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# **Nursing and Public Health in Developing Countries**

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Carmen Luisa Betancur P.

Additional information is available at the end of the chapter

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## **1. Introduction**

The nursing profesional has an important role in public health, highly relevant in developing countries, as their interventions as caregivers are addressed, not only to sick individuals, but above all to the communities of the families of the patients. When they engage in the recuperation process, they are of high value for the implementation of distinct management alternatives.

The transformation of the people toward a better quality of life and long-lasting health, according to the available conditions for each community, are viable only when, through education, the promotion of health and the prevention of sickness impact their behaviors and change their habits.

The nurse has the possibility to walk with the communities, taking a permanent step, independent of creeds, idiosyncrasies, morals, and development. The permanent closeness of vulnerable people in need of care and support is a central axis in the actual role of the nursing profesional, who has abandoned hospital caregiving to move their interest to housing sites, and to work for different people. Continuing to work in the areas of labor, teaching, administration, and politics, they make this change, not only for the image of this profession, but also for the evident impact of their social projection in the transformation of the health of the communities.

The capacity for empathy toward people, even in the worst circumstances, leads the nursing profesional to position themself safely and committed to actions that allow interventions and projections in rated health, most significantly for the leaders of the communities, and for the members thereof, since they represent the possibilities of bettering the quality of life of people in different life cycles. The interdisciplinary and trans disciplinary skills, and the permanent incursion in the development of the themes on community health, project the

nursing professional as a permanent leader of activities and interventions toward the health of the population.

Public health is not only a tool of work for our profession; it's also a context of development in professional and personal influence, and an opportunity to interact with other disciplines that, like this, project toward the accomplishment of representative changes in the countries that, for their contexts, are forced into difficult conditions in relation to coping with risk factors that somehow directly or indirectly affect the health of different groups of people.

Public health for the nursing professional, like that for other health professionals, is an enterprise occupied by the health of the people, their environment, quality of life, and the possibilities of development in terms of bettering living conditions.

## **2. Historic role of public health and nursing in developing countries**

Historically, public health has evolved from a relationship between environmental conditions, socio-economics, and healthy living. Because of this, the situation of health and the development of a community are conditional to the characteristics of the economy, social structure, and the environmental conditions in a determined moment in its history. An intimate relationship exists between these factors, each one becomes the reflection of the other and therefore a society, its environment, and its economy reflect in its state of health and vice versa. Undoubtedly, the state of the health of a given community reflects the state of development of the country in to which it belongs, and in these aspects, the contributions of the Nursing professional are important to address specific actions for social transformation.

Like that which complements and advances social structures, in this globalized world, also makes the health systems, and in a relevant manner in developing countries in which presently exist parallel systems of private health, oriented toward distinct social groups, in accordance with the predominant population in each country and depending on their level of development. Equally, this approach to health care determines the approximation of nursing care as to the population of each one of the countries, and even the region within them. In the majority of the countries, the ministry of health is the organization in charge of ensuring the health of the population, based on socio-economic, demographic, and environmental indicators. With these, ensuring the project plans, health programs and policies, which in all cases include the Nursing Professional.

The purpose of both the ministries and health institutions, like health professionals, especially of the nurse, is to try to accomplish the equity of Access to the health services of the people, as with the extension of coverage, especially to vulnerable populations. Many developing countries are finding an epidemiological transition process in which coexist communicable diseases with diseases caused by violence and other chronic no communicable diseases; situations that the majority of the time is based on inequities that should stir the communities to face the accessibility of the health systems.

Currently the countries of Latin America and the Caribbean face distressing problems social, including poverty and marginalization and translation issues basic rights of education, health and housing. Seeking to diminish the gaps and establish the development of public health to offer equality of opportunities, overall to the communities of developing nations, the( Banco Interamericano de Desarrollo) BID, [1,2,3] performed in a categorization of Latin American and Caribbean countries, which were classified in the following categories:

