

REVIEW

A scoping review of the literature on nursing practices with persons seeking care for sexually transmitted infections

Vicky Bungay, Ingrid Handlovsky, J Craig Phillips and Cheryl Prescott

Aims and objectives. To examine existing research literature to ascertain what is known about nursing practice in sexually transmitted infection care and identify promising research trends and limitations.

Background. Sexually transmitted infections continue to be a significant public health concern with more than 357 million new cases occurring annually worldwide. Nurses are vital for the prevention and care of those affected by sexually transmitted infections. As nursing scope of practice is evolving, there is an urgent need to develop a baseline understanding of the state of nursing knowledge in sexually transmitted infection care.

Design. Nurse researchers and policy and practice experts conducted a scoping review of primary research using Arksey and O'Malley's five-step methodological framework.

Methods. Primary research literature published between 2000–2014 was searched. Seventeen full-text papers were thematically analysed. Electronic charts were created for data coding and extraction.

Results. The research literature in nursing and sexually transmitted infection care is heterogeneous in topic, method and populations investigated. Sexually transmitted infection care is undertaken by nurses in diverse settings and roles including nurse practitioners and public health, school and emergency room nurses. Three themes that illustrate the main focus of current literature were identified: (1) screening, (2) health education and counselling and (3) scope of nursing practice. Inconsistencies in nursing practice activities in sexually transmitted infection care were noted. Many nurses are not working to their full scope of practice.

Conclusions. The research in sexually transmitted infection nursing practice is limited. Further research is needed to investigate the context of practice and patient care experiences; to design and test interventions to support nurses working to full scope of practice; and to improve the conceptualisation of nursing in sexually transmitted infection care.

Relevance to clinical practice. Nurses are effectively improving health outcomes among people affected by sexually transmitted infections; however, not working

What does this paper contribute to the wider global clinical community?

- This study addresses an essential knowledge gap regarding the status of nursing research in the area of nursing practice and sexually transmitted infections, thereby providing an empirical basis upon which to identify and address gaps in research for practice.
- This study offers evidence that nurses are a vital component of health care to prevent, treat and support those affected by sexually transmitted infections. However, there are significant areas that require further inquiry to ensure that prevention and management of sexually transmitted infection are a component of a more holistic approach to sexual health care.
- The barriers to nurses working to their full scope of legislated practice can be further empirically investigated to design and test interventions aimed at supporting nurses to work to their full scope of practice.

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to the full scope of practice could limit our capacity to fully meet patient care needs.

Key words: advanced practice, community nursing, nurses roles, nursing practice, professional regulation, public health nursing, sexual health

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Introduction

Sexually transmitted infections (STIs) continue to be a significant and increasing public health concern with more than 357 million new cases occurring every year worldwide (World Health Organization [WHO] 2015a). In Canada, yearly rates of reportable STIs – chlamydia, gonorrhoea and syphilis – have steadily increased over the last 15 years and mirror trends in the USA, Australia and the UK (Public Health Agency of Canada [PHAC] 2013). Although people of all ages and genders are affected, young people between the ages of 15 and 24 years are disproportionately affected by many of these infections (PHAC 2014). The ramifications of STIs are extensive and result in substantial individual, social, economic and healthcare system costs. STIs contribute to genitourinary and reproductive complications including sexual dysfunction, cancers and increased susceptibility to HIV infection (WHO 2015b). STIs threaten maternal and newborn health (WHO 2015a), and psychological effects including depression (Drolet *et al.* 2011) and shame (East *et al.* 2015) have also been reported.

More than 30 bacterial, viral and parasitic pathogens are sexually transmissible (Holmes *et al.* 2008, WHO 2015a), and nursing, the largest healthcare workforce (Naylor 2003), is an essential aspect of prevention and care for those affected by STIs (East *et al.* 2015). Operating under public health principles of communicable infection prevention and management (Community Health Nurses of Canada 2011), nurses play an active role in safer sex education, condom distribution, immunisation, testing and partner notification (Brewin *et al.* 2014, Bungay *et al.* 2014). Nursing's scope of practice with people affected by STIs is currently expanding, particularly in the independent diagnosis of and treatment for STIs (Miles *et al.* 2002, Challinor 2006, Wearing & Nickerson 2010). Nurse-led sexual health clinics are increasing along with expanded scope of practice for prescriptions and referrals (Miles *et al.* 2002, Knight *et al.* 2003, Black 2012). The increased autonomy and expanded scope of STI practice has until recently been among nurses with advanced practice graduate education (e.g. nurse practitioners). Today, point-of-care nurses without graduate

