



Registered nurses' knowledge, attitude, practice and regulation regarding their scope of practice: A literature review

M.M. Feringa^{a,*}, H.C. De Swardt^b, Y. Havenga^a

^a Adelaide Tambo School of Nursing, Tshwane University of Technology, Private Bag x 680, Pretoria 0001, South Africa

^b Department Health Studies, University of South Africa, Muckleneuk Campus, P O Box 392, Unisa 0003, South Africa



ARTICLE INFO

Keywords:

Scope of practice of nurses
Knowledge
Attitude
Practice
Regulation

ABSTRACT

Over the years, extensive task shifting and sharing has taken place in nursing. In several countries, especially Botswana and other African countries, nurses are often responsible for duties and interventions they consider to be beyond their Scope of Practice (SoP) or regard as 'non-nursing' tasks. Issues and concerns affecting SoP may have considerable impact on the quality of care and welfare of nurses. The aim of this article is to present the results of a literature review regarding the Scope of Practice of Registered Nurses.

Method: A literature search was performed, using the following internet databases EbscoHost, Nursing@Ovid and Google Scholar. ResearchGate, Science Direct, Sage and Sabinet were also consulted, as well as websites of professional organizations and the Botswana Collection at the University of Botswana Library. Articles published in English between 2000 and 2018 were reviewed. Key search concepts included: scope of practice of nurses and knowledge, attitude, practice and regulation.

Findings and discussion: Knowledge of nurses regarding their SoP appears variable and attitudes are usually positive, as long as scope expansion is congruent with legislation. Literature illustrates that nurses regularly practise outside their scope, either beyond or below, whereas SoP may overlap, both intra-disciplinary as well as interdisciplinary. Although the SoP of nurses appears to be regulated in many countries, regulation often appears insufficient to meet the evolving nature of the nursing profession.

Conclusion: In the current changing worldwide health arena, scoping issues remain relevant and warrant imminent attention.

1. Introduction

During the past decades, in many countries Scope of Practice of Registered Nurses has evolved and expanded. According to the International Council of Nurses (ICN, 2010) a Scope of Practice (SoP) outlines the parameters or boundaries within which Registered Nurses practice and needs to reflect what is distinctly nursing (ICN, 2013). The term is frequently used by licensing bodies, such as national nursing councils, to describe what Registered Nurses (RN's) are legally recognized, educated and competent to implement (Altranais, 2000). Boundaries of nursing practice are considered important to protect the nurse and the public, while providing identity to the nursing workforce (ICN, 2010). The ICN considers it vital that the nursing profession should clearly articulate its SoP in order to ensure safe and competent nursing practice and to respond adequately and appropriately to the changing needs of society. The articulation of nursing's boundaries remains challenging, in terms of balancing restricted and expanded practice (Fealy et al., 2014), in terms of what distinguishes nursing

from other health professions (inter-professional boundaries), and as nursing practice is increasingly becoming more diverse, also in terms of intra-professional boundaries (Daly & Carnwell, 2003). Although many countries, during the past 15 years, have developed legal documents to enact SoP, discrepancies and concerns between SoP and actual practice remain prevalent.

2. Background

Reforms and developments in health care (Fairman, Rowe, Hassmiller, & Shalala, 2011) as well as the effect of economic difficulties (Dovlo, 2004) influence nurses' SoP. According to the World Health Organization (WHO, 2007), nursing is one of the main pillars of the implementation of health services. The WHO (2008) maintains that the limited availability of human health resources implied transferring a range of health care service responsibilities to RN's from other health care professionals. The ICN (McGillis-Hall & Buch, 2009) emphasizes that the increased utilization of RN's, with advanced knowledge and

* Corresponding author at: P.O. Box 40315, Broadhurst, Gaborone, Botswana.

E-mail addresses: bartandgeetha@electroflex.net (M.M. Feringa), deswarhc@unisa.ac.za (H.C. De Swardt), havengay@tut.ac.za (Y. Havenga).

skills, is a cost effective approach to meeting increasingly complex health care needs.

Worldwide, RNs undertake activities that were traditionally the prerogative of doctors, whilst certain nursing tasks have been relegated to support staff members (Mee, 2006; Safriet, 2002; Sandelowski, 2000). Tasks are expected to continue to shift to RN's in the foreseeable future, especially within the context of increasing health care costs (Fairman et al., 2011) and the emergence of the global epidemic of non-communicable diseases (ICN, 2011; Trehaerne, Fishman, & Lin, 2014; WHO, 2012). The emergence of HIV/AIDS created new roles for nurses (Willard, 2009), including prescribing of Anti Retroviral (ARV) drugs (Kgatlwane, 2009) and performing circumcisions (Frajzingier, Odingo, Barone, Pwerchal, & Pavin, 2014). According to Munjanja, Kibuka, and Dovlo (2005), in Africa, nurses have been utilized for a variety of extended purposes. Anecdotal evidence further suggests that in Africa significant informal task shifting has occurred especially in rural areas where RNs perform procedures not allowed according to regulations (Dovlo, 2004) or for which they have received inadequate education (Msuya et al., 2017). Contrary, nurses in less-developed countries may migrate to more developed countries, due to not being able to perform according to their optimum scope (Likupe, 2013).

SoP is crucial as it forms the basis for compiling standards of practice, curricula and job descriptions and for protecting nurses through a legal framework specifying who is qualified and authorized to provide specific services and interventions (ICN, 2013). SoP also distinguishes nursing from other health professionals and consequently may prevent scope creep (Price, 2017) from other health cadres.

The most effective use of nurse resources (ICN., 2014) implies that nurses are able to practice to the full extent of their education, training and capabilities. Duffield, Gardner, and Caitling-Paul (2008) also conclude that nurses can perform more effectively by practising according to their knowledge and skill level, whilst Dery, Clarke, D'Amour, and Blais (2018) maintain that practising according to one's SoP or optimum level increases job satisfaction. White et al. (2008) argue that it is crucial to understand the SoP. Appreciating the importance- and understanding the SOP concept is vital to the appropriate deployment of the health workforce (Baranek, 2005; Besner et al., 2005) and prevent potential and actual SoP overlaps within nursing and other health disciplines. Currie and Carr-Hill (2012) add that role boundary exercises will have significant international relevance, only when consensus has been reached about the various concepts constituting nursing.

The WHO (2007) as well as the ICN (2010) recommend that as part of a regulatory framework, a SoP for nurses should be developed. An article in the African Policy Dialogue Review (*Challenges of Nursing in Southern Africa, 2001*) confirms an urgent need in Southern Africa to draft appropriate legislation to address the SoP specifying what nurses should be permitted to do with and without supervision. Whilst Kilpatrick, Lavoie-Tremblay, Ritchie, Lamothe, and Doran (2011) concluded that such work is important for full SoP development, the effectiveness of inter-professional teamwork and the integration of new roles in the health care system. Nurses comprise the largest group of employees within the healthcare sector; they are generalists who can be deployed in different settings and are economically more affordable than cadres that are more expensive.

The aim of this literature review was to identify and review literature to explore and describe the knowledge, attitude, practice and regulated vs. actual practice of the SoP of Registered Nurses in Botswana, Africa and internationally.

3. Methods

A search question was developed using the key concepts within a modified PICO framework. The acronym population (P), context (C), intervention (I) and outcome (O) formed the foundation of the question: In reviewing different types of sources, what are the knowledge,

attitudes, practice and regulated vs. actual practice (I) amongst RN's (P) in Botswana, Africa and internationally (C), regarding their SoP in providing safe care (O)?

The initial literature search was conducted between search was conducted October 2014 and November 2015, additional sources were identified during 2017 and 2018. Co-authors and the university librarian provided assistance.

The following key concepts and combinations thereof were used in the search: Scope of Practice of Registered Nurses and Scope of Practice of Nurses and knowledge, attitude, practice, regulation, Botswana and Africa. Search sites included EbscoHost (Medline and Health Source: Nursing/Academic Edition), Nursing@Ovid, Google Scholar and Science Direct, Sage, Sabinet and ResearchGate. The Botswana Collection at the University of Botswana Library was consulted for country-specific research. Relevant reports were obtained from web-sites of various international professional organizations.

