Nephrology nursing publications: topics and research methods

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Abstract

Four peer-reviewed nephrology nursing society journal publications from 2010 to 2015 were analysed. Journal articles (n=638) were categorised into type, treatment cohort, specific topic and research methods. Primary research (40%) were the most frequent types of publications, followed by systematic reviews (25%) and case studies (16%). Publication patient cohorts were dominated by haemodialysis (41%), followed by chronic kidney disease (15%), kidney transplantation (14%), peritoneal dialysis (12%) and end-of-life care (9%). The most frequent specific topics were vascular access (56 publications), nutrition (35), patient self-management (31), medications (26) and patient quality of life (24). The case study was the most popular method of publishing clinical experience, while cross-sectional survey was the most published research method, followed by qualitative research approaches. There were a low number of publications addressing cost and new therapies.

Keywords

Nephrology, nursing, publishing, research methods, dialysis, transplant, chronic kidney disease.

Scholarly writing and publishing is undergoing significant change at present. New technologies, social media, changing measures of impact, open access journals and predatory journals have influenced the way clinicians and scholars share their research and clinical practice. Nurses wishing to share their research have access to these methods in addition to the traditional society journals.

Historically, nephrology nurses have published in general nursing journals, medical nephrology journals and nephrology nursing journals. Traditionally, nephrology nurses have supported and published in nephrology nursing journals supported by nephrology nursing societies. These societies include the Canadian Association of Nephrology Nurses and Technologists (CANNT), the American Nephrology Nurses’ Association (ANNA), the Renal Society of Australasia (RSA) and the European Dialysis and Transplant Nurses Association/European Renal Care Association (EDTNA/ERCA). Each society has their respective peer-reviewed journal: CANNT Journal (CANNTJ), Nephrology Nursing Journal (NNJ), Renal Society of Australasia Journal (RSAJ) and Journal of Renal Care (JORC).

The decision for nurses to publish in specialist nephrology society journals has not been previously explored; however, it is likely that the desire to reach clinicians and decision-makers in nephrology nursing is among the reasons. In saying this, there has been no recent published analysis of nephrology nursing publications. Therefore, the aim of this brief paper is to present a crude analysis of publications in four nephrology nursing society journals: CANNTJ; NNJ; RSAJ; and JORC.

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Conflict of interest: Dr Paul N Bennett was the Founding Editor of the Renal Society of Australasia Journal and Editor in Chief from 2005 to 2015.

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Published articles from January 2010 through to December 2015 were analysed. Editorials, sponsored supplements, book reviews and letters to the editor were excluded. Each article was categorised specifically into broad type, treatment cohort, specific topic and research methods for original primary research articles. No comparison of the four journals was undertaken.

The number of articles that met the criteria and were analysed was 638. The most frequent types of articles were primary research (40%), followed by reviews (25%), case studies (16%), opinion (10%) and quality improvement reports (9%) (Figure 1). Reviews were required to have a systematic approach, such as a systematic literature review, with non-systematic reviews categorised as opinion.

![Figure 1: Types of articles submitted to CANNTJ, NNJ, RSAJ, JORC from 2010 to 2015 (n=638)](image)

Figure 1 illustrates the breakdown of research methods used in the 359 articles identified as research papers. For the purposes of this analysis, case study reports were included. Case study reports included individual case reports, cohort reports and broader case study research following case study methods. Using this definition, case study reports were the most frequent (28%), followed by survey research (25%), qualitative methods (16%), pre/post measure methods, audit research, randomised control trials (RCTs), mixed methods, case control/ cohort and concept analysis methods. Survey research was defined as involving a structured physical, web-based or other questionnaire, while audit research was defined as audits that were not a part of a formal quality improvement activity.

From the 638 articles included, 343 were targeted specifically as a treatment cohort (Figure 3). Publications not included in this analysis were those that crossed over more than one treatment cohort. Haemodialysis (excluding home haemodialysis) accounted for 41% of these articles, with chronic kidney disease (not specifically dealing with end-of-life care) accounting for 15% of papers, kidney transplantation (14%), peritoneal dialysis (12%), end-of-life care (9%), home haemodialysis (7%) and acute kidney injury (2%). End-of-life care included the terms palliative, supportive, conservative and end-of-life care. Chronic kidney disease was defined as those papers addressing specific pre-renal replacement therapy topics.

