



HAITIAN NURSES' ATTRIBUTES OF PROFESSIONALISM: A COMPARATIVE CROSS-NATIONAL STUDY

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ABSTRACT

**Aims:** This non-interventional study sets out to investigate the attributes of professionalism of Haitian nurses and to compare their professionalism with the Ethiopian nurses. **Background:** Globally, the issue of professionalism has taken center stage in nursing because of the rapid changes in nursing education and the global merging of professional boundaries among nations. **Design:** We designed a comparative cross-national study by distributing a professionalism inventory to consenting registered nurses employed in both public and private hospitals in Haiti between November 2017 and February 2018. **Methods:** Data were collected from a convenient sample of 60 Haitian nurses who completed the professional inventory used to study the attributes of professionalism of Ethiopian nurses (Fantahun et al., 2014). Subsequently, a one-sample binomial non-parametric test was used to explore differences between the data reported for Ethiopian nurses with those obtained in this study for Haitian nurses. **Results:** Both the cumulative professionalism score and the eight subscales (knowledge, a spirit of inquiry, accountability, autonomy, advocacy, innovation and visionary, collegiality and collaboration, and ethics and value) scores for the Haiti nurses were significantly higher ( $p < .001$ ) than the Ethiopian nurses. The observed differences were of "strong or large" practical effect (Cohen's  $d$  values ranges from 0.55 for collaboration and collegiality up to 1.37 for innovation and visionary). **Conclusion:** The findings suggest that the Haitian nurses imbibe higher core values of professionalism than the Ethiopian nurses.

**KEYWORDS:** Attributes of Professionalism, Nurses, Nursing Professionalism, Haiti, Ethiopia.

1. AIM

The primary purpose of this study was to investigate the attributes of professionalism of Haitian nurses and to compare their characteristics with those reported in the literature for nurses in Ethiopia - another developing country with converging historical bonds. A secondary objective of our study was to compare the socioeconomic indices and healthcare indicators in Haiti and Ethiopia.

2. BACKGROUND

Increasingly, the world is becoming a global village and in recent years many nurses are crossing national boundaries to work in other parts of the world. For a nurse planning relocating to another country, it is essential for him/her to be familiar with the professional

ethos and conditions of employment in the host nation. Ethiopia and Haiti are two developing nations with historical relationships (Public Archive, n.d.). Ethiopia in East Africa and Haiti in the Western hemisphere is recently desirous of stronger political ties. Haiti is currently seeking to be a member of the Organization of African based on by their historical connection to Africa (Caribbean Journal, n.d.). As a result of this political development, it is appropriate at this time to compare the attributes of professionalism of nurses in Ethiopia and Haiti.

Globally, professionalism has been a core topic in nursing for many decades and continued to engender interests within the profession (Rutty, 1998; Hwang, Lou, Han, Cao, Kim, Li, 2009; Fantahun, Demessie,

Gebrekirostos, Zemene & Yetayeh, 2014). Unfortunately, professionalism is a construct that is difficult to define because it is kaleidoscopic (Balogun, Mbada, Balogun & Okafor, 2017). Nursing as a collaborative healthcare profession serves patients of all ages, ethnicities and promote health in all settings. Professionally, nurses are expected to exude compassion, caring and possess reliable, ethical values, life-long learning professional traits, inquiry mind, accountability, a spirit of collaboration, flexibility, competence and advocacy for self and patients (Gunter & Allgood, 2001).

The professional status of nursing continues to be a subject of debate in the literature. Nursing is often considered a semi-profession in many countries around the world because the entry-level education is not university-based and still at certificate or diploma level. The nursing profession also currently lacks autonomy in practice, and a scarcity of scientific body of knowledge that is incontrovertible (Etzioni, 1969). As the nursing profession aspires to attain independent practice, in-depth understanding of professionalism and exemplary professional conduct will become an expectation for nurses of all cadres and nursing students.

