

Research Article

An Approach to Cultural Competence Education into the Pharmacy Curriculum: Glances from the Cuban Framework

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Cultural competence is crucial for improved health outcomes in populations. In addition to knowledge and skills, cultural competence involves a confident attitude that underlines regard across all cultures. The importance of cultural competence training has been considered in several pharmacy education statements as part of the Pharmacists' Patient Care Process. Nevertheless, there is a significant discrepancy in the implementation of cultural competence in a curriculum. There is no consensus on how this could be implemented from a view of logical and pedagogical coherence. Consequently, a cultural and interdisciplinary approach should be considered in the curriculum design process respecting the laws and pedagogical principles that guide the process of training professionals at the universities and pharmacy schools. The main purpose of the study is to describe a cultural background to implement cultural competence education in the Cuban pharmacy curriculum. The data for this study was collected through an overall literature review. Using terms specific to Cuban health care, culture, and education, combined with terms linked to cultural competence, global health, and pharmacy education. Relevant statements by the Pan American Health (PAHO) and World Health Organizations (WHO) were extracted. Electronic sites for the American Journal of Pharmaceutical Education, Currents in Pharmacy Teaching and Learning, and Pharmacy Education were reviewed. Scopus, Google Scholar, EBSCO Host, International Pharmaceutical Abstracts, and Web of Knowledge databases were examined. The outcomes of this study reveal that Cuba is a culturally rich country with complex and diverse perspectives on health. Cuban culture is the result of extremely broad and tedious transculturation processes; therefore, it is not possible to exhaust the subject in a single inquiry. Health and education in Cuba are politically entwined; statistical data, arguments, and related information are not always available to be studied or compared. This study identifies the need for a sincere effort toward global pharmacy education's purpose; respect for religious values, traditional beliefs, historic and political factors were also taken into consideration to design a framework for cultural competence with Cuban pharmacy curricula. The repercussions of the current study will be valuable to developing curricular improvement processes aimed at implementing cultural competency in pharmacy education taking into consideration an essentially cultural perspective. Furthermore, this study offers a background to simplify culturally sensitive exchanges among practitioners, undergraduates, stakeholders, and other faculties of pharmacy members from Cuba and other nations when they involve health care and pharmacy practice or education.

1. Introduction

Cultural competence has emerged as one more solution to ease a variety of disparities in healthcare. Healthcare is a cultural construct; therefore, beliefs about health, illness, drug treatment, and delivery of healthcare services will be essential in patient-centered care. Since health is determined

by several factors outside the conventional healthcare setting, including, but are not restricted to, education, housing quality, and access to healthy diets [1], healthcare professionals must be capable of providing their services by recognizing human diversity and respecting patient's culture and competences that must be embedded into educational institutions. Human beings--biopsychosocial diverse in

nature--afford multiculturalism to enhance the services of healthcare providers around the world [2, 3]. Thus, the International Federation of Medical Students' Associations (IFMSA) believes that "developing and incorporating cultural competence in health professions education (medical, dentistry, nursing, pharmaceutical, paramedics, veterinary, and social science students) is the key to the development of a culturally competent health workforce, who will be able to adapt and deliver in a culturally diverse environment" [4].

A definitive clarity for cultural competence remains difficult, since it is a constantly changing process: similarly, the concept has evolved from diverse perceptions, pursuits, and requirements. However, there are some practical working definitions. For instance, Davis defines the term like "a journey and a pathway towards becoming competent in working with, and between, diverse cultural situations and contexts." [5] At the same time, the scientific literature recognizes the consistent foundation shown by Cross et al. [6] as a basic and universal framework interrelated through several systems. This author stated the term "cultural competence" signifies a set of congruent behaviors, attitudes, and policies that come together in a system, agency, or among professionals to enable that system, agency, or those profession to work effectively in cross-cultural situations.

According to Shaya, cultural competence is "a student's ability in the health professions to deliver culturally appropriate and specifically tailored care to patient populations with diverse values, beliefs, and behaviours" [7]. In line with O'Connell [8], cultural competency is the attitudes, knowledge, abilities, and values that a person has and utilizes in working efficiently in a cross-cultural world. Breaking down this definition means focusing on two essential concepts: culture and competence. Both have a great impact on education in general and on the training of health professionals. Culture involves the combined patterns of human behavior, including, among others, beliefs, values, and communication. On the other hand, competence defines the applied abilities and knowledge that enable persons to effectively act in professional, educational, and other life contexts. The competence concept generated a movement in the theory and practice of curriculum discipline in the United States in 1960s and 1970s and then proliferated internationally [9]. On the other hand, the model of the competence-based curriculum turned into one of the most discussed topics among experts in the education sciences and by curriculum stakeholders [10].