Groups	Countries	Developed in public health
<b>Group A</b>	Ecuador, Bolivia, Guatemala, El Salvador, Honduras, Haití.	<ul style="list-style-type: none"> <li>• Several factors against the health</li> <li>• Necessity of priority care</li> <li>• Attention to the elimination of eradicable and reducible diseases</li> <li>• Conscience of the importance of a community organization for the development of health</li> <li>• Interventions in environmental health (zoonotic diseases)</li> <li>• Expansion of public health programs</li> <li>• Maintaining of existing plans</li> </ul>
<b>Group B</b>	Paraguay, República Dominicana, Colombia, Nicaragua, Brasil.	<ul style="list-style-type: none"> <li>• Expansion of environmental health plans</li> <li>• Expansion of basic health services to the national level for the most vulnerable</li> <li>• Development of basic health plans executed by interdisciplinary teams</li> <li>• Health care from care units</li> <li>• Increased competence in public health services for healthcare staff</li> <li>• Implement plans of nutritional health, diminution of psycho-social and laboral risk for vulnerable groups of the population.</li> </ul>
<b>Group C</b>	Argentina, Uruguay, Venezuela, Chile, Panamá, México, Costa Rica.	<ul style="list-style-type: none"> <li>• Maintainment and bettering planning and management of public health services.</li> <li>• Solving specific problems related to industrialization.</li> <li>• Development of centers of investigation of public health.</li> <li>• International alliances the allow providing support for the development of public health to the countries in categories A and B.</li> </ul>

**Table 1.** Classification of Latin American and Caribbean countries in their health development by the (Banco Interamericano de Desarrollo), BID.

In accordance with this classification, it is evident that there are various Latin American and Caribbean countries that conform the large group of developing countries and that require economic and logistic support, along with human talent, in order to better the public health conditions for their populations. In this context, the Nursing Professionals, like other professionals in the area of health, contribute permanently and continue the strength of the work that facilitate the accomplishment of this objective.

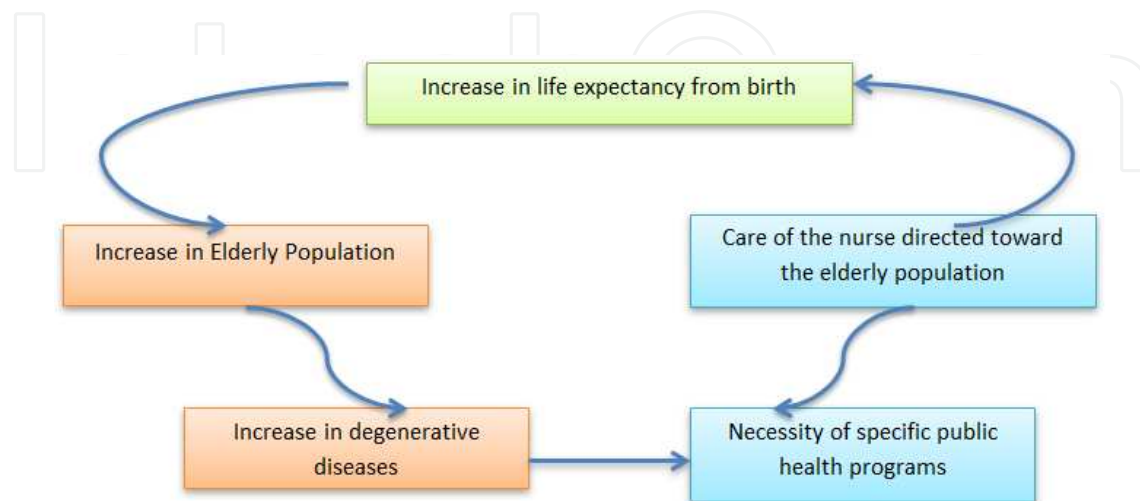
### **3. Current challenges in the face of public health for the Nursing Professional**

World-wide life expectancy increases, even for the communities of developing countries. In the last five decades, it has increased the number of years that each person lives. Between 1950 and 1990 the life expectancy at birth was 46.5 years on average, and by 2002 it was 65.2 years. In 2011 the life expectancy for countries like Monaco was 90 years, and for developing countries, like South Africa, it varies according to the public between 39 and 48 years. For the region of Latin America and the Caribbean it varies between 68 and 75 years. The average life expectancy has important differences between developing countries with high morality and those with low morality. The life expectancy has increased in recent decades for almost all the countries of the world. The socio-economic support of each one of the nations has a direct relationship with the conditions of public health and the quality of life that their residents can access. Congruently with this, the actions of the Nurse also have links to the technological and scientific developments in each country, which in turn interacts with the distribution that is intended for public health care. [4]

