

GENDER ANALYSIS: SUB-SAHARAN AFRICAN NURSES' MIGRATION EXPERIENCES – A
SYSTEMATIC REVIEW

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Section 0: Preamble

For my army of angels: Mom, Dad, Lorraine & my Grandfather

PLAGIARISM DECLARATION

I, **Constancia Mavodza (MVDCON001)**, hereby declare that the work on which this dissertation/thesis is based is my original work (except where acknowledgements indicate otherwise) and that neither the whole work nor any part of it has been, is being, or is to be submitted for another degree in this or any other university.

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Abstract

Alleviating the global shortage of health workers, particularly nurses, is critical for health systems and health worker performance. Several factors have been identified as key players in the shortage crisis. Migration of nurses is one key area that needs to be understood in order to close the shortage gaps. Migration literature has dominantly focused on macro push-pull, brain drain and ethics theories of migration with limited exploration of relationships, interaction, norms, beliefs and values shaping migration trajectories and decisions. Professional migration has become and the nursing profession is female-dominated. However, gender as a phenomenon that may underpin interactions between macro theories and local/individual variables in nurse migration is largely unexamined.

The dissertation is organized into 3 parts.

Part A is a systematic review protocol that describes the background, justification and methodology of the review. A qualitative systematic approach is utilised and the literature in eight databases is searched using key words and terms derived from an initial scoping exercise and the review questions. Suitable articles are defined and selected using a set inclusion and exclusion criteria. The suitable articles are then appraised and a thematic analysis using a gender focal lens is applied to them.

Part B is a critical literature review of existing primary and theoretical research on health worker shortages; migration and gender analysis in health worker migration and shortages. It provides a background for the systematic review by defining migration, gender and gender analysis as well as presenting the scope on health worker and nurse shortages. The literature review encompasses the scoping exercise and concludes on the relevance of a gender-focused research on nurse migration.

Part C. is the full systematic review presented as an article for Human Resources for Health Journal. Articles published on Sub-Saharan African (SSA) nurses' migration experiences between 2005 and 2016 are presented, subjected to a gender analysis to illuminate the results. The discussion and conclusion then follow.

The results indicate that there is a paucity of empirical work on nurse migration experiences that is explicitly gender-focused. Gender analysis that is situated in social contexts and identifiers revealed that SSA nurses continuously renegotiate and reconfigure gender roles in child care as they move from one social context to another. Moreover migrating SSA nurse face challenges and limitations at macro, meso and micro levels of the system- that are linked to their identities as either professionals, African migrants and/or women. Therefore,

the review underscores the importance of the relationships between gender and local/individual nuances and global/national determinants of migration. However, these studies are limited in their explicit gender and social focus and how it contextually affects health worker performance and quality care provision. More empirical studies are needed to investigate gender influences for migrating male nurses; nurses who remain; and by different geographical & cultural region – to allow comparison across different groups of nurses and determine conceptual generalizations for doing gender research.

This dissertation will likely increase understanding of the role of gender in migration decision-making and experiences for SSA nurses across different professional, migrant and woman identities. This understanding has impacts on nurse motivation, capacity and capability as well quality care provision. Additionally, the dissertation provides a better understanding for incorporating gender analysis in health systems research, and also identifies avenues for future research.

Acknowledgements

My sincerest appreciation and gratitude goes to the three women involved in this thesis. I was adamant and determined to study gender in my dissertation, and they stuck with me through it all.

My supervisor, Dr. Maylene Shung King – her guidance, wealth of knowledge and mentorship elevated this dissertation from abstract ideas into academic work. During challenging times, her unwavering support and encouragement pushed this thesis forward.

My co-supervisor Veloshnee Govender- the way she speaks and does gender in her work forever had an impact on my life and thesis. I am sincerely grateful for her wealth of knowledge that helped shape the thoughts and direction this thesis took.

My advisor, Dr. Asha George- she is without question my Academic alchemy. The thrill of working with and learning from her as I took on this dissertation has been incredible. She took the time out of her busy schedule to go through my work, offer her support, encouragement and guidance when she did not have to. I am forever grateful for the mentorship, her time and energy.

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Acronyms and Abbreviations

LMIC - Low and Middle income countries

WBF - Workforce Balance Framework

HRH – Human Resources for Health

HSR - Health Systems Research

HSPR - Health Systems and Policy Research

GCC - Global Care Chain

GNCC- Global Nurse Care Chain

LM - Lead migrants

RCT - Randomized Control Trials

CASP - Critical Appraisal Skills Program

SSA – Sub-Saharan Africa

PART A: Review Protocol

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Definition of Terms

Migration: is a process of movement of persons across geographical and/or political boundaries- usually meaning moving from one country to another¹. In this review, migration is the movement of Sub-Saharan African (SSA) nurses from their country of origin to another country or vice-versa.

Gender: “*the socially constructed roles, behaviours, activities and attributes that a given society considers appropriate for males, females and other genders— affects how people live, work and relate to each other at all levels, including in relation to the health system.*” (Morgan et.al, 2016)

Nurse: . ICN defines a nurse as “*a person who has completed a program of basic, generalized nursing education and is authorized by the appropriate regulatory authority to practice nursing in his/her country. The nurse is prepared and authorized (1) to engage in the general scope of nursing practice, including the promotion of health, prevention of illness, and care of the physically ill, mentally ill and disabled people of all ages and in all health care and other community settings; (2) to carry out health care teaching; (3) to participate fully as a member of the health care team; (4) to supervise and train nursing and health care auxiliaries; and (5) to be involved in research (ICN, 1987)*²

In this review nurse refers to any health worker who trained and was registered to be a nurse in a SSA country, not including clinical assistants or medical assistants without nurse training.

Experiences: In the Webster dictionary, experience broadly refers to an ‘*event, encounter or occurrence*’³. In this review experiences refer to SSA nurses migration occurrences including decision-making and initiation of migration as well as post-migration occurrences in the destination countries and continued linkages to country of origin- which included return migration.

Power: the ability to influence or the control of resources⁴

Identity: is a social and historical construct that manifests self-perception in relation to how we see and experience the world and it also refers to how the world sees and experiences us⁵. In this review identity was adapted from the feminist interpretative framework of intersectionality⁶ were 3 identities of the migrant nurse (professional; African migrant; African woman) are used as the lens exploring intersectionality.

Macro-level (the state), Meso-level (society), Micro-level (individual/family) is a framework for organizing health systems to understand various players and their roles within the health health system⁷. In this review,

¹ FREEMAN, M., BAUMANN, A., BLYTHE, J., FISHER, A. & AKHTAR-DANESH, N. 2012b. Migration: a concept analysis from a nursing perspective. *J Adv Nurs*, 68, 1176-86.

² <http://www.icn.ch/who-we-are/icn-definition-of-nursing/>.

³ WEBSTER, N. 1977. *The Merriam-Webster Dictionary*. The Merriam-Webster Dictionary. New York: Pocket.

⁴ BUSE K., MAYS, N. & WALT, G. 2005. Power and the Policy Process. In: RAINE, N. B. R. (ed.) *Making Health Policy*. 1 ed. England: Open Press University.

⁵ BASTIA, T. 2014. Intersectionality, migration and development. *Progress in Development Studies*, 14, 237-248.

⁶ YUVAL-DAVIS, N. 2006. Intersectionality and Feminist Politics. *European Journal of Women's Studies*, 13, 193-209.

⁷ ALLIANCE FOR HEALTH POLICY AND SYSTEMS RESEARCH 2012. *Health Policy and systems research: A Methodology Reader*, Geneva, Switzerland, World Health Organization.

Macro-level (the state),: refers to the role that the state systems, policies and guidelines plays in SSA nurses' migration experiences for example the policies and guidelines involved in migration.

Meso-level (society): refers to societal and professional environments in which migration is occurring.

Micro-level (individual/family): refers to autonomy factors at the individual/agent level participating in migration⁸

⁸ Ibid.

Introduction

According to current health systems frameworks, people, including health workers and users, form an integral part of the health system. Nurses, of whom the majority are women, form a significant part of the health workforce. Hence, when large-scale migration of nurses occurs, this has significant impacts on the destination and the countries of origin, but even more so on the nurses themselves. This protocol establishes a basis for using a gender framework as an analytical axis to critically understand the relationships that arise when health workers- specifically nurses, as a critical element of the health system, migrate across national borders.

Nurses in the health system

There are several frameworks for analysing complex health systems. Amongst these, two commonly utilized ones are the six building blocks framework (World Health Organization, 2007), and the hardware-software perspective (Sheikh et al., 2011). The six building blocks are service delivery; health workforce; information; medical products, vaccines and technologies; financing; and leadership and governance (World Health Organization, 2007, Alliance for Health Policy and Systems Research, 2012). The hardware refers to structural, organizational, technological and financing inputs that support service delivery needs (Alliance for Health Policy and Systems Research, 2012). Software is embedded in the system as norms, values, traditions, and relationships (Alliance for Health Policy and Systems Research, 2012) of the health system actors. Software can be both tangible and intangible – for example, trust, as a motivator for health worker performance (Gilson et al., 2005) is a software element. Drawing from these two frameworks is the understanding that health systems are made up of the interdependencies and interconnections amongst the building blocks, as well as the ties between the hardware and software (Adam and de Savigny, 2012). Therefore a change in one building block or system component has effects on other blocks or components. For example, a poorly financed health system reflects political-economic prioritisation of health by a society at a macro-level, resulting in a shortage of medical products, vaccines and technologies at the meso-level, which strains the professional spaces of the health workforce as key agents expected to deliver health services at the micro-level.

Within these frameworks, the health workforce- including both the clinical and non-clinical staff- developing, implementing and delivering health services-are a critical input in the

health system (Zurn et al., 2004, World Health Organization, 2000). The health workforce as a hardware element and building block, is an adhesive that holds the health system together (Joint Learning Initiative, 2004, Aluttis et al., 2014). The perceptions, behaviours and attitudes of these health workers are part of the software. The interactions of health workforce hardware and software contributes to the strength and exigency of the health workforce in the system. Therefore, it is important to understand what and how these interactions play out.

The exigency of the health workforce infers that imbalances or shortages of this resource has punctuated impact on health systems' ability to provide, protect and promote health improvement and public health (Alliance for Health Policy and Systems Research, 2012, World Health Organization, 2007). Currently a workforce imbalance exists which manifests as global and persistent shortage of health workers (Kingma, 2007). Health systems' strengthening is dependent on a balanced demand-supply of the health workforce (Labonte et al., 2006, Kirk, 2007). Zurn *et al.* (2004) modified by Marchal *et al.* (2003), developed a framework to capture both the health system and non-health system factors that influence the availability of an adequate health workforce (Zurn et al., 2004, Marchal and Kegels, 2003) (Figure 1). This workforce balance framework (WBF) has been further modified for the purposes of this review, to capture the broader picture of the health workforce elements under exploration (Figure 1).

The gender analytical axis being utilized in the review is introduced in Figure 1 but expanded in Figure 2. The WBF shows health system factors like types of policies in place and population health needs, as well as non-health system functions like overall GDP drive the demand for skilled health workforce. On the other hand, the supply of health workers is more nuanced and driven by many interacting factors. Figure 1 shows that to increase or maintain an adequate supply of health workers- which in this review represents nurses- sufficient training, distribution, performance, and retention mechanisms (Roome et al., 2014, Runnels et al., 2014) have to be put in place to balance the influx and efflux in workforce supply of the health system. When demand for nurses meets supply of nurses, then there is a workforce balance that is crucial for health systems' viability (Figure 1).

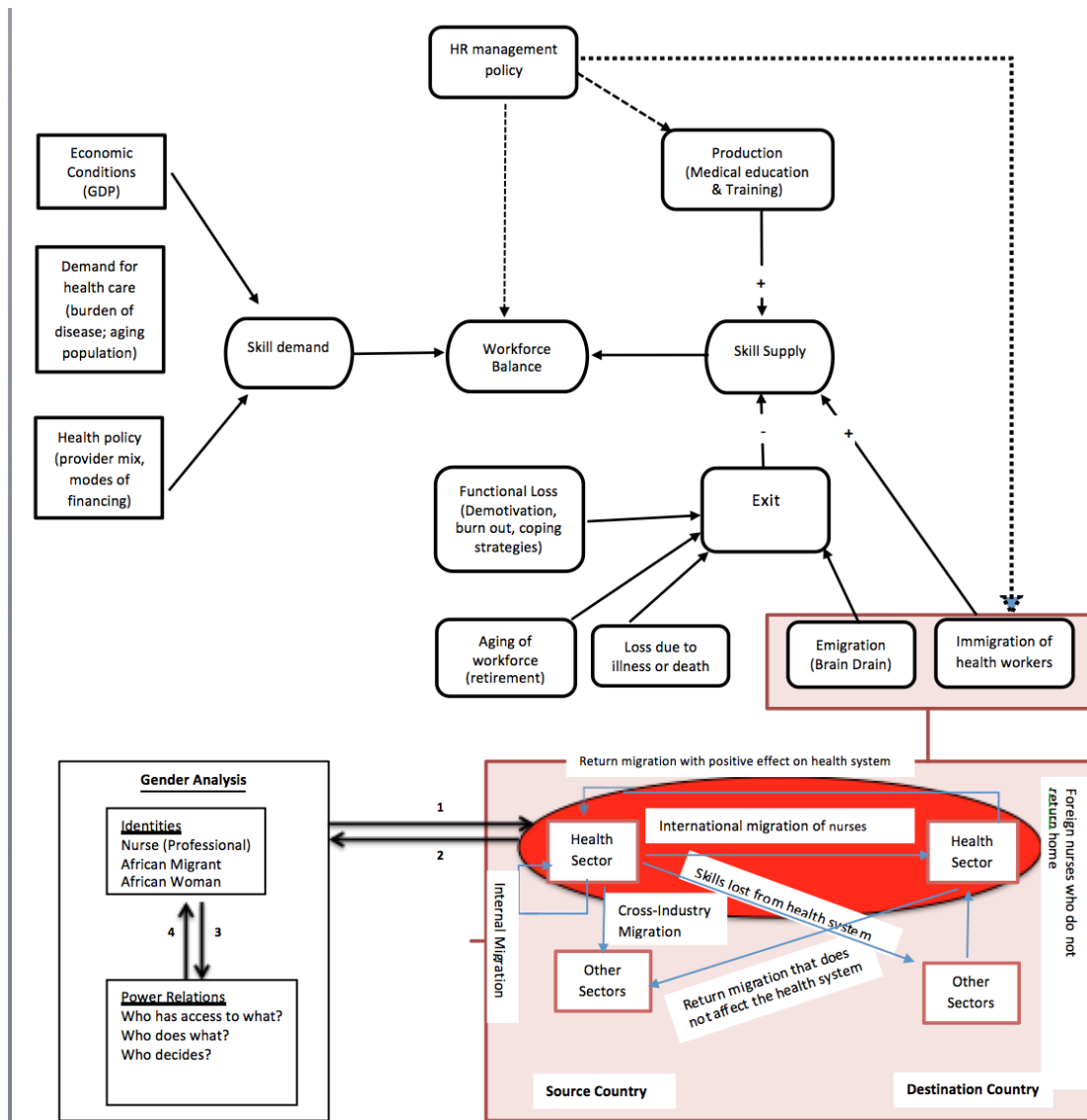


Figure 1: Nurse migration and its impact on health workforce imbalances (adapted from Zurn et al. 2004⁹, Diallo 2004¹⁰, Jones et al., 2009¹¹, Morgan et al., 2016¹²). The conceptual framework presents two interacting models of gender analysis: a model of gender identities adopted from a feminist framework of intersectionality that categorizes migrating nurses into professionals, migrants and women; and a model for power relations which inquires who (migrant nurse vs local nurse) has influence over the other, based on access/control of resources, decision making abilities and labour practises.

The shortage is global (Kingma, 2007) but Sub-Saharan Africa (SSA) specifically suffers the worst repercussions of this imbalance, as the region with the greatest burden of disease (Globalization and Health Knowledge Network, 2007) and the greatest deficiency in HRH per population. It is important to understand the shortage of nurses as they make up the majority of the health workforce (Dovlo, 2007) and are critical to delivering primary health care and strengthening health systems in SSA (Buchan, 2006, Bradby, 2014). In Nigeria for

⁹ ZURN, P., DAL POZ, M. R., STILWELL, B. & ADAMS, O. 2004. Imbalance in the health workforce. *Human Resources for Health*, 2, 1-12.

¹⁰ DIALLO, K. 2004. Data on the migration of health-care workers: sources, uses, and challenges. *Bull World Health Organ*, 82, 601-7.

¹¹ JONES, A. D., BIFULCO, A. & GABE, J. 2009. Caribbean nurses migrating to the UK: a gender-focused literature review. *Int Nurs Rev*, 56, 285-90.

¹² MORGAN, R., GEORGE, A., SSALI, S., HAWKINS, K., MOLYNEUX, S. & THEOBALD, S. 2016. How to do (or not to do)... gender analysis in health systems research. *Health Policy and Planning*.

example, nurse shortages have been associated with elevated maternal and child morbidity and mortality (Salami et al., 2016) suggesting that their shortage is detrimental to a country's health performance. Therefore understanding drivers of the shortage could provide new ways of alleviating this crisis.

Nurse Migration

One of the key drivers of nurse workforce imbalances or shortages is migration (Dovlo, 2007) which is a dual contributor to health worker supply (Aboderin, 2007, Adedokun, 2013) in the WBF (Figure 1). In the WBF, when nurses emigrate to another country, the receiving country's health system benefits from an influx of worker supply, which could reduce the workforce shortage. At the same time, the health workers' original health system experiences human resource drain which may exacerbate inequitable workforce distribution and inabilities of the workforce to meet population health demands. Therefore, imbalances in the migration of health workers participates in undermining health systems' fundamental goal of providing, protecting and promoting health improvement and public health (Alliance for Health Policy and Systems Research, 2012, World Health Organization, 2007). There is incredible value in trying to understand the conditions in which health worker migration occurs, and the consequences thereof.

Migration fundamentally represents a process of movement. This movement can occur across geographical borders, within geographical borders, within the profession- from clinical work to management/ research for example and/or across professions where nurses could move to a non-health sector job (Figure 1) (Prescott and Nichter, 2014, Jones and Sherwood, 2014). In the literature, nurse migration has been shown to be conceptually vague in part due to the diverse descriptions and meanings of the term 'migration' (Freeman et al., 2012a). For the purposes of this review, nurse migration is focused on the movement of nurses from SSA across international borders and vice-versa.

Nurse migration has been identified as a global health priority that especially negatively affects poor developing countries (Dovlo, 2007, Dumont et al., 2007). The factors driving this nurse migration include, seeking better economic status and autonomy (Awases et al., 2004), career advancement opportunities, and better functioning health systems and work conditions (Jones and Sherwood, 2014). In SSA, lopsided out-migration has nurses moving from the region to more developed countries, and SSA countries are unable to replace the

nurses that leave (Globalization and Health Knowledge Network, 2007). The effects of this nurse migration includes dilapidated health service delivery and crippled health systems in SSA health systems (Dovlo, 2007, Globalization and Health Knowledge Network, 2007).

Nurse migration across national boundaries, has historically focused on macro-economic logic theories of push-pull factors (Prescott and Nichter, 2014, Jones and Sherwood, 2014, Marchal and Kegels, 2003), to better understand why nurses migrate. Dominant analyses and studies on nurse migration focus on shortages and brain drain, constraining the realities of these migrants to skilled labour (Raghuram, 2009). This submerges factors like gender of nurses who are usually women (Newman, 2014), and how this may participate in migration experiences. Broad-scale macro-economic logic potentially dilutes or erases historical, cultural and, socio-political complexities - which include gender, that may shape and influence nurse migration (Prescott and Nichter, 2014). For SSA, a gender analysis on the migration experiences of nurses may help to illuminate other channels and nodes driving migration processes.

Conceptualizing Gender and Nurse Migration

There is an awareness of the importance of gender-inclusive health sciences research. However, there is still conceptual confusion on the meaning and use of gender theoretical concepts (Hammarstrom et al., 2014, Freeman et al., 2012a). Gender analyses in health research remain sparse due to a lack of clarity on both the definitions of gender (Hammarstrom et al., 2014) and its role in health systems research (Morgan et al., 2016). The lack of conceptual clarity has contributed to the scarcity of work and focus on gendered nurse migration. Therefore, a conceptual framework that adopts a gender optic to nurse migration is necessary for the rigorous execution of this systematic review. This section seeks to establish this concise framework for visualizing, operationalizing and understanding nurse migration, gender and the links between the two.

In the last decade, migration theory has opened up to embrace questions of ‘who’ is moving instead of just ‘why’ there is movement (Boyd and Greico, 2003). In health worker migration, women as mostly nurses are a significant proportion of who is moving (Penaloza et al., 2011, George, 2007). Women and nurses are a gender specific group but migration theories like push and pull theory have largely remained gender neutral when exploring migration (Boyd and Greico, 2003). This neutrality has largely not addressed the social and gender conditions that could be occurring within the migration phenomenon especially in the

context of nurses' other identities (Figure 2). For example, at the micro-level, the decision to migrate may differ for a nurse who is also the primary family provider and has to leave her children behind to be cared for by other females (Wojczewski et al., 2015); compared to a nurse who migrates alone to a developed country and escapes traditional gender expectations; whose autonomy will differ also, from another nurse migrating as the spouse of an emigrating husband (Wojczewski et al., 2015, Jones and Sherwood, 2014). In alignment with these different circumstances for migration, Pedraza *et al.* (1991) in her paper on women and migration argues that the household, particularly husbands and fathers, as a social unit has significant contributions to making decisions about when, where, who or how migration is going to occur and the consequences of such a move, including expectations of remittances or returning of the migrant (Pedraza, 1991). Further showing how gender expectations within a household unit could influence migration experiences.

Gender goes beyond the social behaviours and characteristics that are learned and associated with being a male or a female in a society (George, 2007, Newman, 2014, Morgan et al., 2016). Gender is a process (Glenn, 1999, Ferree, 1999, Ortner, 1996, Lorber, 1994) and in trying to understand systems relations, gender has been defined as:

“the socially constructed roles, behaviours, activities and attributes that a given society considers appropriate for males, females and other genders—affects how people live, work and relate to each other at all levels, including in relation to the health system.” (Morgan et al., 2016, World Health Organization Department of Gender Women and Health, 2010)

Conceptualizing gender as a process illuminates social power relationality (Iyer et al., 2008, Buse K. et al., 2005) issues that occur at all levels- macro, meso and micro. Gender has continuously participated in recreating disadvantage amongst women in health professions, which includes nurses, who are thought to be underpaid for the amount and type of work they do, regardless of their positions or specialties (George, 2007). So far, research has acknowledged and shown that nurse migration is occurring exponentially (George, 2007) and contributing to health workforce shortages and imbalances (Penaloza et al., 2011). This research largely situates nurses as currency in the labour-market and mostly ignores that they are woman-currency in the labour-market. Attached to their woman-ness are specific norms, values, expectations, and roles that make up gender and influence their migration experience, events and responses. Therefore, this systematic review sought to add gender analysis as a component to be considered when understanding nurse migration. Gender analyses propel understanding (Morgan et al., 2016, True, 2003) and understanding in this review's context,

is based on the totality of the experiences, events, and responses described in nurse migration.