Being that Cuba is internationally recognized for its health professionals' quality makes an approach to cultural competence education should be a forward step for pharmacy curricula [11]. As reported by Abrons, pharmacists and medical professionals from Dominica and Jamaica are educated in Cuba [12]. Likewise, differences in pharmacy practice and regulation in these countries are noted in Cuba through contractual arrangements. According to Gorry, there are 36,770 Cuban health professionals working in across the globe [13]. Unlike Cuba, other Caribbean islands (Puerto Rico, Haiti, and St. Kitts; and Latin American countries, like México, Argentina, Brazil, Ecuador, and Guatemala, are developing partnership programs with

pharmacy schools in the United States to incorporate culturally sensitive concerns within a global pharmacy education and practice framework.

Cuba shows progress in a competency-based training model, with emphasis placed on incorporating ethics and values as elements of competent performance. It has been decided to also implement competency-based training in technical and vocational education after assessing the general results of the accumulated experience. In addition, competency-based training models have been established in different educational institutions, being worked on in Cuban Higher Education, within different careers and centers, although studies carried out in the field of Physical Culture and Physical Education are limited. All developmental models are based on the historical-logical paradigm [14].

The main purpose of the study is to describe a cultural background to implement cultural competence education in the Cuban pharmacy curriculum. The repercussions of the current study will be valuable to developing curricular improvement processes aimed at implementing cultural competency in pharmacy education taking into consideration an essentially cultural perspective. Furthermore, this study offers a background to simplify culturally sensitive exchanges among practitioners, undergraduates, stakeholders, and other faculties of pharmacy members from Cuba and other nations when they involve in health care and pharmacy practice or education.

2. Literature Review

An interesting point of view on competence is its relatedness to a connection between the work market with the results of educational systems [15, 16]. In line with the Future of Education and Skills 2030, the main scheme to redesign the curriculum is its suggestion of instilling core competencies [17]. Enlisting the global tendencies of competencies in education, for instance, was applied by the Organization for Economic Cooperation and Development [18]. The challenge is to produce citizens capable of facing a world market undoubtedly undetermined.

Pedagogical needs stemming from multiculturalism requests require not only methodological and content knowledge but also the development of awareness of who we are, where we come from, and what our new roles in this world should be. Thus, thinking of Paulo Freire's contributions of culture, different ethics, sensitivity, diversity, inclusion, and reflection-action should become foundational with respect and knowledge of people's culture so that they become able to educate themselves [19, 20].

The process of developing cultural competency requires reflecting on our own attitudes, beliefs, and values and how these can influence how we understand the cultural norms of others. It means recognizing that cultural differences do indeed exist. Cultural sensitivity requires appreciating the necessity to regard such differences. Pedagogical needs stemming from multiculturalism requests require not only methodological and content knowledge but also the development of awareness of who we are, where we come from, and what our new roles in this world should be. Thus,

thinking of Paulo Freire's contributions of culture, different ethics, sensitivity, diversity, inclusion, and reflection-action should become foundational with respect and knowledge of people's culture so that they become able to educate themselves [19].

From a psychological perspective, professional competencies: "those qualities of personality that allow the self-regulation of the subject's self-regulation of the subject's behaviour based on the integration of scientific knowledge, skills, and abilities related to the scientific knowledge, skills, and abilities related to the exercise of a profession, as well as the motives, feelings, needs, and values associated with it, allowing as well as the motives, feelings, needs, and values associated with it, which allow, facilitate, and promote the performance of a profession, facilitate, and promote an effective and efficient professional performance within a given social context. It expresses a holistic approach to personality in the unity of the cognitive, affective, and behavioral" [21].

Furthermore, cultural competence is crucial for improved health outcomes in populations. Cultural competence in health care is a continuing process and begins with self-reflection. It includes the capability to recognize the unique needs of different populations and the ability to adapt care consequently. Moreover, to knowledge and skills, cultural competence involves a confident attitude that underlines regard across all cultures [22]. The importance of cultural competence training has been considered in several pharmacy education statements as part of the Pharmacists' Patient Care Process [23, 24]. Nevertheless, there are significant discrepancies in implementing cultural competence into curricula, while little consensus exists on how with a logical and pedagogical coherence [25]: consequently, a cultural and interdisciplinary approach should be considered in the curriculum design process, respecting the laws and pedagogical principles to guide the training of professionals. For the time being, cultural competence, if often absent or an inadequately taught topic, continues in several pharmacy schools in the United States and other countries [26].

