review.
Data Sources: 15 articles were purposefully selected from three different nursing journals.
Review Methods: Evans' four step process was used to synthesize the method sections of the included articles.
Results: Four main categories were identified 1) Ingress and Methodology, 2) Participants, 3) Approval, and 4) Data: Collection and Management. Based on the categories and sub-categories, a 22-item checklist was developed.
Discussion and Conclusions: Earlier guidelines for formal reporting were developed for qualitative research in general. The main advantage and contribution of IMPAD is that it provides a 22-item checklist specifically aimed towards the method section, and furthermore, it was developed specifically for authors within the field of nursing research.

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Introduction: Academic Writing

The activity of academic writing is central to the scientific community in order to spread knowledge, although publishing is also associated with personal satisfaction and prestige (Hartley, 2008). The first journal, *Le Journal des Sçavans*, was published in 1665 in France followed by *Philosophical Transactions* published by the Royal Society of London in 1666 (Swales, 1990). Jinha (2010) estimates that over 50 million articles have been published since then. Academic writing was defined by Matkin and Riggar (1991) as "[…] the discovery, production, publication and dissemination of scholarly knowledge." (p. 5). Scholarly writing is often regulated by strict standards applied by journals for style, presentation and reporting structures. Good academic writing also tells a story, with a beginning, middle and an end (Soles, 2009).

Background: Writing For Scientific Journals and Formal Reporting

Scientific journals generally apply some form of standard reporting structure; one example is the Introduction–Methods–Results–Discussion, also called the IMRAD format (Swales, 1990). More specific guidelines for formal reporting have been developed in light of certain research designs; i.e. CONSORT was developed for reporting randomized control trials (RCTs) (Oermann and Hays, 2010), TREND for reporting quasi-experimental and non-randomized evaluations (Des Jarlais et al., 2004),

and PRISMA for reporting systematic reviews and meta-analyses (McLeroy et al., 2012). Guidelines have mainly been developed for quantitative research although similar checklists do exist for qualitative research albeit to a much lesser extent. Individual papers have addressed standards and criteria to achieve a high quality of research reporting (Blignault and Ritchie, 2009; Malterud, 2001). Two more structured guidelines are available. RATS (Clark, 2003) offers guidelines for qualitative research, and has been adapted, for example, by BioMed Central, as part of their author guidelines for journals in the company's portfolio. COREQ is a 32-item checklist, which was developed for explicit and comprehensive reporting of qualitative studies (Tong et al., 2007). COREQ covers three domains, 1) research team and reflexivity, 2) study design and 3) analysis and findings. Even though COREQ is highly useful and covers all domains, its broad nature is also its weakness as the guideline cannot offer a full description or provide an in-depth analysis of each of the parts it refers to. Furthermore, COREQ was also constructed for qualitative research generally and not for nursing research specifically. In this paper, the Method section focuses on in-depth analysis.

A general objective of the method section of an article is to provide information to the reader about how the study was performed, step-by-step, to ascribe credibility to the findings (Cargill and O'Conner, 2011). Houser (2012) holds that the method section should provide information about the participants, the implementation of the research and what happened throughout the study. Based upon the review of academic writings and different styles above, I conclude that well-established guidelines exist, mostly for quantitative study designs but also to some extent for qualitative research in general.

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Nevertheless, this paper seeks to complement the established guidelines by providing IMPAD, a 22-item checklist which is specifically developed for the method section in qualitative research articles in nursing research.

Objective

The aim of this paper is to develop a checklist, with a specific focus on the method section, for authors preparing manuscripts in qualitative nursing research.

Method

The methodological approach chosen for the analysis here is a four step process for synthesizing qualitative data outlined by Evans (2002). This method was chosen due to its pragmatic approach to synthesizing data in qualitative inquiries without demanding that the researcher adopt a specific position in relation to a defined philosophical ontology. The steps specified in the approach are followed throughout this paper and are: (1) Gather the sample; (2) Identify the key findings; (3) Relate categories across studies; and (4) Describe the phenomenon (findings).