It is generally assumed in the existing literature that the professionalism of nurses can impact the quality of healthcare delivery. However, only a few quantitative studies have examined the factors associated with nurses' professionalism core values (Yoder, 1995, Fletcher, 2001; Wynd, 2003; Godwin, Baek, Wynd, 2010; Zakari, Zakari, Al Khamis, Hamadi, 2010; Fantahun, Demessie, Gebrekirostos, Zemene, Yetayeh, 2014). Outside of the nursing literature, a few studies have reported that the instructors' personality can have a significant impact on the behavior and professionalism of students (Salam *et al.*, 2012; Haghdoost, & Shakibi, 2006; Gillespie, 2002). Unfortunately, there is a schism between what students learn in the classroom and what they observe in the hospital environment and subsequently internalize as the ideal professional behavior to uphold and emulate. The students' education will be in jeopardy when nursing instructors and preceptors fail to demonstrate appropriate professionalism before their students.

In dental and medical education, it has been reported that gender, age, specialty, level of education, social, cultural background, and socioeconomic factors are determinant of professionalism (Nath, Schmidt, & Gunel 2006; Salam *et al.*, 2012; Cruess & Cruess, n.d.). Based on the existing literature, it is rationale to speculate that varied cultural experiences will modulate the attributes of professionalism of nurses in different countries. This study was designed to test this hypothesis. In this study, we defined professionalism as the consistent demonstration of behaviors that exemplify clinical competence, innovation, and vision, a spirit of inquiry, ethics and value, accountability, collegiality and collaboration with the other members of the healthcare team (Registered Nurses Association of Ontario, 2007).

### 3. DESIGN

A comparative cross-national study was implemented. We distributed a previously validated professionalism inventory to consenting registered nurses employed in both public and private hospitals in Haiti between November 2017 and February 2018.

### 4. METHODS

Approval for this study was provided by the Ethical Review Board of the Haitian hospitals that data collection occurred. Participation in the study was voluntary and no stipends or incentive was offered to the study participants. We recruited the study participants from both public and private hospitals.

To discern plausible differences in the healthcare systems of Ethiopia and Haiti, we reviewed a plethora of sources to obtain socioeconomic information such as population, land area, annual and per capita gross domestic product, health and defense expenditures, the percentage of people living below the poverty level and corruption index (MyLifeElsewhere, n.d.; Countryeconomy.com, n.d.). Also, we obtained pertinent information on the healthcare outcomes (life expectancy, birth, fertility and homicide rates, the percentage of people living with HIV/AIDS), and health workforces (number of physicians, dentists, and nurses) for both countries (USAID, 2016, 2017; Garfield & Berryman, 2012).

#### Data collection procedures

Following the recruitment of the participating nurses, we briefed them on the objectives of the study and assured them that their responses would be kept strictly confidential. We also instructed them that their participation is voluntary and they have the right to withdraw from the study at any time. They were asked to answer the questions in the research instrument as honestly and as accurately as possible. Also, we informed them that there was no right or wrong answers to the professionalism perception-based statements. Subsequently, they were provided the consent form and the Professionalism Inventory packet to complete. We did not impose any time limit for the completion of the questionnaire, but most of the study participants finished the inventory in less than 30 minutes.

#### Instrument

The professionalism inventory used in this study has two major parts. Part I sought sociodemographic information such as age, professional organization membership, gender, marital status, highest educational qualification, and religion. Part II contained 34 statements on the attributes of professionalism in nursing. We adapted the items from the survey instrument developed by the Registered Nurses Association of Ontario (2007). Part II contained 34 statements on the attributes of professionalism in nursing. We adapted the items from

the professionalism inventory developed by the Registered Nurses Association of Ontario (2007). The psychometric properties of the professionalism inventory have been investigated previously and found to be reliable and valid (Baumann & Kolotylo 2009; Fadhum, 2014).

French is the official language in Haiti; therefore, to achieve cross-cultural and conceptual equivalence, our research instrument was produced in French using the forward and back translation guidelines recommended by the WHO, (n.d.). The 34 perception-based statements were classified into eight subscales to measure:

knowledge, a spirit of inquiry, accountability, autonomy, advocacy, innovation and visionary, collegiality and collaboration, and ethics and value. Presented in Table 1 are the essential components of the professionalism inventory and examples of the perception-based statements. The 34 perception-based items were classified into eight subscales to measure: knowledge, a spirit of inquiry, accountability, autonomy, advocacy, innovation and visionary, collegiality and collaboration, and ethics and value. The essential components of the professionalism inventory and examples of the perception-based statements are provided in Table 1.