Several studies suggest the benefits of cultural competence in pharmacy practice and education [27, 28]. Consequently, the profession should assume diversity to deliver excellent care to the totality of patients, even knowing that pharmacists may lack basic education in cultural competence [29]. While many pharmacists have shown a positive attitude toward facing new professional challenges, Haack implemented an advanced pharmacy practice experience to increase students' cultural competence. This author found that 98% learned something new about counselling patients with cultural/language differences; 93% increased their awareness about financial barriers to care and its potential solutions [22]. Accordingly, immersion into a culturally diverse patient population presents opportunities for pharmacy students to improve their cultural competence. Minshew et al. created a cultural intelligence framework to help prepare future pharmacists to be socially responsible health care providers. Four domains (Awareness, Knowledge, Practice,

and Desire) were observed. In addition, the Cultural Practice domain was a topic discussed by students where different experiences were described by the students regarding the year in the curriculum and race [30]. A study by Cooper to determine pharmacy students' perceptions concerning cultural competence teaching showed high levels of well-being with types of cultural life through (disabilities, sexuality, financial barriers, and mental health) [31]. As well, Smith et al. [32] stated that cultural identity related to persons with disabilities must be attended as a key element of cultural competency training in pharmacy education. Recently, a study by Doroudgar [33] highlighted the significance of providing intercultural education experiences through the pharmacy curriculum. The curriculum is addressed from a multidimensional perspective [32], and is considered a construction concept that assures identity by double hypotheses, as a paradigm (as a general model of designing education and instruction) and as a particular kind of a curricular project (as a concrete way of curriculum design for all the levels and learning situations) [34].

2.1. Significance. In our paper, competency-based pharmacy curricula are defined as a term that describes the learning progressions based on mastery of content rather than the passage of time [35]. We advocate for holistic, programmatic approaches for integrating cultural competence education to serve as a call to action for further Cuban pharmacy development. It is hoped that this paper will provoke additional scholarly work with recommendations for programmatic approaches to cultural competence education for pharmacists. Similarly, this paper may be useful to help establish partnerships between Cuban faculties of pharmacy with other countries toward a new global pharmacy educational framework. Cuba remains a culturally rich country with complex and diverse perspectives on health.

3. Methods

Using Scopus, Google Scholar, EBSCO Host, International Pharmaceutical Abstracts databases, and Web of Knowledge, an overall literature review was carried out. A general search was conducted using terms specific to Cuban health care, culture, and education, combined with terms linked to cultural competence, global health, and pharmacy education. Relevant statements by the Pan American Health (PAHO) and World Health Organizations (WHO) were extracted. Electronic sites for the American Journal of Pharmaceutical Education, Currents in Pharmacy Teaching and Learning, and Pharmacy Education were reviewed.

Both authors are pharmacy educators with extensive experience in curricular matters, as well as observations from several other nations where they have visited and studied other health systems. Interviews and discussions with international colleagues were of great benefit to the preparation of this manuscript. In accordance with the Global Pharmacy Initiative by the Federation for International Pharmacy (FIP), pharmacy academics and

TABLE 1: Standard of Cuba's health successes.

Health care system: free, universal, and accessible for all citizens [50].
Prevention is the first principle of the Cuban health system [51].
Number of physicians: 103 835 [51].
Number of Odontologists 20 589 [51].
Number of pharmacists: 5 319 [51].
Number of Nursing: 61 736 [51].
Number of Pharmacy technicians: 2 606 [41].
Life expectancy at birth 79.5 years [52].
Infant mortality 3,81 [52].
Free for all HIV/AIDS infected patients [53].
The lowest HIV prevalence in the Caribbean (0.2–0.3%) [54].
Poliomyelitis, diphtheria, pertussis, and rubella, have been eradicated [55].

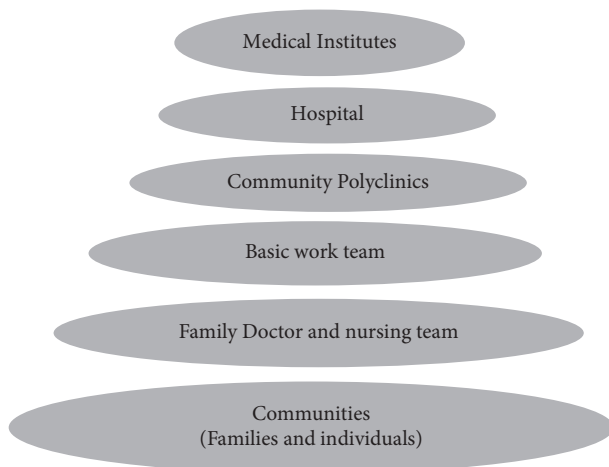


FIGURE 2: The Cuban Health Pyramid (Source: Keck and Reed [61]. The Curious Case of Cuba. American Journal of Public Health, 102 (8), e13-e22. <https://doi.org/10.2105/AJPH.2012.300822>).

care for sick individuals in order to prevent complications and achieve immediate rehabilitation. According to Domínguez-Alonso, about 15% of the health problems that result are covered at this level. Hospitals are subordinated to the provincial health system management [63].