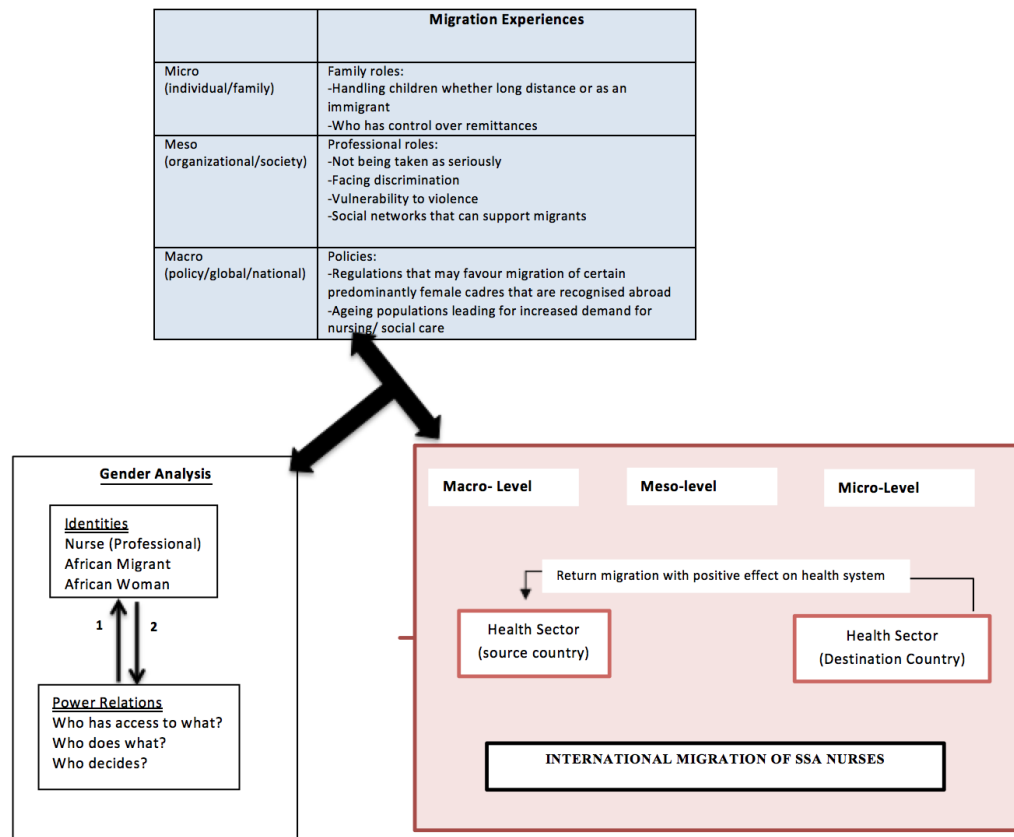
Gender Analysis framework

Gender analysis can be applied to describe, explain and/or understand the nature, mission and goals of nurse migration based on the premise that nurses are mostly women, and relationally, women usually had lesser power in societies than men- were power is the ability to influence or control resources (Morgan et al., 2016, Buse K. et al., 2005). There are several frameworks for conducting gender analysis (Morgan et al., 2016) in health-related research. Gender analysis is integral to fulfilling the aim of Health Systems Research (HSR) to participate in strategic, context-driven and equitable health systems policies and activities (Morgan et al., 2016). A gender analysis framework that explores the power relations, to better understand nurses' migratory journey is an ideal way to contribute to strategic and adept policies and interventions to mitigate nurse migration's impacts on health workforce imbalances. This systematic review's gender analysis aimed to situate SSA nurses' migration experiences within gender influenced realities that are potentially affecting worker motivation, imbalances, and performance.

This systematic review address international nurse migration only, utilizing a gender optic to explore the interactions between gender and international nurse migration experiences as shown concretely in Figure 2. Gender analysis of SSA nurse migration experiences in this review used the gender lens as an encompassing latticework of different nurse relations and identities. Identities are socially and historically constructed and shape how we view ourselves and experience the world, as well as how the world views and experiences us. To operationalize this gender analysis framework, the first step was to organize migration experiences into deductive macro, meso and micro domains established from the scoping exercise (Figure 2). Macro domains related to the role that the state systems, policies and guidelines plays in SSA nurses' migration experiences; meso domains related to societal and professional environments in which migration is occurring and micro domains related to autonomy and individual decision-making factors (Alliance for Health Policy and Systems Research, 2012) (Figure 2). Feminist interpretative framework of intersectionality (Jones et al., 2009, Yuval-Davis, 2006) was adopted to disaggregate SSA migrant nurses by their identities as professionals, as African migrants and as African women (Figure 2). This identity lens was the exploration of intersectionality within the gender lens, were intersectionality is 'addressing the interconnectedness" of nurses' identities. This is one step

in the gender analysis in this systematic review (Figure 2). This type of identity disaggregation also recognizes that gender is a social construct and should be analysed within social contexts and stratifiers.

Another gender framework by Morgan et al., 2016, illustrated the power relational notions of gender (Morgan et al., 2016). Power was an exploration of who has access to resources; who makes decisions and the division of labour and daily practises (Morgan et al., 2016). This exploration is the other step in the gender analysis (Figure 2). This gender latticework may reveal how migrant nurses faces structural encumbrances to professional, personal and/or familial development during migration. This gender power relational inquiry is the exploratory focus for emergent inductive themes in this framework. Therefore, intersectionality was adopted as exploring the different identities of SSA nurses as migrants, professionals and as women, enabling this review to describe the implicit and explicit gender identities, ideologies and relations in the nurse migration literature. This node of intersectionality was selected because the dominant literature intersects gender and class, ethnicity or race, and do not usually consider multi-complex identities and social relations that could be interacting as well (Bastia, 2014) These descriptions may reveal how nurses face hierarchies and manoeuvre international migration trajectories. Understanding the experiences of nurses as migrant women working in professional spaces that may also be gendered, could contribute to policy solutions that address effects of migration in both source and receiving countries. Therefore, a gender analysis on SSA nurses' migration experiences like the one established for this systematic review, is a core unit for establishing these understandings.



JONES, A. D., BIFULCO, A. & GABE, J. 2009. Caribbean nurses migrating to the UK: a gender-focused literature review. *Int Nurs Rev*, 56, 285-90.
MORGAN, R., GEORGE, A., SSALI, S., HAWKINS, K., MOLYNEUX, S. & THEOBALD, S. 2016. How to do (or not to do)... gender analysis in health systems research. *Health Policy and Planning*

Figure 2: Gender analysis framework in the context of SSA nurses' international migration experiences. The framework is a focused elaboration of Figure 1 presenting the migration experiences of SSA nurses in macro, meso and micro domains. A model of gender identities which categorizes migrating nurses into professionals, migrants and women; and a model for power relations which inquires who (migrant nurse vs local nurse) has influence over the other, based on access/control of resources, decision making abilities and labour practises, is used to explore these experiences

Research Questions

What is the influence of gender on the international migration experiences of nurses from Sub-Saharan Africa (SSA)?

- a) Does the literature present gender analyses in nurse migration experiences' research, and if so how?
- b) Based on the available literature, how do gender influences manifest in the migration experiences of SSA nurses?
- c) What are the gaps in the nature and focus of gendered nurse migration research for future endeavours?

Objectives of this Review

This systematic review seeks

- To identify and synthesise the existing literature reporting on the migration experiences of nurses originally from Sub-Saharan Africa.
- To evaluate the identified literature and use a gender analytical framework that addresses identity and power relations (Figure 2) to examine the range and scope of influence that gender has on nurses' migration experiences.

The expectation is that this review will contribute to informing gender-sensitive guidelines for alleviating the consequences of nurse maldistribution due migration of nurses.

Additionally, this review could be a potential example of gender analyses' incorporation into systematic reviews methodology and a step towards encouraging more gender-focused research within the health systems discipline.

Justification for the Review

There has been sparse attention placed on interlinks between gender and theories of migration and brain drain. In the health profession, women make up the majority of the labour force, especially as nurses (Newman, 2014) critically participating in health system sustainability. These nurses also make up most of the people in the professional migration pool (Penaloza et al., 2011, George, 2007). Gender plays a role in determining who moves, when those moves take place and the features of what the migratory process and results will be (Oishi, 2002, Boyd and Greico, 2003). The broader migration literature encompasses gender through investigating and elaborating on largely two types of status change. One change being the woman's position within her family and the other being the movement from one gender stratified patriarchal system to another (Boyd and Greico, 2003, Oishi, 2002) without necessarily alluding to the woman's migration status as highly-skilled labour (Jones et al., 2009). Nurses are migrating with various identities (Figure 2): as a migrant, a skilled labourer and importantly, as women (Jones et al., 2009). Understanding the role of gender in the interaction of these identities during the migration experience, has possible

positive implications for addressing health workforce shortages, performance, and motivations.

There is a tangible paucity of systematic reviews in health systems and policy research (HSPR) that adopt or explicitly include gender analyses in their work (Runnels et al., 2014). Part of this scarcity is driven by challenges which include defining and distinguishing between sex and gender; collecting, measuring and analysing sex and gender as well as appraising quality of the not always available data (Runnels et al., 2014). Despite the challenges of incorporating gender analyses in research, there is a need for a gender perspective to understanding nurse migration experiences, as an avenue for possible solutions to alleviating health worker shortage. A gender perspective acknowledges and recognizes that historically, men and women have operated in configured relationships of domination and subordination that have ripple effects in all aspects of their lives (Prescott and Nichter, 2014, Ong, 1991, Morgan et al., 2016). Gender perspectives that have been used to examine migration include Global Care Chain (GCC) theory (Dumont et al., 2007, Wojczewski et al., 2015) that addresses the power dimensions that manifest during the movement of female health workers from developing countries to developed countries (Dumont et al., 2007). GCC describes the cascade of care work when women migrate as lead migrants (LM) or primary financial providers and leave their families behind to be cared for by other women. In nurse migration literature, GCC and has increasingly been termed Global Nurse Care Chain (GNCC) (Prescott and Nichter, 2014, George, 2007). Some work including gender perspectives into nurse migration primary research has been done, but there is still a dearth of gender-axial systematic reviews to gather and synthesize these already existing empirical works. This systematic review confronted this gap by addressing the extent to which gender relations are directly or indirectly identified as influences in nurse migration experiences and how this is presented in the literature. The aim is to reconfigure the current modes of analysis adopted in understanding nurse migration, to recognize the gendered subjectivities that are part of migratory processes.

Exploring and understanding the influence of gender in nurse migration experiences, contributes to innovating gender-specific solutions to the global health worker shortage crisis. These innovations may include gender-sensitive incentives to increase nurses' capabilities and capacities that may enhance the sustainability of health systems. A systematic review that consolidates nurse migration empirical work in the context of SSA and adopts a gender analysis can contribute to the debates around global health worker shortage and migration. It can also identify knowledge gaps and opportunity spaces for

further inquiry and inform decision makers about how to manage nurse migration from developing countries.

In conclusion, the broad push-pull and brain drain theories that have dominantly been used to explain nurse migration potentially undermine socio-political and cultural processes of migration. This obscures and eliminates social processes like gender, from being examined and considered as contributors to migration. Therefore, this review sought to add gender perspectives as a component to be investigated in understanding nurse migration experiences. The review focuses on SSA as the region that suffers the worst consequences of nurse migration and would benefit greatly from innovative structures, policies and guidelines to mitigate and reduce effects of this migration. At the health systems and policy research *content* level (Morgan et al., 2016), this review will contribute to developing HSPR work that in-cooperates gender theoretical and conceptual frameworks as a way of doing systematic reviews in HSPR.

Methodology

Approach to the review

This study had an explorative purpose as it aimed to engage with nurse international migration experiences at macro, meso and micro levels. This all-encompassing investigation of migration inspired a two-staged approach that comprised of:

- (1) An initial **scoping exercise** (not a scoping review) of the academic literature to identify the key terms and language that have been used in addressing the concept of nurse migration within health systems and health research work. These terms informed search strategies of the systematic review and the exercise also guided the literature review section of this thesis.
- (2) A **systematic review** that was guided by findings from the literature review and grounded in the key search terms and findings from the scoping exercise. This systematic synthesis consisted of iterative, systematic steps that included a) formulating a search strategy and conducting the searches (Appendix I, page 28) b) screening articles for relevance (Appendix II and II, page 31 & 35) c) critically appraising relevant articles (Appendix V, page 35) and d) thematically synthesizing (Appendix IV, page 35) the critically appraised articles.

Scoping exercise

The aim of scoping is to coalesce and analyse a broad range of both research and non-research information to provide conceptual clarity and understanding of a particular topic or evidence base (Davis et al., 2009). Nurse migration is conceptually complex (Freeman et al., 2012a). Therefore, initial scoping was necessary for this study in order to identify the terms that were operationalized in the systematic review so as to adequately represent nurse migration. Scoping was iteratively conducted by searching the literature and a variety of “gender” types was included using terms the terms “sexism”, “discrimination”, “bias”, “prejudice”, “stereotype”, and “inequality”. The variety of gender-typing was explored as a strategy to localize nurse migration studies that explicitly explored gender- in the case of such studies gender was a subject or focal point. Scoping occurred until key terms were identified and operationalized and the author had a general grasp of what the nurse migration literature entailed. The scoped literature included academic work, grey literature, conference abstracts and literature from other disciplines, to enable the integration of evidence on nurse migration and provide the framework of this concept that was used in the systematic review processes.

Systematic Review

Systematic review methodology provides a framework and the tools and methods requisite for analysing and synthesizing the most relevant empirical work evidence (Roome et al., 2014, Lavis et al., 2005). It is a rigorous approach to collecting and selecting the best available empirical evidence so that it can be used to inform policy, program or clinical decisions whilst also providing guidance for the trajectory of future and/or new research (Lavis et al., 2005, Runnels et al., 2014). The Cochrane reviews are the most established and are constantly updated and regulated (Runnels et al., 2014, Higgins and Green, 2011) catering for the rigorous synthesis of primary research from Randomized Control Trials (RCTs) (Higgins and Green, 2011, Jones, 2004).

In the Cochrane guidelines, planning for, conducting, reporting and disseminating the review, encompasses the main stages of carrying out systematic reviews (Higgins and Green, 2011). In the planning stage, justification for the review has to be presented, that is then followed by a proposal and protocol that discusses the aims and objectives of the review thoroughly. The conduction of the review involves developing clear criteria of keywords and search terms that will enable all relevant literature to be extensively identified (Higgins and

Green, 2011, Jones, 2004). In the conduction phase of Cochrane Reviews, relevant appraisal tools should be identified to drive the quality assessment of the relevant studies as well as identifying the relevant extraction, monitoring and data synthesis tools that complement the review question being approached. The reporting and dissemination stage should take into consideration the audience of the review and still continue to reflect the overall aims and objectives under inquiry presented in an accessible and understandable way (Higgins and Green, 2011).

Like empirical strategies, systematic reviews may also have quantitative or qualitative or mixed methodologies (Harden and Thomas, 2005). When the aim of the review is to bring together studies from different settings and contexts to uncover consistencies, then a quantitative review is most appropriate (Harden and Thomas, 2005, Glenton et al., 2013) to bolster transferability and generalizability of the conclusions from different studies (Glenton et al., 2013). Qualitative systematic reviews on the other hand are essential when the aims of the review are to explore and understand a phenomenon within and across contexts (Glenton et al., 2013). Therefore, for the aims and objectives of this study, a qualitative systematic review was the most relevant approach for bringing together existing primary evidence on SSA nurses' migration experiences, and to explore how gender is possibly organizing and theoretical concept within this migration. The intensive, rigorous and step-by-step systematic approach was adopted to maintain objectivity and integrity of the research process by diminishing researcher or findings bias since if enabled the methodology from data collection, analysis, reporting and dissemination to be explicit and transparent.

There are unresolved debates on the best approaches to reviewing and synthesising qualitative data (Harden and Thomas, 2005) unlike RCTs that use quantitative data and have standardized and established methods for synthesizing it (Higgins and Green, 2011). Quantitative data on nurse migration in SSA is vulnerable to bias and unreliability (Dovlo, 2007). This is partly because many SSA nations do not have rigorous health worker information databases and sometimes health workers migrate as spouses and do not necessarily end up working as health workers (Diallo, 2004). They are not captured by the migration data that is available. The primary evidence relevant to this systematic review was however mostly qualitative due to the gender analytical axis. The qualitative synthesis methods that were relevant to include in this review were possibly either narrative review or synthesis and/or thematic synthesis (Pope et al., 2000).

Narrative synthesis articulates the use of text, language or voice in empirical works, where the narrative can either be the analysis tool or the subject (Hennink et al., 2010b). Narrative analyses is instructive for policy information and interventions and this type of analysis developed particularly from research on feminism and gender identities (Hennink et al., 2010b, Pope et al., 2000) which would make it ideal for a systematic review that is focusing on gender perspectives. However, due to the paucity of both systematic reviews that utilize gender analysis as a methodological tool, and empirical works in nurse migration, as well as the underdeveloped use of narrative synthesis applications, conducting a narrative analysis at this stage would be pre-mature.

A thematic synthesis approach is essential when there is a paucity of knowledge on the research subject (Hennink et al., 2010b, Green and Thorogood, 2004b). This synthesis allows key concepts to be generated from the relevant literature and these can be categorized under themes established from either the data itself (inductive) or from theory in existing literature (deductive) (Green and Thorogood, 2004b, Pope et al., 2000). A thematic synthesis approach (Pope et al., 2000, Glenton et al., 2013) was ideal in this methodological context where the empirical work was sparse and largely descriptive in contrast to being richly theorized or conceptual (Glenton et al., 2013, Noyes and Lewin, 2011). This approach was broad enough to allow for the exploration of gender in nurse migration experiences whilst the systematic tools of conducting this synthesis were also structured enough to enable ‘thick’ and ‘rich’ descriptions (Glenton et al., 2013, Hennink et al., 2010b) of the gender perspectives. In this case ‘thick’ and ‘rich’ descriptions were the analytical outputs of the systematic review (Hennink et al., 2010b).

Literature Search Strategy

The literature search for this systematic review was comprehensive to enable capturing of as many relevant articles as possible, but the setting was limited to SSA in line with the research question and also because SSA suffers the greatest health sector and outcomes loss from the migration of nurses (Dovlo, 2007). The literature search was initially part of the scoping exercise and became more refined as scoping approached saturation. A two-step search strategy was utilized. Firstly, eight databases – PubMed, Academic Premier Search, Cumulative Index of Nursing and Allied Health (CINHAL), Africa-Wide Information, Academic Search Premier, PsycINFO, WHO Global Health Library and Google Scholar -

were searched with no limitations to publication year. The scoping exercise participated in deciding the limitations of the publication year and the search terms of the review.

Key compound terms “nurse” were be combined using Boolean operators “OR” (Noyes and Popay, 2007), with truncated or non-truncated terms derived from MeSH terms and the thesaurus, to include words like “nursing”, “health worker”, “health personnel”. These terms were paired, using Boolean operator “AND” (Noyes and Popay, 2007), with compound key word “migration” and its associated appropriate terms which included, “immigration”, “emigration”, “mobility”, and “movement”. The SSA countries were listed individually to avoid any studies from the region being erroneously excluded. The primary focus of this systematic review was using gender as the analytical tool and therefore the primary search strategies centred on ‘nurse’ ‘sub-Saharan Africa’ and ‘migration’ search terms. A combination of these terms was reiteratively applied to search the literature until a comprehensive strategy was established for the systematic review (Hennink et al., 2010a) and there were no changes in the literature search being deemed as relevant. The selected articles were then stored in the reference manager Endnote. Endnote enabled duplicate articles from the search databases to be easily removed and for a careful record of potentially relevant articles to be maintained. The remainder of the articles were screened using the inclusion/exclusion criteria established below. The screening stage involved careful processing of titles and abstracts to tease out the articles that were included in the review.

The second search strategy then commenced at this point. After full reading of the screened and selected articles, hand searching of the reference lists on these articles was done to potentially identify more relevant articles. Careful records of the dates on which all search strategies were conducted was maintained to better inform and provide directions for future researchers who may want to expand this systematic review. A final search strategy and the processes involved were included in Appendix II (page 31) and provided to the supervisors of this review.

Article Inclusion Criteria

Articulating an inclusion criterion for a systematic review is important for giving structure and manageability to the research and article selection process. Therefore, it is important to have inclusion criteria that are embedded in the research aims and objectives with enough specificity to contain a manageable dataset.

This review considered:

Protocol

- I. Qualitative or mixed-methods studies about nurse migration from Sub-Saharan Africa. To include both studies done in SSA but also studies done in non-SSA countries where the subject was nurses originating from SSA. Migration included only transnational migration.
- II. The titles or abstracts of the relevant articles that contained some of the keywords or sections of the research question.
- III. Studies focused explicitly on nurses' migration experiences, but also those focusing on health workers where nurses' inclusion was a sufficient component of the research and featured as a variable and was discussed and analysed, were also considered.
- IV. Articles accessible under the UCT library subscriptions databases and journals only. If an article was deemed essential and relevant but not accessible under these terms, attempts were made to contact the lead author for access.
- V. Interest in the interaction between gender and migration increased at the beginning of the 21st century (Boyd and Greico, 2003). Therefore this review was limited to those that were published since 1995, as a strategy for capturing the most relevant articles ,

Articles were excluded based on the following criteria:

- I. Non-empirical data (secondary data, policy briefs)
- II. Quantitative data only
- III. Mixed methods where the qualitative component was insufficient. This is where qualitative work was not analysed in the article.
- IV. Articles with no abstracts
- V. Articles not in English
- VI. Articles published before 1995

Article Selection

Studies that met the combination of search terms that represent SSA nurses' migration experiences as well as the inclusion criteria above were selected for screening. For articles that had uncertain abstracts or were potentially eligible, a full text read was applied to determine selection for screening. For the purposes of this review, nurse refers to any health worker who trained to be a nurse, not including clinical assistants or medical assistants without nurse training.

Assessment Criteria/Quality Appraisal

The inclusion criteria states that the relevant studies should use qualitative or mixed methodologies in investigating nurse migration in the SSA setting. In addition to this criterion, the appraisal of selected articles used a customized Critical Appraisal Skills Program (CASP) tool (Public Health Resource Unit, 2006) (Appendix V, page 35) for qualitative assessment of the relevant articles. Rich and thickly descriptive qualitative research in nurse migration is time consuming to intensively conduct within health research (Mijovic et al., 2016), and would be more suitably studied within ethnographic and or anthropological contexts (Mijovic et al., 2016). Therefore, studies that met the inclusion criteria from these disciplines were also examined using the CASP tool to gauge impact of each study on the developing explanations and relationships in this review (Glenton et al., 2013).

Data Extraction, Synthesis and Analysis

The thematic synthesis approach (Thomas and Harden, 2008) was the basis for data extraction, analysis and synthesis in this systematic review. The main aim of this thematic analysis was to identify key concepts. Identification included a standardized data extraction form (Higgins and Green, 2011) (Appendix III, page 35) which was used to collate information from articles with annotated summaries of the evidence also provided for reference. This excel format form identified authors, year of publication, which country or region, type of study and the summarized results and interpretations of the authors were also recorded. The form made accessible in a quick and efficient way, the concepts and potential

themes emerging from the data as the review process developed, and formed the basis for the analysis and synthesis that shaped the systematic review.

All relevant texts were manually coded to establish developing themes, concepts and relationships. To guide data extraction, an initial deductive (Green and Thorogood, 2004a) matrix of macro-codes split ‘intent to migrate’ and ‘migration’ experiences against micro (family), meso (organizational), and macro (national, global, policy) codes (Figure 2). These were used to organize and interact with the articles that met the inclusion criteria. This matrix provided a basis and starting point for exploring the literature on nurse migration before enabling a gender analysis of migration experiences. However, careful attention was paid to inductive themes (Green and Thorogood, 2004a, Cohen and Crabtree, 2006) that rose from the data and these were organized and categorized iteratively.

Textual data analysis is iterative and involves developing themes and concepts and revisiting them as more data is incorporated into the research (Hennink et al., 2010b) to establish, patterns, complements and differences as the project moves along. Nursing profession and professional migration are female-dominated phenomena (Jones et al., 2009), therefore the analysis and synthesis in this review began with the broad interpretative understanding of ‘gender analysis as exploring the dynamics of power’ (Morgan et al., 2016, World Health Organization Department of Gender Women and Health, 2010) and gender as relational (Jones et al., 2009).

The framework thematic synthesis approach for analysis and synthesis was used to make sense of the themes and relationships established from the relevant nurse migration articles that met the inclusion criteria. This framework approach has five stages (Glenton et al., 2013, Noyes and Lewin, 2011):

- *Familiarization* involved immersing selected articles into the aims and objectives of the review.
- *Identifying a thematic framework*. In this review, an initial deductive coding matrix (Table 1) guided theme development. The matrix arose from early stages of descriptive analyses of initial texts identified in the literature. This matrix enabled an ordering of the literature that was arising from search strategies. This first step in the framework was organizing migration experiences into macro, meso and micro domains.

Table 1: Initial Deductive Coding Framework

	Definitions	Migration Experiences
Micro (individual/family)	-refers to autonomy factors at the individual/agent level participating in migration	Family roles: -Handling children whether long distance or as an immigrant -Who has control over remittances
Meso (organizational/society)	-refers to societal and professional environments in which migration is occurring.	Professional roles: -Not being taken as seriously -Facing discrimination -Vulnerability to violence -Social networks that can support migrants
Macro (policy/global/national)	-the role that the state systems, policies and guidelines plays in SSA nurses' migration experiences for example the policies and guidelines involved in migration.	Policies: -Regulations that may favor migration of certain predominantly female cadres that are recognised abroad -Ageing populations leading for increased demand for nursing/ social care

- *Indexing or Coding.* At this stage authors independently read selected articles and attach themes as appropriate before discussing attached themes and reaching a consensus of relevance as a means of transparency and rigor in qualitative work (Hennink et al., 2010a). In this review one author indexed all the selected articles with a foundational input from randomly selected articles that had been indexed by the two supervisors for this thesis. Codes we also established during identification of the thematic framework.
- *Charting.* This stage moves beyond descriptive thematic to categorize and establish relationships amongst the identified themes and indices. The initial gender analysis step disaggregated themes about SSA nurses' migration experiences by identity of nurse as professional, as African migrant and as women. Analysis then involved identifying relationships within and between identities.
- *Mapping and interpretation.* At this stage, the categories of themes established in the charting phase were then analysed as a way of building explanations for the findings from the reviews (Noyes and Lewin, 2011, Higgins and Green, 2011). Investigating power dynamics (Morgan et al., 2016) and complex identities guided extraction of emergent themes in selected articles (Figure 2) to careful attention was given to new themes and relationships that rose from the article-data.