![Figure 3: Treatment cohorts in publications in CANNTJ, NNJ, RSAJ, JORC from 2010 to 2015 (n=343)](image)

Figure 3: Specific publication areas of interest, excluding treatment cohort, were categorised using a taxonomy developed for this paper as no specific publication taxonomy had previously been published. Specific topic areas with greater than 10 publications are represented in Figure 4. Vascular access (56 publications) was the most highly published specific topic. This category included articles addressing assessment, complications, fistulae, grafts and central venous dialysis catheters. Nutrition (35) was the second highest ranking topic, followed by patient self-management (31), medications (26), patient quality of life (24), nurse education (20), anaemia (19), ethnicity (including Indigenous) (17), adherence (14), paediatric (14), exercise (11), care partners/carers (11) and models of care (11). Articles that specifically addressed more than one area (for example vascular access in paediatric patients) were classified into both categories.
Figure 3 did not include publications focussed on specific side effects and symptoms of kidney disease and treatments which are shown in Figure 4. In total there were 129 articles reporting specific side effects and symptoms. The most frequent side effects/symptoms that nurses examined were hypertension (27), hypotension (23), bone disease (20), infection (13), pain (6), feet (6), fatigue (4), pruritus (4), inflammation (4) and hyperkalaemia (3).

Important observations from reflecting on nursing publications include methods, alternative therapies and lack of financial focus. Firstly, it is clear that nurses regard highly the use of case studies to report significant clinical issues. This is not surprising given most clinicians who publish have access to cases and groups of cases. Furthermore, individual case studies require less rigour in design than more generalisable methods of research. The 101 case study publications contrast with the small number of 14 published RCTs, the gold standard of generalisable design. Given the resources required to undertake a well-designed RCT, this was an expected finding.

The high number of publications reporting qualitative methods is consistent with nursing research in general. Nephrology nurses frequently grapple with questions that require depth and exploration of people’s perspectives (patients, nurses, care partners). These questions cannot readily be quantified. In saying this, the use and development of questionnaires was a highly popular research method illustrated by the 88 publications using survey methods. Only a limited number of reports (13) specified mixed methods combining both qualitative and quantitative approaches.

A significant area that remained absent from this literature was that of cost. Only two articles focussed on, or measured, the cost, financial implications or cost utility of care related to nephrology. Potential reasons for this absence may be access to health economic researchers or simply the low emphasis financial aspects have in the nephrology nursing literature. This lack of costing literature is in stark contrast with the role of clinical nurses and nurse administrators in ensuring cost-effective care.

A second area that was relatively absent was new therapies that were not specifically haemodialysis, peritoneal dialysis, transplant or chronic kidney disease. Examples include only four publications reporting haemodiafiltration, two focussing on nocturnal or frequent dialysis and three addressing therapeutic plasma exchange. Given the nurses’ dominant role in these emerging therapies it is surprising more nurses do not publish cases, research results and experiences in these areas.

The above analysis is only a brief interrogation of the literature published in four nephrology nursing society journals over the past six years. The analysis did not include the many high-quality articles published in general nursing journals, medical nephrology journals and other associated disciplines, such as psychology journals, quality of life journals and research methods journals. In addition, the analysis did not include grey, non-peer reviewed publications where many nurses present their work. It is important to acknowledge that the articles published in these four journals are not purely written by nurses and authors include physicians, scientists, allied health professionals, statisticians and engineers.

In conclusion, this exercise in reviewing the content of four peer-reviewed nephrology nursing society journals has highlighted the content and methods that have been used in nephrology nursing publications. As is the case, more questions than answers arise for future research and publications. These may include a more longitudinal investigation of trends in nephrology nursing publications, an exploration of the lack of costing and a more rigorous analysis of the quality of methods used in nephrology nursing research.