education are independently diagnosing and treating STIs as part of their sexual health practice. In British Columbia, Canada for example, point-of-care nurses who are certified by the College of Registered Nurses of British Columbia (CRNBC 2014) can independently carry out restricted activities that normally require a physician's or nurse practitioner's order to independently manage patients requiring STI care (Wearing & Nickerson 2010). Certification is achieved through successful completion of a CRNBC-approved continuing education programme (CRNBC 2016). Preliminary evidence indicates that as many as 25% of nurses working in such a model reported feeling unprepared to undertake these expanded roles (Bungay 2010). Other research (e.g. Miles *et al.* 2002, Bungay *et al.* 2014) has demonstrated significant practice inconsistencies among nurses providing STI care although the reasons for this inconsistency remain unclear.

Nurse leaders, clinicians and regulatory organisations have called for improved research evidence to inform the evolving nature of nursing's scope of practice in STI care, irrespective of advanced practice degrees (Bungay & Stevenson 2014, Knight *et al.* 2003, Wearing & Nickerson 2010). This evidence has been offered as the panacea to inform and standardise nursing practice with the espoused aims of enhancing consistency, patient safety and quality care. There has been less discussion, however, regarding the necessary focus for this research, and there is minimal information describing the current state of research in nursing practice with people affected by STIs. We know very little of the main types and sources of evidence available or the key concepts that underpin this research. Until such a baseline has been established, we are limited in our ability to develop strategic research priorities to address the identified need for greater evidence to inform practice, policy and education that may ultimately reduce the STI illness burden.

Aims

The purpose of this project was to undertake a scoping review of the existing literature to ascertain the current

state of research in nursing practice and the care of people affected by STIs (hereafter referred to as STI care) and to identify promising trends and limitations in the field.

Methods

We undertook a scoping review guided by the Arksey and O'Malley (2005) five-stage framework: (1) determine the aims of the review, (2) identify relevant studies, (3) select studies using quality appraisal strategies, (4) chart the data and (5) collate, summarise and report the results. A scoping review was appropriate because it provided an iterative, systematic and rigorous way '...to map *rapidly* the key concepts underpinning a research area and the main sources of evidence available' (Arksey & O'Malley 2005, p. 21) irrespective of research methods (Levac *et al.* 2010). Our team members included nurse researchers and policy and practice experts in STI care who provided essential insights into the relevance and meaning of the search terms and strategies and the implications of findings from the review (Levac *et al.* 2010).

Search methods

We searched seven electronic databases that specifically publish research pertaining to nursing practice for the period January 2000 to December 2014 to find original research articles addressing nursing practice and STI care (Fig. 1). This time period allowed us to capture sufficient breadth of research on the topic area (Levac *et al.* 2010). The search began broadly and was inclusive of any studies pertaining to nursing and STI care. We used the search terms 'nursing', 'sexual health', 'sexually transmitted infection' and 'sexually transmitted disease' in all possible combinations. We included the terms 'public health', 'community health' and 'genitourinary nursing' to ensure that we captured the contexts and settings for nursing practice in STI care internationally (Miles *et al.* 2002, Community Health Nurses of Canada 2011). We similarly conducted more refined searches using search terms pertinent to individualised practices in STI care. We drew on CRNBC (2014)-identified competencies in STI-certified nursing practice and evidence-informed practices in communicable disease prevention and control (Community Health Nurses of Canada, 2011, Marchant-Short & Whitney 2012, Minnesota Department of Health, 2001, Bungay *et al.* 2014) to generate further search terms: 'screening', 'testing', 'health education', 'counselling', 'treatment', 'follow-up', 'partner notification', 'contact tracing', 'vaccination' and 'referrals'. The process was supplemented by a manual search of references from all retrieved articles.

Retrieved articles were exported to a bibliographic file using the reference management software REFWORKS™ (ProQuest, Ann Arbor, Michigan, USA). Each article abstract was evaluated for relevance according to the predetermined inclusion criteria: (1) the study was original research in one or more aspects of STI care; (2) nursing practice or education was a central element of the study; and (3) the article was published in English. When unsure, the entire article was read by a team member. We excluded studies specific to HIV nursing care because systematic reviews in this field had already been carried out (e.g. Pickles *et al.* 2009). To ensure that our review was situated within the primary aim of the review, we also excluded papers limited to sexual dysfunction or general sexual health that did not specify STI prevention and treatment practices. We further excluded those without nursing practice as a central aspect of the research questions or aims (see Figure 1).