Rigor

The research study had a considerable amount of iterative processes, therefore to ensure transparency in the research process, the researcher maintained strict and explicit record keeping detailing all the stages of the research and explaining any decisions made about the process. Bias was limited by systematically searching the literature until saturation and exhaustion as well as using the data extraction form. Samples of the articles as well as the search strategies applied to the literature were also reviewed by two supervisors, to contain possible researcher prejudice and bias. The research supervisors participated in finalizing data extraction forms, analysing and discussing the final analytical themes in a bid to promote internal and interpretational validity of the study.

Ethical Considerations

This review will use publicly available and already published data. Therefore, there is no explicit confidentiality or ethical procedures to be considered for this review.

Study Limitations

There is potential for study selection bias based on the reviewer's own background, perception and understanding. This limit could however be alleviated by the rigorous use of the CASP tool to maintain objectivity during article selection. The review may include analysis of cross-disciplinary studies using different methodologies which may not necessarily have a policy focus. Therefore, deriving health policy implications will be more implied and suggestible than explicit. Also, nurse migration might not be labelled as such in literature when we have nurses who migrate as spouses (not nurses) but may eventually end picking up their careers in the destination country. Such subjects may be in the migration literature but not in the nurse migration literature and could potentially be missed. Studies whose subjects were 'health workers' migrating without identification of whether these were doctors or nurses or both, could be missed in the literature search strategy for this systematic review. Lastly, the review focuses on studies published in English only. This filter could be eliminating potentially relevant empirical from French or Portuguese speaking SSA, that could inform gender dimensions of nurse migration.

Dissemination

This systematic review will be condensed into a summarized format to allow decision-makers within the health sector and potentially the migration sector to easily access the synthesis on the empirical works on nurse migration and the relevance of gender to this

phenomenon. The review seeks to enhance the understanding of the gendered ways in which nurse migration could be happening as a way of inspiring both gender-sensitive human resources for health policies and gender-inclusive future research on health worker migration and its impacts.

Budget

This study was supported by a *MasterCard Foundation Scholarship Award*.

Timelines

Subject	Activity	Time span
Scoping Exercise	Formulating Topics; Identifying research questions; directing protocol & literature review development	February-July 2016
Part A: Protocol		May-November 2016
Part B: Literature Review	Critical Literature Review	May-July 2016
	Drafts	July- October 2016
Part C: Journal Article	Systematic Review	November – January 2017
	Thematic Analysis	January- February 2017
	Drafts	January- February 2017
	Submission	March 2017

References

- ABODERIN, I. 2007. Contexts, motives and experiences of Nigerian overseas nurses: understanding links to globalization. *J Clin Nurs*, 16, 2237-45.
- ADAM, T. & DE SAVIGNY, D. 2012. Systems thinking for strengthening health systems in LMICs: need for a paradigm shift. *Health Policy and Planning*, 27, iv1-iv3.
- ADELAKUN, F. E. 2013. *The journey of foreign educated nurses integrating into the American health care workforce*. Doctorate, Augsburg College.
- ALLIANCE FOR HEALTH POLICY AND SYSTEMS RESEARCH 2012. *Health Policy and systems research: A Methodology Reader*, Geneva, Switzerland, World Health Organization.
- ALUTTIS, C., BISHAW, T. & FRANK, M. W. 2014. The workforce for health in a globalized context – global shortages and international migration. *Global Health Action*, 7, 10.3402/gha.v7.23611.
- AWASES, M., GBARY, A., NYONI, J. & CHATORA, A. 2004. Migration of Health Professionals in Six Countries: A Synthesis Report. Brazzaville: World Health Organization WHO-AFRO DHS

- BASTIA, T. 2014. Intersectionality, migration and development. *Progress in Development Studies*, 14, 237-248.
- BOYD, M. & GREICO, E. 2003. Women and migration: incorporating gender into international migration theory. Migration Information Source.
- BRADBY, H. 2014. International medical migration: a critical conceptual review of the global movements of doctors and nurses. *Health*, 18, 580-96.
- BUCHAN, J. 2006. The impact of global nursing migration on health services delivery. *Policy Polit Nurs Pract*, 7, 16S-25S.
- BUSE K., MAYS, N. & WALT, G. 2005. Power and the Policy Process. In: RAINE, N. B. R. (ed.) *Making Health Policy*. 1 ed. England: Open Press University.
- COHEN, D. & CRABTREE, B. F. 2006. *Qualitative Research Guidelines Project* [Online]. New Jersey: Princeton. Available: <http://www.qualres.org/HomeWhat-3513.html> [Accessed July 2006].
- DAVIS, K., DREY, N. & GOULD, D. 2009. What are scoping studies? A review of the nursing literature. *Int J Nurs Stud*, 46, 1386-400.
- DIALLO, K. 2004. Data on the migration of health-care workers: sources, uses, and challenges. *Bull World Health Organ*, 82, 601-7.
- DOVLO, D. 2007. Migration of nurses from sub-Saharan Africa: a review of issues and challenges. *Health Serv Res*, 42, 1373-88.
- DUMONT, J.-C., MARTIN, J. & SPIELVOGEL, G. 2007. Women on the Move: The Neglected Gender Dimension of the Brain Drain. Germany: Institute for the Study of Labor (IZA).
- FERREE, M. M. L., J.; HESS, B.B 1999. *Revisioning Gender*, Thousand Oaks, CA, Sage Publications.
- FREEMAN, M., BAUMANN, A., BLYTHE, J., FISHER, A. & AKHTAR-DANESH, N. 2012a. Migration: a concept analysis from a nursing perspective.
- FREEMAN, M., BAUMANN, A., BLYTHE, J., FISHER, A. & AKHTAR-DANESH, N. 2012b. Migration: a concept analysis from a nursing perspective. *J Adv Nurs*, 68, 1176-86.
- GEORGE, A. 2007. Human resources for health: a gender analysis. Kochi, India: Women and Gender Equity Knowledge Network.
- GILSON, L., PALMER, N. & SCHNEIDER, H. 2005. Trust and health worker performance: exploring a conceptual framework using South African evidence. *Soc Sci Med*, 61, 1418-29.
- GLENN, E. N. 1999. The Social Construction and Institutionalization of Gender and Race. An integrative Framework. In: FERREE, M. M., LORBER, J. & HESS, B. B. (eds.) *Revisioning Gender*. Thousand Oaks, CA.: Sage Publications.
- GLENTON, C., COLVIN, C. J., CARLSEN, B., SWARTZ, A., LEWIN, S., NOYES, J. & RASHIDIAN, A. 2013. Barriers and facilitators to the implementation of lay health worker programmes to improve access to maternal and child health: qualitative evidence synthesis. *Cochrane Database Syst Rev*, 10, Cd010414.
- GLOBALIZATION AND HEALTH KNOWLEDGE NETWORK 2007. Globalization and Health Worker Crisis. In: PACKER, C., LABONTE, R. & SPITZER, D. (eds.) *WHO Commission on Social Determinants of Health*. Ottawa: University of Ottawa.
- GREEN, J. & THOROGOOD, N. 2004a. Analyzing Qualitative Data. *Qualitative Methods for Health Research*. London: Sage Publications.
- GREEN, J. & THOROGOOD, N. 2004b. *Qualitative Methods for Health Research*, London, Sage Publications.
- HAMMARSTROM, A., JOHANSSON, K., ANNANDALE, E., AHLGREN, C., ALEX, L., CHRISTIANSON, M., ELWER, S., ERIKSSON, C., FJELLMAN-WIKLUND, A., GILENSTAM, K., GUSTAFSSON, P. E., HARRYSON, L., LEHTI, A., STENBERG, G. & VERDONK, P.

2014. Central gender theoretical concepts in health research: the state of the art. *J Epidemiol Community Health*, 68, 185-90.
- HARDEN, A. & THOMAS, J. 2005. Methodological issues in combining diverse study types in systematic reviews. *International journal of social research methodology*, 8, 257-271.
- HENNINK, M., HUTTER, I. & BAILEY, A. 2010a. Data Preparation and Developing Codes. *Qualitative Research Methods*. London: SAGE Publications.
- HENNINK, M., HUTTER, I. & BAILEY, A. 2010b. Textual Data Analysis. *Qualitative Research Methods*. London: Sage Publications.
- HIGGINS, J. & GREEN, S. (eds.) 2011. *Cochrane Handbook for Systematic reviews of Interventions*.
- IYER, A., SEN, G. & ÖSTLIN, P. 2008. The intersections of gender and class in health status and health care. *Global Public Health*, 3, 13-24.
- JOINT LEARNING INITIATIVE 2004. Human Resources for Health- Overcoming the Crisis. Boston: Harvard University.
- JONES, A. D., BIFULCO, A. & GABE, J. 2009. Caribbean nurses migrating to the UK: a gender-focused literature review. *Int Nurs Rev*, 56, 285-90.
- JONES, C. B. & SHERWOOD, G. 2014. The globalization of the nursing workforce: Pulling the pieces together. *Nursing Outlook*, 62, 59-63.
- JONES, M. L. 2004. Application of systematic review methods to qualitative research: practical issues. *J Adv Nurs*. England.
- KINGMA, M. 2007. Nurses on the move: a global overview. *Health Serv Res*, 42, 1281-98.
- KIRK, H. 2007. Towards a global nursing workforce: the 'brain circulation'. *Nursing Management - UK*, 13, 26-30.
- LABONTE, R., PACKER, C. & KLASSEN, N. 2006. Managing health professional migration from sub-Saharan Africa to Canada: a stakeholder inquiry into policy options. *Hum Resour Health*, 4, 22.
- LAVIS, J., DAVIES, H., OXMAN, A., DENIS, J. L., GOLDEN-BIDDLE, K. & FERLIE, E. 2005. Towards systematic reviews that inform health care management and policy-making. *J Health Serv Res Policy*, 10 Suppl 1, 35-48.
- LORBER, J. 1994. *Paradoxes of Gender*, New Haven, Yale University Press.
- MARCHAL, B. & KEGELS, G. 2003. Health workforce imbalances in times of globalization: brain drain or professional mobility? *Int J Health Plann Manage*, 18 Suppl 1, S89-101.
- MIJOVIC, H., MCKNIGHT, J. & ENGLISH, M. 2016. What does the literature tell us about health workers' experiences of task-shifting projects in sub-Saharan Africa? A systematic, qualitative review. *Journal of Clinical Nursing*.
- MORGAN, R., GEORGE, A., SSALI, S., HAWKINS, K., MOLYNEUX, S. & THEOBALD, S. 2016. How to do (or not to do)... gender analysis in health systems research. *Health Policy and Planning*.
- NEWMAN, C. 2014. Time to address gender discrimination and inequality in the health workforce. *Hum Resour Health*, 12, 25.
- NOYES, J. & LEWIN, S. (eds.) 2011. *Chapter 6: Supplemental Guidance on Selecting a Method of Qualitative Evidence Synthesis, and Integrating Qualitative Evidence with Cochrane Intervention Reviews*: Cochrane Collaboration Research Group.
- NOYES, J. & POPAY, J. 2007. Directly observed therapy and tuberculosis: how can a systematic review of qualitative research contribute to improving services? A qualitative meta-synthesis. *Journal of Advanced Nursing*, 57, 227-243.
- OISHI, N. 2002. Gender and migration: an integrative approach. University of California, San Diego.

- ONG, A. 1991. THE GENDER AND LABOR POLITICS OF POSTMODERNITY. *Annual Review of Anthropology*, 20, 279-309.
- ORTNER, S. B. 1996. *Making Gender: The Politics and Erotics of Culture*, Boston, Beacon Press.
- PEDRAZA, S. 1991. Women and Migration: The Social Consequences of Gender. *Annual Review of Sociology*, 17, 303-325.
- PENALOZA, B., PANTOJA, T., BASTIAS, G., HERRERA, C. & RADA, G. 2011. Interventions to reduce emigration of health care professionals from low- and middle-income countries. *Cochrane Database Syst Rev*, 12, CD007673.
- POPE, C., ZIEBLAND, S. & MAYS, N. 2000. Analysing qualitative data. *BMJ : British Medical Journal*, 320, 114-116.
- PRESCOTT, M. & NICHTER, M. 2014. Transnational nurse migration: future directions for medical anthropological research. *Soc Sci Med*, 107, 113-23.
- RAGHURAM, P. 2009. Situating women in the brain drain discourse: discursive challenges and opportunities. In: STALFORD, H., CURRIE, S. & VELLUTI, S. (eds.) *Gender and migration in 21st century Europe*. Aldershot: Ashgate.
- ROOME, E., RAVEN, J. & MARTINEAU, T. 2014. Human resource management in post-conflict health systems: review of research and knowledge gaps. *Confl Health*, 8, 18.
- RUNNELS, V., TUDIVER, S., DOULL, M. & BOSCOE, M. 2014. The challenges of including sex/gender analysis in systematic reviews: a qualitative survey. *Systematic Reviews*, 3, 1-10.
- SALAMI, B., DADA, F. O. & ADELAKUN, F. E. 2016. Human Resources for Health Challenges in Nigeria and Nurse Migration. *Policy, Politics, & Nursing Practice*.
- SHEIKH, K., GILSON, L., AGYEPONG, I. A., HANSON, K., SSENGOOBA, F. & BENNETT, S. 2011. Building the Field of Health Policy and Systems research: Framing the Questions. *PLoS Medicine*, 8.
- THOMAS, J. & HARDEN, A. 2008. Methods for the thematic synthesis of qualitative research in systematic reviews. *BioMed Central Medical Research Methodology*, 8.
- TRUE, J. 2003. Mainstreaming Gender in Global Public Policy. *International Feminist Journal of Politics*, 5, 368-396.
- WEBSTER, N. 1977. *The Merriam-Webster Dictionary*. The Merriam-Webster Dictionary. New York: Pocket.
- WOJCZEWSKI, S., PENTZ, S., BLACKLOCK, C., HOFFMANN, K., PEERSMAN, W., NKOMAZANA, O. & KUTALEK, R. 2015. African Female Physicians and Nurses in the Global Care Chain: Qualitative Explorations from Five Destination Countries. *PLoS One*, 10, e0129464.
- WORLD HEALTH ORGANIZATION 2000. Health Systems: Improving Performance 2000. *World Health Report 2000*. Geneva.
- WORLD HEALTH ORGANIZATION 2007. Everybody's business: strengthening health systems to improve health outcomes: WHO's framework for action. Geneva: World Health Organization.
- WORLD HEALTH ORGANIZATION DEPARTMENT OF GENDER WOMEN AND HEALTH 2010. Gender, women and primary health care renewal. *Primary Health Care*. Geneva: WHO.
- YUVAL-DAVIS, N. 2006. Intersectionality and Feminist Politics. *European Journal of Women's Studies*, 13, 193-209.
- ZURN, P., DAL POZ, M. R., STILWELL, B. & ADAMS, O. 2004. Imbalance in the health workforce. *Human Resources for Health*, 2, 1-12.

Appendix I: Systematic review Search Terms & Databases

Datab ase	Sea rche s	Date of Search	Limitations/filters	Nurse Terms	Migration Terms	Sub-Saharan Africa Terms
PubMed	Search 1	3-Nov-16	Abstracts available; 01Jan1995 to 31Dec2016; full text available	((("Nurses"[Mesh]) OR "Nursing"[Mesh]) OR Nurse) OR Nursing)	((((((((((((((("Human Migration"[Mesh]) OR Human Migration) OR Immigration) OR Emigration) OR Migrant) OR brain drain) OR Foreign) OR foreign educated) OR recruits) OR overseas qualified) OR overseas trained) OR internationally educated) OR internationally recruited) OR internationally registered) OR international) OR global))	((((((("Africa South of the Sahara"[Mesh]) OR Sub-Saharan Africa) OR (((((((((((((((((((((((((((((((((((((((Cameroon) OR Central African Republic) OR Chad) OR Congo) OR Democratic Republic of Congo) OR Equatorial Guinea) OR Gabon) OR Burundi) OR Djibouti) OR Eritrea) OR Ethiopia) OR Kenya) OR Rwanda) OR Somalia) OR South Sudan) OR Sudan) OR Tanzania) OR Uganda) OR Angola) OR Botswana) OR Lesotho) OR Malawi) OR Mozambique) OR Namibia) OR Nigeria) OR South Africa) OR Swaziland) OR Zambia) OR Zimbabwe) OR Benin) OR Burkina Faso) OR Cape Verde) OR Cote d'Ivoire) OR Gambia) OR Ghana) OR Guinea) OR Guinea-Bissau) OR Liberia) OR Mali) OR Mauritania) OR Niger) OR Senegal) OR Sierra Leone) OR Togo) OR West Africa) OR East Africa) OR Southern Africa) OR Central Africa))))))
	Search 2	12-Nov-16	Abstracts available; 01Jan1995 to 31Dec2016; full text available; humans	((("Nurses"[Mesh]) OR "Nursing"[Mesh]) OR Nurse) OR Nursing)	((((((((((((((("Human Migration"[Mesh]) OR Human Migration) OR Immigration) OR Emigration) OR Migrant) OR brain drain) OR Foreign) OR foreign educated) OR recruits) OR overseas qualified) OR overseas trained) OR internationally educated) OR internationally recruited) OR internationally registered) OR international) OR global))	
CINHAL	Search 1	15-Nov-16	1995-2016	(MH "Nurses") OR "nursing"	(MH "Emigration and Immigration") OR (MH "Residential Mobility+") OR (MH "Transients and Migrants") OR "Brain Drain" OR (MH "Foreign Professional Personnel+") OR (MH "Foreign Nurses") OR "foreign" OR "foreign educated" OR (MH "Personnel Recruitment") OR "overseas" OR "overseas nurses" OR "internationally educated" OR "internationally recruited" OR "internationally registered" OR "international" OR "Global"	"sub-Saharan Africa" OR "Cameroon OR Central African Republic OR Chad OR Congo OR Democratic Republic of Congo OR Equatorial Guinea OR Gabon OR Burundi OR Djibouti OR Ethiopia OR Eritrea OR Kenya" OR "Rwanda OR Somalia OR South Sudan OR Sudan OR Tanzania OR Uganda OR Angola OR Botswana OR Lesotho OR Malawi OR Mozambique OR Namibia" OR "Nigeria OR South Africa OR Swaziland OR Zambia OR Zimbabwe OR Benin OR Burkina Faso OR Cape Verde OR cote d'ivoire OR Gambia OR Ghana OR Guinea" OR "Guinea Bissau OR Liberia OR Mali OR Mauritania OR Niger OR Senegal OR Sierra Leone OR Togo OR West Africa OR East Africa OR Southern Africa OR Central Africa"

	Search 2	28-Nov-16	1995-2016; non-English; non-academic articles (dissertations; books; magazines; news articles; conference abstracts)	(MH "Nurses") OR "nursing"	(MH "Emigration and Immigration") OR (MH "Residential Mobility+") OR (MH "Transients and Migrants") OR "Brain Drain" OR (MH "Foreign Professional Personnel+") OR (MH "Foreign Nurses") OR "foreign" OR "foreign educated" OR (MH "Personnel Recruitment") OR "overseas" OR "overseas nurses" OR "internationally educated" OR "internationally recruited" OR "internationally registered" OR "international" OR "Global"	
Africa-Wide Information	Search 1	3-Dec-16	1995-2016; non-English; non-academic articles (dissertations; books; magazines; news articles; conference abstracts)	Nurse OR Nursing	Human Migration OR Migration OR Immigration OR Emigration OR Brain Drain OR foreign OR foreign-educated OR recruits OR overseas qualified OR overseas trained OR internationally educated OR internationally recruited OR internationally registered OR international OR global	sub-Saharan Africa OR sub-Saharan Africa OR Africa south of the Sahara OR Cameroon OR Central Africa Republic OR Chad OR Congo OR Democratic Republic of Congo OR Equatorial Guinea OR Gabon OR Burundi OR Djibouti OR Eritrea OR Ethiopia OR Kenya OR Rwanda OR Somalia OR South Sudan OR Sudan OR Tanzania OR Uganda OR Angola OR Botswana OR Lesotho OR Malawi OR Mozambique OR Namibia OR Nigeria OR South Africa OR Swaziland OR Zambia OR Zimbabwe OR Benin OR Burkina Faso OR Cape Verde OR Cote d'ivoire OR Gambia OR Ghana OR Guinea OR Guinea-Bissau OR Liberia OR Mali OR Mauritania OR Niger OR Senegal OR Sierra Leone OR Togo OR West Africa OR East Africa OR Southern Africa OR Central Africa
	Search 2	3-Dec-16	1995-2016; non-English; non-academic articles (dissertations; books; magazines; news articles; conference abstracts)	Nurse OR Nursing	Human Migration OR Migration OR Immigration OR Emigration OR Brain Drain OR foreign OR foreign-educated OR recruits OR overseas qualified OR overseas trained OR internationally educated OR internationally recruited OR internationally registered OR international OR global	
Academic Search Premier	Search 1	3-Dec-16	1995-2016; non-English; non-academic articles (dissertations; books; magazines; news articles; conference abstracts)	Nurse OR Nursing	Human Migration OR Migration OR Immigration OR Emigration OR Brain Drain OR foreign OR foreign-educated OR recruits OR overseas qualified OR overseas trained OR internationally educated OR internationally recruited OR internationally registered OR international OR global	sub-Saharan Africa OR sub-Saharan Africa OR Africa south of the Sahara OR Cameroon OR Central Africa Republic OR Chad OR Congo OR Democratic Republic of Congo OR Equatorial Guinea OR Gabon OR Burundi OR Djibouti OR Eritrea OR Ethiopia OR Kenya OR Rwanda OR Somalia OR South Sudan OR Sudan OR Tanzania OR Uganda OR Angola OR Botswana OR Lesotho OR Malawi OR Mozambique OR Namibia OR Nigeria OR South Africa OR Swaziland OR Zambia OR Zimbabwe OR Benin OR Burkina Faso OR Cape Verde OR Cote d'ivoire OR Gambia OR Ghana OR Guinea OR Guinea-Bissau OR Liberia OR Mali OR Mauritania OR Niger OR Senegal OR Sierra Leone OR Togo OR West Africa OR East Africa OR Southern Africa OR Central Africa

	Search 2	3-Dec-16	1995-2016; non-English; non-academic articles (dissertations; books; magazines; news articles; conference abstracts; full-text available	Nurse OR Nursing	Human Migration OR Migration OR Immigration OR Emigration OR Brain Drain OR foreign OR foreign-educated OR recruits OR overseas qualified OR overseas trained OR internationally educated OR internationally recruited OR internationally registered OR international OR global	
PsycInfo	Search 1	30-Nov-16	1995-2016	Nurse OR Nursing	Human Migration OR Migration OR Immigration OR Emigration OR Brain Drain OR foreign OR foreign-educated OR recruits OR overseas qualified OR overseas trained OR internationally educated OR internationally recruited OR internationally registered OR international OR global	sub-Saharan Africa OR sub saharan Africa OR Africa south of the Sahara OR Cameroon OR Central Africa Republic OR Chad OR Congo OR Democratic Republic of Congo OR Equatorial Guinea OR Gabon OR Burundi OR Djibouti OR Eritrea OR Ethiopia OR Kenya OR Rwanda OR Somalia OR South Sudan OR Sudan OR Tanzania OR Uganda OR Angola OR Botswana OR Lesotho OR Malawi OR Mozambique OR Namibia OR Nigeria OR South Africa OR Swaziland OR Zambia OR Zimbabwe OR Benin OR Burkina Faso OR Cape Verde OR Cote d'ivore OR Gambia OR Ghana OR Guinea OR Guinea-Bissau OR Liberia OR Mali OR Mauritania OR Niger OR Senegal OR Sierra Leone OR Togo OR West Africa OR East Africa OR Southern Africa OR Central Africa
	Search 2	3-Dec-16	1995-2016; non-English; non-academic articles (dissertations; books; magazines; news articles; conference abstracts	Nurse OR Nursing	Human Migration OR Migration OR Immigration OR Emigration OR Brain Drain OR foreign OR foreign-educated OR recruits OR overseas qualified OR overseas trained OR internationally educated OR internationally recruited OR internationally registered OR international OR global	
WHO Global Health Library	Search 1	3-Dec-16		(tw:(nurse OR nursing))	(tw:(human migration OR migration OR immigration OR emigration OR brain drain OR foreign OR foreign-educated OR recruits OR overseas qualified OR overseas trained OR internationally educated OR internationally recruited OR internationally registered OR international OR global))	(tw:(sub-Saharan Africa))
	Search 2	3-Dec-16		(tw:(nurse OR nursing))	(tw:(human migration OR migration OR immigration OR emigration OR brain drain OR foreign OR foreign-educated OR recruits OR overseas qualified OR overseas trained OR internationally educated OR internationally recruited OR internationally registered OR international OR global))	