Global interest in SoP gained momentum in the last decade of the previous century. Articles published between 2000 and 2018 were included in the review. Searches generated 1940 sources, including articles, reports and additional publications, identified through examining the reference lists of selected sources. After assessment of titles for relevance and duplicates, 1514 were excluded. Identified abstracts and reports were retrieved and scrutinized. After excluding sources that were not relevant, 204 full text articles and reports were reviewed for potential inclusion. A further 144 records were excluded, resulting in 60 publications for inclusion in the review. The PRISMA diagram (Fig. 1) illustrates the literature search process.

Publications in English were eligible for inclusion if they addressed the SoP-related criteria; including relevant aspects and context of the extent of knowledge about SoP, the nature of attitude towards SoP, relevant features of actual and evolving practice and actual vs. regulated practice and the impact and extent of legislation, were in line with the purpose of the literature review and were published in the stipulated time frame. The review comprises scholarly articles as well as some selected reports, studies, columns and editorials where applicable to gain an improved perspective. For the purpose of the following review, a total number of 60 references were identified as relevant and are reflected in Table 1.

Research addressing SoP issues is usually described in terms of associated concepts, such as barriers, descriptions, challenges, facilitators, influencing factors, conflicts and specific skills of extended practice or specialist nursing (Besner et al., 2005; Kilpatrick et al., 2011; Poghosyan et al., 2013; White et al., 2008). Moreover, SoP research tends to focus on advanced practice nurses; studies addressing SoP of generalist nurses, in general practice and in less developed countries appear limited (Benton, Cusack, Jabbour, & Penney, 2017; D'Amour, Dubois, Dery, & Clarke, 2012; Oelke et al., 2008). For the purpose of this review, RN's included nurses who may or may not have additional qualifications. Practice included generalist as well as advanced or specialized nursing practice.

4. Findings and discussion

The review is categorised under the headings knowledge, attitude, practice and regulation.

4.1. Knowledge

Correct interpretation and application of the SoP is crucial for implementation of effective and safe nursing interventions (Bell, 2005). Furthermore, knowledge of SOP is important to prevent legal or employment consequences (Brooke, 2009). The inability of nurses to clearly articulate SoP in terms of facts, awareness, comprehension or application is evident in literature (Aroke, 2014; Lilibridge, Axford, & Rowley, 2000; White et al., 2008). A study conducted in Botswana found that most RN's were unsure about their SoP (Chokani-Namane,

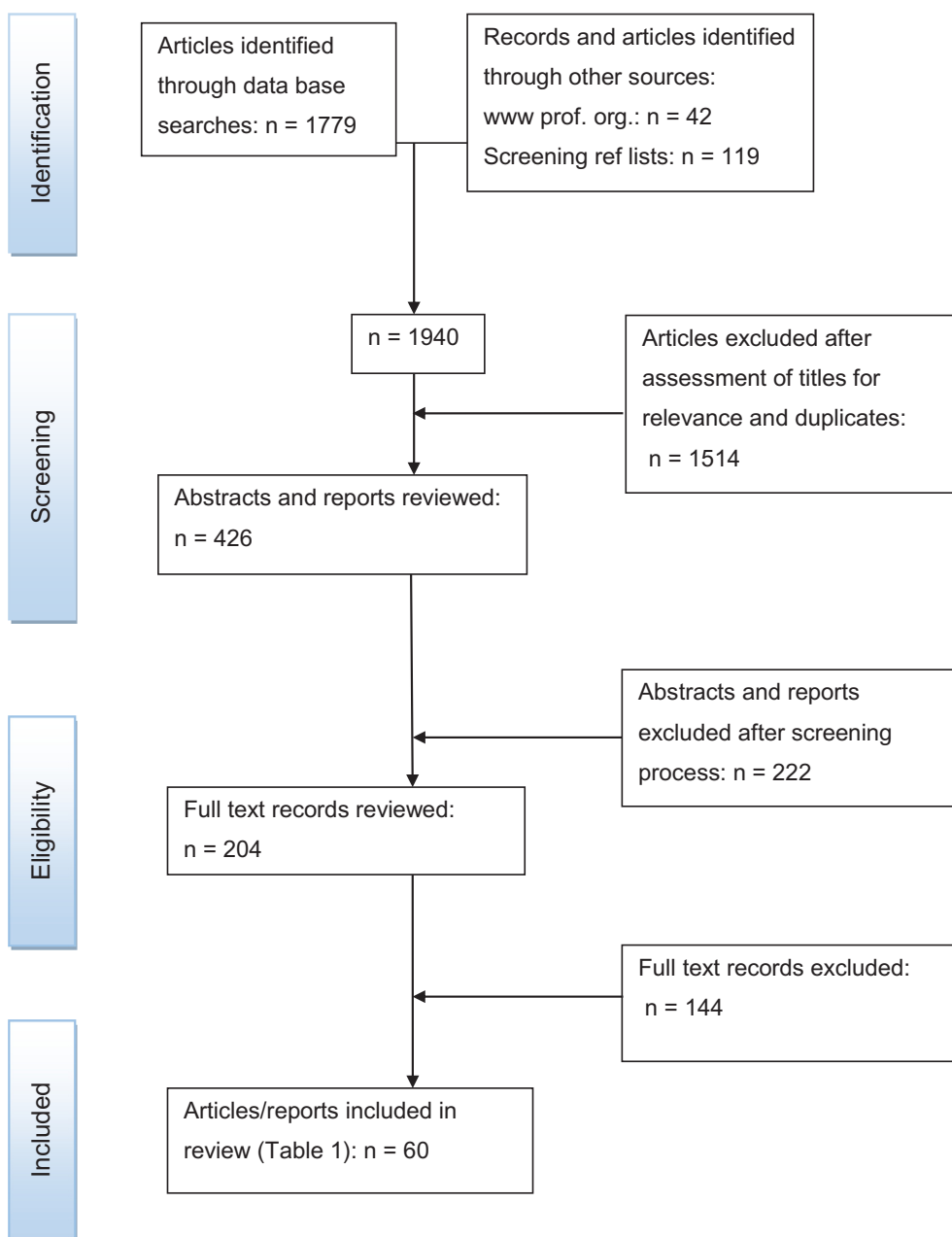


Fig. 1. Diagram representing literature selection process for the review.

2003), whereas Bell (2005) found that the way nurses interpret their SoP might limit their actual practice.

The number of sources reporting cases incriminating nurses for working beyond their SoP (Blair, 2003; Starr, 2011) illustrates RNs' limited knowledge regarding their SoP. This is supported by the large number of telephone enquiries regarding SoP by RNs and midwives to the Nursing and Midwifery Board of Ireland (Brady et al., 2015). Out of 9818 inquiries between 2001 and 2013 that were analysed, 978 concerned SOP issues. Brady et al. (2015) also found evidence of differences in interpretation of the SOP by nurses.

4.2. Attitudes

Articles about RNs' attitudes towards SoP appeared to be mostly positive and supporting of role expansion (Ganz, Toren, & Fadlon, 2016; Jowett, Peters, Reynolds, & Wilson-Barnett, 2001; Senior, 2008). Activities, often viewed as being appropriate for RNs' to perform,

included expanded roles and prescribing of medications. Brodsky and VanDijk (2008) reported that most nurses in their Israeli study supported the expanding role of RN's. Sciamanna, Alvarez, Miller, Gary, and Bowen (2006) found that most nurses (95.7%) and physicians (80%) believed that a nurse practitioner-led chronic disease management model of care could improve the control of chronic diseases. Senior (2008) found that more than 90% of general practice nurses working in general medical practices in a region of Australia indicated that their role had indeed expanded and 86.4% were positive about this expansion.

Studies focussed on attitudes towards specific aspects of SoP extension or expansion, such as prescribing (Bhanbro, Drennan, Grant, & Harris, 2011; Buchan & Calman, 2009; Lockwood & Fealy, 2008). Regarding SOP expansion, Lockwood and Fealy (2008) found that Clinical Nurse Specialists CNSs were positive about prescribing medications but they also revealed a need for specific legal structures and educational requirements. Other SoP aspects which have been investigated included

Table 1
Overview of extracted research articles and reports for review.