Search outcomes

The searches yielded 444 citations; of which, 371 were excluded after review of abstracts and titles because they were duplicates or did not match the inclusion criteria. Seventy-three papers were retained for more in-depth review and randomly assigned across four members of the research team for further assessment. Each team member reviewed their papers using an appraisal guide that included a glossary of the core areas of nursing practice in STI care used for the search, inclusion criteria and quality assessment guidelines for quantitative and qualitative research (Table 1). Review results were entered into a shared Microsoft Excel file that charted yes, no or unsure for the categories *meets inclusion criteria* and *sufficient quality*. We held a team meeting to discuss review outcomes and reach consensus on the 17 studies included in the review.

To further standardise our data extraction and charting process, we developed a Microsoft Excel file to collate details from each paper relevant to our review aims: (1) citation, (2) study population, (3) sample size, (4) research question(s), (5) methods, (6) findings, (7) geographical location, (8) study site location and (9) key area(s) of practice in STI care. We also included our insights into study strengths and limitations. Because many of the nurses engaged in STI care work in public and community health contexts, we assessed whether the research emphasised individual, group or community levels of care. To identify themes and patterns that prevailed across the studies (Arksey & O'Malley 2005), we collated information extracted from each review and assigned analytic categories that were congruent with our predetermined key areas of nursing

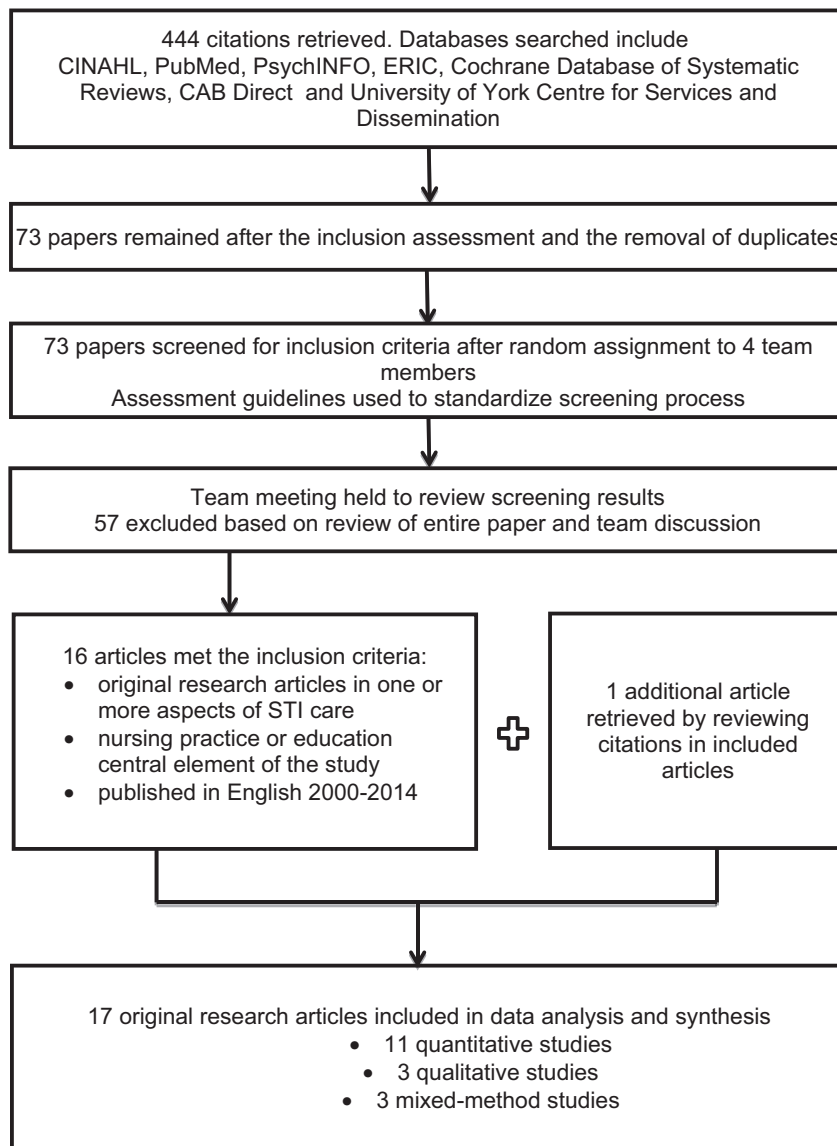


Figure 1 Primary research search and selection.

practice in STI care. Studies were not weighted by sample size or research design, but instead reviewed and clustered thematically (Arksey & O'Malley 2005, Levac *et al.* 2010).