Google Scholar	Search 1	3-Dec-16	1995-2016	nurse	migration	
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Appendix II: Systematic review Search Strategy

Filters	Initial final search	Abstracts available	1995 onwards	Full text available	Humans	After removing: non-academic journals/magazines/periodicals/dissertations/non-English	Records to screen	Combined records to screen	After removing duplicates/multiple copies (503)	not relevant (non-academic work/magazines/dissertations (229)	not relevant by topic/focus (390)	Unavailable full text removed (45)	not relevant (after screening by abstract) (319)	full text available to be assessed for review inclusion	Articles assessed from Reference lists	Articles Selected for the Review
Key term combinations																
PubMed																
Nurse AND Migration AND SSA search terms (11/3)	3657	3628	2420	2063			114	1681	1178	949	559	514	124	124	5 (1 was eligible for inclusion)	28 (+1)
NURSE AND MIGRATION (11/4-11/12)	34706	24825	21911	18962	14249	305										

CINHAL (11/15)																		
Nurse AND Migration AND SSA search terms (11/15)	985		897															
Nurse AND Migration search terms 11/16-11/28	21207		19172				749		577									
PsycInfo (11/30)																		
Nurse AND Migration AND SSA search terms (11/30)	849		828															
Nurse AND Migration search terms 12/01-12/03	29927		24834				19760		164									
Africa-Wide Information																		

Nurse AND Migration AND SSA search terms (12/03)	2683		2437			184	22											
Nurse AND Migration search terms(12/03)	5046		4556			241	2											
Academic Search Premier																		
Nurse AND Migration AND SSA search terms (12/03)	2370		2354			2230	76											
Nurse AND Migration search terms(12/03)	39473		38618	18516		3613	38											
WHO Global Health Library																		
Nurse AND Migration AND SSA	76						29											

search terms (12/03)																			
Nurse AND Migration search terms(12/03)	667																		
Google Scholar																			
Nurse AND Migration AND search terms (12/03)	100																		
Totals	141746																		29

Appendix III: Article Summary Template

Title	Year	Authors	Country of Study/ Country of Nurse Origin	Type of Study (Methodology)	Study Population	Issue of Focus (Objectives)	Inclusion Criteria (Y/N)	Exclusion Criteria (Y/N)	Eligible to be included in Review (Y/N)	Reason for exclusion

Appendix IV: Data Extraction Tool

Author(s), Year of Publication	Difference		Consequences of Difference		Intersectionality Issues Identified	Gender Issues Identified
	Ethnic Differences	Professional Differences	Vulnerability	Agency		
Aboderin, 2007						
Adhikari, 2014						

Appendix V: Critical Appraisal Template & Tool

Author(s)/ Year of Publication	Clear Aims (+/-)	Clear Recruitment Strategy (+/-)	Data Collection: Clear Methods (+/-)	Data Collection: Clear Format	Data Collection: saturation discussed? (+/-)	reflexivity addressed (+/-)	Ethical Approval (+/-)	Detailed description of data analysis process (+/-)	description of theme identification (+/-)	Gender addressed? (+/-)	Deviant Cases analysed (+/-)	Triangulation Efforts identified (+/-)	member checking with respondents (+/-)
Aboderin, 2007	+	+	+	+	-	-	+	+	+	-	-	-	-
Adhikari, 2014	+	+	+	+	-	-	+	+	+	-	-	+	-

Screening Questions

1. Was there a clear statement of the aims of the research?

Yes Can't tell No

HINT: Consider

- What was the goal of the research?
- Why it was thought important?
- Its relevance

2. Is a qualitative methodology appropriate?

Yes Can't tell No

HINT: Consider

- If the research seeks to interpret or illuminate the actions and/or subjective experiences of research participants
- Is qualitative research the right methodology for addressing the research goal?

Is it worth continuing?



©Critical Appraisal Skills Programme (CASP) Qualitative Research Checklist 31.05.13

2

Detailed questions

3. Was the research design appropriate to address the aims of the research?

Yes Can't tell No

HINT: Consider

- If the researcher has justified the research design (e.g. have they discussed how they decided which method to use)?

4. Was the recruitment strategy appropriate to the aims of the research?

Yes Can't tell No

HINT: Consider

- If the researcher has explained how the participants were selected
- If they explained why the participants they selected were the most appropriate to provide access to the type of knowledge sought by the study
- If there are any discussions around recruitment (e.g. why some people chose not to take part)

5. Was the data collected in a way that addressed the research issue?

Yes

Can't tell

No

HINT: Consider

- If the setting for data collection was justified
 - If it is clear how data were collected (e.g. focus group, semi-structured interview etc.)
 - If the researcher has justified the methods chosen
 - If the researcher has made the methods explicit (e.g. for interview method, is there an indication of how interviews were conducted, or did they use a topic guide)?
 - If methods were modified during the study. If so, has the researcher explained how and why?
 - If the form of data is clear (e.g. tape recordings, video material, notes etc)
 - If the researcher has discussed saturation of data
-

6. Has the relationship between researcher and participants been adequately considered?

Yes

Can't tell

No

HINT: Consider

- If the researcher critically examined their own role, potential bias and influence during
 - (a) Formulation of the research questions
 - (b) Data collection, including sample recruitment and choice of location
- How the researcher responded to events during the study and whether they considered the implications of any changes in the research design

7. Have ethical issues been taken into consideration?

Yes

Can't tell

No

HINT: Consider

- If there are sufficient details of how the research was explained to participants for the reader to assess whether ethical standards were maintained
- If the researcher has discussed issues raised by the study (e.g. issues around informed consent or confidentiality or how they have handled the effects of the study on the participants during and after the study)
- If approval has been sought from the ethics committee

8. Was the data analysis sufficiently rigorous?

Yes

Can't tell

No

HINT: Consider

- If there is an in-depth description of the analysis process
- If thematic analysis is used. If so, is it clear how the categories/themes were derived from the data?
- Whether the researcher explains how the data presented were selected from the original sample to demonstrate the analysis process
- If sufficient data are presented to support the findings
- To what extent contradictory data are taken into account
- Whether the researcher critically examined their own role, potential bias and influence during analysis and selection of data for presentation

PART B: CRITICAL LITERATURE REVIEW

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Introduction

The overall goal of any health system is to provide, protect and promote health improvement and public health (Alliance for Health Policy and Systems Research, 2012, World Health Organization, 2007). To understand this goal, health systems are depicted by two main frameworks that comprise either the elements making up the health system, or the intentions they seek to achieve (Alliance for Health Policy and Systems Research, 2012). In 2007, the World Health Organization (WHO) suggested a six building blocks structural framework for understanding health systems (World Health Organization, 2007) that embodies health system goals (Adam and de Savigny, 2012). These six blocks are service delivery; health workforce; information; medical products, vaccines and technologies; financing; and leadership and governance (World Health Organization, 2007, Alliance for Health Policy and Systems Research, 2012). The interactions and interrelationships amongst these building blocks constitute a health system and changes in one block, usually has effects in the other elements (Adam, 2014). One building block, the health workforce is the focus of this review. The interactions of these actors help shape a health system. Moreover, health systems are part of social fabric of any nation (Alliance for Health Policy and Systems Research, 2012), therefore, notions to strengthen health systems have to include analyses of social relations interplaying within the health system. Gender is one social relation that overarches health system and participates in health systems' development and/or strengthening (Morgan et al., 2016, Newman, 2014).

The second framework depicts the health system as being shaped by hardware and software (Alliance for Health Policy and Systems Research, 2012, Sheikh et al., 2014). The hardware encompasses organizational, policy, financing and legal frameworks together with health delivery requirements that assemble the health system (Sheikh et al., 2014). The software includes the norms, traditions, values, roles and processes ingrained in the health system (Alliance for Health Policy and Systems Research, 2012). Software can be tangible and in some instances intangible – for example, gender as a socio-cultural relation in health system performance (Gilson et al., 2005) is a software element. For health workers, the behaviours, attitudes, perceptions and feelings of these actors; and the relationships, communications and team atmospheres that result, are all considered part of the software and influence health system

dynamics. For example, one study showed that 40% of women in the study listed gender discrimination as first amongst 11 factors hindering their career (Carr et al., 2003). This could be indicative of how software components like social attitudes, perceptions and feelings around gender can influence hardware components like the health worker and work place dynamics in the health system. Therefore, analysing the interactions between hardware and software elements is a step towards understanding relationships and corresponding synergisms within the health system (Adam and de Savigny, 2012). Strengthening health systems includes inspired approaches by researchers to investigate actionable ways that not only alter structures for improved performance but also impress upon actors in the health system to shift norms, values, traditions, roles and procedures (Alliance for Health Policy and Systems Research, 2012).

This literature review seeks to explore gender, as a social, intersectional power relation that manifests in the health workforce (nurses). To enable this exploration, the literature review will focus on nurse migration experiences and its role in the health workforce imbalances and the potential health system consequences. The literature review starts by grounding the health workforce as a hardware element, in a global shortage crisis (Marchal and Kegels, 2003) and exploring the role of nurses in the workforce. It will also unpack the health worker migration and its impact on health systems and then will focus on nurses as health worker professional migrants. Lastly, the review will embrace gender as a social power relation software element of health systems that is cognizable in nurse migration. The overall goal of this literature review is to set the stage for developing a systematic review that harnesses the empirical work conducted on nurse migration experiences. This goal is to better understand, what, from a gender perspective, is driving, motivating, participating or halting nursing migration; and needs to be done to strengthen the health workforce in terms of their work-life balance, providing health gains and wider societal values. This understanding would overall impact on health system performance.

The Health Workforce

In health systems frameworks, an underlying understanding, appreciation and acknowledgement is that a thriving health system is people-centred (Abimbola et al., 2014) and crucial to this people-centeredness is the health worker (World Health Organization Department of Gender

Women and Health, 2010). However, there is an unrelenting global crisis of a shortage of skilled health workers (Stilwell et al., 2004, Hongoro and McPake, 2004, Salami et al., 2016, Aluttis et al., 2014a, Labonte et al., 2015). This section of the review outlines the health worker crisis and repercussions associated with this issue.

Human resources for health (HRH) (The European Observatory on Health Systems and Policies, 2011, George, 2007), covers the range of health occupations and personnel whose main focus is to deliver, maintain and progress public health (George, 2007, Morgan et al., 2016). The diverse and broad meanings of the HRH to encompass all clinical and non-clinical activities related to the improvement of health (George, 2007) suggests that outside of formally skilled nurses, physicians and dentists, human resources for health, takes into consideration the role that caregivers, part time workers and even health volunteers play in the amelioration of health (George, 2007). In this literature review, “health workers”¹³ is reserved to mean the formally skilled labor whose training, distribution and performance has tangible macro¹⁴-impacts on health system performance. On health policy agendas, the health workforce has traditionally been low-ranked (Globalization and Health Knowledge Network, 2007). However, the development of sustainable health systems should encompass an interest in the space that health workers (Stilwell et al., 2004, Salami et al., 2016) occupy within health systems. Health workers glue the health system together (Joint Learning Initiative, 2004, Newman, 2014, Aluttis et al., 2014a). The increased recognition of the adhesive nature of health workers and in particular nurses (Buchan, 2006) has inspired enhanced and focused scrutiny on the workforce’s training, distribution, performance and retention (Roome et al., 2014, Runnels et al., 2014) at both national and international levels, revealing chronic shortage problems that impact health system strengthening and resilience (Joint Learning Initiative, 2004, Globalization and Health Knowledge Network, 2007) .

Health Workforce Crisis

There is an urgent need for innovative and equitable solutions to supply and retain a global health workforce that meets the demand for health care (Labonte et al., 2015, Stilwell et al.,

¹³ The literature on health worker migration is typically limited to the professions of physicians and nurses. This is mostly because data on their movement as formal, skilled and usually registered labour is easier to monitor. Health workers in this review therefore refers to this professional cadre and when the reference is nurses, it will be explicitly stated.

¹⁴ Macro refers to national/state and global aggregate levels of impact.

2004, Salami et al., 2016). Health systems' strengthening is dependent on a balanced demand-supply of the health workforce (Labonte et al., 2006, Kirk, 2007) (Figure 1) and a shortage in health workers is indicative of an imbalance (Kingma, 2007). In 2006, the WHO revealed that there was a global shortage of about 2.4 million nurses, doctors and midwives (WHO, 2006) and the low-and-middle income (LMIC) countries incur the worst consequences of this shortage (Stilwell et al., 2004, Salami et al., 2016, Connell et al., 2007). In over fifty-seven countries the ratio of health worker to population is less than 2.5 per 1000 population– which is the 'minimum required to deliver basic health services (Aluttis et al., 2014a, Salami et al., 2016, Dovlo, 2007, WHO, 2006). When "health worker" is disaggregated to doctors and nurses, the doctor to population and nurse to population ratios further articulate this crisis. Projections of available but limited data showed that Sub-Saharan Africa (SSA) has a shortage of about 700 000 doctors and 600,000 nurses (Hongoro and McPake, 2004, Kurowski C et al., 2004). Nigeria for example, faces health and regional disparities due to the extreme shortage of nurses in the rural and northern parts of the country (Salami et al., 2016). Much of this shortage is impelled by health workers migrating from their home countries in SSA to more developed countries (Connell et al., 2007). Zimbabwe alone has over 18 000 nurses working abroad (Sanders and Chopra, 2006, Pang et al., 2002) and a third of South Africa's medical graduates move to Europe and the USA (Hongoro and McPake, 2004). South Africa alternatively takes in health professionals from other African countries (Labonte et al., 2015, Stilwell et al., 2004, Bidwell et al., 2014) to alleviate the shortage of health providers in the country. Therefore, it is substantially important to understand mechanisms like migration, that are driving health worker imbalances, to be better able to levy solutions for this crisis.

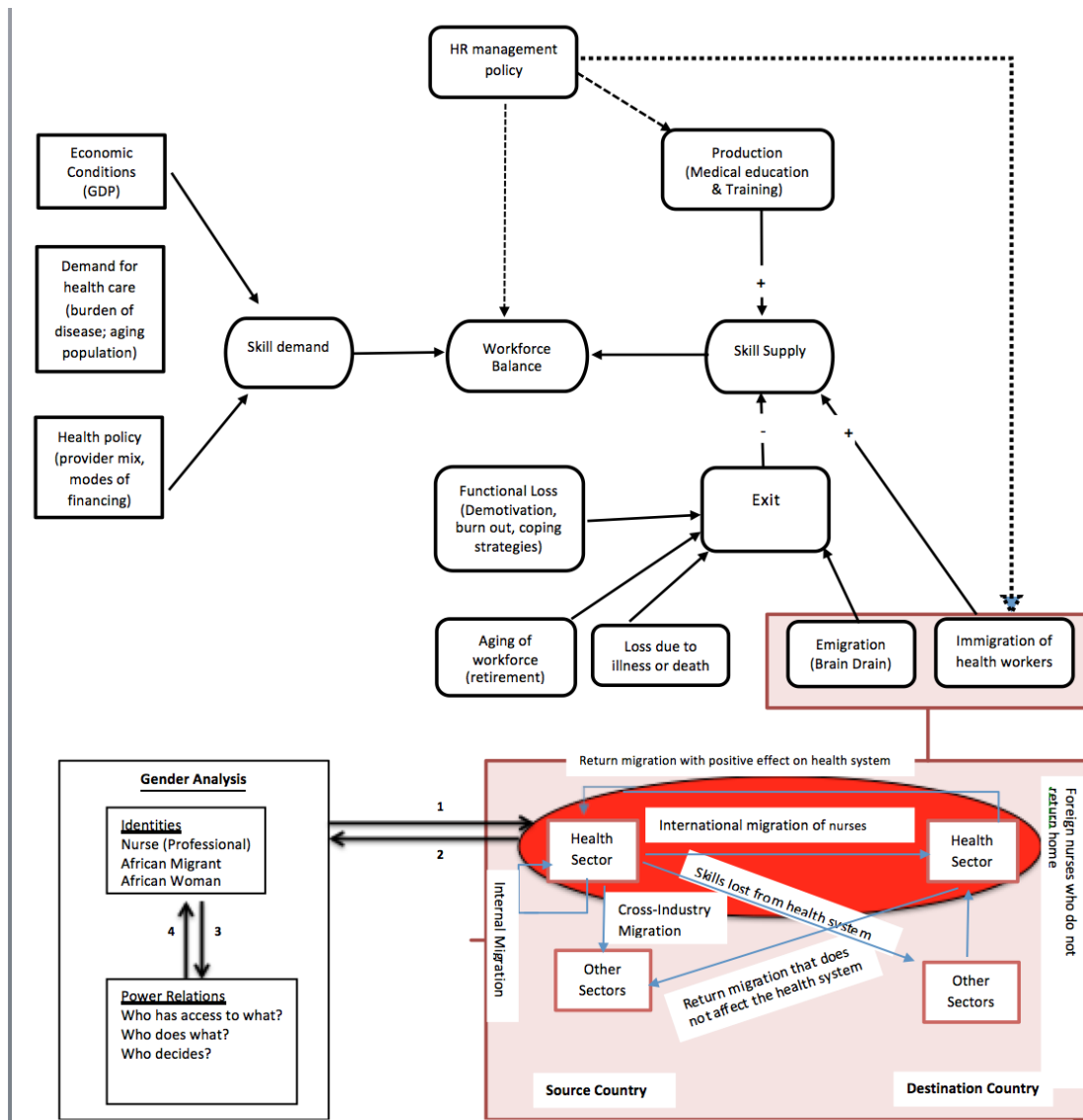


Figure 3: Health Worker Balances and Migration Pathways (Diallo, 2004, Jones et al., 2009, Zurn et al., 2004, Morgan et al., 2016). Nurse migration and its impact on health workforce imbalances (adapted from Zurn et al. 2004¹⁵, Diallo 2004¹⁶, Jones et al., 2009¹⁷, Morgan et al., 2016¹⁸). The conceptual framework presents two interacting models of gender analysis: a model of gender identities adopted from a feminist framework of intersectionality that categorizes migrating nurses into professionals, migrants and women; and a model for power relations which inquires who (migrant nurse vs local nurse) has influence over the other, based on access/control of resources, decision making abilities and labour practises.

¹⁵ ZURN, P., DAL POZ, M. R., STILWELL, B. & ADAMS, O. 2004. Imbalance in the health workforce. *Human Resources for Health*, 2, 1-12.

¹⁶ DIALLO, K. 2004. Data on the migration of health-care workers: sources, uses, and challenges. *Bull World Health Organ*, 82, 601-7.

¹⁷ JONES, A. D., BIFULCO, A. & GABE, J. 2009. Caribbean nurses migrating to the UK: a gender-focused literature review. *Int Nurs Rev*, 56, 285-90.

¹⁸ MORGAN, R., GEORGE, A., SSALI, S., HAWKINS, K., MOLYNEUX, S. & THEOBALD, S. 2016. How to do (or not to do)... gender analysis in health systems research. *Health Policy and Planning*.

Nurses in the Health Workforce

At the primary level, formal and non-formal composition of the health workforce is female-dominated (Newman, 2014). Women work as nurses, community health workers and home-carers sustaining health systems at the primary level (George, 2007). In developing countries, particularly Sub-Saharan Africa (SSA), nurses continue to play a vital role in primary health care provision (Salami et al., 2016, Buchan, 2006, Bradby, 2014) and make up 45-60% of the entire health workforce (Dovlo, 2007). In Nigeria for example, nurses with additional training, become midwives who are the most important birth attendants needed at primary care facilities (Salami et al., 2016). In regions where the shortage of nurses is extreme, there are complimentary high maternal mortality and morbidity rates (Salami et al., 2016)- evidence that nurses have an impact on health outcomes and their shortage is detrimental to a country's health performance. As shown in Figure 3, many factors participate in workforce imbalances or shortages. The supply and demand of health workers is influenced by factors including maldistribution, which impacts motivation, performance and/or burn out (Zurn et al., 2004, Zurn et al., 2010). Sufficient training, distribution, performance, and retention mechanisms (Roome et al., 2014, Runnels et al., 2014) are needed to alleviate this crisis. Part of this imbalanced distribution is due to migration when nurses move professionally from one setting to another resulting in loss/gain of nurses in each setting. The next section explores health worker migration as one of the dominant processes that is both a cause and a result of the health worker crisis (The European Observatory on Health Systems and Policies, 2011, Marchal and Kegels, 2003, Bidwell et al., 2014, Joint Learning Initiative, 2004).

Health Worker Migration

Background

Professional migration trended in the 1960's (Marchal and Kegels, 2003, Aluttis et al., 2014a) and was centred on the 'brain drain' phenomenon of scholars moving from Britain to the USA (Marchal and Kegels, 2003). During this period, between 1960 and 1975, about 27 000 professionals left the African continent and by the 1990s, at least 20 000 Africans per year were leaving the continent (Marchal and Kegels, 2003). Even then, the main concern was the loss of

highly needed workforce in the low-income countries, as they moved to more developed countries. It is thought that a large portion of professional migration is by health workers (Martineau and Decker, 2002). Highly skilled health workers (doctors, nurses and pharmacists) (Salami et al., 2016, Stilwell et al., 2004) are better able to migrate from one country to another or from rural to urban and/or public to private sector, in search of greener and better pastures. The aim is usually to further develop their professional and personal lives (Marchal and Kegels, 2003), since their skilled labor is needed across the globe (Bradby, 2014). In essence, the global shortage of health workers is considered a main pulling factor for migration of health workers as countries compete for them as a scarce resource (Freeman et al., 2012b).

Since the early-2000's, health worker migration has garnered persistent traction due to its contribution in the global shortage (Freeman et al., 2012b) and the increasingly open and free trade markets spurred by, among other things, globalization (Jones and Sherwood, 2014). Globalization enables free and easier movement of people, goods, markets and services (Aluttis et al., 2014a), which if nations cannot come up with ways of motivating health workers to stay and be productive, health workers can move on to other health systems with better motivators (Marchal and Kegels, 2003). These health systems gain from additional health workers, whilst the health workers may experience better working conditions (Marchal and Kegels, 2003). In the 1960's and 1970s', before globalization, the factors that drove health worker migration to the USA and less so to the UK, included recruitment programs that were available in the USA, as well as the familiarity of language and/or cultural ties (Martineau and Decker, 2002, Marchal and Kegels, 2003). Now, globalization is inevitable and unstoppable, which consequently also implies that migration is inevitable and unstoppable. In cases where it enables brain drain from developing countries, there is definite decrease in the quality and availability of health services (Marchal and Kegels, 2003). Health worker migration is occurring in a context of under-resourced health systems pushing health workers to seek opportunities in better resourced circumstances that pull these workers and potentially exacerbating imbalances in health workforce (Dovlo, 2007, Buchan, 2006). Most of SSA is developing countries that do not have attractive incentives to draw in new health workers to replace the ones that leave for developed countries (Globalization and Health Knowledge Network, 2007) which inevitably produces weak under-serviced health systems for the developing countries. The mechanisms driving the global shortage are complex, non-linear and interlinked to other structural, organizational and

even global phenomena. Structurally, some countries are incapable of training sufficient numbers of health workers to meet demand for health care (Dimaya et al., 2012) and organizationally high workload, inadequate reward systems and or professional stagnancy (Marchal and Kegels, 2003) can participate in driving asymmetrical health worker migration.

Nurse Migration

In the midst of the global shortage of health workers, the need for nurses has spiked in both developed countries and developing countries (Stilwell et al., 2004). This increased need has ensured that the migratory flow of nurses (Penaloza et al., 2011, George, 2007) has surpassed that of physicians (Stilwell et al., 2004, Marchal and Kegels, 2003). Nurse migration occurs both externally and internally and has always been diverse and non-linear. In SSA, nurse migration to developed regions is the highest, and yet SSA has the biggest nurse shortage (Dovlo, 2007, Salami et al., 2016).