**Table 1: Essential components of the professionalism inventory.**

Subscale	Name of the professionalism subscale	Number of items	Example of the perception-based statements
1	Knowledge (Items 1, 2, 3, 4, 5 and 6)	6	I have nursing knowledge that is theoretical, practical and clinical
2	Spirit of Inquiry (Items 7, 8, 9 and 10)	4	I have been open-minded and have the desire to explore new knowledge
3	Accountability (Items 11, 12, 13, 14 and 15)	5	I understand the meaning of self-regulation and its implications for practice
4	Autonomy (Items 16, 17 and 18)	3	I am working independently and exercising decision-making within the appropriate scope of practice
5	Advocacy (Items 19, 20, 21 and 22)	4	I understand the client's perspective
6	Innovation and visionary (Items 23, 24 and 25)	3	I promote a culture of innovation to improve client/family outcomes
7	Collegiality and Collaboration (Items 26, 27 and 28)	3	I am developing collaborative partnerships within a professional context
8	Ethics and value (Items 29, 30, 31, 32, 33 and 34)	6	I am knowledgeable about ethical values, concepts and decision-making
Total		34	

The inventory asks respondents to rate their opinion of the professional behaviors and attitudes statements on a 5-point Likert scale ranging in a continuum from "Strongly Disagree" (1) to "Strongly Agree (5)." The minimum score on the attributes of professionalism is 34, and the maximum possible rating is 170. A high cumulative professionalism score suggests that the individual imbibes high core values of professionalism.

#### Data analysis

The statistical package for social sciences (SPSS) software version 16 was used to analyze the data. The independent variables in our study were the cohort of nurses in Haiti and Ethiopia, and the dependent variables were the cumulative professionalism score and the eight subscale scores — knowledge, a spirit of inquiry, accountability, autonomy, advocacy, innovation and visionary, collegiality and collaboration, and ethics and value. Before multivariate analyses, we plotted the box plot and tested the normality of the dependent variables by calculating the Fisher's measures of Skewness (Skc) and Kurtosis (Ktc) coefficients and the Kolmogorov-Simov test (Kellar & Kelvin, 2013). Also, we tested for the homogeneity of the dependent variables using the Levene test. The box plots of the dependent variables showed several outliers. The result of the statistical

analyses revealed that each of the dependent variables was not Mesokurtic and their distributions were heterogeneous.

As a result of the violations of the assumptions of the parametric one sample t-test, we proceeded to use the one-sample binomial non-parametric test to explore differences between the cumulative professionalism score and the eight subscales scores for the Haiti and Ethiopia nurses (Currell, 2015). A one sample t-test and Chi-Square ( $\chi^2$ ) nonparametric test were used to compare the age and the categorical level socio-demographic data (Statistics Calculators, (n.d.)). For the two independent groups, we ascertained the practical significance (effect size) for the dependent variables by calculating the mean difference between the two groups and divide the outcome by the pooled standard deviation to obtain the Cohen's d values (Lenhard & Lenhard A. (2016). According to Cohen's classification schema, d values with an effect size of .1 to .3 is considered a "small" practical significance; .3 to .5 is of "intermediate" practical significance, and .5 and higher is considered a "strong or large" practical significance (Cohen, 1988). We accepted a p-value  $\leq .05$  as being statistically significant.

## 5. RESULTS

### Socioeconomic and health indicators

The socioeconomic and health indicators in Ethiopia and Haiti are presented in Table 2.

**Table 2: Socioeconomic and health indicators in Ethiopia and Haiti.**

	Ethiopia	Haiti
<b>Socioeconomic indices</b>		
Capital	Addis Ababa	Port-au-Prince
Primary national language	Amharic	Creole
Official language of instruction in higher education	English	French
Population‡	91.2 million	10.9 million
Land area‡ (square km)	1,104,300	27,750
Annual GDP ‡ (2017 data)	\$73,151 million	\$8,178
GDP per capital† (2016 data)	\$802	\$754
Debt per capital‡ (2016 data)	\$441	\$256
Health expenditure‡ (2014 data)	15.7%	6.1%
Defense expenditure‡ (2015 data)	\$490.7 million	\$0
People living below poverty level§	29%	59%
Corruption index‡ (2017 data)	35	22
<b>Health outcomes</b>		
Life expectancy† (2015 data)	63	65
Birth rate per 1,000‡ (2016 data)	37	23
Fertility rate (%)‡ (2015 data)	4.3	2.9
Homicide per 100,000§ (2012 data)	8	10
% of people living with HIV/AIDS§ (2015 data)	1.1	1.7
<b>Health care workforce</b>		
Number of physician† (WHO, 2009)	1,936	1,949
Number of dentist† (WHO, 2009)	93	94
Number of nurses‡ (WHO, 2009)	15,544	834
Number of physician per 10,000§ (WHO, 2009)	<1	3
Number of dentist per 10,000† (WHO, 2009)	<1	<1
Number of nurses per 10,000‡ (WHO, 2009)	2	1

