The State of Nursing and Nursing Education in Africa

A Country-By-Country Review

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Sigma Theta Tau International
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Introduction

Years after colonialism came to an end, its influence still weighs heavily on Africa. Colonialism affected nursing and nursing education as much as it affected African society at large. Different degrees of development of nursing can be found throughout Africa. The vast difference, for example, can be seen when comparing South Africa, which was the first country in the world to start state registration of nurses, to Mozambique and Niger, which have no nursing councils at all.

The State of Nursing and Nursing Education in Africa represents an extended and thoroughly prepared collection of chapters providing a summary of nursing and nursing education in Africa. It is intended to be a valuable resource for corporate organizations, funders, university faculty, and philanthropists who want to gain a better understanding of nursing and nursing education when deciding whether or not to make investments.

The purpose of this report is to provide an overview of the status on nursing and nursing education in Africa. Why did we think such an overview was needed? Through our international travel, we often meet with colleagues from universities who are considering exchange programs for staff and students. We meet with potential funders who ask us where the greatest need for development is. We meet with policymakers who ask us about the involvement of nurses at policy tables in Africa.

And then, we have nursing academics in Africa who perform their duties under very difficult circumstances but whose success stories are never told. Through this report, we hope to give you a comprehensive overview on nursing and nursing education in Africa while simultaneously providing nurse academics from Africa a voice to share their work. You might read about the situation in some developing countries and wonder how how achievement is possible. This report is not intended merely to trumpet achievements but also to present the challenges we face. One dire challenge, for instance, is Sub-Saharan Africa's need for 350,000 trained nurses in the next 3 to 5 years. We invite you to join forces with us to leave a legacy of improved nursing and nursing education systems for generations to come; let's work together! No system is ever perfect, and we can learn from each other. Our goal with this report is to ensure that you have a useful resource to assist you in decision making.

The State of Nursing and Nursing Education in Africa is structured into 25 chapters. Chapter 1 provides an introduction to historical as well as contemporary nursing in Africa. Chapters 2 through 23 address the nursing and nursing education systems of 22 African countries. Africa is the second largest continent, with a population of about 700 million in the 58 independent countries. Six of these states are island countries. On the west coast of Africa is Cape Verde Islands, on the east coast the Comores, Madagascar, Mauritius, and Réunion. The sixth island country is Sao Tomé and Principé off the coast of Gabon in West Africa. The countries included in this report have established nursing

education systems. Note, however, that just because a country is not included does not necessarily mean the country has no development. A challenge we faced was the inclusion of Francophone and Lusophone countries due to the language barrier. Nonetheless, we believe the information provided on the 22 included countries will be useful in providing some insight into the status of nursing education in those countries. Chapter 24 is a summary of prominent nursing organizations that operate in Africa, and Chapter 25 provides a summary of issues related to nursing and nursing education in Africa.

We have used a standard format for structuring the chapters. However, in the case of some countries, no information, or very limited information, is available. We have indicated this in the text. As part of the descriptions of the governance in each of the countries, we have used the Mo Ibrahim Index. Established in 2007, the Mo Ibrahim Index is the most comprehensive collection of quantitative data that provides an annual assessment of governance performance in every African country. The index compiles 86 indicators grouped into 14 subcategories and four overarching categories to measure the effective delivery of public goods and services to African citizens. According to the Mo Ibrahim Foundation (2011), because

> Data included in the Index come from 23 separate institutions, and are on different scales at source, these raw data must be standardized in order to be meaningfully combined. The data for each indicator are transformed by the method of Min-Max normalization, which performs a linear transformation on the data whilst preserving the relationships among the original data values. Min-Max normalization subtracts the minimum value of an indicator's raw data set from each country's value for that indicator in a particular year. That value is then divided by the range of the indicator (maximum value in the raw data set minus the minimum value in the data set). The new values are multiplied by 100 in order to put them on a new scale of 0–100, where 100 is always the best possible score.

The overall rating refers to the ranking order out of a total of 53 countries in Africa.

In conclusion, we trust you will find this a valuable resource and reference as we continue to labor for the profession, students, and our patients.

Hester C. Klopper and Leana R. Uys
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CHAPTER 1

Nursing in Africa: An Introduction

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Perceptions about Africa vary from person to person. For many people it is still the "dark continent" or "the heart of darkness," whereas for others it is the source of music (African jazz), art trends (Picasso's African inspiration period), and fashion (Afrocentric fashion). But for those of us who live and work here, the continent is the place that nurtured our families over generations; the home of the plains, rivers, and animals that spawned our family and clan names; and the site of the human history that shapes us.

This report aims to introduce the reader to the Africa of the nurses who serve the continent's population. This edition focuses on 23 countries of Sub-Saharan Africa (SSA), a region in many ways very different from North Africa—and in many ways also very

similar. Nevertheless, SSA falls into the World Health Organization (WHO) region of Africa (AFRO), but North Africa does not—in terms of health care, a significant division. However, politically, the African Union (AU) includes all 53 countries, including the countries of North Africa, and many continental initiatives cross this traditional divide.

The History of Africa

For many people outside Africa, the history of the continent is almost unknown territory, which leaves them with limited understanding of the current state of the continent. The history of Africa can be roughly divided into four phases, which are briefly described in this section.

The *pre-colonial period* stretched to the 16th century, when the scramble for African colonies by European powers began. Africa was relatively isolated as a continent, because the desert and equatorial areas with their endemic illnesses formed a relatively effective barrier between central and southern Africa and Europe and the Middle East. Therefore, visitors to the continent concentrated on the North African area, and Arabian and Eastern traders also heavily visited the East Coast. These visitors were treated well or badly depending on the chief they contacted and what they offered in terms of trade, but they had little influence on the day-to-day life and social structure of the African society.

During this long period, complex social organization characterized the societies that lived on the continent. They were organized into family, clan, and tribal groupings, but nations as such did not exist. In most cases the local languages were not written languages, so the absence of written records and description made it easy for foreigners to miss the complexity of society, norms, and strategies. A growing African literature genre during the time period gives glimpses into this complexity, as do the art of the San people and the puzzling buildings such as the Great Zimbabwe ruins and the 800-year-old Mapungubwe ruins in South Africa.

Though in some regions of Africa hunting and gathering was the way of life, husbandry was widespread. Sometimes periods of peace and affluence led to overpopulation of both people and animals, and a drought, flood, or fight about scarce resources like food, grazing lands, or water led to the family, clan, or tribe moving to another area. Boundaries were not formal, people moved as freely as the locals allowed them, and their movements were driven mainly by the needs of their lives. Trade in minerals took place, as evidenced by gold mining in South Africa and Zimbabwe before the early colonization and also by trade in skin, animal artifacts, and other products. Early tribes also traded in humans, with defeated families, clans, and tribes becoming slaves or with stronger clans kidnapping their neighbors and selling them as slaves.

The *colonial period* commenced when the Dutch opened the sea route to the East to trade in spices. This led to the "Scramble for Africa" by colonizers, who included the first wave of missionaries, traders, and farmers. Only two countries, Ethiopia and Liberia, escaped colonization or a similar fate. Ethiopia, for instance, successfully resisted Italian attempts at colonization. In 1822, the American Colonization Society (ACS) was formed to send free African Americans to Africa. The society established on the west coast of Africa and became the independent nation of Liberia in 1847.

Though colonizing nations often refer to and see themselves as bringing civilization and education to Africa, the devastation caused by colonial powers through ignorance, greed, ethnocentricity, racism, and insensitivity is difficult to describe. The carving up of Africa into nation-states was mainly done on inaccurate maps, taking no account of local tribal distribution or interest (Meredith, 2005). The arbitrarily demarcated boundaries of Africa made in Europe sowed the seeds for future conflict and displacement, such as creating one Sudan from two disparate states or carving Somaliland among three European powers. Meredith (2005) states, "European rule was enforced both by treaty and by conquest. From their enclaves on the coast, officials moved ever deeper into the interior to proclaim the changes agreed in the chancelleries and country mansions of Europe" (p. 2). Where episodes of resistance occurred, such as in northern Nigeria, Zimbabwe, and Kenya, the resistance was dealt with by short, sharp military actions, and the resistance leaders were either killed or sent into exile. At the height of its imperial power, England also set out to take over the two Boer Republics in South Africa after the discovery of gold and diamonds, using the "scorched earth" approach to combat the Boer's guerilla warfare, for which the English were ill prepared.

After the European powers had carved up Africa, they found that few territories could produce instant wealth, so they lost much of their earlier enthusiasm. They wanted each territory to be financially self-supporting, so they kept administration to a minimum, placed education and health care in the hands of Christian missionaries, and left economic activity to commercial companies. The colonial governments limited themselves to maintaining law and order, raising taxes, and providing an infrastructure of roads and railways. The taxation was sometimes used for social engineering to devastating effect. For example, in South Africa, when the British needed African labor to build a harbor in Durban, they levied a "hut tax" that could only be paid in cash on every rural homestead. Cash-only payments forced almost every household to send a young man to Durban to work for wages, which was the beginning of the end of healthy rural communities in Zululand.