External Migration of Nurses

External migration is the movement to relocate from one country to another. In Figure 3 this is illustrated as international migration of the nurse from the health sector of a source country to either the health sector or other sectors of a destination country. The UK is currently the highest net-gainer of external nurse migration (Marchal and Kegels, 2003, Martineau and Decker, 2002) where about twenty one percent of UK's foreign nurses are from SSA (Martineau and Decker, 2002, Marchal and Kegels, 2003, Dovlo, 2007). For SSA, international migration can be to another region of the world, usually English-speaking Europe (Dovlo, 2007) or it can be to countries within the region, like South Africa or Botswana (Salami and Nelson, 2014) perceived to have attractive pull factors. Both inter-regional and intra-regional migration from SSA to other countries has exacerbated already strained health worker shortages in the source countries (Salami and Nelson, 2014, Dovlo, 2007, Adedokun, 2013) whilst enhancing health delivery in the recipient countries. South Africa for example, loses some of her doctors and nurses to the developed world and then replaces them with doctors and nurses from other countries (Marchal and Kegels, 2003, Pang et al., 2002) that are usually worse off in health worker shortages (Stilwell et al., 2004, Labonte et al., 2015). Zambia lost over 90% of its graduating physicians in a 10 year period, to greener pastures including South Africa (Adedokun, 2013, Salami et al.,

2016) and in 2007, its nurse to population ratio was 0.22 to 1000 (Buchan and Sochalski, 2004)- a figure that is forty times less than the USA figures (World Health Organization Department of Gender Women and Health, 2010). Whilst Malawi, plagued by a dysfunctional health system where nurses could go for months without receiving a salary as a push factor, drove health workers to emigrate until the Malawian health system was near collapse (Squires and Amico, 2015). Most of SSA is currently unable to retain the already few nurses being trained and educated in the region. The glaring manifestation of the ‘brain drain’ from SSA countries to other regions covers up some beneficial blind-spot of international migration.

External migration has benefits at both the micro and macro levels. At a micro level, individuals emigrating benefit through improved economic and socio-cultural opportunities (Pang et al., 2002), and macro-level recipient health sectors benefit via influx of migrating health workers to alleviate health worker shortage. Economically, donor countries and nurse migrants’ families also benefit from remittances. Philippines being one example in national nurse and migration policies have been developed to harness the value of remittances to benefit the greater economy (Dimaya et al., 2012). However remittances do not have the same beneficial value across all source countries. For many African states, ethical and economic arguments have been made that the remittances do not match the investments made in the education and training of health workers (The European Observatory on Health Systems and Policies, 2011), such that source countries are still left distressed after health workers leave these countries (Squires and Amico, 2015). Furthermore questions around who sends the most remittances and to whom remittances are being sent have barely been explored.

There has been limited establishment of interlinking conceptual understandings and models of both the positive and negative drivers and consequences of external migration (Squires and Amico, 2015). This is in part facilitated by the lack of information on health worker migratory flow, as it is not readily available or easily collected. Donor countries like the UK have some functional variables and ways of collecting migrant health worker data (Squires and Amico, 2015, Dovlo, 2005) but source countries may not have the resources to collect such data, nor the knowledge of when this movement is actually occurring (Diallo, 2004). Lack of information compounds the development and implementation of measures that both harness the benefits of external migration for both source and recipient countries and may counteract the negative

impacts of migration (Willcox et al., 2015). To add to the limitations of understanding and measuring international migratory patterns, nurse external migration is not occurring as the only form of nurse mobility - see Figure 3. External migration occurs simultaneously with internal, within country migration as well as health workers moving to other sectors.

Internal Migration of Nurses

Internal migration refers to in-country migration and is quite common in developing countries (Marchal and Kegels, 2003). Internal migratory flow can be from rural to urban areas, primary care to hospitals, clinical to management and/or public to private sectors with NGOs occasionally attracting the most skilled health workers for their programs (Marchal and Kegels, 2003). A quantitative case study of Mozambique (Sherr et al., 2012) revealed that the vertical financing of health services via NGO agencies that perpetrated the country during and after the civil war, many providers, especially physicians, leave the public sector which is poorly funded by the government, and go work for these NGOs (Sherr et al., 2012). In Mozambique, internal migration is a bigger contributor to loss of physicians from the public sector than external migration (Sherr et al., 2012). At the health system level, internal migration is thought to not weaken the system as the NGO's that attract senior-level well trained health workers are mostly working to strengthen the public health system (Sherr et al., 2012). However, because the most qualified are being immersed into the NGO's, junior level health workers are left to manage the public sector with inadequate training. This leaves the public sector with a distorted health system in terms of leadership and governance especially since in Mozambique physicians are the most influential stakeholders in health service delivery.

The structural adjustment policies of the 1980's demanded shrinkage of public sector services for many African countries and participated in the exacerbated migratory flow from rural public sector health facilities to urban areas in search of private sector employment opportunities (Chikanda, 2005, Bradby, 2014). This flow left rural areas understaffed and resulted in rural staff being overworked and frustrated due to poor working conditions (Bradby, 2014). Frustrated and overworked health workers diminish the quality and quantity of care in rural areas. In Zimbabwe, nurses run most of the health centers in rural facilities and increasingly take on the inflated role of doctor, pharmacist, lab technician etc. which negatively increases their

workloads (Chikanda, 2005). This workload is thought to become better and better as a nurse moves from rural to district to provincial health facilities (Chikanda, 2005), therefore perpetuating emigration from rural health facilities to urban ones. In Bangladesh 14.5% of the population live in the cities and yet they have access to 35% of the country's doctors and 30% of the nurses (Zurn et al., 2004). The same situation of health personnel urban-rural geographical imbalances exists in Nicaragua's capital city Managua, which has only one third of the country's population but accesses 50% of Nicaragua's doctors and nurses (Zurn et al., 2004). The factors that drive and/or maintain these geographical imbalances are many (poor remuneration, poor motivation, dissatisfaction, access to amenities, employment opportunities, education services and/or spousal/family related) and rural-urban migration is often a decision resultant from consideration of these push-pull factors.

Push-Pull factors in Health Worker Migration

The decision to migrate is inherently a personal one but macro-level economic and social atmospheres usually influence events leading to it. The push-pull theory (Freeman et al., 2012b, Jones and Sherwood, 2014) suggests that people migrate due to different push and pull factors that are internalized, interpersonal and/or structural (Jones and Sherwood, 2014, Stilwell et al., 2004, Salami et al., 2016). Push factors occur in source countries and contribute to one's decision to move (Dovlo, 2007). LMIC countries as source countries for health workers have push factors that include unsatisfactory political, economic, social and work conditions (Awases et al., 2004, Salami et al., 2016) which participate in driving the movement of health workers out of the public sector, the health sector and/or to more developed countries (Hongoro and McPake, 2004, Stilwell et al., 2004, Marchal and Kegels, 2003, Awases et al., 2004). A study in Rwanda (Newman et al., 2011a) showed that work related violence was a threat to health workers and a survey of 395 health workers at a hospital in Nigeria found that almost 90% of the nurses experienced work-related violence (Salami et al., 2016). These types of violence contribute to poor workforce retention and can act as push factors driving health workers to emigrate to safer work environments. In many instances, health workers are underpaid and expected to work in under resourced and overburdened conditions (Salami et al., 2016, Asante et al., 2012, Joint Learning Initiative, 2004) and even more frustratingly there is little room for continued education, professional development and career progression (Joint Learning Initiative, 2004,

Awases et al., 2004). At the micro-level these frustrations result in limited individual professional fulfillment which becomes a push factor (Jones and Sherwood, 2014) to emigrate to places that potentially offer not only better professional fulfillment but social, cultural and economic benefits (Salami et al., 2016, Adalakun, 2013). The places that offer the professional fulfillment, socio-economic and cultural benefits have the pull factors. Pull factors are ones that occur in recipient countries and serve to attract and persuade health workers to leave their own countries (Dovlo, 2007). They are usually a counter-reflection of push factors and they include more formal, better-financed and functioning health systems and better career opportunities (Salami et al., 2016, George, 2007, Awases et al., 2004).

So far, the dominant discourse of the push and pull model has consistently provided aggregate explanatory framework for nurse migration but does not accommodate the individual's decision-making process (Freeman et al., 2012b). The push pull model pays less attention to and potentially undermines familial, social and gender conditions amalgamating in nurse migration (Squires and Amico, 2015). There is a possibility that there since nursing and migration are female dominated (The European Observatory on Health Systems and Policies, 2011, Pedraza, 1991, Raghuram, 2009) then there are differential implications not considered by the push-pull model. When nurses migrate the causes and consequences of this movement are potentially engendered, specifically due to the notion that the sex-disaggregation of this movement is skewed in favour of more female health workers-nurses moving. The limited attention on skew, may subsume nurse migration as being gender-neutral or gender-blind (World Health Organization Department of Gender Women and Health, 2010). The man-woman dyad in societies construes gender roles and expectations at all levels, micro to macro, of the health system as the health system itself is embedded in social functions (Alliance for Health Policy and Systems Research, 2012). Establishing the inter-linkages between these social-cultural conditions and already existing conceptual frameworks for migration could provide a foundation for better informed and context grounded viewership of nurse migration in the global health worker crisis. In the global attempts to understand the nurse migration phenomenon and its impacts on workforce shortages, there should be the essential understanding that nursing is and has always been a female dominated profession. There are intricate constraints and challenges but also opportunities and benefits to the fact that it is mostly female health workers migrating from their homes into other professional, economic and social spaces. The nature of this

migration is varied, dynamic and potentially driven by gender -as a social construct differentiating men and women, in interaction with a variety of other political and/or socio-economic factors that have remained invisible and may be unexplored. There is a need for better understanding into the potentially gendered perceptions, motivations and experiences that empower nurse migration.

Gender and Nurse Migration in Sub-Saharan Africa

Background

In the 21st century nurse migration has been increasingly investigated (Freeman et al., 2012b). Understanding this phenomenon should include systematically investigating its interaction with the nursing shortage crisis as well as the underpinning notion that the nursing workforce is female dominated (Dussault and Dubois, 2003, The European Observatory on Health Systems and Policies, 2011). Gender is a relational social construct that at its foundation, differentiates men from women (Morgan et al., 2016, World Health Organization Department of Gender Women and Health, 2010). Exploring the relations and power dynamics of gender may enable a more nuanced understanding of migration and its contribution and impact in health worker shortage. From a power standpoint, gender determines the location, positions and experiences of women and men as health workers (World Health Organization Department of Gender Women and Health, 2010, George, 2007, Newman, 2014). The following section explores the gender phenomenon in firstly, the health sector and system and then more specifically in nurse migration. In the process, a gender analytical framework is established as a tool for situating migrating nurses' professional, social and/or cultural experiences.

Gender in the Health Workforce

Gender analysis in health workforce research is sparse. This is in part due to a lack of clarity on not only the definitions of gender (Hammarstrom et al., 2014), if any, of gender in the health workforce crises (Globalization and Health Knowledge Network, 2007). There is a general silence on sex-disaggregation in the health workforce literature (Newman, 2014, Runnels et al., 2014) which could inappropriately assume that health worker migration is gender neutral. Using a gender analysis framework to unpack human resources for health inquiries, requires a

fundamental understanding of the gender phenomenon itself and also a conceptual understanding of gender inequalities within the health workforce (Newman, 2014). Gender is the social behaviours and characteristics that are learned and associated with being a male or a female in a society (Newman, 2014, George, 2007, Morgan et al., 2016). It differs from sex, which is the unchanging biological and physiological make-up of males and females (Sen and Östlin, 2008, Phillips, 2005). Unlike sex, gender is a fluid, malleable and non-stagnant notion that changes in response and is related to context and circumstances (Newman, 2014, Morgan et al., 2016). The fluidity of gender adds a layer of complexity in critically thinking about the ways in which gender and the associated inequalities manifests within the day-to-day lives of people, institutions and organizations.

Gender influences susceptibility to ill-health, access to health-seeking resources (Sen and Östlin, 2008, Phillips, 2005) ability to make decisions about health (Percival et al., 2014) and also the how, who and what constitutes the health workforce (Percival et al., 2014, Morgan et al., 2016). In a health system, a health worker simultaneously occupies both gender and health worker roles where female health workers are usually conflated with femininity and men are conflated with masculinity (Eagly and Karau, 2002), illuminating the relationality of gender. Eagly and Karau's *role congruency theory* (Eagly and Karau, 2002, Kusterer, 2008) explains that deviating from these connotations leaves women vulnerable to prejudiced disadvantage whereby on one hand they are negatively evaluated if they are too 'feminine' in their work or leadership style (Kusterer, 2008, Eagly and Karau, 2002) and are considered to be doing their gender vs. doing leadership. On the other hand, if they adopt agentic behaviour they are considered too 'masculine' and are branded as 'trying to be a man' (Eagly and Karau, 2002, Hill et al., 2015). In both circumstances, these evaluations lead to prejudices that can distinctly and inequitably impact on the career choices and decisions of men and women and how they are perceived in the workplace as well as in their societies. In the context of migration, source and receiving country societies have social and cultural behaviours and perceptions that are gender-influenced. This can have socio-cultural, professional costs and benefits for the migrating nurse.

When social and cultural behaviours and perceptions result in unfair and unequal socio-economic and political or cultural opportunities and impacts between different sexes, it is known as gender discrimination. Gender discrimination is a version of sexism and refers to prescribed

sanctions and isolations based on gender norms and behaviours, which inhibit the enjoyment of full human rights (Newman, 2014). In the health workforce, discrimination can be explicit when for instance, policies and guidelines are gender-neutral or gender-blind and do not account for the different needs and capacities of male and female workers (World Health Organization Department of Gender Women and Health, 2010). Gender discrimination can also be subtle, invisible and normative (Newman et al., 2011b, Newman, 2014) due to the socialized nature of gender (World Health Organization Department of Gender Women and Health, 2010). Subtlety can be in the form of promotions systematically taking longer for one sex over the other. This normativity sometimes makes discrimination invisible (Newman, 2014, George, 2007). In these instances of subtlety and implicitness, disabling the pervasive and powerful gender discrimination becomes challenging as it is precipitated by unconscious bias.

Gender bias is sometimes used interchangeably with discrimination (Newman, 2014). It refers to prejudices for or against a group or individual that sometimes spills into unfair treatments that become discrimination (Newman, 2014). In the context of health workforce, bias influences the value and recognition esteemed to health work - which has both professional and personal consequences (George, 2007). Gender bias adds to unconscious assumptions that may ignore the knowledge and experience capital of individuals and results in women for example, occupying most of the career spaces that require less education, are lowly paid, and have little to no job security or chances for career progression (Newman, 2014, Zhuge et al., 2011). Even in spaces where women and men are localized in the same professional space, women are found to be earning less than their male counterparts (Zhuge et al., 2011) and this can be attributed to gender bias. One of the push factors for nurses' migration is the lack of professional opportunities for continued growth, education and career progression (Awases et al., 2004). Historically, female-dominated nursing has been considered not only secondary to male-dominated medicine (World Health Organization Department of Gender Women and Health, 2010), but also a 'care' profession, which feeds into women's stereotyped 'care-role' within societies (George, 2007). It is possible that gender bias precludes the development of policies and opportunities for nurses' professional growth that understand the issues specific to women as nurses. This because not only are nurses 'doing care' as stereotypically expected of them as women but an underrepresentation of women in managerial and decision-making positions (Okoshi et al.,

2014) may play a role in the sustenance of gender-blind policies that feed the “care” stereotype of nurses as women.

Stereotype, in gender, is a social consensus that normalizes and generalizes ideas distinguishing men from women, including their behaviours, skill-sets, abilities and attitudes (Newman, 2014, Johnson et al., 2008). Stereotypes shape the norms and values that are gender enactments (Eagly and Karau, 2002, Kusterer, 2008). Gender-typing perceives women as more ‘nurturing’ - communal, warm, good-natured understanding and caring whilst men are believed to be ‘agentic’ - competent, independent, competitive and confident (Kusterer, 2008, Cuadrado et al., 2015, Ryan et al., 2015). A study in Sweden (Kusterer, 2008) investigated stereotypes for men and female managers and found that the ‘nurturing’ feminine characteristics were considered requirements of good management but yet the norm of ‘men as managers’ continued to persist (Kusterer, 2008) making it difficult for female managers to thrive in their work environments. These gender-typing perceptions can manifest in the health systems and health work force to impact not only career trajectories but may act as push-pull factors in migratory flow of either female or male health workers.

Underlying the notions of gender bias, discrimination and stereotypes is power (Morgan et al., 2016), relationality (Jones et al., 2009) and intersectionality (Sen and Östlin, 2008). Gender is a power relational concept (Morgan et al., 2016) where social gender norms ascribed to women may constrain, limit and minimize their capacities and capabilities (George, 2007) in the work space, to a ‘caring’ role. Gender as power relational also interacts and intersects with concepts of race, ethnicity, age, socio-economic status (Squires and Amico, 2015, Jones et al., 2009). In a Canadian study, Veenstra and colleagues illustrated how power dimensions can be better visualized and made transparent when more nuanced intersectional dimensions are investigated (Veenstra, 2011). The authors unpacked how at the intersection of being male or female there also resided race, class and socio-economic status. Another study found that within the British National Health Service, Black African nurses faced racism, discrimination and unequal opportunities (Likupe, 2015). By incorporating race into her study, Likupe, 2015 reitified the intersectionality of race and gender and how that can work to disadvantage migrant nurses.

Neglecting power relational and intersectional nuances can serve to undermine, dilute and sometimes erase the unsupported contributions that women and men differentially make to sustain health systems. It may ignore structural violence (Farmer, 1996)'s-both explicit and implicit- that women or men could be facing purely based on the gender roles ascribed to them by sex within health systems. For example, there may be no hospital support systems for migrating nurses who are mothers to take maternal leave based on the notion that they are not citizens of a particular country. This type of neglect may not take into account the differential reasons and experiences of health workers' migration. This neglect ignores a potential space of harnessing the different power and skill that female and male health workers contribute to alleviate health problems in both source countries and receiving countries. In the case of the migrating nurse, understanding the gender links between the individual nurse and the wider socio-politico institutions that shape the nurse's motivations and goals, has the potential for informing policies and guidelines that maneuver nurse migration in the direction of progressive health service delivery.

Therefore, gender has potential repercussions on career spaces, trajectories and even when/or how male and female health workers migrate. Gender power relations and intersectionality can be used as lens through which health systems' research can look at the nature of migrating male and female health workers' lives and experiences. Investigating gender power relations, cultural specificity and different forms of agency in the migratory flow of nurses, may influence the understanding of the health worker shortage crisis, including where and how men and women migrate and end up in their professional, social and cultural trajectories.

Gender analysis of Nurse Migration

In migration for work, nurses are migrating as mostly women who are skilled and formal labour (Squires and Amico, 2015, George, 2007, Jones et al., 2009). This mobility is influenced by expectations of improved socio-economic progress through increased exposure and knowledge base and remittances and economic investment for them and their families in their home countries (Jones et al., 2009, Boldy et al., 2013, Stilwell et al., 2004). An integrative review on remittances (Squires and Amico, 2015) deduced that remittances and financial incentives were secondary motivators for female nurses migration and the primary motivators were attuned to

familial goals like improving children's education, whilst male migrators were motivated to build homes in their home-country (Squires and Amico, 2015). In societal, political and institutional systems where women are, from a socio-economic standpoint, usually structurally disadvantaged (George, 2007), migration is changing the shape of these systems, motivating for a gender analysis of this type of movement (Jones et al., 2009, Newman, 2014).

Gender perspectives that have been used to examine migration include Global Care Chain (GCC) theory (Dumont et al., 2007, Wojczewski et al., 2015a) that addresses the power dimensions that manifest during the movement of female health workers from developing countries to developed countries (Dumont et al., 2007). GCC describes the cascade of care work when women migrate as lead migrants (LM) or primary financial providers and leave their families behind to be cared for by other women. In nurse migration literature, GCC and has increasingly been termed Global Nurse Care Chain (GNCC) (Prescott and Nichter, 2014, George, 2007). Some work including gender perspectives into nurse migration primary research has been done, but there is still a dearth of gender-axial systematic reviews to gather and synthesize these already existing empirical works.

A gender analysis approach could alleviate the dearth of effort being made to investigate the female domination and subsequent gendered implications and consequences of nurses' migration (George, 2007, Stilwell et al., 2004). Analytical approaches that have a gender focus are limited in health systems research (Morgan et al., 2016) and systematic reviews (Runnels et al., 2014). Morgan et al. 2016, modelled a gender analytical approach that may be useful in health systems research (Morgan et al., 2016). For Morgan and colleagues (Morgan et al., 2016), a gender analysis approach unpacks the interactions of gender with other identities like class, race, age, ethnicity etc. to confront the structural, social, economic, cultural and/or political locations that such interactions differentially place men and women. Their framework defines power relations in gender as differential 1) access to resources 2) decision making abilities and 3) division of labor. This type of approach has not been undertaken in both research to nurse migration in the SSA setting as well as systematic reviews research (Runnels et al., 2014). Therefore, as shown in Figure 3, Morgan and colleagues' (Morgan et al., 2016) gender power relation structure is the basis for exploring gender power relations in the systematic review on nurse migration experiences.

In 2009, Jones & colleagues conducted a gender-focused literature review of nurse migration from the Caribbean to the UK (Jones et al., 2009). This review was non-systematic and the Caribbean context differs from SSA. Therefore, it is worth exploring, and necessary to understand the role of gender and the power and intersectional relationships that contribute to nurse migrations sourced from SSA. Jones and colleagues enabled a gender approach by using a feminist interpretative framework of intersectionality as the analytical axis, where the identities of nurses as labor, migrants and women (Figure 3) were the tools for examining nurse migration from the Caribbean to the UK (Jones et al., 2009). Intersectionality addresses interconnectedness of nurses' identities and the multi-relationships in systems of oppression (Yuval-Davis, 2006). In nurses' contexts their identity as a woman might cross paths with their identity as an African and may result in exacerbated social and professional costs in a new work environment or source country. Intersectionality therefore challenges the researcher to address both relationships amongst diverse structures and systems in a society (Yuval-Davis, 2006, Kerner, 2016, Jones et al., 2009) and the impacts of these nodal connections on the professional, social, familial lives of migrating nurses- who are mostly women.

Methodologically, the lack of attention paid to gender in systematic reviews (Runnels et al., 2014) undermines the influence that systematic reviews can have in determining interventions that reduce inequities within the health workforce and population health overall. It is imperative that gender analyses be conducted in the confrontation of nurse migration, if a viable and productive human resources for health building block, is going to sustain health systems. The reluctance to conduct gender analyses in health research has been in part, due to the challenging nature of this type of analyses (Runnels et al., 2014, Morgan et al., 2016). Attempts at gender analysis in health workforce research has been mostly limited to sex-disaggregation without further explanation for why there are similarities or differences by sex (George, 2007). Okoshi *et al.* 2014 investigated gender inequalities in career advancement of female academic surgeons in Japan (Okoshi et al., 2014). Their investigations were limited to descriptive presentations of the differential percentages of Japanese male and female surgeons and their career status, without further elucidating on why there are fewer female full time professors or on tenure track for example (Okoshi et al., 2014). Solutions to such issues become difficult to conjure and achieve without understanding why these numbers differ inequitably. In other works, gender analysis is taken to mean 'women's interests' in ways that may dilute and/or erase the experiences of men

or serve as critique of men's norms (Hankivsky, 2012, Hammarstrom et al., 2014) when gender is a co-production by both men and women (World Health Organization Department of Gender Women and Health, 2010) and other gendered self-representations.

A robust gender analysis encompasses relational theory by investigating the multi-dimensionality of the interpersonal, intrapersonal, and institutional and society level spaces that gender occupies (Hankivsky, 2012, Hammarstrom et al., 2014). Paying attention to these gender-sex constructions and interactions forms a stronger foundation for impactful additions to the debates around health worker shortage and the role of migration in this crisis. Currently there is no overarching review that inserts a gender power relational and intersectional analytical framework as a way of consolidating the evidence base on the migration of nurses from Sub-Saharan Africa. The feminist intersectional approach has historically focused on the inequalities amongst different groups of women and the power relational approach encompass the power relations and interactions amongst these relations (Yuval-Davis, 2006, Kerner, 2016). The systematic review grounded in this literature review uses a gender analytical axis (Figure 3) that combines both the feminist interpretative framework of intersectionality and power relation approaches to explore explicit and implicit gendered migration experiences of nurses from SSA.

Conclusion

There is substantial evidence and reviews on health worker migration at a global level, but also solely focused on SSA. Most of this research focuses on the shortage of health workers in SSA, and how migration and the brain drain is compounding this shortage while also describing the push, pull, stick' and 'move' factors driving migration (Marchal and Kegels, 2003, Jones and Sherwood, 2014). However, the implications of amalgamating the notions that the migrant nurse health workforce in SSA is female-dominated together with considering that some migratory driving factors (workplace violence) are gendered, has not been a research or analytical focus of health systems research. Therefore a further review of the nurse migration literature is useful and necessary to reveal, tease out and make transparent the gendered nature of nurse migration phenomenon as a foundation for future empirical work that is focused on the gendered factors driving health worker migration

A systematic review that inserts gender frameworks and analysis questions into the nurse, migration and human resource for health literature focusing on Sub-Saharan Africa synthesizes the evidence on the migrating nurses' experiences and needs. This kind of review has the potential to add to the debate on gender and the health workforce. This review is likely to be an informative way of enhancing the policies, interventions and programs to address the current health worker crisis, which is possibly gender-influenced, by setting a foundation for tangible evidence on how best to approach and develop a global health workforce that meets population needs.