The increase in life expectancy registered in the first half of the 20th century in developing countries was a result of a rapid descent in the rates of mortality, particularly of mother and child, and attributable to infectious diseases in infancy and the first steps of adulthood. The access to a dwelling, some sanitation services, and an education of the best quality, the tendency to form more reduced families, increased income and the adoption of public health measures, like the immunization against various infectious diseases, contribute in an important way to what Public Health has called an epidemiological transition. In many developing countries this change began approximately 100-150 years ago. In some places, for example in Japan, the transition began later, although more recently their rhythm has advanced rapidly. And in many developing countries, it began even later and still has not concluded, as is the case in the majority of developing countries. [5]

This population dynamic has implied, for the public health professional, a better and greater scientific foundation to everything related to public health practices, tending to preserve the conditions of health, controlling the conditional factors, and tending to actions that favor the development of actions in public health for the prevention of diseases and the promotion of health. The increase of the quality of life has a profound relationship with the academic plans of the universities to fortify the Nursing Professional from their undergraduate formation. Especially in developing countries, practice has been backed and supported by the

World Organization of Health. This panorama leads to the attention of the nurse currently projected to the elderly population, since its mandatory increase brings care to the chronic and degenerative diseases which undoubtedly constitutes one of the major challenges to the nursing professional.



**Figure 1.** Repercussions of the increase in life expectancy from birth over the activities of the public health professional.

Other current challenges to public health and in the development of nursing care to the populations should face statistics about mortality that many developing countries considerably underestimate the attributable weight of non transmissible diseases in adults, excluding the health problems of nonfatal consequences like depression or vision disorders. In the case of depression, more than that of vision, they can cause an increase in mortality. One method of utility to synthetically express the burden consists of calculating the number of years adjusted to the disability (AVAD), indicator that combines years of life lost due to premature death (APP) and the years lost to the disability (APD) [6]. It could be said that one AVAD is equivalent to one year of “Healthy Life” lost, and the burden and that the burden of disease as well as indicates the difference between the state of health of a given population and a global population normative reference with high life expectancy in perfect health. In terms of AVAD, 35% of the total years of healthy living lost in 2011 in the world should have been to diseases, injuries, and from external causes suffered by children less than 15 years, many of them preventable, nearly 50% of the pathologies and external injuries suffered by adults between 15 and 59 years. [6]. All of these components permit review and make new propositions to better the indicators through direct interventions to these specific populations, without losing sight of the rest of the population.

It has also constituted an important challenge for public health in developing countries, infantile supervision that currently continues to play an important role in the international health agenda. [7]. Since about 91% of deaths of children under 15 that occur in the world occur in children who have not completed five years, and in developing countries. Equally,



international forces have aimed to comprehend the magnitude of the sanitary challenges that face adults in developing countries, even those that do not accomplish changes in the epidemiological profiles that are expected and projected, while the health of the adult population has had a broad advance in rich countries, which have also reduced, remarkably, premature mortality in children. Undoubtedly so many in developing countries as in the nations in development of health professionals have participated, with the rest of the disciplines of health sciences, in the marathon task of combatting preventable diseases, many of those no preventable, through the programs, plans, and policies of public health that imply the direct work with the communities and addresses from planning and projection of the institutions and health authorities.

The formulations of these policies, plans, and programs for health workers and for involved populations can only be sized by indicators of public health. The construction and management of training required from undergraduate education, however in many developing countries, the nursing professional is found as limiting the inadequate record management which is based on the construction of the indicators. This situation in many developing countries as another of the challenges for the nursing professional, that works in public health, not only as a proposal of betterment to the quality of information, but rather, as the projection of reliable data in which they can base the making of governmental decisions to solve the difficulties of the health of the community.