Step 1: Gather the Sample

The first sub-step, according to Evans (2002), is to determine what type of studies should be included in the review and the second sub-step is to decide which databases to use. Three nursing journals were purposefully selected on the basis of being indexed with the Social Science Citation Index, with an impact factor of at least 1.0 to ensure high quality articles. The purposive selection was guided by the strategy of maximum variation (Creswell, 2007; Polit and Beck, 2008); therefore three different journals were chosen based upon their variation in scope. A general nursing journal was chosen: *International Journal of Nursing Studies* (IF = 2.103) abbreviated IJNS; the second journal focuses on nursing within the field of cancer: *Cancer Nursing* (IF = 2.065) abbreviated CN; and the third and last concerns psychiatric care and mental health nursing: *International Journal of Mental Health Nursing* (IF = 1.427) abbreviated IJMHN. The journals were individually searched to identify articles to include. The search term '*qualitative*' was used, and the search was limited to articles published between January 2011 and the present. The search was conducted on 24 April 2012 and the search results are presented in Table 1. The final sub-step is the selection of studies to be included; these should be selected on the basis of inclusion criteria (Evans, 2002). The search resulted in a total of 304 articles; these were reviewed for title and abstract to exclude those which did not fall under the specified inclusion criteria (see Table 2). After this review, 183 articles were excluded and 121 remained. A deep analysis of the texts of the 121 articles was deemed too time consuming in relation to available resources for this project. Therefore, 15 articles were purposefully selected due to the variation they gave, that is in relation to: methodology, methods, country, journal, impact factor, and field within nursing. The included data, consisting of the method sections of the articles included, amounted to 44 double-spaced pages of pure text data.

Step 2 and 3: Analyzing Procedure

During the analysis, I followed Evans' (2002) second and third steps which focus on identifying key findings and relating categories across studies. In accordance with Evans' second step I read each included article and wrote naïve memos. Thereafter, the articles were re-read several times to get a sense of the texts as a whole. During the reading process, I constructed a matrix to organize the data from the selected studies. From each study, I extracted data, for example identifying methodology and the methods used in the specific

articles. The matrix included 18 columns in total: A) Author and year; B) Title of article; C) Country; D) Journal; E) Aim of the study; F) Methodology and/or design; G) Method(s); H) Data collection method(s); I) Headings in method section; J) Reflective memo writing; K) Key concept; L) Categories; M) Sub-categories; N) Tense; O) Words; P) Number of references; Q) Active/passive voice; and R) Addressing the informants. Along with these readings and filling out the matrix, I wrote reflective memos throughout the process, as the analytical work was inductively driven. Although Evans urges the researcher to collect key findings in the second step, in this review of the method sections, *key concepts* were collected, which I think is a more suitable term in this context. Moving on to Evans' third step which is about relating data across studies, I compared the different studies to identify categories and similarities across them. The categories that were identified through this analysis process are also the headings in the findings. Furthermore, these categories also provide the basic structure of the acronym IMPAD, for example A relates to the category Approval. This analytical work resulted in four categories. Evans further declares that the next sub-step is the progressive refinement of data. I searched for nuances in the categories, which resulted in 22 sub-categories. Ingress and Methodology includes three sub-categories, Participants includes five sub-categories, and Approval includes four sub-categories. Finally, Data: Collection and Management includes ten sub-categories. Based on the categories and 22 sub-categories, statements and questions were aligned in the IMPAD model. For example, P8, (sub-category eight in Participants) was created on the basis of articles addressing issues regarding assignment of participants. Chung and Hwang (2012) made clear that they used nurses at a breast clinic to get into contact with potential participants. This accounts for the relational aspects between the researcher and the participants and generates the statement and question: "Accounting for the relational aspect between researcher and participants, how and by whom was the participant contacted?". Such clarifications are presented in more detail in the findings. In the last sub-step, which Evans (2002) calls examine the analysis, I re-examined the categories and sub-categories and interpreted the content of each by reflecting upon my memos. In Borkan's (1999) terminology, I was commuting between immersing/crystallizing as I was at some points very close to the data while at other points I temporarily stepped back from the data to be able to reflect upon it. The fourth step according to Evans (2002) is to describe the phenomenon, which involves creating a description of the categories and referring back to the original studies to give examples from them for each category. The fourth step is presented in the heading 'Findings'.

Findings

Based on the analysis of the method sections of 15 purposefully selected qualitative research articles within the field of nursing research, four main categories were identified that comprise the structures and patterns. The four categories are named: 1) Ingress and Methodology, 2) Participants, 3) Approval, and 4) Data Collection and Management. These are presented under individual headings. Based on these main categories and the sub-categories, an overview was created (Fig. 1). Together the categories build the acronym *IMPAD* which includes the 22 sub-categories. The author suggests

Table 1
Overview of the sample.

Journal	Hits	Excluded	Included	Selected
International Journal Nursing Studies	170	118	52	5
International Journal of Mental Health Nursing	56	29	27	5
Cancer Nursing	78	36	42	5
Total	304	183	121	15