4.2.3. Medical Institutes. Specialized institutes and hospitals that are located at the tertiary level consist of specialized institutes and hospitals, where health problems are related to the sequelae or complications of certain diseases. These institutions are subordinated to the national health system management. At this level, most of the medical research is carried out. Vaccine research/production and biotechnology R&D are among the best in the world; one institute was the world's first manufacturer and producer of the meningitis B vaccine [64].

4.2.4. Basic Teams, Family Doctor, and Nursing Teams. The basic primary teams are responsible for overseeing that office's neighborhood health evaluation and health condition, in addition to performance appraisal of the doctor and nurse. These teams are composed of a leader from the polyclinic, family doctors, and nurses who have similarly been placed in large shops and schools, on board ships,

childcare centers, and homes for senior inhabitants, among other locations [61]. Their role is to encourage health through positive changes in the inhabitant's knowledge, sanitary habits, and lifestyles to avert illnesses and harm to the fuller population's health. They also develop research that responds to the health demands of the neighborhood within the objectives of the Basic teams [51].

A study by Dieci et al. [65] shows a relevant comparison of Cuba with other countries, such as the Dominican Republic, Costa Rica, and the US, related to cardiovascular risk factors: International comparison of levels and education gradients are revealing. Hypertension understanding in Cuba is similar to that in Costa Rica, considerably lower in the Dominican Republic and substantially higher than in the US. For both genders, Cubans who have hypercholesterolemia incidence that is lower than in Costa Rica and higher than in the US Cubans, like their fellow Caribbean citizens, must continue to address the rapidly growing non-communicable disease obligation both within and outside of the health care system.

Studies developed by Franco et al. [66] to evaluate the associations between population-wide weight loss/gain with diabetes prevalence, incidence, and mortality, as well as cardiovascular and cancer mortality trends, over a 30-year interval, show a stable incidence between 1.5 per 1000 people and 1.8 per 1000 people during the 1980s decade. Similarly, correlations were established between the decrease in body weight and the decrease in diabetes and coronary heart disease. Diabetes mortality increased by 49%, with weight rebounding. In addition, a slowing in the rate of decrease in mortality from coronary heart disease was observed. Malignant tumors represented the second cause of death in Cuba (24.4%). In the last 25-year, mortality due to Asthma has declined because of preventive, therapeutic methods [67].

The Latin American School of Medical Science (ELAM, Spanish acronym) in Cuba is possibly the world's largest medical school, with about 10,000 students [68]. Many students come from Latin American countries, but the enrolment today also includes 91 Americans who were unable to gain entry to US medical schools. In 2010, the ELAM declared the graduation of 34 students from the US. This statement obliged the institution to achieve accreditation by the Medical Board of California. These contributions additionally complement the effort of the Cuban

pharmaceutical industry, which has long been researching medicines for ignored endemic illnesses in developing countries. However, this work of medical education is not perfect. There are reports about the insufficient skills of South African doctors in Cuba related to identity and cultural readjustment necessities for several returning graduates [69].

Recently, González et al. [70] concluded that Cuba considers universal health access as one of its most valuable achievements, although it requires a more efficient analysis of reliable and available sources, research, and application of system results. Assessing strengths and weaknesses in terms of health economics, updating the sciences, and use of resources and new technologies all remain challenges, as well as deepening the many lessons learned while facing such challenges. Parallel to that, Cuba has developed a research capacity throughout the health system associated with population mobility, increasing prevalence of chronic diseases, rising health costs, and the need to control endemic and newly arising communicable diseases in a global context of climate change, among others [71].

4.3. Cuba's Pharmacy and Pharmaceutical Services.

Pharmacy and pharmaceutical services are key elements in Cuba's organized system of health care. However, there is a recent scarcity of available products related to pharmaceutical services. This makes it difficult to amply measure the impact of pharmaceutical services overall. Currently, Cuba has 2,144 community drugstores constituting its national public network. In 1994 the National Drug Program was implemented to harmonize methodology and regulations related to medicines across the country. Coordinated by the Centre for the Development of Pharmacoepidemiology (CDP), it created the National Pharmacoepidemiology Network in 1996, whose activities concern drug information, continuing education, and the promotion of drug utilization research to improve medicine uses by its populations. Connected to the [19] provincial health boards through Provincial Pharmacovigilance Units within the Provincial Department of Pharmacoepidemiology, which in 1976 set up the National Centre for Pharmacoepidemiologic Surveillance with the Coordinating Unit for the Pharmacoepidemiologic Surveillance (CUPS) in 1999. This structure serves to evaluate adverse drug reactions and calculate the risk-benefit balance of marketed drugs to guarantee safety profiles in drug use [72]. Through its membership in the International Centre for Adverse Drug Reaction monitoring in Uppsala, Sweden, Cuba exchanges information about such topics around the world.