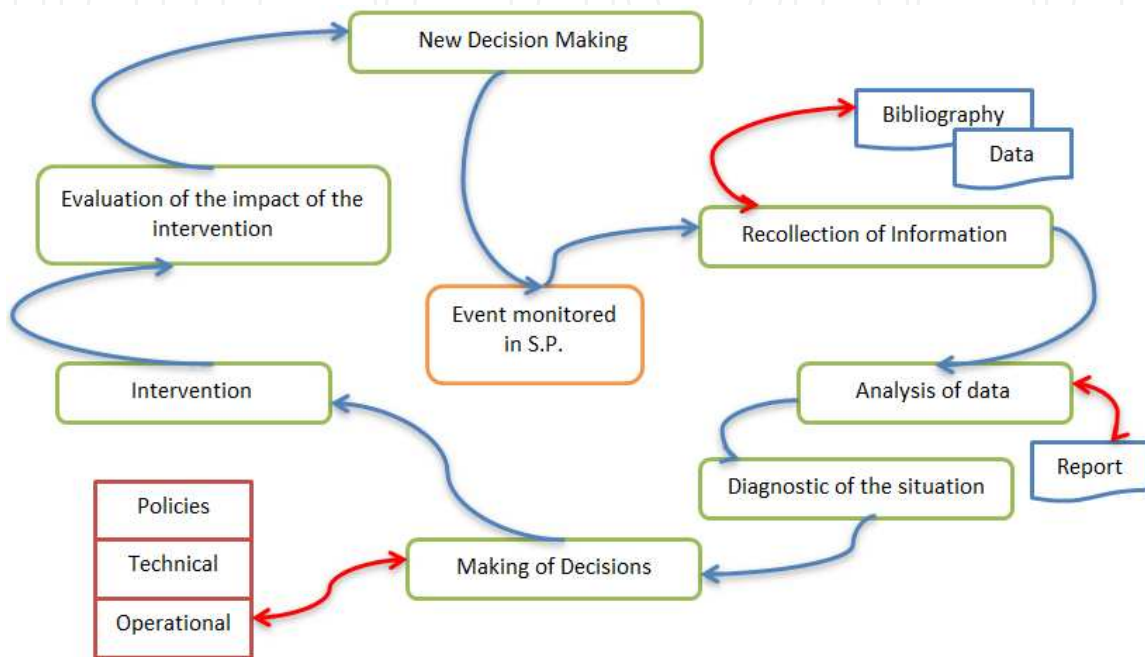
#### **4. Actions of the nursing professional in the monitoring of public health**

The monitoring of public health for the majority of developing countries involves oriented actions for the changes in the management of intervention strategies for the pathologies of major prevalence in each one of them. The nursing professional, as a leader of many of the work teams that develop this monitoring, know and size the pertinent ways and effective activities that favor the factors of protection for the subject population of the monitoring.

The nursing professional, in conjunction with other health professionals, performs an analysis of the situation of health of the population, figure 2. To start the process with this public health surveillance of a particular event, it takes a first step to review the available scientific literature on the event, given the evidence shown so far to manage the disease in question. Then, analyses data collected product information on the population being monitored with this information produces a statistical analysis in order to formulate a diagnosis of the situation and proposals for intervention, which must be accepted from the political, by administrators public health, from the technical to facilitate the planning and execution finally implemented by the operating personnel monitoring, implemented the proposed intervention program or intervention is made of its effectiveness that triggers a new decision-making on the event subject to public health surveillance.

Each of the countries annually conducts a review of its health indicators, in order to establish the conditions that during the next year will be the subject of public health surveillance. According to WHO guidelines, World Health Organization, every nation does tracking

events most prevalent during the previous year, indicating that for many of these, such surveillance may differ from year to year and between different developing countries. While analyzing the different surveillance systems in public health, is often found that among them, there are periods in which the monitoring pathologies are very similar, or at least of the same group.