†Similar in Ethiopia and Haiti

‡ Higher in Ethiopia than Haiti

§Higher in Haiti than Ethiopia

There were similarities and contrasts in the socioeconomic and health indicators data between the two countries. For example, the per capita gross domestic product (GDP), life expectancy, and the total number of physician and dentists' in Ethiopia and Haiti are similar. However, Ethiopia is more populous and has more land area than Haiti. Also, Ethiopia had higher annual GDP and debt per capita, more significant health and defense expenditures, higher corruption index, and birth and fertility rates than Haiti. On the other hand, Haiti had more people living below poverty level, more homicide rate, more people living with HIV/AIDS and a higher number of physicians when adjusted for population - per 10,000 people) than Ethiopia (Table 2).

### Socio-demographic characteristics of the study participants

As presented in Table 3, the cohort of nurses in our study from Haiti was significantly older than the corresponding group of nurses from Ethiopia ( $t = 1.98, p < .05$ ). There were significantly more male nurses in the Ethiopia study and more female nurses in the present study from Haiti ( $\chi^2 = 5.8, p < .05$ ). Christianity is the predominant religion in both study cohorts, but there were significantly more Orthodox Christians in the Ethiopian study than in Haiti ( $\chi^2 = 169, p < .001$ ).

**Table 3: Socio-demographic characteristics of the Ethiopian and Haitian nurses.**

Variable	Ethiopian Nurses ¶ (N=210)		Haitian Nurses (N=60)		T or Chi-square ( $\chi^2$ ) statistic
	Mean $\pm$ SD	%	Mean $\pm$ SD	Percent	
Age	32 $\pm$ 8.4		35 $\pm$ 10.4		1.98*
Sex					
Male		41		25	5.8*

Female		59		75	
<b>Religion</b>					
Orthodox		92		0	169**
Muslim		3		7	
Protestant		3		38	
Catholic		1		37	
Others		1		18	
<b>Highest Education</b>					
Certificate		0		12	26.3**
Diploma		48		30	
Degree		51		43	
Masters		1		15	
<b>Marital status</b>					
Single		39		25	20.9**
Married		58		50	
Divorced		3		25	
<b>Professional organization member</b>					
Yes		48		77	17.9**
No		52		23	

¶Data reported for Ethiopian nurses by Fantahun et.al., (2014)

\*p<.05

\*\*p<.001

A significantly higher proportion of the nurses in Haiti had postgraduate (Master's) degree than the Ethiopian nurses ( $\chi^2 = 26.3, p < .001$ ). A substantially higher divorce rate was found among the nurses in Haiti than the Ethiopian nurses ( $\chi^2 = 20.9, p < .001$ ). A significantly higher proportion of the nurses in Haiti belong to a professional organization than Ethiopian nurses ( $\chi^2 = 17.9, p < .001$ ).

**Comparison of the professionalism of the Ethiopian and Haitian nurses**

The results of the one-sample binomial non-parametric test to explore differences between the Haiti and Ethiopia nurses' cumulative professionalism score and the eight subscales scores are presented in Table 4.

**Table 4: Professionalism scores for the Ethiopian and Haitian nurses.**

Professionalism Inventory	Ethiopian Nurses¶	Haiti Nurses	Non-parametric (Binomial statistic) test	
			p-value	Decision
Components	Mean±SD	Mean±SD		
Aggregated cumulative professionalism score	140±19.1	163±14.4	.001	**
<b>Subscale scores</b>				
Knowledge	25±3.9	28±1.9	.001	**
Spirit of Inquiry	17±2.6	19±1.2	.001	**
Accountability	21±3.1	24±1.9	.001	**
Autonomy	12±2.3	15±6.9	.001	**
Advocacy	17±2.8	19±1.7	.001	**
Innovation and visionary	12±2.3	14±1.2	.001	**
Collaboration and collegiality	12±2.1	15±6.9	.001	**
Ethics and value	25±3.8	28±2.0	.001	**

¶Data reported for Ethiopian nurses by Fantahun et.al., (2014)

\*\*Reject the null hypothesis

The mean ± standard deviation for the cumulative professionalism score for the Haitian nurses was 163±14.4. The mean ± standard deviation score for the spirit of inquiry was 19±1.2, accountability was 24±1.9, autonomy was 15±6.9, advocacy was 19±1.7, innovation and visionary was 14±1.2, collaboration and collegiality was 15±6.9, and ethics and values were 28±2.0.