The Cuban drug supply chain is managed by a logistics operator to ensure medicines availability according to patients' needs. This model showed a medium performance level, being a reference for the logistic support to sustain this health system [73, 74]. Figure 3 shows the structure of the Cuban chain medicines logistic. Many Cuban pharmaceutical products and vaccines are commercialized around the world, generating hundreds of millions of dollars annually. Cuba produces 67% of its own essential medicines, besides

recombinant streptokinase [75]. An agreement between the Roswell Park Cancer Institute of Buffalo, New York, and Cuba's Centre for Molecular Immunology produces a lung cancer vaccine [76].

4.4. *Cuban Pharmacy Education and Organization.* Cuba has a totally public pharmacy education system. After five years of undergraduate training, the graduates enter at the practical level as BSc.Pharm. Cuban pharmaceutical programs incorporate chemical, physiology, and biological sciences education, in addition to practice in the community, hospital, and industry settings.

Several years ago, Social Pharmacy disciplines were introduced to yield pharmacists who are capable of providing pharmacy patient-centered services. Drug information, patient counseling, drug-related problems, and compliance are studied, proposing a 120 h residency to pharmacy practice [78]. In summary, a pharmacy student takes formal clinical pharmacy and pharmaceutical care education (usually from the fourth to the fifth year). Nonetheless, there is not yet a Cuban standard on pharmaceutical care education, with this training being a free choice according to the school of pharmacy and geographical health necessities [79]. Moreover, the challenge for the profession to advance, design, and implement curricula remains to produce pharmacists capable of providing newer novel services to better manage complex pharmacotherapy [80]. In addition, pharmacy curricula have incorporated these topics to provide students with more opportunities to engage with their populations [78]. Thus, the social transformation of pharmacy practice conducted in some developing countries, like Cuba, is an important subject from which to learn. Topics related to drug information, patient counseling, drug problems, and compliance are analyzed, offering a wide opportunity for pharmacy practice [81].

The National Council on Pharmaceutical Education (NCPE) is responsible for quality pharmacy education by establishing standards and guidance according to practice and education evolution. All schools of pharmacy mandatorily assess their educational results against these standards for accreditation objectives. Standards are established in partnership with academics, consultants, regulators, employers, and other stakeholders. In addition, a final evaluation is carried out by the Council for Accreditation of Higher Education to guarantee adherence to standards [82].

In the community setting, Cuban pharmacists counsel about proper use of pharmaceutical drugs and over-the-counter medicines. In addition, they offer advice concerning topics such as exercise and healthy nutrition. A recent report by Cantluple [83] summarizes the regularities that characterize the Cuban pharmacy sector: "Cuban pharmacists focused on dispensing essential drugs as they negotiated around many drug shortages in the country, pharmacies were described as virtual drug distribution centers but did not offer widespread healthcare services, and pharmacy services in Cuba in primary care are still primarily dispensing-oriented."