**Figure 2.** Sequence of the monitoring in public health.

These types of interventions contribute significantly in changing handling the morbidity and mortality, and also promote relevant changes in the behavior of populations which ultimately leads to better quality of life, greater number of years of healthy life and productive impact on the social and economic transformation. [8]

## 5. The determinants of public health in developing countries

The determinants are a set of conditions of health and disease in individuals and communities. In 1974 when the Minister of Health Canada, (developed country), Lalonde analyzed the determinants of health, created a public health model, to improve the health of its inhabitants, which was later extended to the other countries. [9]. According to this model is considered that the level of health of a community is determined by four variables:



Determinants of Health	Components of the determinant
Human Biology	Genetic and aging
Environmental:	<ul style="list-style-type: none"><li>• Biological contamination</li><li>• Virus</li><li>• Micro-organisms</li><li>• Bacteria</li></ul>
	Atmospheric Contamination <ul style="list-style-type: none"><li>• Noise</li><li>• Vibrations</li><li>• Radiations</li></ul>
	Chemical Contamination <ul style="list-style-type: none"><li>• Sulfur Oxide</li><li>• Fertilizers</li><li>• Pesticides</li><li>• Heavy Metals</li></ul>
	Psycho-Social & Socio-Cultural Contaminations <ul style="list-style-type: none"><li>• Stress</li></ul>
Lifestyles (Unhealthy Habits or Behaviors)	Sedentariness Consumption of drugs, including tobacco Excessive consumption of foods rich in fats and carbohydrates Dangerous or reckless driving Misuse of health care services Aggressiveness
Health care assistance system	Quality Gratuity Coverage

**Table 2.** Determinants of the health and its components, according to Lalonde.

Among these determinants of health, which currently provides more weight to determine the presence of health or disease in the context of public health especially in developing countries, is the behavioral or lifestyle, and is in this in which nursing professionals have greater opportunity to achieve major changes. Habits such as sedentary lifestyle can be changed when the professional who leads the activities of prevention and promotion does impact the transformation of personal and community behaviors towards developing guidance and exercise routines and physical activity, for weight loss, improving physical functions and therefore reduction of chronic diseases such as hypertension, diabetes, musculoskeletal problems. Also against the use of drugs and the nurse is of high importance in developing countries, where often vulnerable community has no easy access to medical specialist or general practitioner, is when the professional nursing can deploy activities established in the public health policies of each country, in order to minimize the use of these

drugs, in no way easy, but certainly in which we must continue working to make an impact. Undoubtedly many times with little or community receptiveness of the individuals involved in the process. As for the excessive consumption of foods high in fats and carbohydrates, every day the situation becomes more complex, since developed countries have high experience in this matter and its impact on developing countries make greater proportion through mass media. There are a growing number of people involved in processes of malnutrition, mostly by overweight, which ends in a high proportion suffering from preventable diseases such as hypertension and diabetes, whose morbidity is increasing every day with dire consequences on individuals and communities. Reckless attitudes, both when driving as aggressive, increasingly number within the young population, are one of the causes of high morbidity and mortality, as many of these actions are outcome externally caused injury to lethality, or in many cases with severe and irreversible damage to those who are involved in such actions, which is not always a direct relationship between the injured and recklessness, as the injuries often have nothing to do with the process and suffer damage, being close to the subject reckless. In addition to the above, the nursing professional is a low adherence to the programs established in each of the countries and few support tools to increase it or motivate. However, given the professional scientific technical preparation in nursing, is always ready to ride new strategies, develop innovative new plans or promote public health policies aimed at decreasing the risks and harms associated with these.

Undoubtedly the best actions against determinants of public health should be geared toward the prevention of disease and promotion of health and the professional in this field has been developing permanent nursing actions, primary health care has a high impact on developing countries, actions addressed by properly targeted and highly competent professionals in the field, make an impact in a relevant and timely information on the magnitude of the problem.

The greatest weight in determining public health, such as behavioral, environmental and the system or health services are largely modifiable factors, at least theoretically, and therefore the actions of public health should be routed to this change. Another important feature of these determinants is that they are influenced by social, within which the economy, culture and social development are highly relevant. [10].