References

- ABIMBOLA, S., NEGIN, J., JAN, S. & MARTINIUK, A. 2014. Towards people-centred health systems: a multi-level framework for analysing primary health care governance in low- and middle-income countries. *Health Policy Plan*, 29 Suppl 2, ii29-39.
- ADAM, T. 2014. Advancing the application of systems thinking in health. *Health Res Policy Syst*, 12, 50.
- ADAM, T. & DE SAVIGNY, D. 2012. Systems thinking for strengthening health systems in LMICs: need for a paradigm shift. *Health Policy and Planning*, 27, iv1-iv3.
- ADELAKUN, F. E. 2013. *The journey of foreign educated nurses integrating into the American health care workforce*. Doctorate, Augsburg College.
- ALLIANCE FOR HEALTH POLICY AND SYSTEMS RESEARCH 2012. *Health Policy and systems research: A Methodology Reader*, Geneva, Switzerland, World Health Organization.
- ALUTTIS, C., BISHAW, T. & FRANK, M. W. 2014. The workforce for health in a globalized context – global shortages and international migration. *Global Health Action*, 7, 10.3402/gha.v7.23611.
- ASANTE, A., ROBERTS, G. & HALL, J. 2012. A review of health leadership and management capacity in the Solomon Islands. *Pac Health Dialog*, 18, 166-77.
- AWASES, M., GBARY, A., NYONI, J. & CHATORA, A. 2004. Migration of Health Professionals in Six Countries: A Synthesis Report. Brazzaville: World Health Organization WHO-AFRO DHS
- BIDWELL, P., LAXMIKANTH, P., BLACKLOCK, C., HAYWARD, G., WILLCOX, M., PEERSMAN, W., MOOSA, S. & MANT, D. 2014. Security and skills: the two key issues in health worker migration. *Glob Health Action*, 7, 24194.
- BOLDY, D., DELLA, P., MICHAEL, R., JONES, M. & GOWER, S. 2013. Attributes for effective nurse management within the health services of Western Australia, Singapore and Tanzania. *Aust Health Rev*, 37, 268-74.
- BRADBY, H. 2014. International medical migration: a critical conceptual review of the global movements of doctors and nurses. *Health*, 18, 580-96.
- BUCHAN, J. 2006. The impact of global nursing migration on health services delivery. *Policy Polit Nurs Pract*, 7, 16S-25S.

- BUCHAN, J. & SOCHALSKI, J. 2004. The migration of nurses: trends and policies. *Bull World Health Organ*, 82, 587-94.
- CARR, P. L., SZALACHA, L., BARNETT, R., CASWELL, C. & INUI, T. 2003. A "ton of feathers": gender discrimination in academic medical careers and how to manage it. *J Womens Health (Larchmt)*, 12, 1009-18.
- CHIKANDA, A. 2005. Nurse migration from Zimbabwe: analysis of recent trends and impacts. *Nurs Inq*, 12, 162-74.
- CONNELL, J., ZURN, P., STILWELL, B., AWASES, M. & BRAICHET, J. M. 2007. Sub-Saharan Africa: beyond the health worker migration crisis? *Soc Sci Med*, 64, 1876-91.
- CUADRADO, I., GARCÍA-AEL, C. & MOLERO, F. 2015. Gender-typing of leadership: Evaluations of real and ideal managers. *Scandinavian Journal of Psychology*, 56, 236-244.
- DIALLO, K. 2004. Data on the migration of health-care workers: sources, uses, and challenges. *Bull World Health Organ*, 82, 601-7.
- DIMAYA, R. M., MCEWEN, M. K., CURRY, L. A. & BRADLEY, E. H. 2012. Managing health worker migration: a qualitative study of the Philippine response to nurse brain drain. *Hum Resour Health*, 10, 47.
- DOVLO, D. 2005. Wastage in the health workforce: some perspectives from African countries. *Hum Resour Health*, 3, 6.
- DOVLO, D. 2007. Migration of nurses from sub-Saharan Africa: a review of issues and challenges. *Health Serv Res*, 42, 1373-88.
- DUMONT, J.-C., MARTIN, J. & SPIELVOGEL, G. 2007. Women on the Move: The Neglected Gender Dimension of the Brain Drain. Germany: Institute for the Study of Labor (IZA).
- DUSSAULT, G. & DUBOIS, C.-A. 2003. Human resources for health policies: a critical component in health policies. *Human Resources for Health*, 1, 1-1.
- EAGLY, A. H. & KARAU, S. J. 2002. Role congruity theory of prejudice toward female leaders. *Psychol Rev*, 109, 573-98.
- FARMER, P. 1996. On Suffering and Structural Violence: A View from Below. *Daedalus*, 125, 261-283.
- FREEMAN, M., BAUMANN, A., BLYTHE, J., FISHER, A. & AKHTAR-DANESH, N. 2012. Migration: a concept analysis from a nursing perspective.
- GEORGE, A. 2007. Human resources for health: a gender analysis. Kochi, India: Women and Gender Equity Knowledge Network.
- GILSON, L., PALMER, N. & SCHNEIDER, H. 2005. Trust and health worker performance: exploring a conceptual framework using South African evidence. *Soc Sci Med*, 61, 1418-29.
- GLOBALIZATION AND HEALTH KNOWLEDGE NETWORK 2007. Globalization and Health Worker Crisis. In: PACKER, C., LABONTE, R. & SPITZER, D. (eds.) *WHO Commission on Social Determinants of Health*. Ottawa: University of Ottawa.
- HAMMARSTROM, A., JOHANSSON, K., ANNANDALE, E., AHLGREN, C., ALEX, L., CHRISTIANSON, M., ELWER, S., ERIKSSON, C., FJELLMAN-WIKLUND, A., GILENSTAM, K., GUSTAFSSON, P. E., HARRYSON, L., LEHTI, A., STENBERG, G. & VERDONK, P. 2014. Central gender theoretical concepts in health research: the state of the art. *J Epidemiol Community Health*, 68, 185-90.

- HANKIVSKY, O. 2012. Women's health, men's health, and gender and health: Implications of intersectionality. *Social Science & Medicine*, 74, 1712-1720.
- HILL, E., SOLOMON, Y., DORNAN, T. & STALMEIJER, R. 2015. 'You become a man in a man's world': is there discursive space for women in surgery? *Med Educ*, 49, 1207-18.
- HONGORO, C. & MCPAKE, B. 2004. How to bridge the gap in human resources for health. *Lancet*, 364, 1451-6.
- JOHNSON, S. K., MURPHY, S. E., ZEWDIE, S. & REICHARD, R. J. 2008. The strong, sensitive type: Effects of gender stereotypes and leadership prototypes on the evaluation of male and female leaders. *Organizational Behavior and Human Decision Processes*, 106, 39-60.
- JOINT LEARNING INITIATIVE 2004. Human Resources for Health- Overcoming the Crisis. Boston: Harvard University.
- JONES, A. D., BIFULCO, A. & GABE, J. 2009. Caribbean nurses migrating to the UK: a gender-focused literature review. *Int Nurs Rev*, 56, 285-90.
- JONES, C. B. & SHERWOOD, G. 2014. The globalization of the nursing workforce: Pulling the pieces together. *Nursing Outlook*, 62, 59-63.
- KERNER, I. 2016. Relations of difference: Power and inequality in intersectional and postcolonial feminist theories. *Current Sociology*.
- KINGMA, M. 2007. Nurses on the move: a global overview. *Health Serv Res*, 42, 1281-98.
- KIRK, H. 2007. Towards a global nursing workforce: the 'brain circulation'. *Nursing Management - UK*, 13, 26-30.
- KUROWSKI C, WYSS K, ABDULLA S, YEMADJI ND & A, M. 2004. Human resources for health: requirements and availability in the context of scaling up priority interventions in low-income countries. Case studies from Tanzania and Chad. London: London School of Hygiene and Tropical Medicine, 2004.
- KUSTERER, H. L. 2008. Exploring the gender typing of management characteristics in an egalitarian context. *Scand J Psychol*, 49, 549-57.
- LABONTE, R., PACKER, C. & KLASSEN, N. 2006. Managing health professional migration from sub-Saharan Africa to Canada: a stakeholder inquiry into policy options. *Hum Resour Health*, 4, 22.
- LABONTE, R., SANDERS, D., MATHOLE, T., CRUSH, J., CHIKANDA, A., DAMBISYA, Y., RUNNELS, V., PACKER, C., MACKENZIE, A., MURPHY, G. T. & BOURGEAULT, I. L. 2015. Health worker migration from South Africa: causes, consequences and policy responses. *Hum Resour Health*, 13, 92.
- LIKUPE, G. 2015. Experiences of African nurses and the perception of their managers in the NHS. *J Nurs Manag*, 23, 231-41.
- MARCHAL, B. & KEGELS, G. 2003. Health workforce imbalances in times of globalization: brain drain or professional mobility? *Int J Health Plann Manage*, 18 Suppl 1, S89-101.
- MARTINEAU, T. & DECKER, K. 2002. Briefing Note on International Migration of Health Professionals: Leveling the Playing Field for Developing Country Health Systems. Liverpool: Liverpool School of Tropical Medicine
- MORGAN, R., GEORGE, A., SSALI, S., HAWKINS, K., MOLYNEUX, S. & THEOBALD, S. 2016. How to do (or not to do)... gender analysis in health systems research. *Health Policy and Planning*.

- NEWMAN, C. 2014. Time to address gender discrimination and inequality in the health workforce. *Hum Resour Health*, 12, 25.
- NEWMAN, C. J., DE VRIES, D. H., D'ARC KANAKUZE, J. & NGENDAHIMANA, G. 2011a. Workplace violence and gender discrimination in Rwanda's health workforce: Increasing safety and gender equality. *Hum Resour Health*, 9, 19.
- NEWMAN, C. J., FOGARTY, L., MAKORAE, L. N. & REAVELY, E. 2011b. Occupational segregation, gender essentialism and male primacy as major barriers to equity in HIV/AIDS caregiving: Findings from Lesotho. *International Journal for Equity in Health*, 10, 24-24.
- OKOSHI, K., NOMURA, K., FUKAMI, K., TOMIZAWA, Y., KOBAYASHI, K., KINOSHITA, K. & SAKAI, Y. 2014. Gender inequality in career advancement for females in Japanese academic surgery. *Tohoku J Exp Med*, 234, 221-7.
- PANG, T., LANSANG, M. A. & HAINES, A. 2002. Brain drain and health professionals. *BMJ*, 324, 499-500.
- PEDRAZA, S. 1991. Women and Migration: The Social Consequences of Gender. *Annual Review of Sociology*, 17, 303-325.
- PENALOZA, B., PANTOJA, T., BASTIAS, G., HERRERA, C. & RADA, G. 2011. Interventions to reduce emigration of health care professionals from low- and middle-income countries. *Cochrane Database Syst Rev*, 12, CD007673.
- PERCIVAL, V., RICHARDS, E., MACLEAN, T. & THEOBALD, S. 2014. Health systems and gender in post-conflict contexts: building back better? *Conflict and Health*, 8, 19.
- PHILLIPS, S. P. 2005. Defining and measuring gender: A social determinant of health whose time has come. *International Journal for Equity in Health*, 4, 11-11.
- PRESCOTT, M. & NICHTER, M. 2014. Transnational nurse migration: future directions for medical anthropological research. *Soc Sci Med*, 107, 113-23.
- RAGHURAM, P. 2009. Situating women in the brain drain discourse: discursive challenges and opportunities. In: STALFORD, H., CURRIE, S. & VELLUTI, S. (eds.) *Gender and migration in 21st century Europe*. Aldershot: Ashgate.
- ROOME, E., RAVEN, J. & MARTINEAU, T. 2014. Human resource management in post-conflict health systems: review of research and knowledge gaps. *Confl Health*, 8, 18.
- RUNNELS, V., TUDIVER, S., DOULL, M. & BOSCOE, M. 2014. The challenges of including sex/gender analysis in systematic reviews: a qualitative survey. *Systematic Reviews*, 3, 1-10.
- RYAN, M. K., HASLAM, S. A., MORGENROTH, T., RINK, F., STOKER, J. & PETERS, K. 2015. Getting on top of the glass cliff: Reviewing a decade of evidence, explanations, and impact. *The Leadership Quarterly*.
- SALAMI, B., DADA, F. O. & ADELAKUN, F. E. 2016. Human Resources for Health Challenges in Nigeria and Nurse Migration. *Policy, Politics, & Nursing Practice*.
- SALAMI, B. & NELSON, S. 2014. The downward occupational mobility of internationally educated nurses to domestic workers. *Nurs Inq*, 21, 153-61.
- SANDERS, D. & CHOPRA, M. 2006. Key Challenges to Achieving Health for All in an Inequitable Society: The Case of South Africa. *American Journal of Public Health*, 96, 73-78.
- SEN, G. & ÖSTLIN, P. 2008. Gender inequity in health: why it exists and how we can change it. *Global Public Health*, 3, 1-12.

- SHEIKH, K., GEORGE, A. & GILSON, L. 2014. People-centred science: strengthening the practice of health policy and systems research. *Health Research Policy and Systems*, 12, 19.
- SHERR, K., MUSSA, A., CHILUNDO, B., GIMBEL, S., PFEIFFER, J., HAGOPIAN, A. & GLOYD, S. 2012. Brain drain and health workforce distortions in Mozambique. *PLoS One*, 7, e35840.
- SQUIRES, A. & AMICO, A. 2015. An integrative review of the role of remittances in international nurse migration. *Nurs Res Rev*, 5, 1-12.
- STILWELL, B., DIALLO, K., ZURN, P., VUJICIC, M., ADAMS, O. & DAL POZ, M. 2004. Migration of health-care workers from developing countries: strategic approaches to its management. *Bull World Health Organ*, 82, 595-600.
- THE EUROPEAN OBSERVATORY ON HEALTH SYSTEMS AND POLICIES 2011. Health Professional Mobility and Health Systems: Evidence from 17 European countries. In: WISMAR, M., MAIER, C. B., GLINOS, I. A., DUSSAULT, G. & FIGUERAS, J. (eds.). Denmark: WHO.
- VEENSTRA, G. 2011. Race, gender, class, and sexual orientation: intersecting axes of inequality and self-rated health in Canada. *International Journal for Equity in Health*, 10, 1-11.
- WHO 2006. Health Workers: A global Profile. Working Together for Health. *World Health Report*. Geneva: World Health Organization.
- WILLCOX, M. L., PEERSMAN, W., DAOU, P., DIAKITE, C., BAJUNIRWE, F., MUBANGIZI, V., MAHMOUD, E. H., MOOSA, S., PHALADZE, N., NKOMAZANA, O., KHOGALI, M., DIALLO, D., DE MAESENEER, J. & MANT, D. 2015. Human resources for primary health care in sub-Saharan Africa: progress or stagnation? *Hum Resour Health*, 13, 76.
- WOJCZEWSKI, S., PENTZ, S., BLACKLOCK, C., HOFFMANN, K., PEERSMAN, W., NKOMAZANA, O. & KUTALEK, R. 2015. African Female Physicians and Nurses in the Global Care Chain: Qualitative Explorations from Five Destination Countries. *PLoS One*, 10, e0129464.
- WORLD HEALTH ORGANIZATION 2007. Everybody's business: strengthening health systems to improve health outcomes: WHO's framework for action. Geneva: World Health Organization.
- WORLD HEALTH ORGANIZATION DEPARTMENT OF GENDER WOMEN AND HEALTH 2010. Gender, women and primary health care renewal. *Primary Health Care*. Geneva: WHO.
- YUVAL-DAVIS, N. 2006. Intersectionality and Feminist Politics. *European Journal of Women's Studies*, 13, 193-209.
- ZHUGE, Y., KAUFMAN, J., SIMEONE, D. M., CHEN, H. & VELAZQUEZ, O. C. 2011. Is there still a glass ceiling for women in academic surgery? *Ann Surg*, 253, 637-43.
- ZURN, P., CODJIA, L., SALL, F. L. & BRAICHET, J. 2010. How to recruit and retain health workers in underserved areas: the Senegalese experience. *Bulletin of the World Health Organization*, 88, 386-389.
- ZURN, P., DAL POZ, M. R., STILWELL, B. & ADAMS, O. 2004. Imbalance in the health workforce. *Human Resources for Health*, 2, 1-12.

PART C: JOURNAL ARTICLE
Selected Journal: Human Resources for Health

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Gender Analysis: Sub-Saharan African Nurses' migration experiences – a systematic review

Constancia Mavodza*

Abstract

Background: Nurses are mostly women and make up the majority of the health workforce. Their migration from Sub Saharan Africa (SSA) increases the nurse shortage in the region and further constraints the already struggling health systems. Despite the potential role of gender as an influential component of migration trajectories, there has been little research done to investigate gender in the context of migration of SSA nurses. This review aims to identify, describe, and summarize SSA nurses' migration experiences by assessing the influence of gender on these experiences.

Methods: Two search processes were conducted in each of eight electronic databases to extract full text, English only articles published between 1995 and 2016. These articles had to meet a set of inclusion/exclusion criteria and report on the international migration experiences of nurses originating from SSA. Articles were assessed for quality and subjected to thematic analysis. A priori scoping exercise revealed deductive themes that were organized into macro, meso and micro domains. The literature was then explored using an identity lens of professional; African migrant; and African women. Emergent inductive themes were then organized and interpreted within these identity strata.

Results: Twenty-nine articles were included in this review. Of these, only seven explicitly sought to address gender as a focal point in the research. The scoping exercise and systematic review indicated a paucity of explicit gender driven research on nurse migration experiences in the SSA context. By recognizing gender as part of social context and using identity stratifiers in gender analyses, this study found that SSA nurses' professional experiences by the level of access to career advancement resources. For some nurses, migrant identity resulted in racial discrimination, which hindered professional growth. Lastly, SSA nurses are mostly women – and their dual roles as nurse and mother resulted in reconfiguration of gender roles from one geographical and social context to another.

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Conclusion: As far as the author knows, this review is the first to systematically and explicitly explore the qualitative evidence on SSA nurses' migration experiences using a gender focal lens. The review attempts to examine the implicit and explicit gender interactions amongst nurses' multiple identities -professional, African migrants and African women that challenge or benefit their work-life balance, professional positions and career prospects, during their migratory trajectories. This review utilized gender analysis to outline the nodes between the socio-cultural and the professional. A recommendation from this exercise – using interdisciplinary approaches to understanding nurses' migration experiences is important for alleviating the negative impacts and harnessing the positive, on quality of health care provision, nursing shortages, and health worker willingness to work overall.

Keywords

Nurse (s); International migration; gender; Sub-Saharan Africa; Gender analysis.

Background

Health workers are the glue that holds the health system together and nurses especially, play a critical role in health systems [1-3]. There is a global shortage of nurses [4] and in SSA, nurses make up 45-60% of the health workforce [5]. The majority of SSA countries fall into the low-income countries category coupled with high disease burden and low staff capacities [5, 6] such that the region experiences the worst effects of the shortage crisis. In SSA, the shortage crisis is driven by factors that include high workloads, inadequate reward systems, professional stagnancy, and incapacity of countries to train sufficient numbers of nurses to meet demand for health care. One factor which is both a driver and outcome of the crisis is migration [4] as nurses move in search of better functioning health and reward systems, leaving unfilled vacancies in SSA health systems, as most nurses never return to their original countries [7].

Migration has become a critical issue in health workforce policy agendas [8]. In this paper, migration explicitly refers to the movement of nurses from SSA (Figure 4) across national geographical boundaries. Movement from SSA to developed nations particularly impacts the viability of health care delivery in SSA [5]. In researching nurse migration, three dominant discourses have emerged. The push-pull theory [9, 10] describes and explains primarily economic, organizational, structural, and/or social motivations as the primary factor for migration. The brain drain theory describes the consequences of labour migration from the global south to the global north [11, 12]. Lastly, ethics theory discusses the controversial debates

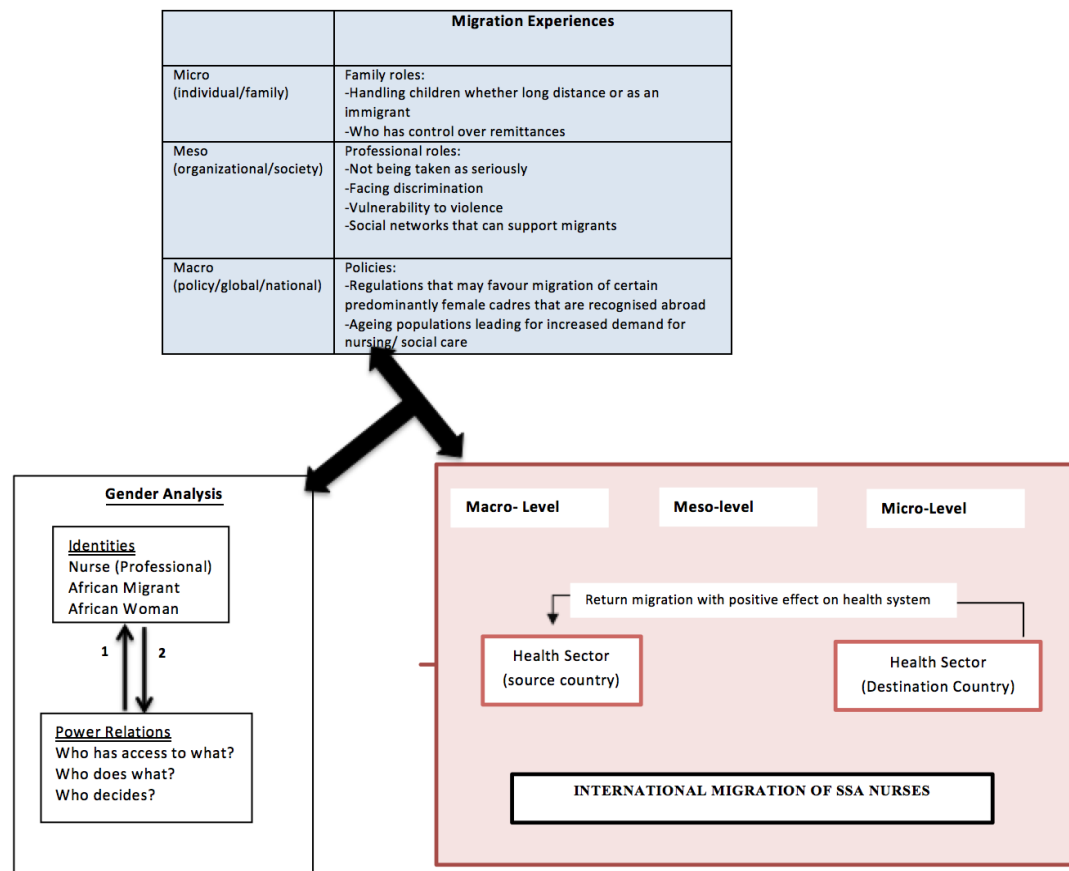
on the morality of mass professional migration from developing countries [12, 13]. These theories explore macro-level discussions, debates and explanations, without examining processes, norms and conditions possibly associated with migration of nurses from SSA [14]. More local and personal experiences could be precipitating this movement [15, 16]. Nurse migration research that explores the inter linkages and relationships between the broader global contexts and more local and personal experiences is largely absent in the literature and is the focus of this review.

This review is presented against a background of the nurse profession being female dominated and understanding that care work is mostly done by women [17, 18]. This background recognizes gender as a phenomena and process that may influence the nursing profession and migration experiences [19]. So far, the literature has sparsely explored gender and its consequences on migration trajectories [20, 21]. Conceptualizing gender as a process goes beyond the socially constructed roles, norms and behaviours expected of men or women in societies [22] to illuminate social context and power relations [23, 24] occurring at all levels of a system. There is little gender research that goes beyond the GCC [20, 21, 25] to explore gender determinants associated with the migration experience. This type of gender research would explore the locus of intersection between nurses' socio-cultural and professional assimilation to better understand their migration experiences.