The nature of colonial rule was to have a small band of European administrators and army presence and to make extensive use of African chiefs in a system the British called "indirect rule" (Meredith, 2005). This distorted the role of African chiefs to that of agents of colonial powers, responsible for providing labor and taxes from their own people,

and many "chiefs" were created by the colonial powers because of their willingness to collaborate, rather than because of their legitimate claim to such a status.

But slowly nations took shape, and economies were established. The economy in Ghana, for example, was based on the cocoa trade. Through the efforts of Christian missionaries, primary education gradually expanded south of the Sahara, and an educated elite grew in most African nations. However, the majority of each population was still left to carry the legacy of colonialism with little impact on their everyday lives to improve their living conditions.

Table 1.1 provides a summary of the colonial possessions in Africa. The first column indicates the controlling European power and column two indicates the number of the African countries that were colonies under European power.

TABLE 1.1: Colonial Possessions in Africa

NR	EUROPEAN POWER	AFRICAN COUNTRIES UNDER EUROPEAN POWER*
1	British and British mandate	Botswana, Egypt, Gambia, Ghana, Kenya, Lesotho, Malawi, Nigeria, Sierra Leone, Somalia (middle), South Africa, Sudan, Swaziland, Tanzania, Uganda, Zambia, Zimbabwe
2	French and French mandate	Algeria, Benin, Burkina Faso, Cameroon, Central African Republic, Chad, Comoros, Congo Brazzaville, Cote d'Ivoire, Gabon, Guinea, Madagascar, Mauritania, Mauritius, Morocco, Niger, Senegal, Seychelles, Somalia (north), Togo, Tunisia
3	Belgium and Belgian Mandate	DRC, Rwanda, Burundi
4	Portuguese	Angola, Guinea Bissau, Mozambique
5	Spanish	Equatorial Guinea, Western Sahara
6	Italian mandate	Somalia (south)
7	German, mandated to South Africa	Namibia

** Current rather than colonial names are used.*

Thousands of African men saw service in the Second World War in the East, North Africa, and Europe and came back with a new vision of how their own countries should be governed. Within 10 years, a tsunami of independence movements started.

The *post-colonial period* really commenced in the 1950s when first Egypt (1951) and then a rush of countries became independent. Within 30 years, 51 of 53 African countries (or 96%) gained their independence. The exceptions were Liberia, which gained its independence in 1947, and Eritrea, which only became independent in 1993. Table 1.2 indicates the timeline of independence of African countries.

TABLE 1.2: Independence of African Countries

PERIOD	COUNTRIES
Before 1950	Liberia, Egypt
1950 to 1959	Ghana (1957); Guinea (1958); Sudan, Tunisia and Morocco (1965)
1960 to 1969	Chad, Benin, Nigeria, Ivory Coast, Madagascar, Central African Republic, Mali, Niger, Senegal, Burkina Faso, Mauritania, Togo, Democratic Republic of Congo (DRC), Somalia, Congo, Gabon, Cameroon (1960); Sierra Leone, South Africa (1961); Algeria, Burundi, Rwanda, Uganda (1962); Kenya, Tanzania (1963); Malawi, Zambia (1964); Gambia (1965); Botswana, Lesotho (1966); Equatorial Guinea, Mauritius, Swaziland (1968); Guinea-Bissau, Libya (1969)
1970 to 1979	Angola, Cape Verde, Comoros, Mozambique, Sao Tome (1975); Seychelles (1976); Djibouti (1977)
1980 onward	Zimbabwe (1980); Namibia (1990); Eritrea (1993); Southern Sudan (2011)

Indigenous People of Africa and America Magazine (www.ipoaa.com/african_independence.htm)

The African governments faced daunting challenges. Africa's climate is generally hard and variable, with half of the continent receiving inadequate rainfall for sustainable agriculture and soil that is not very nutritious (Meredith, 2005). Many countries fall in the belt where tropical diseases are endemic and where death rates for children are historically among the highest in the world. The newly independent countries also faced an acute skills shortage. There were no universities in Francophone Africa at the time of independence, and in the whole continent only 8,000 secondary school graduates were produced per annum. Expatriates filled more than three-quarters of top-level positions in government and business, and for the most part foreign corporations owned and controlled the economies of most countries.

Governing in a democratic fashion was also difficult. Democracy was a recent transplant, and the pattern most government officials had been used to under colonial rule was one of personal power, autocratic decisions, and exploitation. One of the challenges was to create a coherent nation from disparate groups of peoples, because ethnicity had become a dominant part of people's lives during the colonial era.

Though the new African economies were heavily dependent on agriculture, new governments neglected this sector and played to the urban, verbal constituency. This led to a decline in agricultural production in the 1960s and 1970s, and African governments borrowed to sustain their populations. Between 1970 and 1980, black Africa's external debts rose from $6 billion to $38 billion, and by 1982, 28.3% of all export earning had to be used to service the debt (Meredith, 2005).

Within a decade many of the new leaders became dictators, exploiting and repressing their people—for example, Bokassa in the Central African Republic, Idi Amin in Uganda, Mengisto in Ethiopia, and Banda in Malawi to name but a few. One government after another was taken over through coups, especially in Francophone Africa. Furthermore, one-party states were created, and opposition parties were illegal in 32 states (Meredith, 2005). Corruption became the norm, influencing all aspects of life. By the 1980s the economic decline was so serious that the 1980s became known as the "lost decade," and it led to the "structural adjustments" initiated and enforced by the World Bank and IMF. This resulted in a massive brain drain of educated and skilled Africans who left for an improved quality of life elsewhere.

The African Renaissance Period

In the 1990s discontent was widespread in Africa, and the end of the Cold War changed the dynamics on the continent. All over the continent the "Big Men" (terminology often used to refer to dictators) were challenged by people trying to oust them, and public protest supported such changes. In South Africa democracy finally arrived for the indigenous population in 1994, and democratic changes swept through many countries. Though many of the "Big Men" managed to stay in power, opposition parties were launched, constitutions changed, and the African Union became focused on good governance.

During the last decade Africa has shown considerable progress on many fronts:

- Africa has shown rapid economic growth, with an annual growth rate of 6% between 2003 and 2008.
- It has seen improvements in governance, as indicated by indexes such as the Mo Ibrahim Foundation Index. This index showed a significant improvement in African countries in economic management, participation in human rights, and human development.
- Political stability increased, and violent conflict has been reduced by 36% between 2004 and 2008.
- Aid increased by 46% between 2004 and 2007, and the region received large amounts of debt relief. (Wickstead & Hickson, 2010)

Africa still faces many challenges—trade restrictions, safety, and rule of law are not improving much, but the continent is developing and making progress.

The Socioeconomic and Political Situation in Africa

You can describe the current socioeconomic situation in Africa in many ways. You can easily make statements such as that by the World Bank classifying 40 countries as "low-income countries"—29 or 72.5% are in Africa—or that Africa mainly consists of "developing" countries as opposed to "developed" countries. We have chosen the Ibrahim Index of African Governance (Mo Ibrahim Foundation, n.d.) to describe this aspect of the continent. The index is published annually and is quite comprehensive in the categories it takes into account. The authors of this index use a wide definition of governance, not an exclusively political approach, and say that "nation-states in the modern world are responsible for the delivery of essential political goods to their inhabitants" (Rotberg & Gisselquist, 2009, p. 7). These authors further state:

> In focusing on its five categories, the Index takes a broader view of governance than some other projects that treat governance as relating only to the rule of law, democracy, and human rights. This narrow definition of governance is essentially what is called "political governance" in the African Peer Review Mechanism (APRM). Defining "good governance" as equivalent to good political governance, we argue, is too narrow. It ignores the central responsibilities of state governments to provide safety and security, as well as to provide for a basic level of well-being for their citizens (p. 8).

This wider definition of the responsibilities of a government is very important in light of the requirements for health of a population—health that is not only dependent on health care, but also on the absence of war, the ability to make a living and provide for one's family economically, and the ability to obtain an education that enables intelligent self-care.

The structure and components of the index are outlined in Table 1.3. Though the author of each chapter will describe his or her own country in much more detail, we will provide the Ibrahim Index of African Governance for each country as a reference point up to the sub-category level and with a total overall score.

TABLE 1.3: Basic Structure of the Ibrahim Index of African Governance (Rotberg & Gisselquist, 2009)

CATEGORY	SUB-CATEGORY
Safety and Rule of Law	1.1 Personal Safety
	1.2 Rule of Law
	1.3 Accountability and Corruption
	1.4 National Security

continues

TABLE 1.3: Continued

CATEGORY	SUB-CATEGORY
Participation and Human Rights	2.1 Participation
	2.2 Rights
	2.3 Gender
Sustainable Economic Opportunity	3.1 Public Management
	3.2 Private Sector
	3.3 Infrastructure
	3.4 Environment and the Rural Sector
Human Development	4.1 Health and Welfare
	4.2 Education

It is impossible to talk about the socio-economic issues in Africa without addressing the United Nations Millennium Development Goals (MDGs), which were accepted by the United Nations in 2000. The eight goals with their targets represent an unprecedented and politically important global consensus about measures to reduce poverty (Waage et al., 2010). The eight MDGs are summarized in Table 1.4, and it is clear from this list that the MDGs are particularly appropriate for the continent of Africa.