Author(s)	Title	SoP review criteria addressed	Type of ref	Design	Results
Aroke (2014)	Full nursing potential: a concept clarification.	Knowledge	Research article	Lit rev analysis using concept clarification approach.	Contribution to ongoing conceptual development of the term 'full nursing potential'.
Baranek (2005)	A review of scopes of practice of health professions in Canada: a balancing act.	Practice	Research Report	Lit Review of academic and grey literature.	Little consistency or coherence found in general and profession-specific definitions of SoP's of health professionals in Canada.
Barosh et al. (2011)	Advancing the scope of nursing practice: hepatic arterial catheter removal.	Attitude	Research article	Evaluation of effectiveness of shifting the responsibility of catheter removal from advanced practice or medical staff to nurses.	Patient satisfaction irrespective of who removed the catheter. Nurses' satisfaction on enhancing their ability to provide quality patient care.
Bell (2005)	An investigation into the scope of practice of a registered critical care nurse in a private hospital. (MCur), University of Stellenbosch.	Knowledge	Thesis	Non experimental descriptive qualitative and quantitative study among critical care nurses (N = 71) in 19 private hospitals in South Africa.	Existing legal and professional guidelines do provide a foundation for clinical activities of critical care nurses; however, the interpretation of the SoP documents by nurses is limiting their practice.
Benton et al. (2017)	A bibliographic exploration of nursing's scope of practice.	Practice	Research article	Bibliometric analysis of published work related to SoP, utilizing a systematic search employing Scopus.	Useful technique to augment understanding of SoP. Overemphasis on advanced practice.
Besner et al. (2005)	A systematic approach to maximizing nursing scopes of practice.	Knowledge Practice	Research report	Descriptive-comparative exploratory design to elicit nurses' perceptions of the extent to which they are able to work to full scope and identify barriers and facilitators to optimize their roles.	Evidence of unmatched expectations between education (full SoP) and what nurses perceive they are allowed to do in practice (role enactment). Factors influencing role enactment are identified.
Bhanbro et al. (2011)	Assessing the contribution of prescribing in primary health care by nurses and professionals allied to medicine: a systematic review of literature.	Attitude Regulation	Research article	Integrative review of literature (19 papers from 17 empirical studies).	Majority concluded that medical prescribing was widely accepted and viewed positively by patients and professionals. Substantial knowledge gaps were however identified.
Blair (2003)	Determine your Scope of practice.	Knowledge Regulation	Legal column	Discussion SoP case.	Need to actively address any questionable assignments.
Boonstra et al. (2002)	Adherence to treatment guidelines in primary health care facilities in Botswana.	Practice	Research article	Participatory observation using questionnaire related to each consultation.	There is clear potential for improving health workers adherence to national treatment guidelines.
Boonstra et al. (2003)	Syndromic management of sexually transmitted diseases in Botswana's primary health care: quality of care aspects.	Practice	Research article	Participatory observations of consecutive consultations of patients with STDs by nurses (N = 224).	One-third of female patients and one-fifth of male patients did not receive appropriate treatment.
Boonstra et al. (2005)	Adherence to management guidelines in acute respiratory infections and diarrhoea in children under 5 years old in primary health care in Botswana.	Practice	Research article	Observation of consecutive consultations of patients with acute respiratory infection and diarrhoea (N = 270), by nurses (86%), enrolled nurses (11%) and family welfare educators (3%).	Health care providers' adherence to guidelines on history taking was suboptimal, but poor on examination of patients. A high level of inappropriate antibiotic prescription was found in both diseases.
Brady et al. (2015)	Am I covered? An analysis of a national enquiry database on scope of practice.	Knowledge	Research article	978 (n = 9818) enquiries, dealing with SOP concerns, were subjected to thematic analysis.	Most enquiries arose from efforts by employers to maximize skill mix and staff deployment. Greatest concerns by staff included medication management, innovations in health care and demands of service.
Brassard (2013)	Scope of Practice wins in Iowa, Nevada, Oregon and Rhode Island.	Regulation	Column	N/A	Describes legislative victories regarding SoP of Advanced Practice Registered Nurses.
Brodsky and VanDijk (2008).	Advanced and specialist nursing practice: attitudes of nurses and physicians in Israel.	Attitude	Research article	Questionnaire: 215 nurses, 110 physicians from 3 general hospitals and 15 community clinics.	Nurses viewed change more positive than physicians. Majority of nurses support expansion of nursing practice, without significant opposition from physicians, except where the task was previously the prerogative of the doctor.

(continued on next page)

Table 1 (continued)

Author(s)	Title	SoP review criteria addressed	Type of ref	Design	Results
Brooke (2009)	Legally speaking... when can you say NO?	Knowledge	General article	Overview of legal rights and obligations that nurses have refusing work beyond SoP, overtime or high workload.	Methods nurses can use to avoid performing duties which may result in legal consequences or consequences from their employer.
Buchan and Calman (2009)	Implementing nurse prescribing, an updated review of current practices internationally.	Attitude Practice	Review report monograph from ICN	Updated review of current practice internationally.	Need for nurse prescribing is identified. Global impact of nurse prescribing is limited but growing. Adequate legislation is important
Bungay et al. (2014)	Examining the scope of public health nursing practice in sexually transmitted infection prevention and management: what do nurses do?	Practice	Research article	A cross sectional descriptive study Eligible nurses (N = 314) completed a 62-item questionnaire.	Most nurses spent 50% of their time in direct patient care, whilst not all nurses worked to their full scope. Barriers to do so warrant investigation.
Callaghan et al. (2010)	A systematic review of task shifting for HIV treatment and care in Africa	Practice Regulation	Research article	Systematic literature review (N = 84), from 10 countries in sub-Saharan Africa.	Task shifting is an effective strategy for addressing shortages of HRH in HIV treatment and care.
Carney (2015)	Regulation of advanced nurse practice: its existence and regulatory dimensions from an international perspective	Regulation	Research article	Literature review of 510 scholarly nursing papers and 30 websites.	Lack of clarity in definitions and terminology relating to the regulation of advanced practice.
Castner et al. (2013)	Registered nurse scope of practice and ED Complaint-Specific Protocols (CSP)'s.	Practice	Research article	Qualitative descriptive design whereby data were collected from state boards of nursing web site documents.	Seven states where identified where RN-initiated CSP's appear outside SoP, therefore 18% of US population (over 55 million people reside in states where CSP's by RN's are not allowed.
Cheek and Jones (2003)	What nurses say they do and need: implications for the educational preparation of nurses.	Practice	Research article	Qualitative Interviews	Contemporary practice appears one of considerable diversity, posing challenges to educators.
Chokani-Namane (2003), University of South Africa, Pretoria.	Pre-hospital care: the perceptions of Registered Nurses in Gaborone, Botswana.	Knowledge	Disertation	Qualitative interviews (n = 12)	Nurses are inadequately prepared for practice in pre-hospital emergency care settings. RN's were not sure whether their interventions fall within SoP.
CRNM (2009), College of Registered Nurses of Manitoba.	Scope of practice; Survey results.	Practice	Feature article	Online survey (n = < 100)	Over 25% were not practising to full scope. Full SoP would improve job satisfaction.
D'Amour et al. (2012)	Measuring actual scope of practice. A new tool for nurse leaders.	Practice	Research article	Development and testing of the actual SoP questionnaire (N = 285).	A comprehensive and reliable instrument was developed. Can be applied in various settings and for diverse purposes.
Daly and Carnwell (2003)	Nursing roles and levels of practice: a framework for differentiating between elementary, specialist and advancing nursing practice.	Practice	Clarification article	Examination of emerging diverse nursing roles in the U.K.	Clarification of inter- and intra-disciplinary roles of RN's. Differentiation between elementary, specialist and advanced competencies. Application of concepts of role extension, expansion and development.
Dicenso et al. (2010)	Factors enabling advanced practice nursing role integration in Canada.	Regulation	Research article	Scoping review of literature (468 papers) and in-depth interviews (81 key informants) for a decision support synthesis.	Identification of enablers for successful role development and role implementation of APN's in Canada.
Dovlo (2004).	Using mid-level cadres as substitutes for internationally mobile health professionals in Africa, a desk review.	Regulation	Research article	Desk review and questionnaires on education, SoP, specialization, nomenclature, retention and cost effectiveness in several African countries.	Substitution may be expanded and can be successfully used to sustain health services in otherwise deprived communities.
Duffield et al. (2008)	Nursing work and the use of nursing time.	Practice	Original article	Exploration of the changing direction and focus of nurses' work.	Match nurses tasks with their education, experience and abilities to increase efficiency.
Eagar et al. (2010)	Scope of practice conflict in nursing: a new war or just the same battle?	Practice Regulation	Research article	Six focus group discussions amongst RN's and EN's.	Confusion surrounding SoP, particularly medication admin, patient allocation and workload, resulting in harassment, stress, bullying and potential conflict.
French (2008)	Die emotionele welstand van die verpleegkundige binne die multi-vaardighede-opset.	Regulation	Disertation	Semi-structured interviews (n = 10).	