Gender Analysis Conceptual Framework

Gender is relational and contextual [26] and its analysis can be applied to describe, explain and/or understand the nature, mission and goals of nurse migration, based on the premise that nurses are mostly women. Relationally as well, women have had lesser power in societies than men- where power is the ability to influence or control resources [22, 24]. One framework for gender analysis of SSA nurses' migration experiences encompasses gender power relations by making inquiries about access to resources; decision-making, division of labour [22] and all social norm value definitions which include examining interactions with race, ethnicity, culture [27, 28]. For this study, a gender analysis conceptual framework (Figure 4) was utilized to interact with the literature to better understand migration experiences. 'Experiences' was a broad term used to refer to migration occurrences, including decision-making, initiation of migration as well events in the destination countries and continued linkages to country of origin. In this framework, migration trajectories are initially categorized into macro (global/ state policies), meso (social/community factors) and micro (individual/family factors) domains to show how

migration is experienced across all these system levels. A gender analysis of these experiences then encompasses identity- disaggregation where nurses can be viewed as professionals, as African migrants and as mostly women [29]. The confrontation of these identities with gender power relations (Figure 4) has constraining or empowering effects on the professional, cultural, and social wellbeing of migrating nurses. The conceptual framework is therefore used to consolidate the nurse migration literature by inquiring how and what about the migration experiences of SSA nurses is gender influenced. Therefore, This review uses gender as an analytical axis to critically understand the relationships that arise when health workers- specifically nurses, as a critical element of the health system, migrate across national borders. This understanding could contribute to gender-inclusive nurse migration policies and guidelines that encompass gender contributions.



JONES, A. D., BIFULCO, A. & GABE, J. 2009. Caribbean nurses migrating to the UK: a gender-focused literature review. *Int Nurs Rev*, 56, 285-90.
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Figure 4: Gender Analysis Conceptual Framework for international migration of SSA nurses

Methodology

Methods

The qualitative systematic review approach was selected because it consolidates knowledge about a topic like nurse migration, and then guides the organization of analysis and synthesis of empirical findings from this consolidation [30].

Search Strategies

The systematic review sourced relevant literature on the topic from eight electronic databases: PubMed/Medline, Cumulative Index of Nursing, and Allied Health (CINAHL), Africa-Wide Information, Academic Search Premier, PsycInfo, WHO Global Health Library and Google Scholar. The key words and MeSH Terms used for nurse included 'Nurse', 'Nursing'. The terms for migration included 'Human Migration', 'Immigration', 'Emigration', 'Migrant', 'Brain Drain', 'Foreign-educated', and 'overseas-educated'. Lastly the terms for Sub-Saharan Africa (SSA) included 'Sub-Saharan Africa', 'southern Africa', 'central Africa' and all the SSA countries were also listed individually. The terms for nurse, migration and SSA were appropriately applied to each of the eight databases.

Two-step search processes were conducted in each of the seven databases

- 1) Search terms for Nurse AND Migration AND SSA were implemented to extract the articles relevant for review per the developed protocol.
- 2) Search terms for Nurse AND Migration only were also implemented for a broader scope and to also identify articles that may not be specific to SSA but are relevant for example, articles that has nurses as participants and SSA nurses were a subset of this group.

The two-step process was done because the first process generated skeletal empirical works. This process also enabled as much as possible, identification of all the work on SSA nurse migration experiences, even when the research was not limited to SSA only..

Article Selection

After combining the searches from the eight databases, and excluding non-relevant articles by search terms and topic, more than 1600 articles were screened for relevance and duplicate copies were removed. All relevant studies that utilized qualitative and/or mixed method approaches were included in the systematic review. Quantitative articles were excluded since the research question is focused on understanding nurse experiences of migration, which would not be

adequately represented by quantitative methods [31]. Articles were included if the studies were journal articles on SSA nurses' migration experiences, with available full abstracts. Inclusion criteria limited studies to those published in English and in the period between 1995 and 2016. The focus on migration of health workers and its role in the global health worker shortage was established in the early 21st century, therefore this period was considered appropriate to cover all the relevant literature.

Exclusion criteria included 1) non-academic articles or grey literature on nurse migration 2) articles not related to nurse migration and/or nurse migration in SSA context 3) any studies not published in English or published before 1995 and 4) studies that did not discuss implicitly or explicitly nurse migration in the full text 5) For research whose study population included a mix of migrant nurses from SSA and non-SSA or doctors and nurses, the study was excluded if it did not provide disaggregation by region when describing the study population. In addition, such studies were also excluded if in the analysis, the contribution of SSA nurses' experiences could not be identified.

Study titles were screened against the inclusion/exclusion criteria and 514 articles were retrieved for further examination. The abstracts of these articles were read and 124 articles were chosen for full text reading and resulted in the selection of 28 articles included in the review. Five additional articles were identified from reference lists and only 1 article was eligible for inclusion to give a total of 29 final articles that explored the migration experiences of nurses from SSA (Figure 2).

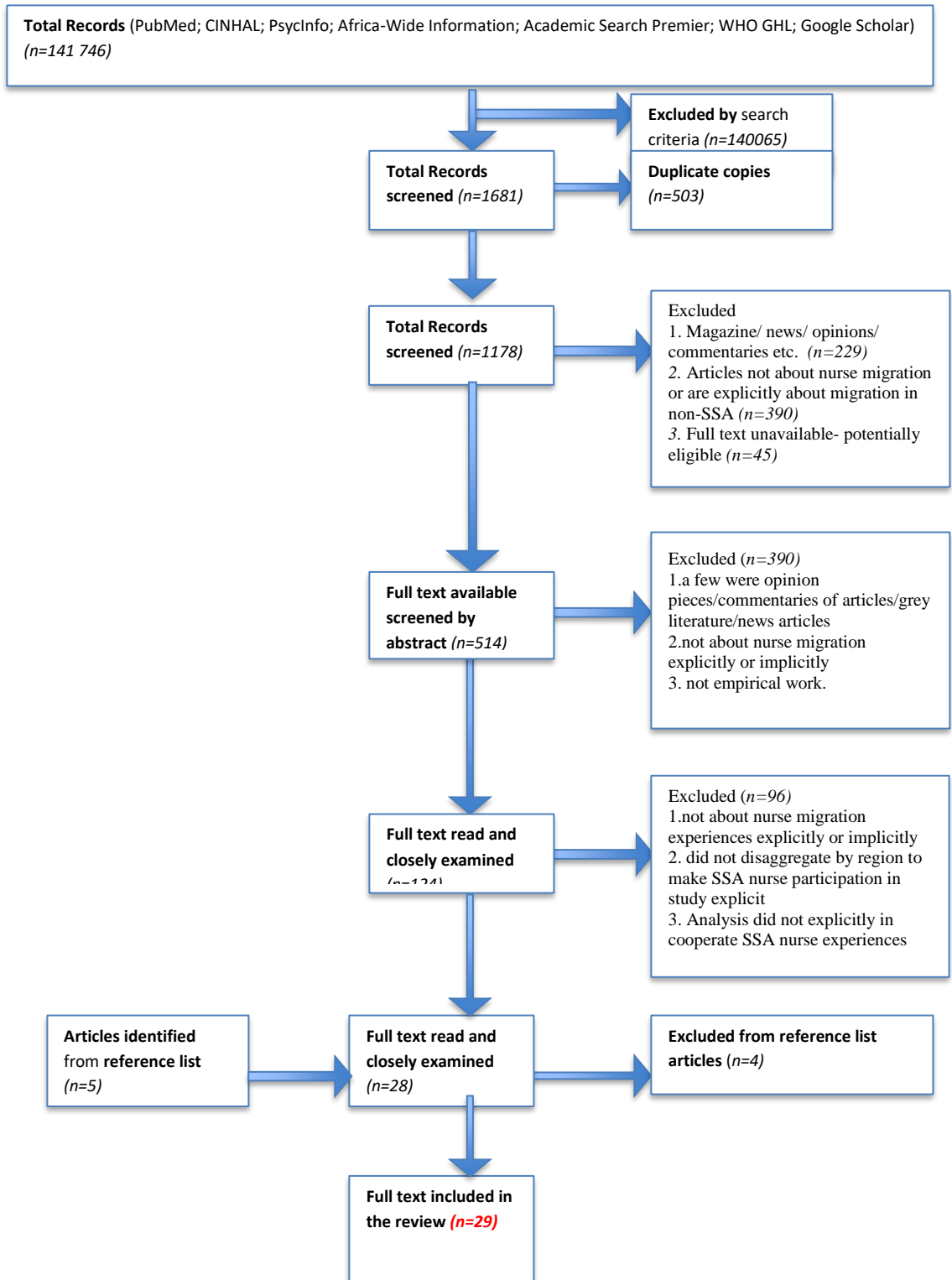


Figure 2: Search Flow Chart

Quality review and data extraction

A Customized Appraisal Skilled Programme (CASP) tool [31, 32], adapted using guidance from meta-synthesis review of qualitative studies on migration [31] was used to critically appraise the quality of studies included in this review. The data extraction form was utilized to draw out sections of relevant texts, emerging codes, themes, and categories so that there could be a basis for cross-article comparisons and abstractions.

Data analysis

Initially all 29 articles were read twice before data analysis sorted emerging codes from the articles. The coding was done manually by the researcher and discussed with two supervisors and hierarchy [33, 34] of analysis was created to position findings on gender and nurse migratory experiences, as well as findings on SSA nurses' migration experiences more broadly. Codes and themes were developed both deductively and inductively [35, 36]. The first step of the analysis was to stratify deductive findings into a matrix of macro, meso and micro level domains. The first level of the gender analysis disaggregated experiences by SSA nurses' identities as professionals, as African migrants and as African women. The inductive themes that emerged were organized around this disaggregation.

Findings

The 29 articles included in this review revealed that the UK [33, 37-52], USA [53-56], Canada [57] and Australia [58] and sometimes the Kingdom of Saudi Arabia (KSA) [59], were the favoured destination countries, from which research on nurses migrating from mostly Nigeria [37], Ghana [60, 61] and South Africa [62, 63], was conducted. One study showed Austria [64] as a destination country.

A large proportion of the studies (n=10) treated migrant nurses as a homogeneous group, studying them under an umbrella term of "Internationally educated nurses (IEN)" or "overseas nurses (ON)". Some studies' samples included nurses from multiple African countries (n=8). In another instance of sameness, nurses were studied under the umbrella term of health workers (n=8) alluding that their experiences would be similar to that of doctors. The aim of this review was to explore gender. The local and contextual nature of gender alludes to a disaggregation not just by region, but by African countries as well. This may be useful to link findings of gender to specific localities of culture, ethnicity, or other identities. In this review, only 11 articles investigated nurse migration experiences specific to a country of nurses' origin, with Ghana and

Nigerian nurses being the pre-dominant groups. Moreover, because nurses were grouped under umbrella terms like “Internationally educated nurses (IEN)” or “overseas nurses (ON)” there was little disaggregation of SSA nurses by factors like age, years of experience, socio-economic status, language ability etc.- which makes addressing aspects of gender and intersectionality complex.

Table 2: Articles Included in This Review

Author(s) & Publication Year	Study Objectives	Country of study/Country of Nurse Origin	Study Population	Study Design: Data Collection	Data Analysis	Findings
Aboderin 2007	To describe migration motives, contexts, and experiences in home-care sector	UK/Nigeria	UK-based Nigerian registered nurses; returnee nurses in Nigeria; nursing tutors in Nigeria	Qualitative: In-depth Interviews (IDIs)	Thematic Analysis	Socio-economic, career and social & professional status migration motives; race & migration status experiences; desire career change to NHS
Adhikari & Grigulis, 2014	Malawi: to examine the lives of Malawian nurses	UK/ Malawi & Nepal	UK-based Malawi nurses; Malawi- based nurses; nursing tutors in Malawi	Qualitative: Malawi: IDIs	Thematic Analysis	Nursing home work- poor working conditions; deskilling & devaluing to do; racism and social isolation; desire career change to NHS
Allan, 2010	To explore the experiences of employment mobility and career progression for ON's in the NHS	UK/Overseas nurses	Overseas Nurses; national managers; local managers/ mentors; national stakeholders; Ghanaian HWs (53% African)	Qualitative: IDI	Thematic Analysis	Bullying & discrimination; undervalued, de-skilled; cultural & professional mistranslations between nurses & mentors
Allan et. al. 2004	To explore experiences of discrimination and racism among IRNs; to develop an understanding of institutional racism that reflects on IRNs' experiences of racism and discrimination	UK/Overseas nurses	Overseas Nurses (Ethiopia, Ghana, Kenya, Nigeria, South Africa, Zambia, Zimbabwe)	Qualitative: Focus Group Discussions (FGDs)	Thematic Analysis	"Different was a social marker and 'difference' manifested as colour, language, accent, racism was defined as being different; and this impacted personal and professional confidence. Covert and overt racism.
Alexis & Veiling, 2007	Migrating registered nurses in the UK: Black and minority ethnic overseas nurses' perspectives	UK/Overseas nurses	Overseas nurses (SSA countries & South Africa)	Qualitative: IDIs	Thematic Analysis	Social and professional ties; gaining new skills but eroded confidence due to limited support.
Okougha & Tilki, 2010	To describe the experiences of nurses recruited from Ghana and Philippines	UK/Ghana & Philippines	Ghanaian & Filipino nurses	Qualitative: FGDs	Thematic & interpretative Analysis	Communication barriers- accent, jargon; cultural barriers with patients; work space adaptation challenge

Author(s) & Publication Year	Study Objectives	Country of study/Country of Nurse Origin	Study Population	Study Design: Data Collection	Data Analysis	Findings
Hagen et. al. 2001	To document and describe the experiences of immigrant nurses of colour who filed grievances documenting concerning their employer' discriminatory practices	Canada/SSA	Black African nurses	Qualitative: IDI & FGD	Interpretative Analysis	Marginalization; racism; physical stress/emotional pain. strategies to cope & survive (social networks);
Bidwell et. al. 2014	To explore and provide deeper understanding of reasons for migration from S.A; the experiences of migration by doctors and nurses & the reasons and realities of migration	UK/South Africa	Doctors & Nurses	Qualitative: semi-structured interviews	Content Analysis	Motives for migration- social networks, high crime, and insecurity & career progression; inverse racial tensions; tourist; money NOT a push factor. Migration Experiences- NHS system is different; de-skilling.
Likupe, 2015	To explore experiences of racism, discrimination & equality of opportunity among black African nurses and their managers' perspectives on these issues	U.K/ Kenya, Ghana, Malawi, Nigeria, South Africa, Zambia, Zimbabwe, Cameroon	SSA nurses & NHS managers	Qualitative: FGDs & IDIs	Thematic Analysis	Negative integration experiences of racism and discrimination despite Equality Acts. Discrimination is mostly overt and racism is mostly covert.
Hardily & MacDonald, 2000	To use biographical narratives to illuminate the complexities of factors involved in migration decisions	UK/Overseas health workers	key actors; overseas nurses (south Africa);	Mixed Methods: semi-structured Interviews, non-participatory observations & Questionnaire survey	Thematic grounded analysis	Motivators: professional stimulation & challenges, tourism. challenges: downward occupational mobility, language barriers, de-skilled/valued especially by the African nurses who felt doctors treated them as 'less than' facilitators: integration program available (mentors)
Henry, 2007	To explore the perceptions of career progression in the NHS & analyse perceptions of career progression	UK/Ghana	Old Ghanaian nurses in the NHS; managers; midwives	Qualitative: semi-structured interviews	Thematic analysis	Limited upward career mobility. Facilitators of this difficulty - favouritism for white colleague; Ghanaian nurses not made aware of the resources obligated to them; unable to voice unfairness for fear of victimization

Author(s) & Publication Year	Study Objectives	Country of study/Country of Nurse Origin	Study Population	Study Design: Data Collection	Data Analysis	Findings
Hull, 2010	To examine how both global and intimate factors affect women when making migration-decisions	South Africa	S.A. nurses in KwaZulu Natal	Qualitative: Case study Interviews + literature review	Narrative Analysis	Localized GCC. Nurses returned home to care for children and families (culturally and socially ingrained); migration enhances cultural capital back home. Domestic relations intercepted nurses' career plans
Jose, 2011	To elicit and describe the lived experiences of IENs working in a multi-hospital urban USA.	USA/IEN's	Internationally educated nurses (Nigeria)	Qualitative: guided interviews	Thematic Analysis	Perceptions differed from reality USA: culture shock and differences both socially and professionally. Coped via social/professional support networks. Call for longer Adaptation and Orientation Programs before and after moving
Larsen et. al. 2005	To explore the motivations, experiences, and strategies of migrant nurses.	U.K/ Overseas Nurses	Overseas Nurses (67% African)	Qualitative: FGDs	Thematic Analysis	Social, cultural, economic push factors motivate African nurses. White African nurses (S.A) move for the idea of travel and experiencing something different- a condition that is specific to S.A context. Nigerian nurses- social and professional status improves at home.
Likupe, 2013	To explore SSA nurses' reasons for moving to the UK, their views on brain drain and what can be done to mitigate the situation	U.K/ Kenya, Ghana, Malawi, Nigeria, South Africa, Zambia, Zimbabwe, Cameroon	SSA nurses	Qualitative: FGDs & IDIs	Thematic Analysis	5 main themes for migration motivation from SSA: poor salaries & unemployment; professional development; poor health care & systems; political reasons; social reasons
Matiti & Taylor, 2005	To investigate the cultural experiences of internationally recruited nurses (IRNs) I exploring the cultural adaption process both from a personal/ professional perspective	UK/IRNs	IRNs (Mauritius & Nigeria)	Qualitative: semi-structured interviews	Thematic & interpretative Analysis	Primary culture (home country traditions and norms) and secondary culture (nursing culture) intersect to determine migrant nurses' social and professional experiences in UK. Deskillling, devaluing,

Author(s) & Publication Year	Study Objectives	Country of study/Country of Nurse Origin	Study Population	Study Design: Data Collection	Data Analysis	Findings
Mapedzahama, 2012	To examine how African migrant nurses, forge social and professional identities within their transitional, cross-cultural existence	Australia/Africa	Black African nurses	Qualitative: semi-structured interviews	Thematic & interpretative Analysis	Racialized English language proficiency & communication barriers. Racism is overt and covert from patients and colleagues, results in marginalization, limited social/professional networks of support. Implicit & explicit discrimination based on predetermined meanings attached to black and/or African migrant.
Nowak, 2009	To explore how HW themselves see international migration and its impact on their lives, and how gender norms influence these perceptions	Ghana	HWs	Qualitative: semi-structured interviews & FGD	Thematic Analysis	Gender norms and expectations affected migration decisions. Socio-economic impact gender norms. Social costs considered higher than socio-economic gains
Reardon & George, 2014	3 issues of focus: 1) to explore the migration intentions and the factors that influence these intentions; their views and opinions about the Bilateral Agreement between the UK and South Africa (SA) and other UK policies around the recruitment and employment of foreign health professionals; understand the impact of these policies on the migration plans of these CS doctors and nurses.	South Africa	HWs	Qualitative: FGDs & IDIs	Thematic & interpretative Analysis	Pros for migration; poor pay; children's education; Cons- deskilling; devaluing; family ties
Showers, 2015	To contextualize racial and ethnic identities in shaping African women's work lives in the USA.	USA/ Nigeria, Ghana, Liberia, Sierra Leone	nurses	Qualitative: IDIs	Grounded Theory Approach	Racism similar to black Caribbean nurses; further discrimination based on ethnic and African identity from colleagues & patients; Accent a barrier to career mobility

Author(s) & Publication Year	Study Objectives	Country of study/Country of Nurse Origin	Study Population	Methodology	Data Analysis	Findings
Taylor et. al. 2015	Explores the links that South African-trained health workers who now live and work in the United Kingdom maintain with their country of training and what their future migration plans may be	UK/South Africa	HWs	Qualitative: semi-structured interviews	Thematic Analysis	Limited upward career mobility in SA. Deskilling & devaluing in the UK
Wheeler et. al. 2013	To gain a deeper understanding about the experiences of IENs compared to those of US registered nurses (RNs)	USA/IEN's	nurses (SSA)	Qualitative: IDIs	Thematic analysis	Cultural & professional isolation; difficulties forming professional relationships. US nurses also face discrimination
van Rooney et. al. 2010	To describe and reflect on the lived experiences of the South African nurses residing and working in the Kingdom of Saudi Arabia	Saudi Arabia/South Africa	nurses	Qualitative: interviews & personal journals	Thematic Analysis	SA nurses limited by KSA gender norms & values; Differences in nursing roles and expectations; differences in salary scales depending on the region one comes from; cultural adaptation challenges
Wheeler et. al. 2014	To document experiences of nurses educated abroad and in the USA in 2 urban hospitals in the south-eastern USA.	USA/IEN's	nurses (SSA)	Qualitative: semi-structured interviews	Interpretative explanation	Discrimination for both US and IEN's- IEN's more sensitive; Barriers to integration & adaptation; communication challenges; isolation
Winkelmann-Glued & Seeley, 2005	To explore if gender played a role in migrant nurses working in the British healthcare system; to examine the experiences of recently internationally qualified migrant nurses to Britain and explores their stories with the aim of understanding aspects of their work-related identities	UK/Foreign nurses	foreign nurses & key informants	Mixed Methods: survey & IDIs	Thematic Analysis & Statistical Analysis	Intersections of race & ethnicity identities; social networks & family ties both similar & different; gender participates in migration decisions and is present in new health & societal systems

Author(s) & Publication Year	Study Objectives	Country of study/Country of Nurse Origin	Study Population	Methodology	Data Analysis	Findings
Wojczewski et al. 2015	To explore the impact of migration on the careers of female African migrant health-workers (MHW) utilising the framework of Global Care Chain (GCC) research; to explore doctor-nurse comparisons of de-skilling and devaluing	Belgium, Austria, UK/Botswana, South Africa,	African Migrant HWs	Qualitative: semi-structured interviews	Content Analysis	Race & discrimination more salient than gender discrimination; MHWs marginalized & bullied (co-workers, patients)
Wojczewski et al. 2015	To explore the professional links that migrant health workers from sub-Saharan African countries living in five African and European destinations have with their countries of origin	Belgium, Austria, UK/Botswana, South Africa,	African Migrant HWs	Qualitative: semi-structured interviews	Content Analysis	Family ties; remittances; links in NGO sector, practice;
Wong 2014	To analyse how skilled Ghanaian women (nurses) they navigate multiple caregiving responsibilities	UK/Ghana	migrant & returnee nurses	Qualitative: semi-structured interviews	Thematic & interpretative Analysis	Reconfiguring & restructuring of gender norms to achieve child care giving; nursing care-giving subordinate to child care; strategic use of social networks
Jirovsky, 2015	To explore HWs from SSA's reasons for migration to Austria, as well as their personal experiences concerning the living and working situation in Austria.	Austria/SSA	HWs	Qualitative: semi-structured interviews	Thematic Analysis	Austria unusual choice (by marriage); accreditation barriers; professional discrimination; devaluing

In relation to gender as an analytical focus, only 7 [50, 51, 54, 59-62] of the 29 articles on migration experiences of SSA nurses explicitly explored gender in nurse migration experiences, where gender was a methodological factor and or analytical angle of discussion. Of these seven, only one article [60] addressed male nurses' migration experiences. The scarcity of gender inclusive research limits the conceptual generalisability and conclusions that could be drawn from this review. However, one of the aims of this review was to synthesis implicit gender issues as well. The three identities of professional, African migrant and African woman were used as domains to organize the findings for all migration experiences of SSA nurses. For each domain, the themes that emerged are listed and discussed below.

Table 3: Domains and themes in migration experiences of SSA nurses as viewed through a gender power relational lens.

<i>Nurse as Woman</i>
<i>Migration decision-making</i>
<i>Child care networks, migration and career progression</i>
<i>Nurse as Professional</i>
<i>Accessing Career Resources within health systems</i>
<i>Family and Professional care work</i>
<i>Nurse as African Migrant</i>
<i>Racial Discrimination</i>

Nurse as woman

Migration decision-making

Marital status was a determinant in making migration decisions, revealing the influence of gender expectation on interactions between individuals, families, and society. Young male nurses in Ghana entered the nursing profession and decided to migrate as a way of meeting societal norms that expected men to be financial providers [60]. For young Nigerian and Ghanaian women, escaping gender norms influences migration decisions. These women perceived the UK to offer more independence and autonomy, whereas in Nigeria and Ghana they were customarily expected to marry early and remain in their parents' patronage until marriage [45, 60]. Divorced nurses used migration as an escape from circumstances that socially sanctioned them, and as a chance to start over giving them independence and freedom from their husbands and societies [33, 45, 51].

Child care networks, migration and career progression

Decisions around childcare participated in reconfiguring gender roles. Child care is usually the primary responsibility of women in families [18], but in the UK, Ghanaian nurses shared child care with their husbands who were often learning less than them [61]. However, even in this sharing, some nurses worked fewer shifts at a hospital that offered better salary and professional growth opportunities, so that they could carve in shared child-care responsibilities with her husband [61]. In a rural part of South Africa [62], the child-care and migration outcomes varied. Some returning migrant nurses became socially isolated for abandoning their main responsibility- taking care of their families [62]. In another instance the husband encouraged his nurse-wife to migrate and he remained providing childcare ([62]; pg. 860). On the other hand in a prototype of the Global Care Chains (GCC) [21, 25, 51], other nurses had to find friends or relatives to provide child care in their absence [51, 60-62]. However, in another instance a South African nurse had to leave her lucrative job in the UK to return home and take care of her child [62], which could be indicative of limited support networks.