TABLE 1.4: UN Millennium Development Goals and Targets

NR	GOAL	TARGETS FOR 2015
1	Eradicate extreme poverty and hunger	Halve the proportion of people whose income is less than US$1 a day;
		Achieve full and productive employment and decent work for all, including women and young people;
		Halve the proportion of people who suffer from hunger.
2	Achieve universal primary education	Ensure that children everywhere, boys and girls alike, will be able to complete a full course of primary schooling.
3	Promote gender equality and empower women	Eliminate gender disparity in primary and secondary education, and by 2015 in all levels of education.
4	Reduce child mortality	Reduce by two-thirds the mortality rate in children younger than 5 years.

5	Improve maternal health	5.1 Reduce by three-quarters the maternal mortality ratio;
		5.2 Achieve universal access to reproductive health personnel.
6	Combat HIV/AIDS, malaria, and other diseases	6.1 Have halted and begun to reverse the spread of HIV/AIDS;
		6.2 Achieve universal access to treatment for HIV/AIDS infection with access to retroviral drugs;
		6.3 Have halted and begun to reverse the incidence of malaria and other major diseases.
7	Ensure environmental sustainability	7.1 Integrate the principles of sustainable development into country policies and programmes and reverse the loss of environmental resources;
		7.2 Reduce biodiversity loss;
		7.3 Halve the proportion of people without sustainable access to safe drinking water and basic sanitation;
		7.4 Achieve significant improvement in the lives of at least 100 million slum dwellers.
8	Develop a global partnership for development	8.1 Develop further an open, rule-based, predictable, non-discriminatory trading and financial system that includes a commitment to good governance, development and poverty reduction—both nationally and internationally
		8.2 Address the special needs of the least developed countries
		8.3 Address the special needs of landlocked developing countries and small island developing States (through the Programme of Action for the Sustainable Development of Small Island Developing States and the outcome of the twenty-second special session of the General Assembly)
		8.4 Deal comprehensively with the debt problems of developing countries through national and international measures in order to make debt sustainable
		8.5 In cooperation with pharmaceutical companies, provide access to affordable essential drugs in developing countries in the long term
		8.6 In cooperation with the private sector, make available the benefits of new technologies, especially information and communications

(United Nations, 2008)

In one of the evaluation reports on the progress towards the MDGs, the Overseas Development Institute (2010, p. 9) lists the top 20 achievers in terms of absolute progress, and 11 of these countries were from Africa. The authors point out that low-income countries, especially those in Africa, tend to make more absolute progress, which means that they show the biggest positive change on the indicators regardless of their initial conditions. Because the targets tend to measure relative progress, which refers to the progress towards reaching the targets, the progress in Africa tends to be overlooked. Achievements such as almost halving the proportion of people living on less than $1.25 a day in a range of African countries (Ethiopia, Egypt, Gambia, Mali, Senegal, and Angola) and the reduction of under-5 mortality ratios in Angola and Niger by more than 100 per 1,000 should be celebrated. Figure 1.1 summarizes the gains in Africa across all the MDGs, but in each chapter the progress of the individual countries will be reflected.

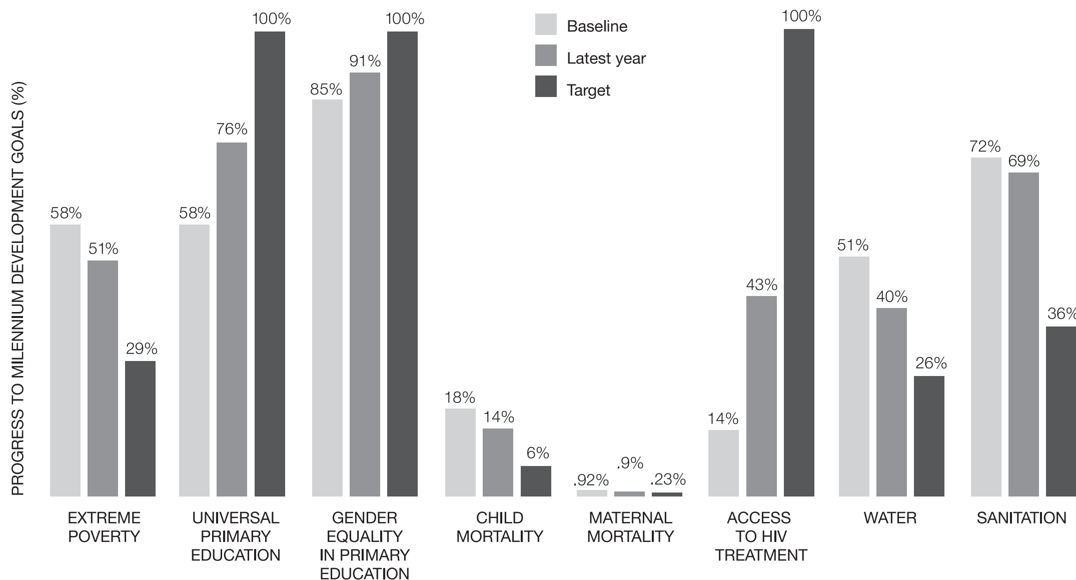


FIGURE 1.1

Progress of Africa against MDGs
(Wickstead & Hickson, 2010).

Health and Health Care in Africa

According to the WHO (2000, pp. 5–6), a health system includes all activities whose primary purpose is to promote, restore, and maintain health, whereas the health care system is the provision of, and investment in, health services. Health systems as such did not exist worldwide 100 years ago and have developed because of “the growing

expectation of access to some form of health care for all, and growing demands for measures to protect the sick, and their families, against the financial cost of ill health" (p. 7).

In African countries the first health care system was a traditional one, and this still exists as a strong component of the health system in all African countries. Traditional healers can be divided into the following categories, although it is sometimes difficult to distinguish in the case of individual practitioners:

- **Diviners:** Use ritual to identify the causes of the problems people are experiencing, and often also prescribe cleansing or other rituals to address the causes.
- **Herbalists:** Specialize in gathering and dispensing herbal and traditional remedies.
- **Priests:** Combine Christian rites, such as prayers, incantations, and rituals, with traditional diagnostic and treatment approaches.

In some African countries, efforts are underway to recognize traditional healing as part of the formal health system (see Chapter 16). In most cases this involves some form of credentialing, registration, and then access to health services.

Western-type health care in Africa was initially provided mainly for the colonial administrators and expatriates, while mission facilities and limited public health measures were targeted at the local indigenous population. When these countries became independent, the challenge was to make the systems more equitable and accessible, but also cost efficient for relatively poor countries. The timeous "solution" was the Primary Health Care approach accepted by the joint WHO/UNICEF International Conference health at Alma-Ata, USSR, in 1978 (World Health Organization, 1978).

In middle and higher income countries, primary care is mainly associated with general and family medical practice, but in African countries it is usually provided in a "PHC" service such as a clinic or a health center and usually by a nurse or another cadre of health worker. According to the WHO (2008c), in some countries this level of care can be termed *primitive* rather than *primary* because of poorly trained and equipped PHC practitioners. The WHO also points out that the demand for such care is greatly influenced by the perceived quality and responsiveness of the services, not purely on the need for such services.

In terms of health and health care, geographical location is central to understanding the different African countries. In the central areas of Africa some infectious diseases, such as malaria, tuberculosis, and the Tropical Cluster of Diseases (Trypanosomiasis, Chagas disease, Schistosomiasis, Leishmaniasis, Lymphatic Filariasis, and Onchosersiasis) are endemic (WHO, 2008a). The burden of disease in these countries is greatly increased by these conditions, and because these conditions are not generally found in developed countries, research and development about them has been limited, leading to the 10/90

gap. The 10/90 gap refers to the statistical finding of the Global Forum for Health Research (Currat, 2002) that only 10% of worldwide expenditure on health research and development is devoted to the problems that primarily affect the poorest 90% of the world's population. This means that little has been done through science and technology to alleviate this burden on poor countries and their populations.

Another major factor influencing current health systems is the colonial past, especially the view of the role of the nurse and midwife, which was imported almost without adaptation from European countries to African countries. For example, in France the nurse is still perceived as a handmaiden to the doctor, with very little independent practice, and midwives are almost unknown. Though this model might be appropriate in a country with a medical practitioner to population ratio of 1:1,000, it is clearly totally inappropriate in a country like Niger, where the ratio of doctor to population is 1:10,000 population and the ratio of nurse to population is 12:10,000 (WHO, 2008b). The severe shortage of midwives in many African countries speaks to the continuing dominance of non-applicable models in African health services.

Lastly, the HIV and AIDS pandemic that struck the continent in the 1990s has led to changes in health systems and populations that will have an influence for many years to come. Southern and Eastern Africa were the most seriously affected by the epidemic (WHO, 2004). The prevention, treatment, and care challenges were enormous, and though thousands died, the response globally gradually allowed countries to address the needs more adequately than was initially the case. Dedicated funding for this and the related tuberculosis epidemic streamed into the region, allowing for health system strengthening and a massive research effort.