(continued on next page)

Table 1 (continued)

Author(s)	Title	SoP review criteria addressed	Type of ref	Design	Results
Ganz et al. (2016)	Factors associated with full implementation of Scope of Practice.	Attitude	Research article	Five instruments assessed extent of SoP and attitude towards future expansion of SoP.	Identification of four main categories: positive and negative experience of multi-skill setup, personal coping mechanisms and emotional well-being. Nurses had very positive attitudes towards role expansion. They want to work according to optimum scope but were hindered by administrative barriers. SoP concerns' include professionally identity and value based issues.
Gardner (2010)	Expanding scope of practice: Inter-professional collaboration or conflict?	Regulation	General article	Perspectives on SoP in relation to Affordable Care Act in America.	Information related to SoP for the 2014 International Nurses' Day Theme.
ICN (2014)	Nurses: A force for change; a vital resource for health.	Practice	Toolkit IND	N/A	A resolve is needed between what nurses can do and are allowed to do according to regulations.
IoM (2010)	The future of nursing: focus on Scope of Practice.	Regulation	Report	Perspective on SoP in relation to health care changes in America.	Disparities in job satisfaction across facility level and facility ownership in Nigeria. Positive attitude to task shifting but demanding nature of new roles posed a major challenge.
Iwu and Holzemer (2017)	HIV task sharing between nurses and physicians in Nigeria: examining the correlates of nurse self-efficacy and job satisfaction.	Attitudes	Research article	Survey of task shifted roles of nurses (N = 508) in Nigeria.	Development of innovative systems to deliver nursing care provided that necessary safeguards and support are in place.
Jowett et al. (2001)	The UKCC's scope of professional practice - some implications for health care delivery.	Attitude Practice	Research article	Stakeholder survey (n = 212) using structured questionnaire to investigate attitudes about and perceptions of SoP.	Common themes identified include: professional interest from doctors and nurses, most often opposition from medical profession, organization of care and funding, impact of legislation and regulation on SoP and education capacity to prepare nurses for APN roles.
Kleinpell et al. (2014)	Addressing issues impacting on advanced nursing practice worldwide.	Regulation	Review article	Review of main factors motivating role development of APN's, barriers and current status of APN practice in 12 countries.	Four major SoP categories were identified. Nurses may overstep the line into medical decision making and go beyond legal sanctions. Need to define SoP to stabilize boundaries.
Lillibridge et al. (2000)	The contribution of nurses' perceptions and actions in defining scope and stabilizing professional boundaries of nursing practice.	Knowledge	Research article	Naturalistic inquiry exploring scope and boundaries of nursing practice using interviews and observations.	Findings are indicative of high professionalism and resilience of Botswana nurses. Many nurses felt pressure from councils to practice beyond their SoP to compensate for inadequate numbers of other health professionals.
Linn et al. (2016)	A benchmark qualitative study of health service delivery in Botswana in 1989: Nurse assessments of the PHC System before the nationwide spread of HIV/AIDS.	Practice	Research article	In-depth qualitative nurse assessment of parameters of the national PHC system.	Nurses positively disposed towards nurse prescribing as future role expansion. Fear of litigation was further identified.
Lockwood and Fealy (2008)	Nurse prescribing as an aspect of future role expansion: the views of Irish CNS.	Attitude Regulation	Research article	Questionnaire (N = 283) using self designed Likert-type attitudinal scales.	80% of risk assessments were performed by nurses' not licensed or un-supervised to do so, resulting in 50% being interpreted incorrectly.
Lubbe and Roets (2014)	Nurses' scope of practice and the implication for quality nursing care.	PracticeRegulation	Research article	Retrospective, quantitative study of Waterlow scale application using a checklist on a random sample of patient files (n = 157)	Task shifting from physicians to nurses was implemented in the majority of the countries surveyed, however the extent of task shifting varied. Policies and reforms are suggestive of continuation of shifting boundaries.
Maier and Aiken (2016)	Task shifting from physicians to nurses in primary care in 39 countries: a cross-country comparative study.	Regulation	Research article	Cross country comparative survey (N = 93) and literature scoping review.	
McCarthy et al. (2013)		Regulation	Research article	Survey using convenience sample of nursing and midwifery leaders in ECSA region (N = 32).	

(continued on next page)

Table 1 (continued)

Author(s)	Title	SoP review criteria addressed	Type of ref	Design	Results
	Nursing and midwifery regulatory reform in East, Central and Southern Africa: a survey of key stakeholders.				Task shifting is practiced (72%) Appropriate revision of national regulations (57%). Lack of resources to implement change.
McConnell et al. (2013)	Emergency nurse practitioners' perceptions of their role and scope of practice: is it advanced practice?	Practice Regulation	Research article	Survey approach (n = 42) among APN's.	SoP was perceived to be controlled by nursing management and medical staff. Nurses work beyond registration yet do not fulfil council criteria for APN.
McCorkle et al. (2012)	Perceptions of roles, practice patterns and professional growth opportunities: broadening the scope of advance practice in oncology.	Practice	Research article	Computerized self support survey (n = 31) of nurses and physicians.	Clerical duties impede patient care activities. 64% satisfied with time spent with patients. Need for model to empower APN's to care at fullest potential.
Mwijarubi (2015)	In Tanzania, medical circumcision services rely on a predominantly female nursing workforce.	Practice	Short article	One interview	Experience of nurse with Volunteer Male Medical Circumcision.
Nathenson et al. (2007)	Relationship of RN role responsibility to job satisfaction.	Practice	Research article	Evaluating new model of care.	Nurse satisfaction improved when RN's functioned within their exclusive SoP.
Paul and Decker (2007)	American medical Association attacks on scope of practice: oncology nurses beware.	Regulation	Guest editorial	N/A	Concern about medical associations to seek legislative action to reduce SoP of nurses.
Powers (2013)	Are you practicing to your full potential?	Practice	Editorial	N/A	Empowerment of nurses to work to their full potential.
Scanlon et al. (2015)	The complexities of defining nurse practitioner scope of practice in the Australian context.	Regulation	Research article	Review of policy and regulatory documents related to Australian operational requirements for NP-SoP.	Hindrance of NP's to work to full scope; context of clinical practice, including legal restrictions, form major barriers to the expression of the NP-SoP.
Schluter et al. (2011)	Understanding nursing scope of practice: a qualitative study.	Practice	Research article	Constructivist methodology, using critical care incident technique was used to explore nurses' role and SoP (N = 20).	Sub-themes included: inter alia, role blurring, working beyond job description, working below expertise level and being impeded by doctor's omissions.
Sciamauna et al. (2006)	Attitudes toward nurse practitioner-led chronic disease management to improve outpatient quality of care.	Attitude	Research article	Mailed survey to primary care physicians and Nurse Practitioners (n = 212)	The majority of respondents was positive.
Seitio-Kgogwe et al. (2014)	Assessing performance of Botswana's public health system: the use of the World Health Organization health system performance assessment framework.	Practice	Research article	Data collected from document analysis, 54 key informants and surveys from 42 hospital managers and 389 health workers.	Challenges in the distribution of facilities and inpatient beds create inequities and inefficiencies. Service delivery is limited by resources, and significant challenges emerged with the quality of care.
Senior (2008)	How general practice nurses view their role.	Attitude Practice	Research article	Exploratory, descriptive design among 22 nurses to explore barriers and enablers in the context of role expansion.	Overall nurses were happy with role expansion (86.4%), 22.7% indicated having worked outside their scope.
Shumbusho et al. (2009)	Task shifting for scale-up of HIV care: evaluation of nurse-centred antiretroviral treatment at rural health centres in Rwanda.	Practice	Research article	Review of 1076 medical records of patients enrolled in HIV care to assess compliance with national guidelines and specified key outcomes.	Patient outcomes compared favourably with cohorts in other sub-Saharan countries. Nurses can effectively and safely prescribe ART when given adequate training, mentoring and support.
Sorrel (2009)	Scope of practice expansions fuel legal battles.	Regulation	General article	N/A	Physician's objections to scope expansion of allied health professionals; continuing battles.
Spies (2016)	An exploratory descriptive study on task shifting in East Africa.	Attitude	Research article	A qualitative exploratory study of nurse leaders (N = 14) regarding task shifting.	Nurse leaders' perceptions of roles revealed four major themes; nurse burden, patient perception, regulatory needs and nurse preparation.
Starr (2011)	Policy, scope of practice and the 'agony of the moment'.	Knowledge Regulation	Legal column	Discussion SoP case.	Ensure full understanding of all aspects of SoP (policies, standards, purpose of CPD).