Results

Although the 17 articles reviewed demonstrated heterogeneity in study purpose, research population, design and geographical location all had at least one key area of nursing practice in STI care as a primary focus (Table 2). To synthesise the core concepts underpinning the research, the key research foci or topics and the findings were organised according to three interrelated themes (Themes 2) pertinent to our study aims: (1) health education and counselling, (2)

screening and (3) scope of practice. The first two pertained directly to specific areas of nursing practice in STI care, while the scope of practice theme represented the studies about nursing scope of practice, qualifications and barriers to STI care (see Table 3 for detailed descriptions of thematic categories).

Health education and counselling

Five studies specifically focused on nursing practice in health education and counselling; of which, four examined intervention outcomes and one studied patient satisfaction. The four interventional studies diverged in study populations and the context in which the education

Table 1 Overview of appraisal guidelines

Guideline item	
Inclusion criteria	1 Original research in one or more nursing practice activity area 2 Nursing central element of the study 3 Published in English
Quality appraisal guidelines	Qualitative studies
	<p>a Is there a clearly articulated research question?</p> <p>b Is the methodological framework/paradigm clearly stated, and is it appropriate given the research question?</p> <p>c Were the data gathered appropriately for the framework and research question?</p> <p>d Were techniques such as triangulation and the iterative process applied to data collection?</p> <p>e Was prolonged engagement with participants employed?</p> <p>f Were ethical issues/concerns addressed?</p> <p>g Were data analysed appropriately (e.g. is it reported how and why data were analysed, and by whom?)</p> <p>h Was the study rigorous? Did the researcher(s) engage in reflexive practice to limit bias? Were negative cases included and analysed? Was rich and thick description used? Were comparisons and contrasts made? Did the researcher(s) check with participants to ensure that results were accurately communicated?</p>
	Quantitative studies
	<p>a What is the research design? Is it descriptive or experimental? <i>strongest to weakest designs:</i> - Double-blind RCT - Prospective design study - Cohort study - Clinical intervention study - Cross-sectional/case-control studies - Case study and case series studies</p> <p>b How was the sample drawn (e.g. random assignment) and how representative of the population is the sample?</p> <p>c Is the sample size appropriate, and was this determined by significance level (p) or confidence interval?</p> <p>d Was a measurement tool used, and if this was a newly developed tool, how were the validity and reliability determined?</p> <p>e What statistical test was used, and was it appropriate for the question/context? (e.g. chi-square for ordinal variables, t-test for differences between two groups, ANOVA for differences between three or more groups)</p> <p>f What level of significance was used? (by convention, p of 0.05 is ideal, p of 0.1 may be questionable)</p> <p>g Were confidence intervals (CI) used?</p> <p>h Were the results generalised to the population, with appropriate statistical tests? Was sample size adequate and CI provided?</p> <p>i Were the results discussed at length? (i.e. statistical significance does not necessarily indicate clinical relevance)</p>

Source: Adapted from Melnyk & Fineout-Overholt (2011) and Polit and Beck (2012).

occurred but all shared consistent condom use and reduced number of sexual partners as two key elements of behavioural risk reduction. Two occurred with college students in group settings and involved a power point lecture provided by a nurse accompanied by brochures summarising the content (Anderko & Uscian 2000, Johnson-Mallard *et al.* 2007). Two were situated in primary healthcare settings and included one-on-one nurse practitioner-patient interactions with women (Marion *et al.* 2009, Laughon *et al.* 2011). STI testing and assessment of each patient's individual factors (e.g. knowledge deficits, condom use practices, the number of sexual partners) associated with an increased susceptibility to infection were included in order to contextualise the education.

Capacity building (e.g. developing skills and abilities to improve condom use and reduce the total number of sexual partners), an essential element of health education, was not consistently integrated in the interventions. Effectiveness of outcome measures varied across the studies ranging from improved STI-related knowledge to increased condom use, reduced incidence of STIs and reduced number of sexual partners. One study (Johnson-Mallard *et al.* 2007) examined the intervention effectiveness by measuring knowledge of risk factors and risk reduction strategies as the only outcome variables (condom use, limiting partners). Two studies (Anderko & Uscian 2000, Marion *et al.* 2009) included educational content and teaching strategies for participants to learn about and practise condom negotiation skills in mock scenarios. One study coupled the intervention with a