Higher Education in Africa

According to the Commission for Africa, many of Africa's education institutions are in a state of crisis (2010) with poor physical infrastructure, lack of human resource capacity, poor management systems, and problematic funding resources. The commission estimated that it would cost about US $500 million over 10 years to revitalize the universities of Africa. *The Economist* (2005) summarized the state of higher education in developing countries by saying that the bad legacy of colonialism was compounded by the legacy of anti-colonialism. The legacy of colonialism was that universities "concentrated on producing a tiny group of elite administrators," and the anti-colonialism that followed allowed governments too much control over universities (p. 14).

The Africa-U.S. Higher Education Initiative summarizes the problems of Higher Education (HE) in Africa as follows (Yisengaw, 2008):

- Faculty shortage and development

- Governance, leadership, and management
- Problems with quality and relevance of qualifications
- Weak research and innovation capacity
- Financial austerity and lack of capacity for diversification
- Poor physical facilities and infrastructure
- Inability to meet increasing demands for access and equity

But such general statements give little guidance on what the problem is and what the solutions could be. Therefore, we need to delve down into greater detail.

The Task of Higher Education

According to many modern writers (Etzkowitz, Kemelgor, & Uzzi, 2000; Gibbons et al., 1994) the task of the modern university is to deliver economic growth in a competitive world market of innovation and production. A university is no longer an autonomous entity that functions based on the CUDOS norms (Communism, Universalism, Disinterestedness, and Organized Scepticism). In a world of growing external demands for accountability and access and diminishing economic support, universities have experienced a shift in values to meet the challenges to be contemporary universities driven by the knowledge economy (Klopper, 2006).

This is a particularly important shift for African universities. Until the mid-1990s the World Bank saw the role of higher education in Africa's development as unimportant for development. Therefore, the World Bank encouraged funding agencies to focus on the level of primary or secondary schooling. During this time the World Bank reduced its funding for higher education from 17% in the 1985-89 period to 7% by 1995-99 (as cited in Cloete, 2006). "Neglect of higher education led to the disestablishment of research centers, medical schools, agricultural centers, telecommunication and technological development, business training centers, vocational and skills schools, and other institutions in the tertiary education sector which are critical to the development of African societies and their economies" (Cloete, 2006).

Authorities hold a spectrum of opinions about the value of higher education. On the one extreme it is seen as marginally important—an ancillary luxury—whereas on the other extreme it is seen as critical—the engine for development. A more centralist approach is to see it as mainly important to produce appropriately skilled professionals. Support for the view that it is the engine of development comes from many arenas. For example, "successful countries" such as those in the East and in South America were able to rapidly

expand the supply of skilled workers and dramatically change the educational profile of their population, as illustrated in Figure 1.2. The top block represents the percentage of the population with tertiary education, the middle block secondary, and the bottom primary.

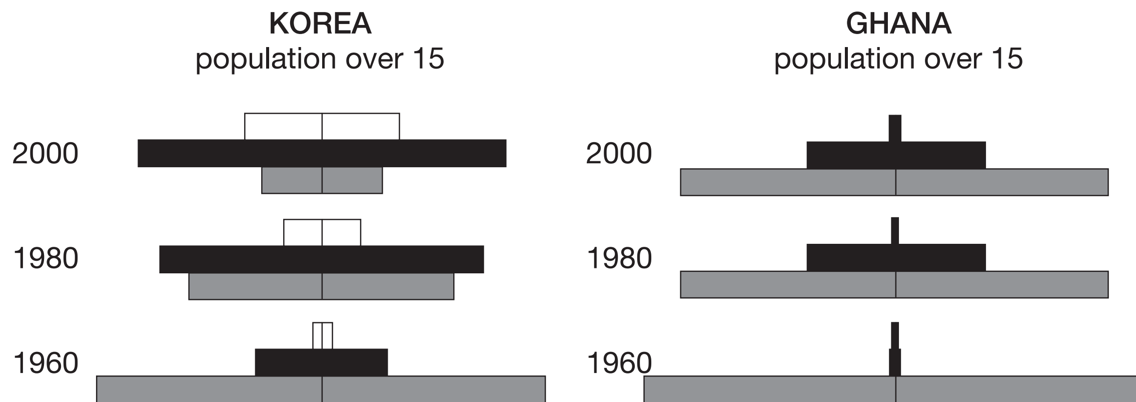


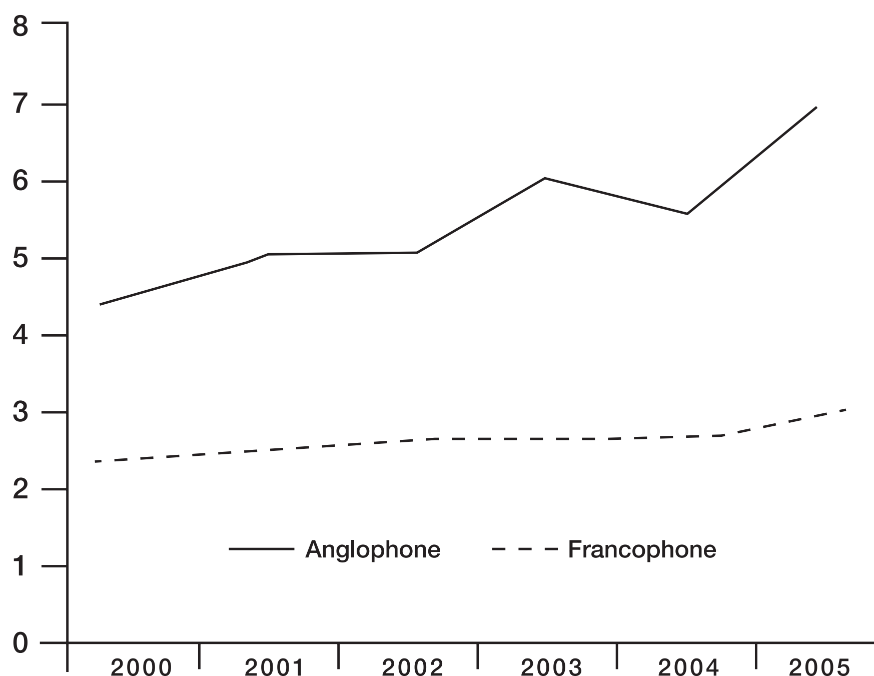
FIGURE 1.2

Changes in Educational Profile in Korea and Ghana, 1960-2000 (World Bank, 2009, p. 38)

The World Bank further elaborates on this theme when it found a direct relationship between participation rate in higher education and national income (2009). The role of universities in all countries in Africa should, therefore, be accepted as being the driver of economic and social development. Not achieving this goal means that the higher education sector is failing the nation it serves.

Lack of Access to Higher Education

Two linked changes are driving the increased demand for higher education—basification of higher education and the rise of the knowledge economy (*The Economist*, 2005). These changes have created a social, employer, and governmental demand for more students to graduate, and for them to graduate in the appropriate disciplines. The African population sees education as an important pathway to success in life, and it is generally correct, because people with higher education do much better financially than those without. But though the Gross Enrollment Ratio (GER) figures have doubled in the whole SSA area between 1991 and 2005, Francophone Africa has seen almost no growth during that time. Figure 1.3 shows the statistics from 2000-2005.



SOURCES: World Bank, UNESCO Institute of Statistics 2009, p. 47.

FIGURE 1.3

Trends in SSA Tertiary Gross Enrollment Ratio 2000-2005

The growth in GER in SSA has been underpinned very strongly by the emergence of private tertiary education in this region over the last 2 decades. According to the World Bank (2009), public higher education in SSA has doubled between 1990 and 2007, while private institutions have grown by about 400% (from about 24 to 468). This growth has been mainly in non-university sectors. The private higher education sector is characterized by programs in social sciences, economics/business, and law because of their relatively low set-up cost. Therefore, this sector usually does not address the need for more health professionals and further distorts the graduate profile in the region (see Table 1.5).

TABLE 1.5: Distribution of African University Graduates by Field of Study, 2005 (World Bank, 2009, p. 48)

FIELD OF STUDY	% OF GRADUATES
Agriculture	3
Education	22

continues

TABLE 1.5: continued

FIELD OF STUDY	% OF GRADUATES
Health sciences	7
Engineering	9
Sciences	9
Social science and humanities	47
Other	3

Although supply has generally improved, the specific problems are as follows:

- The need for graduates in specific (scarce) fields of study
- The need for people with postgraduate qualifications

If you look at Table 1.5 you see clearly that Africa is in need of many more graduates in the health sciences field. Africa is also not producing enough postgraduate students. For example, in the United States and Japan, PhD candidates have increased by 4% and 9% for the period between 1995-2005, whereas in South Africa, one of the best performing African countries, PhD candidates have increased by less than 1% (World Bank, 2005).

Resources for Higher Education

I have already alluded to the starvation diet on which African higher education has been for the 1990s (which Sawyer [2004], secretary-general of the Association of African Universities [AAU] calls the "lost years") and the subsequent deterioration in the system. But I need to mention the resources currently available as well. In general, though student numbers are soaring, government spending on tertiary education is either remaining the same or declining (World Bank, 2009, p. 24). The amount spent on each higher education student declined from US $6,800 in 1980 to an average of US $981 by 2004/05 (Mingat, Blandine, & Ramahatra, 2008). Clearly this does not bode well for salaries and for plant and equipment.