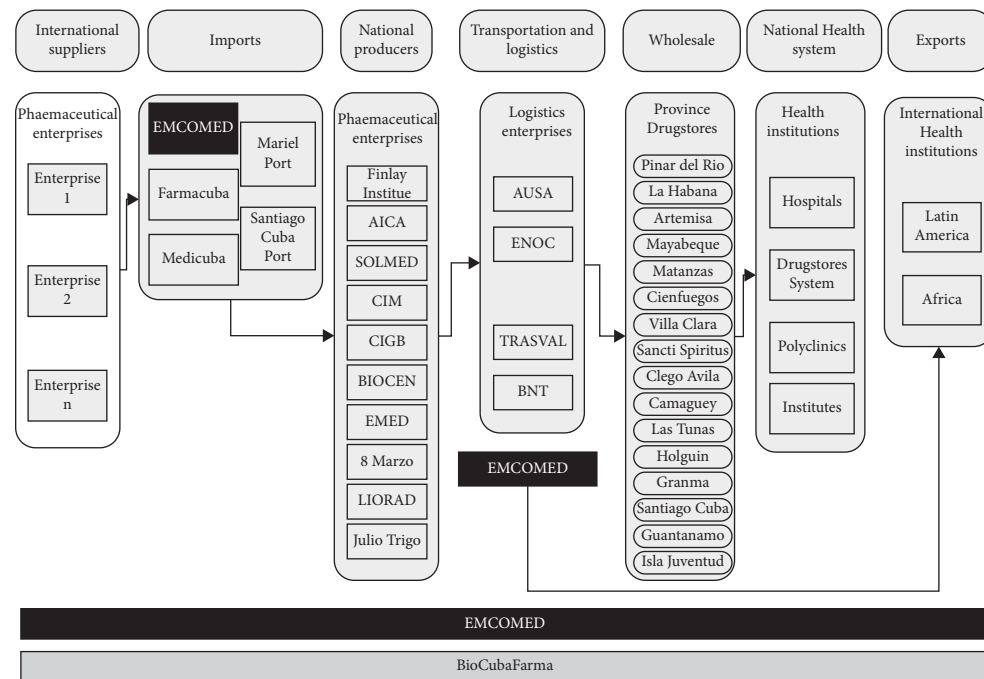


FIGURE 3: Medicine supply chain for the Cuban health system. Source: López-Joy et al. Medicines value chain management level in Cuban health system, Ing.Univ., [27, 77] <https://doi.org/10.11144/Javeriana.iyu24.mvcm>. EMCOMED, specialized logistics operator for the pharmaceutical sector.

The 5-year Bachelor of Pharmacy degree (BScPharm) is the main pharmacy degree at Cuban universities, with teaching fully in Spanish. The curriculum provides knowledge of the basic disciplines related to biological, scientific, chemical, mathematical, social, and clinical sciences revealing their application in patient health care. The curriculum provides knowledge of the basic disciplines related to biological, scientific, chemical, mathematical, social, and clinical sciences revealing their application in patient health care. At the same time, this curriculum aims at the formation of values, professional responsibility, critical thinking, and lifelong learning. Additionally, it offers abilities to utilize this expertise in individual patient care circumstances. Conventional science courses and social and administrative science programs are included in the program to enable education [81].

Currently, a new pharmacy curriculum was approved by the Cuban Council on Higher Education, consisting of pharmacy centered-patient care to be considered as an eligible matter into the outline of self-obligatory basic curricula required linked to the social and geographical setting of university [84]. However, limited published evidence is accessible on cultural competence education in the Cuban pharmacy curriculum. Table 2 shows the professional profile of pharmacists trained in Cuba.

4.5. Diet. From anthropology and cultural points of view, food is more than nutrition. Relationships between individuals in society are built around food and eating habits, which shape their identity; perceptions of food are directly

related to the nature and organization of societies. One's food choices reflect a social reality related to our life and perception of the peoples and cultures with which we maintain an identity [85]. A study by Rodríguez-Martín [86] on eating by Cuban adults compared with those of a developed Western country, Italy, showed Cubans reporting higher scores for food thought suppression with reward responsiveness and restrained eating emerging as significant predictors of between-country differences. Similarly, Cubans demonstrated less tendency to food restrictions and a great predisposition to binge eating; eating behaviors in Cubans could be different from those described in European countries, possibly because of Cuba's current history of food shortages.

High consumption of calories, fats, and sugars characterizes the Cuban diet; similarly, consuming whole-grain cereals, fruits, and vegetables is scarce. Food has been sold in controlled quantities at government-funded prices since the 1960s. Deficits of micronutrients are a phenomenon present in Cubans: 30–45% of infants aged 6 to 23 months, 25–35% of reproductive-age women, and 24% of pregnant women are affected with iron-deficiency anemia [87]. Disproportionate use of salt in food preparation, minimal intake of dietetic fiber (14 g per day), use of reheated oils, and minimal consumption of fish are general characteristics of eating habits. In short, in Cuba “when you're hungry, eat what is at your fingertips” [88].

High alcohol consumption is part of the social life of Cubans. A prospective study by Armas Rojas [89] showed that women were current alcohol drinkers, with 15,433 (29%) men and 3054 (5%) women drinking at least weekly

TABLE 2: Professional profile of the pharmacist trained in Cuba.

Pharmaceutical sciences**Qualification:** Bachelor of pharmaceutical sciences**Certification:** Excellence (national accreditation board)**Study plan:** E**Modality:** Diurnal. Face-to-face (4 years). Course by Encounters – Blended (5 years)

Professional model:

Object of work

The object of work of the pharmacist includes medicines, supplements, cosmetics, and diagnostics as complex matrices that interact with the living organism and the environment.

Modes of action

The Bachelor of Pharmaceutical Sciences is a graduate with a broad profile who must contribute to the socioeconomic development of the country and the improvement of health through his activity in pharmaceutical services and in the design, development, production, and control of medicines, supplements, diagnostics, and cosmetics.; For this, they must apply and integrate the knowledge acquired during their university studies, as well as the new ones generated from scientific-technical development, through basic and applied scientific research. All this must be done in a responsible manner with society and the environment, in accordance with the principles of professional ethics, and interacting with other professionals in multidisciplinary work teams.