The result of the binomial non-parametric test revealed that both the cumulative professionalism score and the eight professionalism subscales scores for the Haitian nurses were significantly higher (p<.001) when compared to the cohort of nurses from Ethiopia.

**Effect size**

The computed Cohen *d* values for the observed differences in the cumulative professionalism score and

the eight professionalism subscales scores for the Ethiopian and Haitian nurses are presented in Table 5.

**Table 5: Effect size statistic and confidence interval values for the professionalism scores.**

Professionalism Inventory Components	Cohen <i>d</i> value†	Interpretation of the effect size*	Confidence interval 95% level
Aggregated cumulative professionalism score	1.33	Large	0.90 - 1.56
<b>Subscale scores</b>			
Knowledge	1.01	Large	0.57 – 1.17
Spirit of inquiry	1.11	Large	0.64 – 1.25
Accountability	0.99	Large	0.58 – 1.18
Autonomy	0.55	Large	0.45 – 1.05
Advocacy	0.90	Large	0.51 – 1.10
Innovation and visionary	1.37	Large	0.88 – 1.49
Collaboration and collegiality	0.55	Large	0.47 – 1.07
Ethics and value	1.12	Large	0.66 – 1.27

†Cohen (1988)

\**p*<.05

The Cohen's *d* values obtained ranges from 0.55 for collaboration and collegiality up to 1.37 for innovation and visionary. Our results revealed that the observed differences in the aggregated cumulative professionalism score and the eight subscales scores obtained between the Ethiopian and Haitian nurses were of "strong or large" practical effect significance.

## 6. DISCUSSION

We set out to investigate the attributes of professionalism of Haitian nurses and to compare their characteristics with those reported in the literature for nurses in Ethiopia. To our knowledge, this is the first study to assess the attributes of professionalism of Haitian nurses. We posited that the social and cultural influences in each country would affect the nurses' behaviors and perception of professionalism. Consistent with our hypothesis, we found that the overall professionalism score and the eight subscales scores were significantly different between the nurses from the two countries; professionalism scores were consistently higher among the Haitian nurses than the Ethiopian nurses. The observed differences were of "strong" or "large" practical effect (Cohen's *d* values ranges from 0.55 for collaboration and collegiality up to 1.37 for innovation and visionary). Our findings revealed that the Haitian nurses embodied higher core values of professionalism than the Ethiopian nurses. We attributed the results to the significant differences observed at the educational level and the age of the nurses in both countries. The Haiti nurses in our study were older and had more individuals with postgraduate (Master's) degree credential than the Ethiopian nurses. In the African culture, old age is often associated with life experience and wisdom (Brown, n.d). Intuitively, nurses with a postgraduate degree are expected to have more general knowledge of nursing, evidence-based practice and clinical experience. Consequently, they are supposed to imbibe higher core values of professionalism.

Several previous studies in nursing found that age, years of clinical experience and educational levels are significantly correlated with attributes of professionalism (Yoder, 1995; Fletcher, 2001; Wynd, 2003; Godwin, Baek, Wynd, 2010; Zakari, Zakari, Al Khamis, Hamadi, 2010). Paradoxically, a study by Fantahun, Demessie, Gebrekirstos, Zemene & Yetayeh (2014) among Ethiopian nurses found that diploma credentialed nurses had high professionalism score than baccalaureate and postgraduate credentialed nurses. On the contrary, a recent study in allied health found a significant correlation between age and aggregate attribute of professionalism score for physiotherapists. Year of work experience was also positively correlated with the core values of professionalism such as autonomy, advocacy, collaboration and collegiality and ethics/values. The study also demonstrated that physiotherapists who are married and with a doctorate employed in the orthopedic/sports practice setting embodied higher attributes of professionalism than their peers (Balogun, Mbada, Balogun & Okafor, 2017).