Around 2003, the Francophone countries spent around 2.7% of GDP on higher education (see Table 1.6), which is lower than the average worldwide for low-income countries (World Bank, 2009).

TABLE 1.6: Expenditure on Education in Low-Income Countries, 1990-2003 (World Bank, 2009, p. 7)

	AS % OF GOVERNMENT RESOURCES		**AS % OF GDP**	
Region	Early 1990	Around 2003	Early 1990	Around 2003
Africa	19.3	18.2	3.1	3.3
Francophone	22.9	17.6	3.3	2.7
Anglophone	16.1	21.4	3.0	4.5
Lisophone and others	12.9	18.7	4.0	3.0
Outside Africa	19.9	18.3	3.4	3.2

The brain drain problem is well known to everybody. The result is that the human resource situation in African universities is very worrying (World Bank, 2009):

- Vacancy rates are reported to be between 25 and 50%.
- Students are being taught by people without advanced degrees.
- Teaching staff is aging without younger faculty being developed.
- In some countries less than 10% of faculty is doctorally prepared.

Research

According to the World Bank, "Universities in Africa do not yet possess the research capabilities needed to combine global knowledge with national experience in support of innovation and problem solving" (2009, p. 54). Over the last 2 decades, teaching has been favored over research (see Table 1.7), and this has led to a poor knowledge infrastructure in most universities. In 2005 SSA contributed only 2.7% to the global scientific publications (World Bank, 2009, p. 56).

TABLE 1.7: Researchers per Million Persons (World Bank, 2009, p. 55)

COUNTRY	**RESEARCHER/M POP**	**COMPARATORS**	**RESEARCHER/M POP**
Mauritius	201	Latin America	261
Nigeria	15	Brazil	168
South Africa	192	India	158
Uganda	25	SSA	48
		USA	4,103
		China	459

When you explore the contribution of nurse researchers from Africa, you see an even poorer contribution. Polit and Beck (2009) recently analyzed the contributions to eight international nursing research journals over the period 2005-06. They found only five studies (or 0.5%) emanated from African nurse scientists. Of course, they did not include the *Africa Journal of Nursing and Midwifery* because they use the impact factor as a rating of standing.

In the same journal, Adejumo and Lekalakala-Mokgele (2009) analyzed the articles "related to nursing in Africa" (p. 64), and they found 1,860 for the period 1986 to 2006. They found a dramatic increase in the 1990s and then again a doubling in the 2000s. They also found that 52.67% of articles were published in African journals and 90 (7%) were written by a single author. Of concern was the fact that 64.3% of the research was focused on health professionals and not on clients.

Research has also become part of the income of universities. In an analysis of higher education in Europe, Felt (2005, p. 24) says, "The search for sufficient external research money has become a key task for contemporary universities." External funding makes possible the development of infrastructure for both research and teaching. It makes available funds for postgraduate research and support, and for the academic development of the academics involved. It might even make additional income for academics possible, thus preventing second and third jobs in the non-academic sector.

Felt (2005, p. 26) also says that "publication in journals no longer suffice for visibility. In many research fields scientists need to consider the market positioning of their research thanks to patenting processing and the creation of spin-off companies." Therefore, being an academic in 2009 is a much more complex task than it was 30 years ago, and additional tasks keep being added to what is required.

Continental Initiatives

In its strategic plan, the African Union has developed eight key ideas and 26 action sheets to implement these ideas (African Union, 2004). One of these action sheets (nr 19) deals with "Priority Education." This action sheet includes the "flagship projects" discussed in the following sections.

Distance Education

Promote distance learning, training, and other forms of education as part of capacity-building and human resource development programs (virtual education) with special emphasis on training of trainers/teachers—e-Education program of NEPAD.

Centers of Excellence

Promote establishment of Centers of Excellence for Africa (all sectors).

Higher Education and Scientific Research

The African Union also planned to promote networks and exchanges, education in science, and technology at all levels with special emphasis on higher education for scientific research and the establishment of AU scholarships.

The support for distance learning and open learning in this declaration should be welcomed, because many African countries have prohibited its use in higher education, thus severely limiting access to higher education. Quality control in such programs is certainly challenging, but it is impossible to see how the higher education needs of Africa can be addressed without using open learning creatively.

The most influential organ for higher education in Africa is the Association of African Universities (AAU). It discussed the impact of globalization on African Universities in 2002 and published the Accra Declaration, which renewed the commitment to higher education in Africa as a “public mandate” and not a commodity. It focused also on strengthening the capacity of national institutions for quality assurance, accreditation of programs, and recognition of qualifications. It also recognized the crucial role played by international cooperation in higher education.

In 2008 the AAU hosted an e-forum of the Africa-U.S. Higher Education Initiative (AUHEI) to establish the needs of African universities with regard to collaboration with United States universities. The AUHEI also accepted proposals for planning grant funding for collaborative relationships that addressed such needs and allocated the first set of such grants. Keeping track of developments of this initiative and other AAU activities on its website is important.

Regional Nursing Organizations and Contact Details

Three important regional organizations exist in Africa:

- The East, Central, and Southern African College of Nursing (ECSACON)
- The West African College of Nursing (WACN)
- The Tau Lambda-at-Large Chapter of Sigma Theta Tau International (STTI)

Based in Arusha, Tanzania, the East, Central, and Southern African College of Nursing (ECSACON) promotes the sustainable development of nursing. It is part of

the Commonwealth Regional Health Community, which aims at fostering regional cooperation for better health. The organization, which celebrated its 10th anniversary in 2000, includes representation from 14 countries: Botswana, Kenya, Lesotho, Malawi, Mauritius, Mozambique, Namibia, Seychelles, South Africa, Swaziland, Tanzania, Uganda, Zambia, and Zimbabwe. ECSACON has in the past been active in capacity building, regional harmonization, quality improvement, and many other projects that influence nursing in the region.

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The West African College of Nursing was constituted in 1980 in Accra, Ghana, with individual members from Gambia, Ghana, Liberia, and Sierra Leone. It has an international General Meeting every second year and a national one in countries with enough members every alternate year.

West African College of Nursing
6, Taylor Drive (OFF EDMOND CRESCENT)

P.M.B 2023, YABA, LAGOS, NIGERIA.
Tel: 01-4729865, 4710872
Email: wacnnursing@yahoo.com, info@wacnonline.org

First founded in 2001 as the African Honour Society for Nurses, the Tau Lambda-at-Large Chapter was established to join nurses of Africa with Sigma Theta Tau International (STTI). STTI is the second largest nursing organization in the world and consists of individual members who are nominated based on their academic performance at universities or their professional leadership. The primary aim of STTI is to provide leadership and scholarship in practice, education, and research to enhance the health of all people. STTI supports the learning and professional development of its members and strives to improve nursing practice worldwide. The Tau Lambda-at-Large Chapter currently consists of 15 sub-chapters in 7 African countries with over 500 members. The Tau Lambda-at-Large Chapter presents a unique model within the larger STTI organization that includes multiple schools of nursing, known as sub-chapters, at African universities. The chapter is governed by a board of directors based in different African countries. The Tau Lambda-at-Large Chapter offers schools of nursing the opportunity

to promote and reward excellence in students, staff, and alumni, creating networking opportunities not only within Africa, but across the world.

The Secretariat-Treasurer
Tau Lambda-at-Large Chapter
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Summary

Africa is a challenging arena in which to provide health care and higher education. Nevertheless, thousands of nurses and midwives are engaged in this task every day. They face their daily tasks often with limited support and reward.

Nursing and midwifery are also still mainly female professions in Africa, which means that the weak position of women in African societies impacts on nurses and midwives in many ways. This makes their position as leaders in health services more challenging, and in some cases severely limits their ability to influence the care they deliver and the policies they are expected to implement.

Nurses and midwives are the most widely spread and available health professionals on the continent, and as such, their role cannot be overestimated.