(continued on next page)

Table 1 (continued)

Author(s)	Title	SoP review criteria addressed	Type of ref	Design	Results
Upenieks et al. (2007)	Value-added care, a new way of assessing nursing staffing ratios and workload variability.	Practice	Research article	Prospective workflow study to determine relative time allocated to workload activities amongst RN's (n = 11/day) sampled by convenience through shadowing in comparable units.	Large degree of variability in nursing workload activities in three units, regarding amount of time spent on value-added and non-value-added activities.
White et al. (2008)	Nursing scope of practice: descriptions and challenges.	Knowledge Practice	Research article	Elicit perceptions of nurses about meaning of full SoP. Mixed method design (3 types of nurses: n = 167 and non nurse health team members: n = 53).	SoP meaning = day to day tasks and total care. RPN's most likely work to full scope, 73% of RN's not being fully utilized at least some of the time. Role confusion identified.

that of carrying out particular delegated (medical) controlled acts, for example hepatic arterial catheter removal (Barosh et al., 2011), who found that despite initial concerns, nurses' and patients' attitudes were positive.

Articles from the African continent, addressing RNs' SoP attitudes were rare. A recent Nigerian study (Iwu & Holzemer, 2017) revealed that task sharing in the context of HIV/AIDS had a positive effect on job satisfaction of nurses, due to training and advanced competency. However, this effect was negated by challenges faced by nurses such as increased workload, lack of remuneration and stress. Spies (2016) also identified conflicting roles and expectations amongst nurses in East Africa that were inconsistent with their SoP.

4.3. Practice

The contemporary scope of RNs' practice varies considerably (Cheek & Jones, 2003; Daly & Carnwell, 2003). Most practice related SoP studies focussed on clinical nurse specialists and advance nurse practitioners and not on general nurses (Benton et al., 2017; White et al., 2008). Concerns of nursing practice in the following discussion include optimum, below, beyond, overlaps, deployment, expanded and extended SoP.

4.3.1. Practice: optimum scope

Ideally, nurses' should practice according to their optimum SOP (Jowett et al., 2001; Powers, 2013) constituting the most effective use of nursing resources (ICN, 2014) and allowing nurses to provide quality patient care (McCorkle et al., 2012). In practice, however, nurses might function below (underutilization of) or beyond (outside) their SoP (Nathenson, Schafer, & Anderson, 2007; Schluter, Seaton, & Chaboyer, 2011; Upenieks, Akhavan, Kotlerman, Esser, & Ngo, 2007).

A survey by the College of Registered Nurses of Manitoba (CRNM, 2009) found that only 67.3% of respondents believed that they were practising according to their full scope, whereas Besner et al. (2005) found that 73% of the nurses reported that they were not being fully utilized at times. Nathenson et al. (2007) found that nurses performed essential RN functions only 38% of the time. Bungay, Masaro, and Gilbert (2014) recommended further research to identify reasons why nurses, providing prevention of sexually transmitted infections services, were not working to their full scope. According to Ganz et al. (2016) nurses would like to work according to their full Scope of Practice, but were prevented to do so by administrative barriers.

The survey by the CRNM (2009) further revealed that working according to one's optimum scope, improved work satisfaction among nurses, which was confirmed by other studies (Nathenson et al., 2007; White et al., 2008). The ICN (2014) maintains that the most effective way of using nursing resources is to enable nurses to practise to the fullest extent of their education and competence.

Being unable to practise to one's optimum scope might affect nurses and patients adversely. Castner et al. (2013) examined the use of complaint-specific protocols (CSP's) by Emergency Registered Nurses to improve the Emergency Department's (ED) efficiency. In seven states of America, RN initiated CSPs fell beyond the SoP and could not be provided in those states, depriving 18% of the USA population of these protocols.

4.3.2. Practice: below scope

D'Amour et al. (2012) developed the first tool to measure the actual SoP. This comprehensive, valid and reliable tool is general in character and depends on self-reporting of nurses' SoP perceptions (D'Amour et al., 2012) suggest that nurses practised below their optimum scope, whilst important aspects of nursing practice were implemented only occasionally.

4.3.3. Practice: beyond scope

Senior (2008) found that 90% of nurses in general practice settings

in Victoria, Australia, stated that their role had expanded over the past five years. However, only 22.7% ($n = 5$) of the respondents had ever been asked to work outside their scope. [McConnell, Slevin, and McIlpatrick \(2013\)](#) found that emergency nurse practitioners in the United Kingdom (UK) were working at a level significantly beyond their registration even though they did not meet the registration criteria for advanced nurse practitioners.

In many sub-Saharan African (SSA) countries, nurses are the primary health care contacts for patients, especially in rural settings ([Boonstra, Lindbaek, Khulumani, Ngome, & Fugelli, 2002](#)). In Botswana, nurses experienced pressure from councils (municipalities) to work beyond their SoP due to inadequate numbers of other health care professionals ([Linn, Wilson, & Fako, 2016](#)). However, patient health care outcomes may be endangered when nurses perform interventions beyond their SoP. This was illustrated in studies amongst nurses in Botswana, about the quality of prescribing ([Boonstra et al., 2002](#)), the syndromic management of sexually transmitted diseases ([Boonstra, Lindbaek, Klouman, Romoren, & Sundby, 2003](#)) and the adherence to management guidelines in acute respiratory infections and diarrhoea in children under five years old ([Boonstra, Lindbaek, & Ngome, 2005](#)). In all three considerable margins of error were found. [Lubbe and Roets \(2014\)](#) similarly found that in South Africa, 80% Waterlow™ risk assessment scales were performed by nurses not licensed to do this assessment unsupervised, resulting in 50% of the scales being incorrectly interpreted.

4.3.4. Practice: overlaps

Potential and actual overlaps of SoPs within and across various health disciplines raise another concern for practice, namely the appropriate utilization of health professionals, including nurses. [Eagar, Cowin, Gregory, and Firtko \(2010\)](#) found that various groups of nurses were confused regarding their SoPs. [Duffield et al. \(2008\)](#) stated that poor role differentiation could occur when various nursing cadres undertake similar work, which could influence staff job satisfaction levels. The Health Council of Canada studied this issue ([Baranek, 2005; Besner et al., 2005](#)). [Baranek \(2005\)](#) states that while a certain overlap in activities might be desirable, it has also caused role confusion, competition and workplace tension. In the authors' review of SoPs of Canadian health professionals, limited consistency and coherence in SoPs of various health professionals were reported. Whilst this overlap of activities may be desired by employers, it could prevent an appropriate skills mix contributing to medical errors ([Lubbe & Roets, 2014](#)). On the other hand, regulatory barriers might negate optimal use of health workers. For instance, [Besner et al. \(2005\)](#) uncovered significant role confusion within nursing and between nursing and other health professional groups.

4.3.5. Practice: deployment

Inappropriate deployment of nurses might occur. Post basic qualifications and location preferences are often not considered ([Baranek, 2005; Besner et al., 2005; Seitio-Kgokgwe, Gauld, Hill, & Barnett, 2014](#)). This might impede the functioning of nurses to their fullest potential, require nurses to work beyond their scope and might demotivate them.

4.3.6. Practice: expanding/extending scope

Nurses can successfully expand their scope as exemplified by the HIV/AIDS epidemic in Africa. Nurses are successfully performing circumcisions ([Mwijarubi, 2015](#)) in Tanzania and nurses prescribe medicines in some countries ([Buchan & Calman, 2009](#)). ARV therapy for HIV/AIDS was successfully introduced in at least 10 African countries ([Callaghan, Ford, & Schneider, 2010; Shumbusho et al., 2009](#)). Outcomes of prescribing ARVs by nurses compared favourably with medical practitioners' prescriptions ([Shumbusho et al., 2009](#)).