Fields of action

The essence of the pharmacist's work object is derived from his fields of action in biomedical sciences, pharmaceutical chemistry, pharmaceutical technology, pharmaceutical analysis, pharmacological sciences, pharmaceutical biotechnology, social pharmacy, and education.

Spheres of action

The pharmacist can carry out their functions by interacting with other professionals in multidisciplinary teams from the pharmaceutical, biotechnological and cosmetic industries, regulatory agencies, drug marketing companies and other health products, research, and education centers. An exclusive sphere of action of the pharmacist is the community and hospital pharmaceutical services since she is the only professional with the required training to be able to interact with other members of the health team as the head of the medication.

Main functions of the professional

Program, direct and execute the technical and organizational tasks of community and hospital pharmaceutical services and pharmaceutical production. Participate in research, teaching, development, production, and service tasks. Obtain and characterize active ingredients and other products of pharmaceutical interest, through chemical synthesis, biotechnology, and/or isolation from natural sources. Consistently design, develop, and produce medicines, supplements, cosmetics, and diagnostics at different production scales. Manage, ensure, and control the quality of medicines, supplements, cosmetics and diagnostics during the processes of preparation, release, storage, distribution, and dispensing. Consistently design, develop, and produce medicines, supplements, cosmetics, and diagnostics at different production scales. Manage, ensure, and control the quality of medicines, supplements, cosmetics, and diagnostics during the processes of preparation, release, storage, distribution, and dispensing. Evaluate drugs and other products of pharmaceutical interest from the pharmacological, biopharmaceutical, and toxicological point of view through preclinical and clinical studies. Participate in scientific-technical and/or marketing information tasks related to their spheres of action. Schedule and execute the necessary tasks to guarantee the logistics of the medicine in normal conditions, in situations of natural disasters or armed aggression. Provide patient-oriented pharmaceutical services related to pharmacotherapeutic follow-up and the rational use of medicines. Guarantee compliance with the current regulatory framework through its participation in state pharmaceutical inspections, the sanitary authorization of new products, and its surveillance in the market

Source: <https://ifal.uh.cu/pregrado/carrera-2/>.

among 120,623 participants from 1996 to 2002. All-cause mortality was positively and continuously associated with weekly alcohol consumption, and cancer and vascular diseases were the main causes of death.

4.6. Safety. Like other Caribbean islands, Cuba is a safe country. However, the US Department of State's Travel Advisory Level for Cuba at the date of this report's publication remains at Level 2: "Exercise Increased Caution." Travelers must use expanded caution in Cuba caused by discernible and occasionally weakening damages to members of the US diplomatic community leading to the lessening of embassy staff [90]. Travel to Cuba for people from the states remains banned by statute. The US Department of Treasury's Office of Foreign Assets Control (OFAC) continues to issue general licenses for twelve categories of travel to Cuba. Persons who meet the regulatory conditions of the

general license travel are not required to apply for a special license from OFAC.

4.7. Influence of Spirituality and Traditional Healing on Health. Since 1959, the health care system maintains national health care as respecting a human right for all the citizens. The Cuban health system is the lens through which all the nation's problems are measured, including education, housing, and social security [91]. The uniqueness of health care to Cuban nationalism's political and social values remains crucial, though successes in health and medicine do determine national and international aspects of government validity [92].

The life of Cubans is dominated by intense medicalization and a great biomedical hegemony, both individual and collective. However, outside such conventionalisms, there coexist beliefs and therapeutic practices that are

beyond the control of the structured Cuban health system. Thus, the evil eye (*mal de ojo*), and gastrointestinal distress syndrome (*empacho*) are examples of cultural health beliefs [93]. As a result of its diverse ethnic roots, several syncretic religions and cults rich in the ethnobotanical foundation are practiced in Cuba. *Vodún* (voodoo), *Espiritismo* (spiritism), and *Santería* are the consequence of a largely African cultural legacy that also includes Hispanic and Chinese influences [94].

By 2005 the Cuban government began to promote campaigns to resume traditional medicine and the use of medicinal plants in official therapy, a movement led by the Armed Forces. According to Moret [95], people came to search for medicinal plants as part of their cultural health practices in a spontaneous way inside the savannas and bushes. Now, because of the commercialization of medicinal plants, individuals go to so-called herbalists for convenience. In these establishments, plants are commercialized with little knowledge about their collection and conservation regulations, all of which, according to the authors, could have future difficulties in the access of individuals to ritual resources and medicinal plants. The value of medicinal plants and the commercialization of ethnobotanical knowledge within Afro-Cuban religious activities has increased amid deficiencies, inequalities, and social movements based on ethnic and religious identities.