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CHAPTER 2

Botswana

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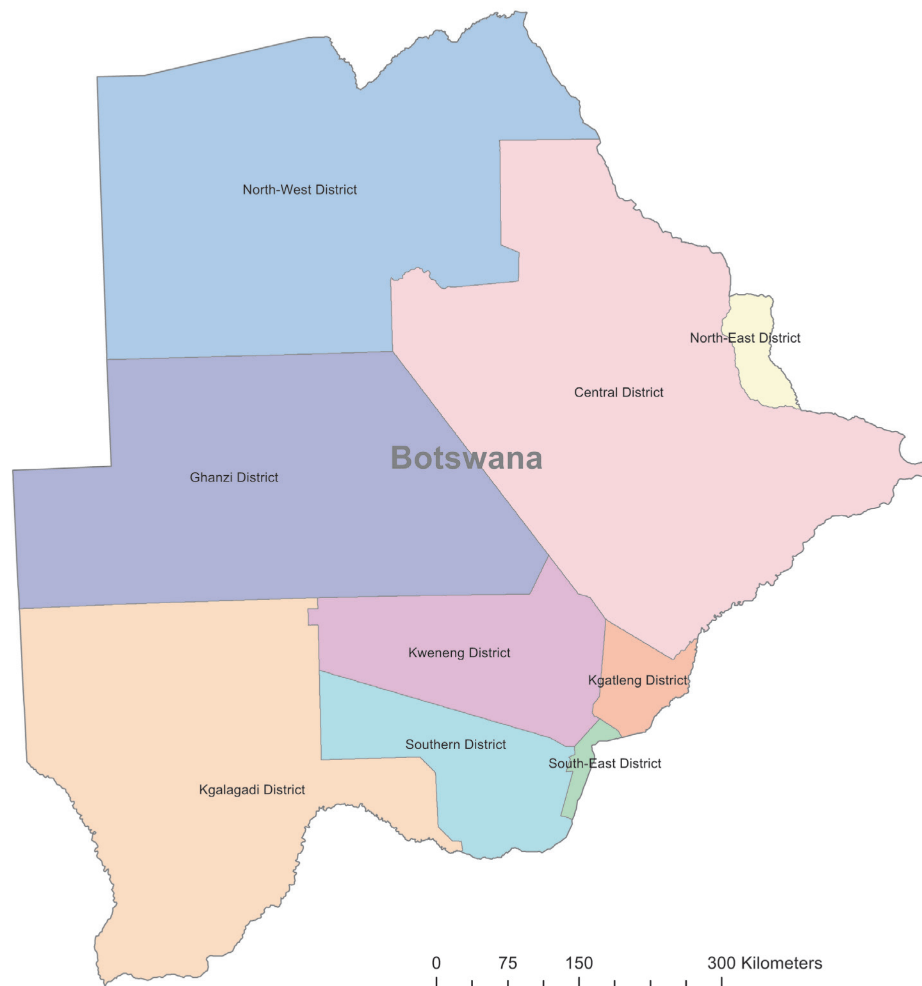
Introduction

Nursing's core business is to care in health and in illness in any given setting. Nursing and midwifery have long been established in Africa. Nurses and midwives play a major role in providing health promotion to allow populations to experience the highest levels of well-being and in enhancing the prevention of communicable diseases. Nurses care for the sick in the home (home-based care) and in health institutions. Their interventions include promotive, curative, preventive, rehabilitative, and palliative care. Nursing and midwifery play a critical leadership role within the health care systems. The roles of nurses and midwives fall within three broad areas—providing care, collaborating, and advocating for the nursing profession and their clients within the Primary Health Care (PHC) strategy (ECSACON, 2001).

Portugal
Madrid
Barcelona
Italy
Turkey
Spain
Lisbon
Mediterranean Sea
Mediterranean
Sea
Caspian
Sea
Turkmenistan
Syria
Iraq
Iran
Tunisia
Morocco
Algeria
Libya
Egypt
Jordan
Saudi Arabia
Tropic of Cancer
W. Sahara
Mauritania
Mali
Niger
Chad
Sudan
Red
Sea
Yemen
Oman
Arabian
Sea
Senegal
Gambia
Guinea-Bissau
Guinea
Sierra
Leone
Liberia
Cote d'Ivoire
Burkina
Faso
Ghana
Togo
Benin
Nigeria
Cameroon
Central African Republic
South
Sudan
Ethiopia
Eritrea
Djibouti
Somalia
Somaliland
Gulf of Guinea
Equatorial Guinea
Gabon
Congo
Congo
(Kinshasa)
Uganda
Kenya
Rwanda
Burundi
Tanzania
Equator
Indian Ocean
Angola
Zambia
Malawi
Mozambique
Zimbabwe
Namibia
Botswana
South
Africa
Swaziland
Lesotho
Madagascar
Mozambique
Channel
Tropic of Capricorn
Seychelles
Comoros
Mauritius
Zambia
Livingstone
Grootfontein
Maun
Francistown
Windhoek
Botswana
Serowe
Mahalapye
Gaborone
Pretoria
Johannesburg
Upington
Bloemfontein
Cairo
Khartoum
Addis Ababa
Nairobi
Kampala
Kinshasa
Lagos
Abuja
Dakar
Luanda
Lusaka
Harare
Maputo
Durban
Cape Town
0 375 750 1,500 Kilometers
0 375 750 1,500 Miles

The Country and Its Population

Botswana is a landlocked country in Southern Africa. It shares its borders with South Africa (South), Namibia (West), Zimbabwe (North East), Angola (North West), and Zambia (North East). Its area is 232,802 square miles (602,957 square kilometers), making it the same size as France or the state of Texas in the United States. Botswana was a former protectorate of the British government and was known as the Bechuanaland Protectorate from the late 1880s to 1966 when it gained its independence from the British government. The country was not developed by its colonizers, and at independence it was classified as one of the 10 poorest countries in the world. Fortunately, post-independence, the country leadership and its people worked hard to expedite development to sustain its people.



BOTSWANA IS THE SECOND-MOST SOUTHERN COUNTRY IN AFRICA, SURROUNDED BY NAMIBIA, SOUTH AFRICA, AND ZIMBABWE.

Botswana is a democratic country with a multi-party political system and has held elections every 4 years since 1996. It enjoys peace because of political and economic stability and relative safety because of its peace-loving people. However, although this country is often referred to as a shining example of democracy in Africa, it also has its own problems—the major one being poverty. About 30.1% of the population is poor (Central Statistics Office, 2003). Poverty has affected most of the female-headed families, which accounted for 47% of the households in the country, and 52% of these were in the rural areas (Ministry of Health [MOH], 2002).

Resource-generating sectors, especially mines, were established after independence. Botswana is now classified as a middle-income country (MIC). Its communication and transportation are efficient, with good roads that connect the various regions and neighboring countries. Because it's landlocked in Southern Africa, its good road infrastructure facilitates transportation of goods by long-distance trucks within the Southern African Development Community (SADC) region and beyond (MOH, 2002). This infrastructure has also enabled movement of the population from the highly populated eastern area to the remotest of areas, such as those in the Kalahari desert. Batswana are a highly mobile society, and they commonly have three to four different homes—in the city (*teropo*), in the village (*motse/legae*), at the plowing place (*masimo*), and where cattle are reared (*moraka*). These settlement patterns of living have created a great challenge for the health care system, especially in areas of caring for and treating the spread of HIV and AIDS and other communicable diseases and monitoring and maintaining those with old and emerging chronic illnesses. This settlement pattern sometimes makes followup and referral very difficult.

Botswana has a relatively homogeneous, small population of an estimated 2.1 million in 2013 (Central Intelligence Agency, 2013), most of whom reside in the fertile and arable eastern area. The rest of the country is sparsely populated. About 80% of the population resides in the rural area (Central Statistics Office, 2011). Most Batswana are of the same Tswana ethnic group. However, other ethnic groups with their own indigenous cultures and languages are present, such as Basarwa, Bayei, Bakalanga, and others. Its people are referred to as Batswana (singular, Motswana), and the most common language is Setswana. The official languages are Setswana and English. Young people (10-29 years) make up 60% of the population, and one third of the population lives with HIV and AIDS (United Nations Economic Commission for Africa, 2008). Therefore, it is critical to recognize young people's needs and problems, in particular, their sexual and reproductive health and rights issues, and the importance of addressing them adequately.

The Economy

Historically Batswana have been subsistence farmers. Since the 1970s mining has become a significant contributor to the economy. The government has recently endeavored to

diversify the economy to not lean only on mining, in particular providing support to small- and medium-sized enterprises to create employment for all Batswana. The major resources that sustain the economy of Botswana are:

- **Mining:** Diamonds and precious metals make a major contribution to the booming economy. Diamonds account for 30% of the Gross National Product (GNP), 70% of exports, and 50% of the Botswana government revenue (Ministry of Health, 2002).
- **Export of beef to Europe and other African countries:** Interestingly, the cattle population fluctuates between 2.5 and 3 million cattle in Botswana (Botswana Export Development and Investment Authority [BEDIA], 2007), the majority owned by cattle barons, but a sizable number owned by ordinary Batswana. Culturally, a man who does not have a cow is looked down upon. Generally each family owns some cows.
- **Tourism:** The main centers of tourism are the Okavango Delta and the Kalahari desert. These two eco-tourist attraction venues have an abundance of wild animals and birds that draw people from all over the world.
- **Subsistence farming:** Because land is plentiful, each Motswana over 21 years old is eligible for a free 25-hectare plowing field and a residential plot in the rural areas. Unfortunately, scarce rains, occasional droughts, and lack of irrigation have inhibited developments in this sector.

Table 2.1 provides the summary of the population statistics of Botswana. Table 2.2 provides the Ibrahim Index of African Governance for Botswana.

TABLE 2.1: Population Statistics of Botswana Ranging from 2001 to 2009 (aneki.com, n.d.; Central Intelligence Agency, 2013; WHO, 2010)

INDICATOR	VALUE (YEAR)
Total population	2,127,825 (July 2013 est.)
Population annual growth rate	1.94 % (2009)
Population proportion under 15 years	32% (2011)
Population proportion over 60 years	4% (2011)
Population in urban areas	80% (2001)
Population with sustained access to improved drinking water sources	95% (2008)
Population with sustained access to improved sanitation	60% (2008)

continues

TABLE 2.1: continued

INDICATOR	VALUE (YEAR)
Adult literacy	80% (1995–2005)
Gross national income per capita (PPP international $)	$13,100 (2008)
General government expenditure on health as % of total government expenditure	74.6% (2007)
Total expenditure on health as % of gross domestic product (GDP)	5.7% (2007)
Out-of-pocket expenditure as % of private expenditure on health	27.3% (2007)
Private expenditure on health as % of total expenditure on health	25.4% (2007)

TABLE 2.2: Ibrahim Index of African Governance: Botswana (Mo Ibrahim Foundation, n.d.)