4.2. Regulation

It is essential that nurses' SoP legislation evolves concomitantly with their expanding roles to ensure that RNs are protected by working within established legal boundaries.

4.2.1. Regulation/legislation and SoP

The potential incongruence between legislation and practice might cause inter and intra-professional conflict, uncertainty, frustration, stress, disruption of practice ([Eagar et al., 2010; French, 2008](#)) and exploitation. However, limiting regulations might prevent nurses from working to their full potential while fear of litigation when functioning beyond one's legal boundaries, could affect the quality of care provided. [Lubbe and Roets \(2014\)](#) conclude that, even in the current nursing shortage situation, nurses should not be allowed to perform activities for which they are not prepared or registered. Fear of litigation appears to be a significant barrier to SoP expansion ([Lockwood & Fealy, 2008](#)).

A report on the future of nursing by the Institute of Medicine ([IoM, 2010](#)) states that legislation did not keep up with nurses' expanded SoP in America. The Institute affirms that inconsistent regulations between states restrict the ability of nurses to provide care in a legal manner. The Institute recommends the removal of legal barriers and outdated regulations to enable nurses to practise to their full scope.

[Kleinpell et al. \(2014\)](#) found that barriers to full SoP included opposition from the medical profession and legislation and regulation issues. And, in reviewing task-shifting for successful HIV treatment and care in Africa, [Callaghan et al. \(2010\)](#) concluded that compliance of regulatory bodies remains a major challenge. [McCarthy et al. \(2013\)](#), found that in East, Central, and Southern Africa (the ECSACON region), 72% of respondents reported that task shifting occurred in their countries. However, only 57% reported that national regulations had been revised to accommodate additional roles and responsibilities.

[Scanlon, Cashin, Bryce, Kelly, and Buckely \(2015\)](#) found that the clinical practice context for nurse practitioners in Australia continue to include jurisdictional restrictions preventing RNs from practising to full scope. Canadian research participants requested legal and regulatory adjustments to allow RNs to work to their full SoP ([Dicenso et al., 2010](#)). [Carney \(2015\)](#) concluded that most European countries do not regulate advanced practice. [Bhanbro et al. \(2011\)](#) found that approximately 20 out of 193 WHO member states, where non-medical prescribing was carried out by nurses and other health professionals in the context of Primary Health Care (PHC) settings, provided some legal authority to do so. However, [Maier and Aiken \(2016\)](#) who compared task shifting from physicians to nurses in 39 countries, found that recent policy and regulatory reform are suggestive of shifting boundaries between medicine and nursing, although reforms are usually lengthy and controversial.

4.2.2. Working outside SOP: legislation, risk and conflict

Actual and regulated practices do not always correlate. Inconsistencies between legislation and actual practices might result in potential implications and/or consequences for nurses.

Several studies reported nurses working beyond their SoP. [McConnell et al. \(2013\)](#) found that in a certain region in the UK, Advanced Nurse Practitioners in Accident and Emergency Wards worked beyond their level of registration. [Dovlo \(2004\)](#) reported anecdotal evidence suggesting that significant informal task shifting has occurred especially in rural areas of Africa, where nurses performed procedures not allowed according to the regulations.

Furthermore, RN's have overstepped their boundaries, resulting in legal cases whereby nurses could be incriminated for working beyond their SoP ([Blair, 2003; Starr, 2011](#)). [Sorrel \(2009\)](#) describes how SoP expansions fuel legal battles in America, where an increased number of legal cases involved non-physician health professionals seeking SoP expansion. [Paul and Decker \(2007\)](#) express their concern about steps taken by the American Medical Association and other physicians'

organizations that might resort to legal action to reduce the SoP of oncology nurses. Gardner (2010) maintains that interdisciplinary fights become more public and more frequent. Brassard (2013) reports on various cases in which legislative rulings were made in favour of nurses.

5. Conclusion

It appears that research addresses SoP of advanced or specialized nurses rather than generalist nurses. Literature indicates that SoP is a complex and diverse concept and is affected by many factors. Whilst some authors and organizations call for removal of boundaries to allow nursing's SoP to evolve and expand, others argue that parameters are necessary to guide nurses' practice and to provide professional identity. Knowledge of RN's regarding their SoP is rarely measured directly and varies. Attitudes of RN's towards SoP are usually positive, as long as scope expansion is congruent with legislation. Literature illustrates that nurses regularly practise below or beyond their SoP, causing loss of skills or compromising practice. SoPs might overlap, both intra-disciplinary as well as interdisciplinary, potentially resulting in inefficient use of resources. Although the SoP of nurses appears to be regulated in many countries, regulations appear to be insufficient or inadequate to meet the evolving nature of the nursing profession, and legislation might lag behind practice. It is also arguable whether one general SoP for nurses could serve all nurses and adequately address emerging nursing roles. In the current changing worldwide health arena, scoping issues are relevant and warrant attention, especially in African countries, including Botswana, where the disease burden is high but nursing resources as well as physicians are extremely limited. Not being able to work to one's fullest potential or scope or beyond one's scope may demoralise nurses and cause deterioration of health care. Considering contextual global, regional and national influences and developments, which impact on the SoP, nurses should be aware of continuing negotiations and developments addressing SoP.

5.1. Recommendations

1. Flawed knowledge or conflicting interpretation of nurses' SoP, may compromise patient care. Nurses should be conversant with all aspects of SoP applied to practice.
2. Practicing below one's SoP may lead to loss of competencies, whereas working beyond one's scope may result in unsafe practice. Nurses should work according to their optimum level of education, competence and interest.
3. The need for legal endorsement is acknowledged. Nurses need to feel protected rather than apprehensive when carrying out interventions; hence relevant legislation should be on par with expansion and extension of practice.
4. Evolvement of nursing practice appears inevitable. Continuing focus and careful attention on scoping issues is warranted, in order to meet the health needs of populations and to address contemporary nursing concerns and developments.

Appendix A. Supplementary data

Supplementary data associated with this article can be found, in the online version, at <http://dx.doi.org/10.1016/j.ijans.2018.04.001>.

References

Altranais, A. B. (2000). *Scope of nursing and midwifery practice framework*. Dublin: An Bord Altranais.

Aroke, E. N. (2014). Full nursing potential: A concept clarification. *Nursing Forum*, 49(4), 278–287.

Baranek, P. M. (2005). A review of scopes of practice of health professions in Canada: a balancing act. Available from Toronto: www.healthcouncilcanada.ca.

Barosh, R., Holmes, C., Keerikatty, L. M., Manappurathu, M. S., Segovia, J. H., Hasen, P. C., & Kurzrock, R. (2011). Advancing the scope of nursing practice: Hepatic arterial

catheter removal. *Clinical Journal of Oncology Nursing*, 15(5), 465–468.

Bell, J. (2005). *An investigation into the scope of practice of a registered critical care nurse in a private hospital*. (MCur), University of Stellenbosch. Available from <http://hdl.handle.net/10019.1/16595>.

Benton, D. C., Cusack, L., Jabbour, R., & Penney, C. (2017). A bibliographic exploration of nursing's scope of practice. *International Nursing Review*, 64, 224–232.

Besner, J., Doran, D., McGillis Hall, D., Giovanetti, P., Girard, F., Hill, W., ... Watson, L. (2005). A systematic approach to maximizing nursing scopes of practice. Available from Ottawa: www.cihr.gc.ca.

Bhanbro, S., Drennan, V. M., Grant, R., & Harris, R. (2011). Assessing the contribution of prescribing in primary health care by nurses and professionals allied to medicine: A systematic review of literature. *BMC Health Services Research*, 11(330), 1–10.

Blair, P. A. (2003). Determine your scope of practice. *Nursing Management*, 34(4), 20–22.

Boonstra, E., Lindbaek, M., Khulamani, P., Ngome, E., & Fugelli, P. (2002). Adherence to treatment guidelines in primary health care facilities in Botswana. *Tropical Medicine and International Health*, 7(2), 178–186.

Boonstra, E., Lindbaek, M., Klouman, E. N. E., Romoren, M., & Sundby, J. (2003). Syndromic management of sexually transmitted diseases in Botswana's primary health care: quality of care aspects. *Tropical Medicine and International Health*, 8(7), 604–614.

Boonstra, E., Lindbaek, M., & Ngome, E. (2005). Adherence to management guidelines in acute respiratory infections and diarrhoea in children under 5 years old in primary health care in Botswana. *International Journal for Quality in Health Care*, 17(3), 221–227.