4.8. Recommendations for Cultural Competence Education into the Cuban Pharmacy Curriculum. Tying the above narrative's points of context and description, the application to Cuban pharmacy and curricular reform thus implies recognizing the social, cultural, economic, and political particularities of Cuba. Likewise, fundamentals related to the treatment of the concepts of culture, multiculturalism, and interculturalism, specifically in the educational field, must be considered.

According to Agüero-Contreras, although the Latin American region and the world may recognize the relevance of the multicultural and intercultural perspective for the deployment of training processes in higher education. In Cuba, the conception of solidarity as politics enters the vision of the process [96]. Theoretical deficits in the social sciences, particularly in the sociology and anthropology of education, regarding the conception and treatment of multiculturalism and interculturalism in the Cuban context have prevented their recognition and consequently have limited their application in the training process. Even when concrete and important results in the number of graduates are evidenced, the formative process was limited in terms of deep dialogue for cultural socialization to achieve unity within the current diversity.

Implementing cultural competence education in pharmacy curricula should not assume that knowledge about Cuban culture is known to pharmacy faculties across the island. Differences exist among the provinces on beliefs, rituals, and influences, and the respective prevalence of different religions practiced, along with health and lifestyles [97–100]. Therefore, consideration over spirituality, people's drug information, perceptions related to natural medicine,

pharmacognosy, or ethnopharmacology in both pharmacists and patients must be recognized and studied. From a cultural perspective, looking at the cultural competence training implies addressing communicational aspects that govern the pharmacist-patient relationship or the lack of perception by the pharmacist as a health caregiver. The need to address pharmacy education toward communicative competencies and pharmacist-patient relationship management from the current Cuban societal perceptions regarding health; and health professionals should be studied in an interdisciplinary manner. Similarly, aspects related to the eating habits of the Cuban population, their impact on the prevalence of diseases, and the relationship of these behaviors with the use of medicines should be studied for cultural competence education from ethnographic and sociocultural perspectives.

5. Conclusion

Cuba is a culturally rich country with complex and diverse perspectives on health. This article focused on general themes advocating for a holistic, programmatic approach to integrating cultural competence education; it also serves as a call to action for Cuban pharmacy curricular development. Thus, readers must recognize that Cuban culture is the result of extremely broad and tedious transculturation processes; at the same time, health and education in Cuba are additionally entwined politically, a condition not always statistically available to be studied, nor scientifically referenced to be verified. Therefore, it is not possible to exhaust the subject in a single inquiry.

Being Cuba, a country recognized for its contribution to the top training of health professionals for various countries in Latin America and Africa, the relationship with its partners towards consideration of intercultural education experiences in pharmacy education can be beneficial in cultural competence development. The continuous curricular improvement towards cultural competence should combine the valuable Cuban pedagogical tradition with the study of cultural and religious traditions related to health and the use of medicinal plants. In addition, factors contributing to cultural identity (such as age, sexual orientation, socioeconomic status, beliefs, religion, perceptions about health, life and death) are considerations for inclusion in a pharmacy curriculum.

This article is not an exhaustive expose of varying cultural dynamics, intercultural transitions, and evolution of Cuban perceptions about health within the viability of the Cuban health system and its pharmaceutical services. This is merely a preliminary point to promote a greater understanding of the relevance of implementing cultural competence in pharmacy education; a Cuban cultural approach to health and pharmacy dynamics portrays the complexity of grasping a Global Pharmacy Education framework.

Abbreviations

OFAC: US Department of Treasury's Office of Foreign Assets Control

NCPE: National Council on Pharmaceutical Education
 CUPS: Coordinating Unit for the Pharmacoepidemiologic Surveillance
 CDP: Centre for the Development of Pharmacoepidemiology
 ELAM: Latin American School of Medical Science
 WHO: World Health Organization
 PAHO: Pan American Health Organization
 MGI: Medicina General Integral
 GDP: Gross domestic product
 FIP: Federation for International Pharmacy
 IFMSA: International Federation of Medical Students' Associations.

Data Availability

All data generated or analysed during this study are included in this published article.

Consent

Not applicable.

Disclosure

This article has been presented in Research Square <https://bit.ly/3EbcXPC>. In addition, this article is available at <https://www.researchsquare.com/article/rs-1039757/v1>.

Conflicts of Interest

The authors declare that they have no conflicts of interest.

Authors' Contributions

All authors contributed to the conceptualization and writing of this monograph. The first draft of the manuscript was written by AM, and JS commented on previous versions of the manuscript. Both authors read and approved the final manuscript.

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