## **6. Relevance current of the environmental determinant**

Environmental risks and their impact on health are becoming increasingly important. In the twentieth century, the UN in 1984 structured the commission for the Environment Management and Development was held in 1987 and the Tokyo Declaration, which was attended by most of the countries interested in environmental preservation and implementation of preventive measures this level, the publication of the Brundtland, Gro Harlem, in the Rio summit, 1992, gave guidelines in Agenda 21, sustainable development project that enabled decisive actions for developing countries such as sustainable cities and towns, 1994. By 2002 at the Johannesburg summit, it became clear the negative impact of many of the measures proposed and implemented by the various nations.

Given the importance of ozone for the protection of the health of the population in 1985 was conducted Vienna Convention for the Protection of the Ozone Layer. In 1987 and looking to delve on the issue and improve control strategies on the environment was held the Montreal Protocol. In 1992 took place the framework convention on climate change. In 2000 was held the Millennium Summit goals within this one was directed to the proper environmental management. In 2005, achieving the Paris Declaration and the Kyoto Protocol, making each of these conventions and protocols important advances in the analysis of the risks that the environment can offer to the health of the population and in the population decisively vulnerable. Within the management of environmental issues and their relationship to community health, waste sub has taken a leading role, the Basel in 1989, with amendments in 2011, Rotterdam in 1998, Stockholm in 2001. [11] Parallel to this international action each country has developed its own rules, as support and adjustment to international component. From this collaboration have also developed a series of international cooperation agendas that directly or indirectly benefit the health of communities.

The 61st World Health Organization, in 2008, noting with concern the findings of the Intergovernmental Panel on Climate Change regarding the effects of rising temperatures on the planet and their involvement in some aspects of human health; besides providing estimated that climate change begins to have negative net global effect on human health, especially in developing countries, small island developing States and least vulnerable local communities capacity to prepare for such a change and adapt to it; and that the estimated exposure to climate change affects the health status of millions of people as a result of increased malnutrition, mortality, morbidity and injury due to extreme weather events, the burden of diarrheal disease and the frequency of cardiopulmonary diseases, as altering the distribution of some infectious disease vectors; also found that climate change hinders the achievement of the Millennium Development Goals, including the goals for health, undermining the efforts of the Secretariat of the 60th World Conference and Member States to improve public health and reduce all health inequalities globally. It recognized the importance of addressing timely health consequences of climate change due to the cumulative effects of emissions of greenhouse gases, and recognized that solutions to the health impacts of climate change should be seen as a joint responsibility of all States, and that developed countries should assist developing countries in this regard. The conference found the importance of strengthening health systems in order to provide them with the ability to address both gradual changes and sudden shocks is a key priority for the correction of direct and indirect effects of climate change on health. [12]

Certainly the environment is a very important factor in the development of strategies and public health, both understood in the traditional sense (physical and biotic environment), as in the socio-cultural sense. One of the outstanding features of the new public health is the attention given to environmental factors and their relationship to human health.

Environmental management has been a rediscovery of community needs, which has allowed public health to explore and understand the importance of prompt and effective intervention to facilitate the development of a balanced and healthy relationship. In these respects, the story has changed since a few decades ago the environmental component was

completely ignored and roomy ignorance of its effects on the development of certain diseases. [13]

Models	Description
Biocentrism	Currently the environment is understood as part of the conditions around the man, who is an element of the context, in interaction with all the biotic (living) and physical surrounding
Systemic view	Conception of the environment as a system with different levels of complexity: <ul style="list-style-type: none"><li>• Biosphere: relates to the nature and everything which has life</li><li>• Technosphere: system of man-made structures that assist the biosphere</li><li>• Sociosphere: set of institutions to regulate human creation developed internal relations, social (public, religious, etc.).</li></ul>
Development of an environmental ethic	In recent years environmental ethics has emerged as the everyday moral philosophy. It is a line of thought and action experienced as commitment for action in contravention of the system balance. This ethic is based on solidarity in which the man found with the privilege level of nature, should be responsible for it.
Sustainable development model	Facing the expansionist model of unlimited growth of the industrial product and technology development, new knowledge of the natural resource exhaustibility and irreversible dynamics of any system, requires rethinking and growth patterns of behavior, not substantiated exclusively economic parameters, but more consistent with respect to all forms of life and the development of greater quality of education.

Table 3. Environmental Models.