These cases underscore the gender norms that prescribe women to prioritize child care [61, 62] regardless of their other professional responsibilities and economic contributions to the family unit [51, 61, 62]. This impacts migration trajectories and career progression [63]. They highlight SSA nurses, as women, negotiating child care and meandering gender norms as they attempt to fulfil expectations of identity and behaviour that may differ in the source and destination country environments they inhabit.

Nurse as professional

Accessing Career Resources within health systems.

At a macro-level, socio-economic decline inspired African nurses to migrate to developed countries, and one intent was to improve socio-economic life back home [37, 38, 45, 49, 61, 63]. Remuneration was poor for SSA nurses and health facilities had inadequate drug supplies and equipment [33, 37, 61, 63]. In destination countries, remuneration was better—ten times better in the case of Malawi [38], but it was also hierarchised in other regions. In the Kingdom of Saudi Arabia (KSA), South Africa fell in Zone 8 [59], which meant less remuneration than KSA nurses, as well as nurses from other countries (Europe and America), even when the nurses had the same grade and job description, indicating a systemic hierarchy that disadvantaged the African nurse.

Access to career advancement opportunities was non-linear. Destination countries offered access to better equipped health systems, educational progression and practical learning of new procedures and technology [33, 37, 45, 51, 52, 60, 61], all of which were perceived to contribute to professional fulfilment. However, this perceived access was not always possible. The similarities in nursing curriculums between Britain and its colonies [33, 61] had many SSA nurses expecting that their home qualifications would provide them with professional and language capital in the UK [37, 38, 45, 47]. However, UK policies and systems of integration (46) limited how, where and when SSA nurses could practise and resulted in clinical de-skilling and de-valuing and their years of experience were largely not considered [33, 37, 46, 47, 49, 51, 61]. Driven by an aging population in destination countries that needs care provision, many nurses ended up working in nursing homes [37, 38, 63], where the lack of opportunity to apply their clinical skills resulted in loss of professional capital and growth.

Competitive promotion strategies differed in the UK when compared to Ghanaian systems where promotion was based on years of experience [44]. Additional language deficits including understanding quirks, quips and colloquial jargon of British English also proved challenging for African nurses [47, 48] and limited their abilities to progress, as they were versed in neither competitive strategies nor the language needed to pass interviews. African nurses also felt that their managers and supervisors aided British nurses in preparing for interviews to get promoted, but when they sought similar support, it was denied [44]. In the absence of such support, many nurses felt ostracized if they voiced their concerns [33, 44, 46]. Alternatively, professional networks participated in migration decisions and trajectories [33, 38, 42, 53, 56, 62, 63] and also became a support system to endure and persevere in the unexpected isolative, marginalizing, discriminatory realities of being a migrant professional nurse [42, 44, 47, 49, 52, 53, 57, 59]. Migrant professional colleagues helped each other, when trying to master the application, interview, and presentation requirements for getting promotions within the NHS system [44]. Despite these challenges, many SSA nurses [37, 38, 45] expected to return home with a higher social status tied to improved and increased value based on their foreign professional status. They were willing to endure receiving countries, for better life in their home countries.

Family and Professional care work

For some SSA nurses, nurse work included participation of the family in patient care. Nigerian [53] and Ghanaian nurses were disgruntled by the absence of family involvement in hospital patient care, as family presence symbolized care and concern [37, 38, 48, 61]. This may be an interaction of professional and woman statuses, as these nurses are also women who would be expected to care for the sick and elderly in their families, which could explain their discontent at the absence of family involvement in patient care.

Nurse as African migrant

Racial Discrimination

Discrimination is distorted differential treatment of otherwise equally qualified people [65]. For SSA nurses, it was greatly linked to their African migrant identity. Being African in destination countries encompasses being black, and having certain accents, mannerisms, and stereotypes that positively or negatively affected SSA nurses' work and life experiences. Most of the migrating SSA nurses were black [37, 41, 44, 55] with a few from South Africa and Zimbabwe being white [42, 45, 49]. In source countries like South Africa, white nurses migrated because they felt racially excluded due to the actions to right the disparities of apartheid. They had limited access to opportunities for promotions and career progression were limited (awarded more to black South African health workers) [42, 49]. Upon emigration, white African nurses [41-43, 49] acknowledged that they were treated better than their black SSA counterparts [41] in destination countries.

Black African migrants engendered racial discrimination in the form of unfair treatment and abuse especially in the work space [44, 46, 55, 57]. SSA nurses confronted their blackness in interactions with patients, colleagues and institutional processes. In a case of nurse-on-nurse racism, gender was used to underpin racism when a black nurse manager's executive director questioned on how she manages to balance having children, a husband, studying and still work. The African nurse manager perceived the director was shocked that she did not fit into her stereotype of a black African woman [57]. Lack of supportive supervision [33, 44, 46, 51] was a recurring theme for SSA nurses. When they were supervised, African nurses thought managers over-supervised them because of them being African, and the supervisors did not trust their nursing abilities [39, 41, 46, 58]. This nurse on nurse racism was more covert which made it difficult to challenge or address [51]. Patient on nurse racism however was more overt where many patients bluntly stated that they did not want to be treated by black nurses [41, 46, 55, 58, 61]. Other patients mistook African nurses for being nurses' aides whilst the white nurse aides were automatically assumed to be registered

nurses [54, 61]. Overall, negative stereotypes of Africa [38, 45, 46, 54, 58] prohibitively impacted the way SSA nurses were treated resulting in loss of professional status and progression [41, 42, 44, 47, 57].

Migrant identity seemed to have professional outcomes. Africans were concentrated in the least desirable specialties, working long hours and paid the least with limited opportunities for upward mobility [54]. One nurse found that when she worked in a nursing home it was mostly African nurses employed there because it was a job no one wanted to do, versus when she worked in the ICU of a hospital and it was mostly Caucasian nurses in the ICU [54].

“When nurse DF (Africa) was working in a hospital among mostly white nurses, a US RN (W) told her ‘I feel like you should be sweeping, not be a nurse’.” [55]

Moreover, other migrant Filipino and Indian nurses also discriminated against African nurses and were treated more favourably [46], showing how racial discrimination was also stratified nationality [54, 55].

Discussion

International trends and/or neo-liberal economic theories cannot exclusively explain migrant experiences. Gender contributes to understanding the needs of migrant nurses as they plan to initiate, migrate, and/or return from migration. This has implications for both the quality of care these nurses provide in donor and recipient health systems and the ability to retain nurses within these health systems – especially in the context of the shortage crisis. There is a paucity of health research that explicitly addresses gender and nurse migration experiences in SSA contexts. Situating gender within social contexts and nurse identities of professionals, migrants and women revealed that constraining gender norms in source country context are not nullified upon migration; rather they are negotiated and reconfigured.

These findings are important for broadening understanding on nurse migration experiences to include: 1) Social and professional networks [33, 38, 42, 53, 56, 62, 63] as an empowering informal support structure in migration experiences 2) Macro and meso level migration issues are nuanced by understandings of micro-based occurrences 3) The need for more gender focused research in nurse migration in SSA and across other regions and 3) the need for policies and institutional guidelines that comprehensively address gender and discrimination issues in the context of the migrant nurse.

The use of social support networks for child care underscored the global care chains [21, 66] but enabled nurses to pursue their careers. The positive effects of SSA nurses' migration can be enhanced if social and professional legitimacy is gender inclusive and politically backed. The political and government promotion of health worker emigration in the Philippines contributes to the social acceptability of migration and could potentially be participating in increased or regular returnee migration [15, 67]. SSA governments promoted, encouraged and accommodated nurses' migration, whilst explicitly realizing that nurses are migrating as literate, educated women who are part of formal workforces. This could be done by setting up systems that allow returnee nurses to practise in their home countries; by officially supporting migrant communities in receiving countries through embassy-backed community organizations; and/or setting up protective trade agreements with receiving countries like the U.K, Australia, and Canada- where most SSA nurses migrate to.

Migrant nurses are not utilized to their full capacity and capabilities [68]. The receiving countries, having gained the brains, are not optimising the nurses' professional skills and talents, by devaluing their potential contributions simply because they are African migrants. So their expertise is lost to the receiving and the giving country. Political backing may positively impact meso-level social and work acceptability and integration for migrating nurses, by gradually transforming social and work norms associated with the migrant SSA nurse. If migrant nurses feel and know they are protected and supported by policies and guidelines as professionals, as migrants and as women, they could gain decision-making empowerment to directly address the issues of discrimination or marginalization that they face in their work and personal lives, both in their countries of origin as well as receiving countries. It should be the responsibility of receiving countries to ease the mobility and experiences of these nurses to enable them to deliver the best possible care. For example, gender inclusive policies that allow migrant nurses to access the same child care resources that native nurses have, to ease the burden of child care labour.

Adaptation and assimilation programs should include continuous participatory cultural sensitization for both native nurses and foreign nurses to improve dialogue and communication and form a basis for supportive supervision [69] for the new nurses. Despite existing in an interconnected global world, cultural dimensions have been argued to be barely present in the nursing curriculums of destination countries [70] and if explicitly included, could alleviate some of the nurse-on-nurse racial and ethnic tensions that occur.

There is a need for inter-disciplinary collaborative and inter-sectoral health systems research on nurse migration to better inform HRH agendas, policies, and labour and migration laws.

Such research would make the similarities and differences amongst nurse migrant groups distinct. Similar systematic reviews or empirical studies could be conducted focusing on gendered migration experiences of nurses from other regions like Latin America, Asia, or Eastern Europe. This could allow comparisons on how migrating nurses from different regions get access to resources, the types of jobs they end up doing, as well as their decision-making capabilities. Because the nursing shortage is global, comparing gendered nurse migration across regions could lead to both conceptual generalizations and better understanding of this complex process' participation in the global nurse shortage.

Conclusion

It is possible to demonstrate that gender contributes to migration decisions and processes for SSA nurses. The evidence in this review shows that there is limited health focused research that explores gender as a factor in the migration of health workers. The review suggests that gender is embedded in social stratifiers and contexts, therefore understanding and exploring gender nuances can reveal socially driven barriers and facilitators of migration, and vice versa. Many nurses are migrating as mothers and childcare provision is the most explicit realm of gender manifestation and the impact on migration and career experiences.

The review showed how nurses' multiple identities interact. Determinants in one identity (racial discrimination in migrant identity) have outcomes that may portray in another identity (career degradation/stagnation in professional identity). Moreover, policies (or lack of) that are relevant to one identity, like child care support for migrant women, also has effects in another- difficulties in accessing career advancement opportunities, as nurses work out the tension between child care and career responsibilities.

The sparse literature should be advanced through more interdisciplinary research that seeks to understand gender influences in the human resources for health domains, especially in developing countries. Lastly, this review provides insights into gender focused systematic analysis in health systems discipline, showing how software and hardware structures of a health system may interact.

List of Abbreviations

SSA – sub-Saharan Africa

GCC- Global Care Chain

Competing Interests

The author sites no competing interests

Author's contribution

Constancia is responsible for the conception, design, literature searches, data extraction analysis and synthesis including drafting and editing the review.

Author's details

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References

1. Joint Learning Initiative: **Human Resources for Health- Overcoming the Crisis**. Boston: Harvard University; 2004.
2. Aluttis C, Bishaw T, Frank MW: **The workforce for health in a globalized context-- global shortages and international migration**. *Glob Health Action* 2014, **7**:23611.
3. Kirk H: **Towards a global nursing workforce: the 'brain circulation'**. *Nursing Management - UK* 2007, **13**:26-30.
4. Kingma M: **Nurses on the move: a global overview**. *Health Serv Res* 2007, **42**:1281-1298.
5. Dovlo D: **Migration of nurses from sub-Saharan Africa: a review of issues and challenges**. *Health Serv Res* 2007, **42**:1373-1388.
6. Labonte R, Packer C, Klassen N: **Managing health professional migration from sub-Saharan Africa to Canada: a stakeholder inquiry into policy options**. *Hum Resour Health* 2006, **4**:22.
7. Asare P: **Labour migration in Ghana**. *International Affairs Officer, GTUC* 2012.
8. Brewer CS, Kovner CT: **Intersection of migration and turnover theories-What can we learn?** *Nurs Outlook* 2014, **62**:29-38.
9. Buchan J: **International recruitment of nurses: policy and practice in the United Kingdom**. *Health Serv Res* 2007, **42**:1321-1335.
10. Kline DS: **Push and pull factors in international nurse migration**. *J Nurs Scholarsh* 2003, **35**:107-111.
11. Kalipeni E, Semu LL, Mbilizi MA: **The brain drain of health care professionals from sub-Saharan Africa: A geographic perspective**. *Progress in Development Studies* 2012, **12**:153-171.
12. Kollar E, Buyx A: **Ethics and policy of medical brain drain: a review**. *Swiss Med Wkly* 2013, **143**:w13845.
13. Aiken LH, Buchan J, Sochalski J, Nichols B, Powell M: **Trends in international nurse migration: the world's wealthy countries must be aware of how the 'pull' of nurses from developing countries affects global health**. *Health Affairs* 2004, **23**:69-77.
14. Raghuram P: **Gendering skilled migratory streams: Implications for conceptualizations of migration**. *Asian and Pacific Migration Journal* 2000, **9**:429-457.

15. Oishi N: **Gender and migration: an integrative approach.** University of California, San Diego; 2002.
16. Boyd M, Greico E: **Women and migration: incorporating gender into international migration theory.** Migration Information Source; 2003.
17. Kaelin L: **Care drain: the political making of health worker migration.** *J Public Health Policy* 2011, **32**:489-498.
18. England K, Henry C: **Care work, migration and citizenship: international nurses in the UK.** *Social & Cultural Geography* 2013, **14**:558-574.
19. Wrede S: **Nursing: globalization of a female-gendered profession.** In *The Palgrave handbook of gender and healthcare.* Springer; 2010: 437-453
20. Prescott M, Nichter M: **Transnational nurse migration: future directions for medical anthropological research.** *Soc Sci Med* 2014, **107**:113-123.
21. Yeates N: **Global care chains: a state-of-the-art review and future directions in care transnationalization research.** *Global Networks* 2012, **12**:135-154.
22. Morgan R, George A, Ssali S, Hawkins K, Molyneux S, Theobald S: **How to do (or not to do)... gender analysis in health systems research.** *Health Policy and Planning* 2016.
23. Iyer A, Sen G, Östlin P: **The intersections of gender and class in health status and health care.** *Global Public Health* 2008, **3**:13-24.
24. Buse K., Mays N, Walt G: **Power and the Policy Process.** In *Making Health Policy.* 1 edition. Edited by Raine NBR. England: Open Press University; 2005: 19-47.[Raine NBR (Series Editor): *Understanding Public Health*].
25. Raghuram P: **The difference that skills make: gender, family migration strategies and regulated labour markets.** *Journal of ethnic and migration studies* 2004, **30**:303-321.
26. Donato KM, Gabaccia D, Holdaway J, Manalansan M, Pessar PR: **A Glass Half Full? Gender in Migration Studies1.** *International Migration Review* 2006, **40**:3-26.
27. Yuval-Davis N: **Intersectionality and Feminist Politics.** *European Journal of Women's Studies* 2006, **13**:193-209.
28. Bastia T: **Intersectionality, migration and development.** *Progress in Development Studies* 2014, **14**:237-248.
29. Jones AD, Bifulco A, Gabe J: **Caribbean nurses migrating to the UK: a gender-focused literature review.** *Int Nurs Rev* 2009, **56**:285-290.
30. Dixon-Woods M, Bonas S, Booth A, Jones DR, Miller T, Sutton AJ, Shaw RL, Smith JA, Young J: **How can systematic reviews incorporate qualitative research? A critical perspective.** *Qualitative Research* 2006, **6**:27-44.
31. Blacklock C, Ward AM, Heneghan C, Thompson M: **Exploring the migration decisions of health workers and trainees from Africa: a meta-ethnographic synthesis.** *Soc Sci Med* 2014, **100**:99-106.
32. Public Health Resource Unit: **Critical Appraisal Skills Programme (CASP): Making Sense of Evidence.** The higher education academy; 2006.
33. Likupe G: **The skills and brain drain what nurses say.** *J Clin Nurs* 2013, **22**:1372-1381.
34. Spencer L, Ritchie J, O'Connor W: **Analysis: Practices, Principles and Processes.** In *Qualitative Research Practice: A Guide for Social Science Students and Researchers.* Edited by Ritchie J, Lewis J. London: Sage Publications; 2003
35. Pope C, Ziebland S, Mays N: **Analysing qualitative data.** *BMJ : British Medical Journal* 2000, **320**:114-116.
36. Hennink M, Hutter I, Bailey A: **Data Preparation and Developing Codes.** In *Qualitative Research Methods.* London: SAGE Publications; 2010: 204-229

37. Aboderin I: **Contexts, motives and experiences of Nigerian overseas nurses: understanding links to globalization.** *J Clin Nurs* 2007, **16**:2237-2245.
38. Adhikari R, Grigulis A: **Through the back door: nurse migration to the UK from Malawi and Nepal, a policy critique.** *Health Policy Plan* 2014, **29**:237-245.
39. Alexis O, Vydellingum V: **Migrating registered nurses in the UK: Black and minority ethnic overseas nurses' perspectives.** *International Journal of Health Care Quality Assurance* 2007, **20**:441-452.
40. Allan H: **Mentoring overseas nurses: barriers to effective and non-discriminatory mentoring practices.** *Nurs Ethics* 2010, **17**:603-613.
41. Allan HT, Larsen JA, Bryan K, Smith PA: **The social reproduction of institutional racism: internationally recruited nurses' experiences of the British health services.** *Diversity in Health & Social Care* 2004, **1**:117-125.
42. Bidwell P, Laxmikanth P, Blacklock C, Hayward G, Willcox M, Peersman W, Moosa S, Mant D: **Security and skills: the two key issues in health worker migration.** *Glob Health Action* 2014, **7**:24194.
43. Hardill I, MacDonald S: **Skilled international migration: The experience of nurses in the UK.** *Regional studies* 2000, **34**:681-692.
44. Henry L: **Institutionalized disadvantage: older Ghanaian nurses' and midwives' reflections on career progression and stagnation in the NHS.** *J Clin Nurs* 2007, **16**:2196-2203.
45. Larsen JA, Allan HT, Bryan K, Smith P: **Overseas nurses' motivations for working in the UK: Globalization and life politics.** *Work, Employment and Society* 2005, **19**:349-368.
46. Likupe G: **Experiences of African nurses and the perception of their managers in the NHS.** *J Nurs Manag* 2015, **23**:231-241.
47. Matiti MR, Taylor D: **The cultural lived experience of internationally recruited nurses: a phenomenological study.** *Diversity in Health & Social Care* 2005, **2**:7-15.
48. Okougha M, Tilki M: **Experience of overseas nurses: the potential for misunderstanding.** *Br J Nurs* 2010, **19**:102-106.
49. Taylor K, Blacklock C, Hayward G, Bidwell P, Laxmikanth P, Riches N, Willcox M, Moosa S, Mant D: **'You can't stay away from your family': a qualitative study of the ongoing ties and future plans of South African health workers in the United Kingdom.** *Glob Health Action* 2015, **8**:26125.
50. Winkelmann-Gleed A, Seeley J: **Strangers in a British World? Integration of international nurses.** *British Journal of Nursing* 2005, **14**:954-961.
51. Wojczewski S, Pentz S, Blacklock C, Hoffmann K, Peersman W, Nkomazana O, Kutalek R: **African Female Physicians and Nurses in the Global Care Chain: Qualitative Explorations from Five Destination Countries.** *PLoS One* 2015, **10**:e0129464.
52. Wojczewski S, Poppe A, Hoffmann K, Peersman W, Nkomazana O, Pentz S, Kutalek R: **Diaspora engagement of African migrant health workers - examples from five destination countries.** *Glob Health Action* 2015, **8**:29210.
53. Jose MM: **Lived experiences of internationally educated nurses in hospitals in the United States of America.** *Int Nurs Rev* 2011, **58**:123-129.
54. Showers F: **Being black, foreign and woman: African immigrant identities in the United States.** *Ethnic and Racial Studies* 2015, **38**:1815-1830.
55. Wheeler RM, Foster JW, Hepburn KW: **The experience of discrimination by US and Internationally educated nurses in hospital practice in the USA: a qualitative study.** *J Adv Nurs* 2014, **70**:350-359.

56. Wheeler RM, Foster JW, Hepburn KW: **The experiences of internationally educated nurses in the southeastern United States of America.** *Int Nurs Rev* 2013, **60**:397-404.
57. Hagey R, Choudhry U, Guruge S, Turrittin J, Collins E, Lee R: **Immigrant nurses' experience of racism.** *J Nurs Scholarsh* 2001, **33**:389-394.
58. Mapedzahama V, Rudge T, West S, Perron A: **Black nurse in white space? Rethinking the in/visibility of race within the Australian nursing workplace.** *Nurs Inq* 2012, **19**:153-164.
59. van Rooyen D, Telford-Smith CD, Strümpher J: **Nursing in Saudi Arabia: reflections on the experiences of South African nurses.** *Health SA Gesondheid* 2010, **15**:1-9.
60. Nowak J: **Gendered perceptions of migration among skilled female Ghanaian nurses.** *Gender & Development* 2009, **17**:269-280.
61. Wong M: **Geographies and strategies of caregiving among skilled Ghanaian migrant women.** *Women's Studies International Forum* 2014, **42**:28-43.
62. Hull E: **International migration, "domestic struggles" and status aspiration among nurses in South Africa.** *J South Afr Stud* 2010, **36**:851-867.
63. Reardon C, George G: **An examination of the factors fueling migration amongst Community Service practitioners.** *Afr J Prim Health Care Fam Med* 2014, **6**:E1-9.
64. Jirovsky E, Hoffmann K, Maier M, Kutalek R: **"Why should I have come here?" - a qualitative investigation of migration reasons and experiences of health workers from sub-Saharan Africa in Austria.** *BMC Health Services Research* 2015, **15**:74.
65. Alexis O, Vydellingum V: **The lived experience of overseas black and minority ethnic nurses in the NHS in the south of England.** *Diversity in Health & Social Care* 2004, **1**:13-20.
66. Jones CB, Sherwood G: **The globalization of the nursing workforce: Pulling the pieces together.** *Nursing Outlook* 2014, **62**:59-63.
67. Brush BL, Sochalski J: **International nurse migration: lessons from the Philippines.** *Policy Polit Nurs Pract* 2007, **8**:37-46.
68. Tregunno D, Peters S, Campbell H, Gordon S: **International nurse migration: U-turn for safe workplace transition.** *Nurs Inq* 2009, **16**:182-190.
69. Bazant E, Sarkar S, Banda J, Kanjipite W, Reinhardt S, Shasulwe H, Mulilo JM, Kim YM: **Effects of a performance and quality improvement intervention on the work environment in HIV-related care: a quasi-experimental evaluation in Zambia.** *Hum Resour Health* 2014, **12**:73.
70. Xu Y: **International migration of nurses and human development.** *Home Health Care Management & Practice* 2007, **20**:87-90.

PART D: Appendix – Instructions for Authors

Human Resources for Health

Instructions for authors

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Reviews are summaries of recent insights in specific research areas within the scope of *Human Resources for Health*.

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Reviews should be approximately 3000 words.

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- [Title page](#)
- [Table of contents](#)
- [Additional non-English language abstract](#)
- [Keywords](#)
- [Introduction](#)
- [Review](#)
- [Conclusions](#)
- [List of abbreviations used](#) (if any)
- [Competing interests](#)
- [Authors' contributions](#)
- [Authors' information](#)

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This should contain the body of the article, and may also be broken into subsections with short, informative headings.

Conclusions

This should state clearly the main conclusions of the review and give a clear explanation of their importance and relevance.

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Complete book, authored

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Online document

Doe J. Title of subordinate document. In: *The dictionary of substances and their effects.* Royal Society of Chemistry. 1999. <http://www.rsc.org/dose/title of subordinate document>. Accessed 15 Jan 1999.

Online database

Healthwise Knowledgebase. *US Pharmacopeia,* Rockville. 1998. <http://www.healthwise.org>. Accessed 21 Sept 1998.

Supplementary material/private homepage

Doe J. Title of supplementary material. 2000. <http://www.privatehomepage.com>. Accessed 22 Feb 2000.

University site

Doe, J: Title of preprint. <http://www.uni-heidelberg.de/mydata.html> (1999). Accessed 25 Dec 1999.

FTP site

Doe, J: Trivial HTTP, RFC2169. <ftp://ftp.isi.edu/in-notes/rfc2169.txt> (1999). Accessed 12 Nov 1999.

Organization site

ISSN International Centre: The ISSN register. <http://www.issn.org> (2006). Accessed 20 Feb 2007.

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