CATEGORY	SUB-CATEGORY	SCORE (100)
1. Safety and Rule of Law	1.1 Personal Safety	70.0
	1.2 Rule of Law	96.6
	1.3 Accountability and Corruption	89.0
	1.4 National Security	96.4
2. Participation and Human Rights		
	2.1 Participation	74.1
	2.2 Rights	58.4
	2.3 Gender	74.8
3. Sustainable Economic Opportunity	3.1 Public Management	76.5
	3.2 Private Sector	83.9
	3.3 Infrastructure	50.2
	3.4 Environment and the Rural Sector	68.6
4. Human Development	4.1 Health and Welfare	78.2
	4.2 Education	74.8

Overall Score: 75.9
Overall Rating: 3

Established in 2007, the Ibrahim Index is the most comprehensive collection of quantitative data that provides an annual assessment of governance performance in every African country. The Index compiles 86 indicators grouped into 14 sub-categories and four overarching categories to measure the effective delivery of public goods and services to African citizens. According to the Mo Ibrahim Foundation, "As data included in the Index come from 23 separate institutions, and are on different scales at source, these raw data must be standardized in order to be meaningfully combined. The data for each indicator are transformed by the method of Min-Max normalization, which performs a linear transformation on the data [while] preserving the relationships among the original data values. Min-Max normalization subtracts the minimum value of an indicator's raw data set from each country's value for that indicator in a particular year. That value is then divided by the range of the indicator (maximum value in the raw data set minus the minimum value in the data set). The new values are multiplied by 100 in order to put them on a new scale of 0–100, where 100 is always the best possible score" (2011). The overall rating refers to the ranking order out of a total of 53 countries in Africa.

The Health Care System

The health care system in Botswana is guided by the Primary Health Care (PHC) philosophy. The country often adopts World Health Organization (WHO) initiatives and guidelines to strengthen its health care system. The main goal is to achieve the Millennium Development Goals (MDGs) by 2015 and the country's vision for total development by 2016. Health care is provided freely or at minimal cost to all its citizens; however, non-citizens have to pay for health services received. The nature of health care institutions and the levels of health care provision are determined by the size of the population in a specific geographic area, explanations of which appear in the following list. As indicated earlier, because of the relatively small population compared to the size of Botswana itself, the sparse population in many areas makes the provision of health care more difficult. Botswana has five levels of health care:

- **Mobile clinics**: This is an outreach service commonly used in sparsely populated areas. It is run by a registered nurse (RN) with a diploma or bachelor's degree in nursing (basic qualification leading to registration as RN) and a family welfare educator. The latter are people who have been identified and elected by communities in which they live. Their major responsibility is to provide health promotion services at community, family, and individual levels.
- **Health posts:** These are provided in areas where the population exceeds 500 people but is not above 5,000 inhabitants. The health posts are staffed by a RN with a diploma or bachelor's degree in nursing and family welfare educators. They provide the same service as that of a mobile clinic.

- **Primary Health Care clinics:** These clinics come in two types, those without a maternity unit and those with the maternity unit. The clinics' staff includes RNs with a diploma or bachelor's degree in nursing (referred to as basic training) and RNs with specialist qualifications such as midwifery, community health nursing, family nurse practice, adult health, and mental health (referred to as postbasic qualifications). The PHC clinics also have social workers, pharmacy technicians, and family welfare educators.
- **Primary hospitals:** These are based in areas with a population of 10,000 and above. Primary hospitals are staffed by RNs with basic and postbasic qualifications, medical doctors, pharmacy technicians, and other health technicians.
- **District hospitals**: These hospitals are based in the capital villages of the tribal districts. The staff deployed in these hospitals includes RNs with diplomas and degrees in nursing, RNs with postbasic qualifications including midwifery, and those with master's degrees in various clinical specializations of nursing. District hospitals also contain medical doctors and medical specialists, pharmacists and pharmacy technicians, physiotherapists, radiographers, medical laboratory technicians, and social workers.
- **Referral hospitals:** Botswana has three referral hospitals. Two are in the major cities (Gaborone in the south and Francistown in the northeastern part of the country), namely Princess Marina and Nyangagwe Hospitals, respectively. These two referral hospitals are well resourced in comparison to other health institutions. The staff includes RNs with diplomas and degrees in nursing, RNs with postbasic qualifications, nurse-midwives, RNs with master's degrees, medical doctors, medical specialists, pharmacists and pharmacy technicians, physiotherapists, dieticians, psychologists, occupational therapists, and social workers. The third referral hospital is the Psychiatric-Mental Hospital in Lobatse, a town in the southeastern part of Botswana. Two private hospitals are based in Gaborone.

The Ministry of Health has always been responsible for secondary and tertiary health care offered at district and referral hospitals, while the Ministry of Local Government was responsible for health care services provided through mobile clinics, health posts, primary health care clinics, and primary hospitals. Since February 2010, however, all health care services are the responsibility of the Ministry of Health (UNAIDS, 2010). The major goal of this change is to mitigate compartmentalization of health services and conflicts and challenges created by the traditional division. The merging is aimed at ensuring synchronization and enhances equity in delivery of health services for the citizens of Botswana.

Health Insurance

A very small proportion of the Botswana population has health insurance, mainly those employed in the formal sector. However, all civil servants, who form the majority of the workforce in the country, are covered by the civil servants health insurance. Interestingly, the two major health insurance companies are partners with the newly established private hospital in Mogoditshane, a village close to Gaborone. Employees of the private and parastatal institutions are also covered by health insurance. Some employers pay a certain percentage and the individual also contributes toward the health insurance coverage. The most interesting part is that the Botswana government will cover any citizen's health cost at all levels of health care received in government health services. For example, if a citizen of Botswana is referred to a medical specialist in a South African hospital, all costs are covered by the government of Botswana.

Nursing Education System in Botswana

Nursing education in Botswana was introduced by the missionaries who established the district hospitals. The mission hospital nursing schools in Molepolole, Kanye, Mochudi, and Ramotswa, which adopted the apprenticeship model, trained enrolled nurses and registered nurse-midwives. The Protectorate Government also established nursing schools in the towns of Francistown and Lobatse. These schools also trained enrolled nurses and registered nurse-midwives. All registered nurses were compelled to train as midwives as well, hence, the registered nurse-midwives. In 1970, the apprentice model of nurse training was discontinued. The academic entry requirements were completion of secondary school or secondary school leaving certificate/Cambridge certificate (Selelo-Kupe, 1993).

In 1990 the Ministry of Health engaged W. K. Kellogg Foundation consultants to restructure the nursing education programs in Botswana. The main concern involved similarities and overlaps between the diploma of the enrolled nursing programs and the diploma of the registered nurse programs. Overlaps and redundancies also existed between the diploma and basic degree programs. The responsibilities of different levels of nurses in the workplace were not clearly delineated. The consultants' recommendations included the discontinuation of the enrolled nursing program so that RN is the entry level into nursing practice.

A task force was established to develop a curriculum and program for upgrading the enrolled nurses to RNs. The Executive Committee of the University of Botswana Affiliated Health Training Board approved the curriculum in 1994, and it was implemented in 1995. Those who did not go through the upgrading training were "grandfathered," which means

they were allowed to work as enrolled nurses until retirement or death. Currently, a very small number of enrolled nurses are still in practice. The rest have retired. The consultants also recommended the harmonization and dovetailing of the nursing programs from basic diploma to bachelor's degree in nursing.

The University of Botswana (UB), to which all the schools of nursing offering the diploma course were affiliated, established a task group to identify the overlap between programs, gaps, and similarities and come up with an articulation plan. The recommendations of this task group were considered and implemented by all nursing schools in Botswana. Currently, four categories of nursing programs exist:

- Basic diploma in general nursing:

  This program is offered at five Institutes of Health Sciences (IHSs) belonging to the Government of Botswana, based in Gaborone, Francistown, Lobatse, Molepolole, and Serowe. It is also offered in three mission training schools, one owned by the Dutch Reformed Church in Mochudi (Kgatleng District), the other by the Seventh Day Adventist Church in Kanye (Ngwaketse District) and the third one by the Lutheran Church in Ramotswa. The entry requirement is the attainment of secondary school certificate (12 years of schooling). The duration of the program is 3 years. The government IHSs each admit 100 students yearly, while the mission schools each admit about 30 students annually. The government IHSs also provide basic diploma programs in allied health, namely pharmacy technician, medical laboratory science, dental therapy, and health education. (See Table 2.3.)