For the XXI century one of the biggest environmental challenges the decision of what constitutes equitable North-South, or what in other contexts is called operator-exploited.

The social, cultural and health of the various treaties, conventions and international agendas have shown the importance of resolving the Needy present without compromising the ability of future generations’ development, thus giving the opportunity for each company to resolve their own conflicts towards the environment. [14] According to this approach should be a basic balance between the environment and community health, to achieve this is essential, consider some elements:

- Population Stabilization: population control
- Efficient use of natural resources
- Reduction of residual contamination

- Reduction of greenhouse effects and climate changes
- Implementation of situational benefit to everyone
- Define environmental limits
- Debugging the concept of market economy
- Formation and social/cultural changes

It is perhaps this last element in which greater prominence has taken the role of public health and with it the number of commitments and activities to be performed by the nursing professional in each of the developing countries. One of the most important things is education consisting of habitat management in children and young populations, which in most cases constitute multipliers at family and community.

Caring for the environment as part of public health responsibility involves some approaches of social, environmental activities and programs must address ecological variability, sustainability in the social, economic viability as a sustainable solution in the short, medium and long term.

Global environmental problems should be assessed against public health. The environmental issue is not limited to pollution, however covers a range of circumstances in which most of the time, people generate damage on the environment, which may be irreversible and against which you have to face the consequences and suffer damage from these.

Some of the most relevant issues regarding health of people are, the population explosion, the human being on the planet has grown in an uncontrolled dimension and most people on earth live in developing countries. About 1.4 million people lack food, which leads to major health problems as malnutrition triggers a series of important diseases in the human population. Deforestation, in which between 60 and 70% of the world's forests have been destroyed, with the unfortunate consequences that it brings to the environment and health of people. The increasing desertification, with consequences such as reduced water, the extinction of animal and plant species, increased mineral consumption, increased air pollution, destruction of natural heritage, cultural and technical-artistic, increased armed conflicts and the use of weapons that also affect the environment.

From the perspective of public health must take into account that people like all living things depend on a complex set of environmental factors. Humans occupy various environmental systems with characteristics and specific environmental characteristics:

- The environment is not only physical and biological, but also sociocultural.
- The human being is capable of modifying the physical and biological environment to suit your needs.

These changes may be accompanied by alterations of the natural balance with environmental damage and extent of individual and community health as well as quality of life.

Against this background the institutions public health regulators propose lines of action to minimize the damage and initiate protection activities, for which studies are required to



strengthen the evidence and to protecting the environment, such research should be oriented physical health and the environment, integrating aspects as abiotic air Pollution, contamination of water, soil and food, contamination by radiation, noise pollution, health studies and biological environment as subtopics biotic pollution, communicable diseases and the study of health and socio-cultural environment. This interaction supported policies that will raise the level of quality of life. In relation to this issue include the great interest of the professional training institutions in Nursing, for educational interventions to strengthen knowledge and stewardship of the environment. [14]

## **7. International cooperation for public health**

It is clear that at present the only way forward in health policies and programs of adequate and timely scope is establishing cooperation networks. In the case of public health, cooperation must answer a global need, where the greatest needs are located in developing countries. Their viability depends on the strengthening and integration of countries and organizations assigned by them to support processes that manage work schedules and coordinated sets. The internationalization of needs and finding a solution encourages technological development, common economic interests and interaction processes, if international cooperation is conceived as a strategy to strengthen each of the countries, the possibility of financial support, technical and scientific and logistics by developed states, to developing countries, improve public health perspective in the current context. [15]

Shared knowledge between countries, given that between them there are different degrees of development over public health is an aspect that motivates the approach for the development of projects in which the consideration of collective agreements, is seen as a point of starting to close the gap between actors, international cooperation in order to strengthen public health milestones evaluates and transforms impact on communities, especially the vulnerable, for obvious reasons that belong to the neediest countries.

It should be noted how the experience of international cooperation in public health has allowed this to be inserted into other activities on international scientific cooperation, networking of knowledge about health issues, as their understanding of the ethical issues and the appropriation of knowledge have led to the accompaniment of cooperative work in several developing countries, and on whose initiative has worked to expand such cooperation.