Brady, A. M., Fealy, G. M., Casey, M., Hegarty, J., Kennedy, C., McNamara, M., & Rohde, D. (2015). Am I covered? An analysis of a national enquiry database on scope of practice. *Journal of Advanced Nursing*, 71(10), 2402–2412.

Brassard, A. (2013). Scope of practice wins in Iowa, Nevada, Oregon and Rhode Island. *The American Nurse*, 11. Available from <http://www.theamericannurse.org/index.php/2013/09/03/scope-of-practice-wins-in-iowa-nevada-oregon-and-rhode-island/>.

Brodsky, E., & VanDijk, D. (2008). Advanced and specialist nursing practice: attitudes of nurses and physicians in Israel. *Journal of Nursing Scholarship*, 40(2), 8.

Brooke, P. S. (2009). Legally speaking ... when can you say NO? *Nursing*, 39(7), 42–46.

Buchan, J., & Calman, L. (2009). Implementing nurse prescribing, an updated review of current practice internationally. Available from Geneva: www.icn.ch.

Bungay, V., Masaro, C. L., & Gilbert, M. (2014). Examining the scope of public health nursing practice in sexually transmitted infection prevention and management: What do nurses do? *Journal of Clinical Nursing*, 23(21–22), 3274–3285.

Callaghan, M., Ford, N., & Schneider, H. (2010). A systematic review of task shifting for HIV treatment and care in Africa Human Resources for Health (Vol. 8, pp. 1–9). BioMed Central Ltd.

Carney, M. (2015). Regulation of advanced nurse practice: its existence and regulatory dimensions from an international perspective. *Journal of Nursing Management*, 2(1), 1–10. Available from Wiley Online Library website: <http://onlinelibrary.wiley.com/doi/10.1111/jonm.12278/abstract> doi: 10.1111/jonm.12278.

Castner, J., Grinsdale, S., Gusay, J., Hettinger, A. Z., DSeo, J. Y., & Boris, L. (2013). Register nurse scope of practice and ED complaint-specific protocols. *Clinical Nurses Forum*, 39(5), 467–473.

Challenges of Nursing in Southern Africa (2001). Vol. 1. *African Policy Dialogue Review*. Harare: Nehanda Publishers p. 86.

Cheek, J., & Jones, J. (2003). What nurses say they do and need: implications for the educational preparation of nurses. *Nurse Education Today*, 23(1), 40–50.

Chokani-Namane, N. M. (2003). *Pre-hospital care: The perceptions of registered nurses in Gaborone, Botswana*. University of South Africa, Pretoria masters.

CRNM (2009). Scope of practice survey results. *RN Journal*, 26.

Currie, E. J., & Carr-Hill, R. A. (2012). What is a nurse? Is there international consensus? *International Nursing Review*, 60(1), 67–74.

Daly, W. M., & Carnwell, R. (2003). Nursing roles and levels of practice: A framework for differentiating between elementary, specialist and advancing nursing practice. *Journal of Clinical Nursing*, 12(2), 158–167.

D'Amour, D., Dubois, C. A., Dery, J., & Clarke, S. (2012). Measuring actual scope of practice. A new tool for nurse leaders. *The Journal of Nursing Administration*, 42(5), 248–255.

Dery, J., Clarke, S. P., D'Amour, D., & Blais, R. (2018). Scope of nursing practice in a tertiary pediatric setting: associations with nurse and job characteristics and job satisfaction. *Journal of Nursing Scholarship* 65–64.

Dicenso, A., Bryant-Lukosius, D., Martin-Misener, R., Donald, F., Abelson, J., Bourgeault, I., & Harbman, P. (2010). Factors enabling advanced practice nursing role integration in Canada. *Nursing Leadership*, 23(special issue), 211–238.

Dovlo, D. (2004). *Using mid-level cadres as substitutes for internationally mobile health professionals in Africa, a desk review*. Human Resources for Health Available from: <http://www.human-resources-health.com/content/2/1/7>.

Duffield, C., Gardner, G., & Caitling-Paul, C. (2008). Nursing work and the use of nursing time. *Journal of Clinical Nursing*, 17, 3269–3274.

Eagar, S. C., Cowin, L. S., Gregory, L., & Firtko, A. (2010). Scope of practice conflict in nursing: A new war or just the same battle? *Contemporary Nurse: A Journal for the Australian Nursing Profession*, 36(1–2), 86–95.

Fairman, J. A., Rowe, J. W., Hassmiller, S., & Shalala, D. E. (2011). Broadening the scope of nursing practice. *New England Journal of Medicine*, 364, 193–196.

Fealy, G., Casey, M., Brady, A., Hegarty, J., Kennedy, C., McNamara, M., O'Reilly, P., Prizeman, G. & Rohde, D. (2014). National review of the scope of nursing and midwifery practice framework: final report. Retrieved from Dublin.

Frajzinger, V., Odingo, G., Barone, M., Pwerchal, P., & Pavin, M. (2014). Safety of adult medical male circumcision performed by non-physician clinicians in Kenya: A prospective cohort study. *Global Health: Science and Practice*, 2(1), 93–102.

French, H. (2008). *Die emotionele welstand van die verpleegkundige binne die multi-*