A secondary objective of our study was to identify the socioeconomic indices and health indicators that may impact the professionalism of the nurses in our study. Overall, the Haitian nurses embodied higher core values of professionalism than the Ethiopian nurses (Table 4). Given the significant differences observed in the attributes of professionalism between the nurses in the two countries, it is imperative to examine our study outcome through the prism of the healthcare system in which the nurses work. We attributed our findings to several complex and interwoven sociocultural and health-related factors in the two countries. The country of Haiti with a population of only 10.9 million people has for decades struggled with poor health outcomes and their struggling health care system was in 2010 decimated by the earthquake, which destroyed 50 health centers, the primary teaching hospital, and the Ministry

of Health (Garfield & Berryman, 2012). A few months later, the health care system was hit by the first cholera outbreak in a century (USAID, 2016). These tragedies in addition to the more significant homicide rate and endemic poverty level (higher % people living below

poverty level and lower annual GDP) found in our study (Table 2) positioned the nurses in Haiti to assume more substantial advocacy roles (Table 6) for themselves and their patients than the Ethiopian nurses.

**Table 6: The primary professionalism subscales modulating the findings in the study.**

Antecedent factor	Professionalism subscale	Perception-based statement
Higher homicide and poverty rates	Advocacy	<ul style="list-style-type: none"> <li>▪ I understand the client’s perspective.</li> <li>▪ I assist my clients with their learning needs.</li> <li>▪ I am involved in professional practice initiatives, and activities to enhance healthcare.</li> <li>▪ I am knowledgeable about policies that impact the delivery of healthcare.</li> <li>▪ I promote a culture of innovation to improve client/family outcomes.</li> </ul>
Higher workforce density -- physicians per 10,000 people	Collaboration and collegiality	<ul style="list-style-type: none"> <li>▪ I am developing collaborative partnerships within a professional context.</li> <li>▪ I serve as a mentor to nurses, nursing students and colleagues, to enhance and support their professional growth.</li> <li>▪ I acknowledge and recognize the interdependence between healthcare providers</li> </ul>
Higher corruption rate	Ethical value	<ul style="list-style-type: none"> <li>▪ I am knowledgeable about ethical values, concepts, and decision-making.</li> <li>▪ I can identify ethical concerns, issues, and dilemmas.</li> <li>▪ I apply knowledge of nursing ethics to make decisions and to act on decisions.</li> <li>▪ I have been able to collect and use information from various sources for ethical decision-making.</li> <li>▪ I collaborate with my colleagues to develop and maintain a practice environment that supports nurses and respects their ethical and professional responsibilities.</li> <li>▪ I am engaged in critical thinking about ethical issues in clinical and professional practice.</li> </ul>

The 22% corruption index in Haiti is more depressed than the 35% in Ethiopia (Table 2). This finding is of grave concern because corruption deteriorates the well-being of every individual in a society where corruption is endemic (SafeSpace, 2014). The UN posited that corruption is: "an insidious plague that has a wide range of corrosive effects on societies. It undermines democracy and the rule of law, leads to violations of human rights, distorts markets, erodes the quality of life and allows organized crime, terrorism, and other threats to human security to flourish" (SafeSpace, 2014). When corruption thrives in any society, the ethical and moral compass of the citizenry will be depressed (Hoseah, 2014). Therefore, it is not surprising that the Haitian nurses demonstrated higher ethical core values when compared to their counterparts in Ethiopia where corruption is more endemic (Table 4).

According to USAID, Haiti has 15,660 health workers of all cadres: 8,469 personnel in the public health sector—88% are concentrated in the urban centers—and 7,191 in the private health sector. It has only 0.65 doctors, nurses, and midwives per 1,000 people; data that lags behind the WHO’s sustainable development goals of 4.45 doctors, nurses, and midwives per 1,000 people (USAID 2017). The higher collaboration and collegiality attributes that we found in our study among the Haitian nurses may be because there are more physicians per 10,000 people in

Haiti than in Ethiopia (Table 2). Consequently, the nurses in Haiti are primed to have more opportunity to interact and collaborate with the other members of the healthcare team (Table 6).