- Postbasic diploma in nursing

  The IHSs also offer postbasic diplomas. These programs equip registered nurses with specialist knowledge and skills in various clinical nursing specializations such as community health nursing (Molepolole), nurse anesthetist (Gaborone), family nurse practice (Gaborone and Kanye), midwifery (Serowe, Molepolole, Gaborone, Lobatse, Francistown, and Ramotswa). Psychiatric/mental health nursing is offered only in Lobatse. Each IHS provides one or two post-diploma programs except Gaborone IHS, which does more. The entry requirements for postbasic diploma programs are a basic diploma or bachelor's degree with at least 2 years' experience. Some of these programs attract students from other Southern African Development Community (SADC) countries. (See Table 2.3.)

TABLE 2.3: Nursing and Midwifery Programs Offered at Nursing Schools

TYPE OF PROGRAM	DURATION	NUMBER OF SUCH PROGRAMS	NUMBER OF STUDENTS PRODUCED PER ANNUM
Diploma in nursing	3 years	8	600
Midwifery	18 months	6	210 (every 18 months)
Family nurse practice	18 months	2	12 (every 18 months)
Psychiatric-mental health	18 months	1	10 (every 18 months)
Nurse anesthetist	2 years	1	15 (every 2 years)

Over the past 5 years Botswana produced approximately 3,000 registered nurses with basic diplomas. The numbers for postbasic diplomas were about 420 midwives, 24 family nurse practioners, 20 psychiatric-mental health nurses, and 30 nurse anesthetists. Unfortunately, in the past 10 years, Botswana for the first time has experienced a large number of nurses migrating to the United Kingdom.

- Bachelor's degree in nursing

The bachelor's degree program is offered in the School of Nursing at the University of Botswana in Gaborone (see Table 2.4). It is the only program in the entire country. It was first offered in 1978. The introduction of the program was motivated by lack of nurse educators in the IHSs. Nurses used to be sent to University of Nairobi in Kenya to train as tutors. However, only one or two nurses could be sent per academic year, and this was not enough. The government was reluctant to send students to South Africa during the period of the apartheid regime, though most of the nurse leaders prior to independence had trained in South Africa. The initial degree program was a bachelor's degree in nursing education, offered in the Faculty of Education. The admission criteria were a Cambridge School Certificate with a pass in five subjects, credits in one or two sciences, and a pass in English language. Two years of nursing experience were also required.

This program equipped nursing students with advanced knowledge and clinical skills over and above competence in curriculum and instruction, administration, and leadership. Graduates of this program were deployed by the Ministry of Health mostly as educators and administrators. The

Ministry of Local Government also employed them as administrators in the health facilities it managed. Some of the graduates worked for non-governmental organizations (NGOs) and the United Nations family agencies.

In the mid-1990s, the Ministry of Health informed the University of Botswana to discontinue the B.Ed. nursing program, because there were adequate nurse educators to teach at the IHSs in the country. It recommended the development of the bachelor of nursing science degree. At the same time the Ministry of Local Government expressed the need to have nurses with a basic degree who could provide direct care to patients in primary health care settings. This led to the development of the direct entry bachelor's degree in nursing (BNS), which was first implemented in year 2000. The BNS program has two streams, generic (high school leavers who had direct entry into year one) and RN completion (those with basic or postbasic diplomas in nursing who joined at second year, as they were given blanket waiver because of their previous nursing experience). The generic students had to satisfy the criteria for all science students admitted in the Faculty of Science at the University of Botswana, the main purpose being that nursing should share the top-performing prospective students with other sciences at the University of Botswana.

- Postgraduate programs

  Prior to 1996 all nurses pursued their master's and doctoral education outside Botswana, which was expensive for the government. The Ministry of Health then requested the University of Botswana to launch a master's degree in nursing. The Master of Nursing Science (MNS) commenced in 1996, with four specializations (adult health, community health, psychiatric/mental health nursing, and midwifery). A family nurse practice (FNP) specialization was introduced in 2003. Therefore, the nurse specialist programs are currently offered at the Institutes of Health Sciences (postbasic diplomas as explained previously) and in the School of Nursing at the University of Botswana (master's degree in nursing). Botswana has no doctoral programs in nursing. (See Table 2.4.) It is envisaged that the School of Nursing at the University of Botswana would start one in the near future.

TABLE 2.4: Nursing and Midwifery Specialist Programs Offered in the School of Nursing at the University of Botswana

TYPE OF PROGRAM	DURATION	NUMBER OF SUCH PROGRAMS	NUMBER OF STUDENTS PRODUCED PER ANNUM
Bachelor's degree in nursing	3 years RN completion and 4 years generic	1	80–100
MNS degree in midwifery	2 years	1	3–4
Family nurse practice (FNP)	2 years	1	3–5
Psychiatric-mental health and community health	2 years	1	3–6
FNP and adult health	2 years	1	3–5

Accreditation and Quality Assurance

Historically, the nursing schools were accredited by the South African Nursing Council, and the examinations were moderated by National Examination Board of Botswana, Lesotho, and Swaziland (NEBLS). In the mid-1970s the Nursing and Midwifery Council of Botswana took over the accreditation of nursing and midwifery programs in Botswana. Following the introduction of the degree programs at the University of Botswana, the IHSs were affiliated to the UB, which served as an accreditation and quality assurance structure. Recently the Ministry of Education has introduced the Tertiary Education Council (TEC), which is now charged with the responsibility to accredit all tertiary institutions and to ensure quality. This process is still being finalized. However, the main concern is that the TEC would also be responsible for providing resources from the government to tertiary institutions, and this could lead to conflicts of interest.

Nursing Regulation

Nursing and midwifery are regulated by the Nursing and Midwifery Council of Botswana, which is housed in and funded by the Ministry of Health. However, the Council enjoys its independence—it's headed by a registrar, and its members are elected by nurses and nurse-midwives. An additional member is from the community. The Council in partnership with the Nurses Association of Botswana influenced the enactment of the Nurses and Midwives Act of Botswana (1995). The registrar is a nurse-midwife. The Council acts as the watchdog of the profession; it investigates complaints against nurses and institutes the disciplinary process, and it sets standards for education and practice (Nurses and Midwives Act of Botswana, 1995).

Nursing Associations in Botswana

The major nursing organization in Botswana is the Nurses Association of Botswana (NAB), composed of registered nurses of all levels and nurse-midwives. It is a member of the International Council of Nurses (ICN), and its head office is in Gaborone. Its main function is to enhance professionalism, and advocate for good working conditions for nurses and midwives. It is run by the National Executive Board, which is headed by the president.

Nursing Research

Research is taught at the diploma and undergraduate levels to enable students to be consumers of research and provide evidence-based care. The master's students are expected to carry out a research project and share the findings to improve the quality of nursing care. At the UB, members of the academic staff are expected to engage in rigorous research. Research publications are one of the requirements for promotion. The UB has established an Office of Research Development to assist faculty members and fund their research projects internally, or source external funds as well. The faculty members in the School of Nursing are involved in collaborative research studies nationally, regionally, and internationally with universities they have links or partnerships with.

A very small portion of nurses and midwives in Botswana holds a doctoral degree, and the majority of those work for the UB. The research findings were disseminated in the multi-disciplinary journals co-sponsored by the UB, called *Pula* (Rain) and *Mosenodi* (The Revealer). The UB has a research strategy that is reflected in the UB strategic plan with identified research priorities. The research plan is informed by the prevailing health problems in Botswana. The School of Nursing at the UB is a WHO Collaborating Center for Nursing and Midwifery; therefore, development is also guided by World Health Organization research priorities. At present the university gives awards annually to the researchers who excel, but no explicit rating system for scientists in the country exists. Nurses and midwives do embark in scholarly activities such as research to add to the development of nursing knowledge and the establishment of nursing science that can guide health policy and practice.

Nursing and Midwifery Services

The nursing and midwifery services are led by the director of nursing and midwifery services based in the Ministry of Health. The primary health care strategy is the guiding framework for all nursing and midwifery services at different levels of health care. According to WHO Action Framework for the Strengthening of Nursing and Midwifery (WHO AFRO, 2007), the roles of nurses and midwives in Africa were summarized

as follows: health promotion, prevention and health promotion to families and the community, the execution of emergency measures, provision of care to women to address gynecological problems, family planning, and childcare. Nurses in Botswana also carry out screening and consultations; provide counselling to individuals, families, and other groups; manage health facilities; and document correctly to keep record of health statistics and submit appropriate reports as required. Currently nurses demand to be given allowances for the expanded roles delegated to them such as consultation, dispensing of drugs, obtaining blood specimens for testing, and other functions that are not traditionally that of nurses and which are carried out because of a lack of other health workers like pharmacists and laboratory technicians.

Midwives also provide sexual and reproductive health and rights services. They deliver babies and immunize the infants and children. They have to implement safe motherhood skills to save lives and reduce maternal mortality.

Nursing and midwifery are developing well in this country, and they are expected to play a leading role to assist the country to achieve the MDGs through provision of education and services that will adopt measures to address the social, political, and economic issues impacting the health of the society on our continent.

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Summary

Evidence-based practice has a positive impact on the African society that we serve, an impact that can help us achieve the Millennium Development Goals. Let us remember a plea that nurses must care enough about their own practices to make sure they are based on the best possible information. Access to quality health care by our people is not a favor to them but their fundamental right. Health is an aspect of social development, not only the matter for health professionals; therefore, we need to work in partnerships with stakeholders and the communities that we serve.

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