- vaardighede-opset. (M.Cur. Dissertation), North West University, Potchefstroom. Available from <http://dspace.nwu.ac.za/handle/10394/3711>.
- Ganz, F. D., Toren, O., & Fadlon, Y. (2016). Factors associated with full implementation of Scope of Practice. *Journal of Nursing Scholarship*, 48(3), 285–293.
- Gardner, D. (2010). Expanding scope of practice: Inter-professional collaboration or conflict? *Nurse Economist*, 28(4), 264–266.
- ICN (2010). *Scope of nursing practice and decision-making framework toolkit*. Available from Geneva.
- ICN (2011). Nurses are the 'front line' answer to tackling NCD's but need greater support, says survey [Press release].
- ICN (2013). *Scope of nursing practice: Position statement*. Geneva: International Council of Nurses.
- ICN. (2014). Nurses: A force for change – A vital resource for health. Available from Geneva: www.icn.ch.
- IoM (2010). The future of nursing. Focus on scope of practice. Available from www.iom.edu/nursing.
- Iwu, E. N., & Holzemer, W. L. (2017). HIV task sharing between nurses and physicians in Nigeria: Examining the correlates of nurse self-efficacy and job satisfaction. *The Journal of the Association of Nurses in Aids Care*, 28(3), 395–407.
- Jowett, S., Peters, M., Reynolds, H., & Wilson-Barnett, J. (2001). The UKCC's scope of professional practice – Some implications for health care delivery. *Journal of Nursing Management*, 9(2), 93–100.
- Kgatlwane, J. (2009). Task shifting in Botswana: equipping nurses to manage and disperse antiretroviral drugs. In R. G. Marlink, & S. J. Teitelman (Eds.). *From the ground up: Building comprehensive HIV/AIDS care programs in resource-limited settings* (pp. 9–10). Washington: Elizabeth Glaser Paediatric AIDS Foundation.
- Kilpatrick, K., Lavoie-Tremblay, M., Ritchie, J. A., Lamothe, L., & Doran, D. (2011). Boundary work and the introduction of acute care nurse practitioners in health care teams. *Journal of Advanced Nursing*, 68(7), 1504–1515.
- Kleinpell, R., Scanlon, A., Hibbert, D., Dekeyser-Ganz, F., East, L., Frazer, D., & Beauchesne, M. (2014). Addressing issues impacting on advanced nursing practice worldwide. *Online Journal of Issues in Nursing*, 19(1), 16. Retrieved from [http://www.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/](http://www.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableOfContents/Vol-19-2014/No2-May-2014/Advanced-Nursing-Practice-Worldwide.html)
- Likupe, G. (2013). The skills and brain drain from sub-saharan Africa: What nurses say. *Journal of Clinical Nursing*, 22(9–10), 1372–1381.
- Lilibrig, J., Axford, R., & Rowley, G. (2000). The contribution of nurses' perceptions and actions in defining scope and stabilizing professional boundaries of nursing practice. *Collegian (Royal College Of Nursing, Australia)*, 7(4), 35–39.
- Linn, J., Wilson, D., & Fako, T. (2016). A benchmark qualitative study of health service delivery in Botswana in 1989: Nurse assessments of the Primary Health Care System before the nationwide spread of HIV/AIDS. *Journal of AIDS and HIV Research*, 8(2) (February 2016), 6–11. Available from <http://www.academicjournals.org/JAHR>. doi: 10.5897/JAHR2015.0363.
- Lockwood, E. B., & Fealy, G. M. (2008). Nurse prescribing as an aspect of future role expansion: The views of Irish clinical nurse specialist. *Journal of Nursing Management*, 16(7), 813–820.
- Lubbe, J. C., & Roets, L. (2014). Nurses' scope of practice and the implication for quality nursing care. *Journal of Nursing Scholarship*, 46(1), 580–564.
- Maier, C. B., & Aiken, L. H. (2016). Task shifting from physicians to nurses in primary care in 39 countries: A cross-country comparative study. *European Journal of Public Health*, 26(6), 927–934.
- McCarthy, C. F., Voss, J., Salmon, M. E., Gross, J. M., Kelley, M. A., & Riley, P. L. (2013). Nursing and midwifery regulatory reform in east, central and southern Africa: a survey of key stakeholders. *Human Resources for Health*, 11(29). Available from <http://www.human-resources-health.com/content/11/1/29> doi:10.1186/1478-4491-11-29.
- McConnell, D., Slevin, O. D., & McIlpatrick, S. J. (2013). Emergency nurse practitioners' perceptions of their role and scope of practice: Is it advanced practice? *International Emergency Nursing*, 21(2), 76–83.
- McCorkle, R., Engelking, C., Lazenby, M., Davies, M. J., Ercolano, E., & Lyons, C. A. (2012). Perceptions of roles, practice patterns and professional growth opportunities: Broadening the scope of advance practice in oncology. *Clinical Journal of Oncology Nursing*, 16(4), 382–387.
- McGillis-Hall, L., & Buch, E. (2009). *Skill mix decision-making for nursing*. Available from Geneva: <http://www.icn.ch/what-we-do/international-centre-for-human-resources-in-nursing-ichrn/>.
- Mee, C. L. (2006). Shaping your scope of practice. *Nursing*, 36(4), 6.
- Msuya, M., Blood-Sieffried, J., Chugulu, J., Kidayi, P., Sumaye, J., Machange, R., Mtuya, C. C., & Pereira, C. (2017). Discriptive study of nursing scope of practice in rural medically underserved areas of Africa, South of the Sahara. *International Journal of Africa Nursing Sciences*, 6, 74–82.
- Munjanja, O. K., Kibuka, S., & Dovlo, D. (2005). The nursing workforce in sub-Saharan Africa. Retrieved from Geneva.
- Mwijarubi, M. (2015). In Tanzania, medical circumcision services rely on a predominantly female nursing workforce. *Intrahealth*. Available from <http://www.intrahealth.org/blog/tanzania-medical-circumcision-services-rely-predominantly-female-nursing-workforce#.Vg6gmPDotKg>.
- Nathenson, P., Schafer, L., & Anderson, J. (2007). Relationship of RN role responsibility to job satisfaction. *Rehabilitation Nursing*, 32(1), 9–14.
- Oelke, N. D., White, D., Besner, J., Doran, D., McGillis-Hall, L., & Giovanetti, P. (2008). Nursing workforce utilization: an examination of facilitators and barriers on scope of practice. *Nursing Leadership*, 21(1), 58–71.
- Paul, I. H., & Decker, G. (2007). American medical association attacks on scope of practice: oncology nurses beware. *Clinical Journal of Oncology Nursing*, 11(2).
- Poghosyan, L., Nannini, A., Smaldone, A., Clarke, S., O'Rourke, N. C., Rosato, B. G., & Berkowitz, B. (2013). Revisiting scope of practice facilitators and barriers for primary care nurse practitioners: A qualitative investigation. *Policy, Politics and Nursing Practice*, 14(1), 6–15.
- Powers, J. (2013). Are you practicing to your full potential? *Nursing Made Incredibly Easy*, 11(3), 4. Available from http://journals.lww.com/nursingmadeincrediblyeasy/Fulltext/2013/05000/Are_you_practicing_to_your_full_potential_1.aspx. doi: 10.1097/01.NME.0000428434.46662.5d.
- Price, G. (2017). Scope it out. What in and what's out. *Journal of Nursing in Professional Development*, 156–158.
- Saffriet, B. J. (2002). Closing the gap between can and may in health care providers scope of practice: A primer for policy makers. *Yale Journal on Regulation*, 4422, 301–334. Available from http://digitalcommons.law.yale.edu/fss_papers/4422.
- Sandelowski, M. (2000). Thermometers and telephones. A century of nursing and technology. *The American Journal of Nursing*, 100(10), 82–86.
- Scanlon, A., Cashin, A., Bryce, J., Kelly, J. G., & Buckely, T. (2015). The complexities of defining nurse practitioner scope of practice in the Australian context. *Collegian*. Available from <http://www.collegianjournal.com/article/S1322-7696%2814%2900091-2/pdf>.
- Schluter, J., Seaton, P., & Chaboyer, W. (2011). Understanding nursing scope of practice: A qualitative study. *International Journal of Nursing Studies*, 48(10), 1211–1222.
- Sciamanna, C. N., Alvarez, K., Miller, J., Gary, T., & Bowen, M. (2006). Attitudes toward nurse practitioner-led chronic disease management to improve outpatient quality of care. *American Journal of Medical Quality*, 21(6), 375–381.
- Seitio-Kgokgwe, O., Gauld, R. D. C., Hill, P. C., & Barnett, P. (2014). Assessing performance of Botswana's public health system: the use of the World Health Organization health system performance assessment framework [Press release]. Available from http://ijhpm.com/article_2883_aae6e3f0977f17b29b507f7fd4fbed3b.pdf.
- Senior, E. (2008). How general practice nurses view their role. Available from http://www.ajan.com.au/Vol26/26-1v2_Senior.pdf.
- Shumbusho, F., Van Griensven, J., Lowrance, D., Turate, I., Weaver, M. A., & Price, J. (2009). Task shifting for scale-up of HIV care: evaluation of nurse-centered antiretroviral treatment at rural health centres in Rwanda. *PLoS Med*, 6(10). Available from <http://journals.plos.org/plosmedicine/article?id=10.1371/journal.pmed.1000163>.
- Sorrel, A. L. (2009). Scope of practice expansions fuel legal battles. *American Medical News*, 52(11), 1–4. Available from [amednews.com website: http://www.amednews.com/article/20090309/profession/303099970/2/](http://www.amednews.com/article/20090309/profession/303099970/2/).
- Spies, L. A. (2016). An exploratory descriptive study on task shifting in East Africa. *Advances in Nursing Science*, 39(2), E44–E53.
- Starr, L. (2011). Policy, scope of practice and the 'agony of the moment'. *Australian Nursing Journal*, 19(6), 29.
- Trehaerne, B., Fishman, P., & Lin, E. H. B. (2014). Role of the nurse in chronic illness management. *Nurse Economist*, 32(4), 178–184.
- Upenieks, V. V., Akhavan, M. H. A., Kotlerman, M. S., Esser, J., & Ngo, M. J. (2007). Value-added care, a new way of assessing nursing staffing ratios and workload variability. *JONA. The Journal of Nursing Administration*, 37(5), 243–252.
- White, D., Oelke, N. D., Besner, J., Doran, D., McGillis-Hall, L., & Giovanetti, P. (2008). Nursing scope of practice: Descriptions and challenges. *Nursing Leadership*, 21(1), 44–47.
- WHO (2008). *Task shifting: rational redistribution of tasks among health workforce teams, global recommendations and guidelines*. Available from Geneva.
- WHO (2007). *WHO guidelines for implementing strategic directions for strengthening nursing and midwifery services in the African region, 2007-2017*. Available from Brazzaville.
- WHO (2012). Enhancing nursing and midwifery capacity to contribute to the prevention, treatment and management of non-communicable diseases. *Human Resources for Health Observer*, 12, 38. Available from <http://www.who.int/hrh/resources/observer12/en/>.
- Willard, S. (2009). Expanding the role of nurses and advanced practice nursing in HIV/AIDS care. In R. G. Marlink, & S. J. Teitelman (Eds.). *From the ground up: Building comprehensive HIV/AIDS care programs in resource-limited settings* (pp. 137–148). Washington: Elizabeth Glaser Paediatric AIDS Foundation.