According to the WHO, Ethiopia with a population of over 91.2 million people has a health workforce density of 0.7 per 1,000 people, which is low when compared to the 2.3 health workers per 1,000 people needed to attain sustainable development goals (WHO, 2010). Auxiliary and registered nurses overwhelmingly dominated the Ethiopian healthcare workforce. Physicians, dentists, and allied health professionals are in critical shortage. The physician workforce is on a declining trend and according to the WHO stands at 1: 42,706 populations, which in sub-Saharan Africa are among the lowest ratio (WHO, 2010). On a positive note, the numbers of nurses and auxiliary health workers are on an upward trajectory. Ethiopia has attained the WHO’s minimum recommendation of 1 nurse per 5,000 population. However, migration often complicates the health workforce supply in Ethiopia. For example, in 2002, 17% of nurses and 30% of doctors left the country in search of greener pastures (WHO, 2010). Ethiopia has 12 public universities that train health professionals, including nurses. In 2005, two innovative community-based programs started in five of the public universities and 20 hospitals. The health extension training program

admitted 34, 000 female workers, who graduated to provide health promotion and disease prevention services. An accelerated health officer training program also enrolled 5,431 students who have graduated and gainfully employed within the healthcare system. In 2007, a three year postgraduate program in emergency surgery and obstetrics was established in five universities to address the workforce shortage; 252 physicians enrolled the first year. Also expanded was the enrolment capacity of the midwifery schools (WHO, 2010).

### Study Implications

The educational infrastructures for health and the conditions of service for the workforce in both countries are different. Haiti has three medical schools and ten (five public and five private) nursing schools which annually produces 200 physicians and 300 registered nurses (Garfield & Berryman, 2012). Nurses with a baccalaureate degree are in short supply in Haiti. In 2005, the Episcopal University of Haiti in Leogane, a private institution, started a four-year baccalaureate degree program in nursing and graduated its pioneering class in 2010. The three-year diploma credentialed nurses are generalists with the opportunity to specialize in midwifery, HIV care, hospital administration, and pediatrics. By 2012, Haiti had approximately 1,400 registered nurses and 1,500 auxiliaries (Garfield, & Berryman, 2012). Due to poor working conditions and limited employment opportunities, about 50% of Haitian physicians and nurses immigrate to developed countries within five years of graduation. Presently, about 70% of the nurses work in the capital, Port-au-Prince, where 33% of the population lives. In the rural areas, most small hospitals have only one or two qualified nurses (Garfield & Berryman, 2012). The nursing profession in Haiti is still in its infancy. There is currently no postgraduate educational opportunity in nursing in the country. The 15% of the Haitian nurses in the study with the graduate degree were the educators employed in the nursing schools. As the nursing profession in Haiti evolves, the contents of the diploma and baccalaureate nursing curricula must be expanded to include professionalism contents. The outcomes of our comparative investigation should be reassuring and comforting to the professional nursing organization in Haiti because it allowed gauging the professionalism attributes of their nurses with another developing country with whom they have long historical ties.

### Limitations of the study

A significant limitation of our study is the relatively small number of nurses that participated in the study. According to WHO, there are 834 and 15,544 nurses in Haiti and Ethiopia, respectively. The sample size in our study (N = 60), represented only 7% of the target population in Haiti. On the other hand, the sample size in the Ethiopian study was 210, which represented only 1% of the target population. In estimating the sample size, we adopted a standard deviation of 1.96 which corresponds to 95% confidence interval, and a margin of

error of 5%. For a target population of 834 and 15,544 nurses in Haiti and Ethiopia, respectively, the minimum sample size of 264 will be needed in Haiti and 375 will be required in Ethiopia (Survey Monkey, n.d.). The external validity of our study is limited in scope, given that only 60 nurses (7% of the target population in Haiti) participated in the study. Another limitation of our study is the fact that the participants were not randomly but purposively selected. Therefore, they may not accurately represent the characteristics of the target population of nurses in Haiti. The conclusions drawn from our study concerning the attributes of professionalism should be interpreted with a dose of caution. A follow-up study with a minimum of 264 nurses randomly selected from the register of the nursing organization in Haiti will be needed to strengthen the external validity of this exploratory study.

### CONCLUSION

Our findings revealed that Haitian nurses embodied higher core values of professionalism than the Ethiopian nurses. Follow up studies are needed to identify the influence of sociodemographic variables such as years of clinical experience, the different educational levels, the location of employment (urban vs. rural centers) and remuneration on the professionalism attributes of the Haitian nurses.

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