The importance of expanding international cooperation areas to strengthen relations development and integration of public health with the scientific community in several countries is a matter of the internationalization policy not only health but also of science and that be taken as strategic perspective and long range. This internationalization strategy favors public health community institutions like health administrators and forming human resources, which is important to include all disciplines in the health sciences. Internationalization in public health is a context that relates unfailing capacity of each country, its institutions and networks that are formed between them for a more effective dialogue, however refers therefore to a scenario international cooperation highly competitive and complex. [16]



In the process of international cooperation in public health include the generation of new ways of working around the synergy of processes that encourage interaction and communication of each of the countries involved. This implies that for health care organizations as well as for generating knowledge in public health aspects, integration into the opportunities and international scientific cooperation mechanisms represent a strategic position within the multilateral schemes and initiatives within each country to work together around the national public health agendas.

Many national research networks in Health Policy and Systems, at the level of individual developing countries are interested in advancing their maturation and consolidation processes for each of their countries. Within the process of international cooperation for public health has been proposed to increase the efficiency of capacity to respond effectively to those in need of intervention and research and participatory development in achieving national and international studies of the impact of health policies with social relevance.

Although the network approach achieves through its leadership role in the determination of public policy in the sector, it is proposed to endogenously maintain permanent meetings, forums and meetings with experts, using various scenarios academics to discuss health issues public in the country.

Each of developing countries has been developing an agenda for international cooperation that facilitates individually and jointly meets the challenges facing the public health and promoting management processes supported by most developed countries, thus opening opportunities innovation associated with research, innovation, technology and therefore the scientific development related to public health. Vitalize the national agendas from scenarios decision making process and stakeholders with high social commitment, since this interaction of the endogenous progresses toward the exogenous, when strengthens systematization of processes of each country, as evidence for informed consolidated action and social management, to develop public health research at the national level, can move easily in the interaction with other states. Many of these developing countries, through international cooperation involving public health in their agendas, issues like: The Millennium Development Goals, the fight against the world drug problem, environmental protection, reproductive health, nutrition, occupational health, social reconciliation and governance. The search for the consolidation of domestic and international alliances to achieve reduces social inequalities and promotes the development of public health, has become a joint effort. As evidenced by the needs of these populations the work of professional nursing responsibly supports the development of themes through actions relevant to each community. Reducing poverty, achieving full coverage in health and education, and the decline of the unemployment rate in developing countries achieve progress in development of production and competitiveness, not only in meeting the eradication of extreme poverty and hunger, but generally towards achieving higher levels of economic and social development with equity and without exclusion, which ultimately benefits significantly to rural communities, the poverty belt, displaced by violence, natural events or social injustice. [17]

8. Trajectory of public health

Only in the mid-eighteenth century the concept of health acquired a public dimension, although there are indications of community care since antiquity. The concept of public health, as it says Gómez Arias, integrates two basic concepts, the health and "public", historically evolved and it was necessary to gather at one time in his career.

Stage	Evolutionary conception	Moments
Primitive	Survival requires collective experiences. [18] Commits primitive communities and ancient civilizations. Emerging notions of individual and the public. The disease comes to the community despite its supernatural origin. Collective healing rituals. Hammurabi's Code of Laws.	The historical relationship of primitive health. The Jews in the twelfth century BC had religious rituals of disease management and its determinants. The Egyptians, Assyrians, Babylonians and Mesopotamians, at the same time made similar processes versus disease management. Other primitive societies connected the disease with cosmic events and thus addressed his management from conception religious magic.
Old	It develops the notion of the public, but the disease and health issues remain purely individual. Religious magical character. Illness as a result of the forces of nature or the spiritual powers. Health practices preventive, had a religious magic lasso. Using amulets, restrooms, food or sex vetoes. [18]	Paleolithic: Individual disease management consistent with the nomadic life. Diseases caused by excessive physical activity or atmospheric exposure. Neolithic: appearance of inactivity, change in the epidemiological profile, pest outbreaks, malnutrition. The Mayas: health resulting from the coexistence with the laws of nature and society. Diseases are the product of the transgression of these. Prevention is done through religious rituals and medicinal plants. The Jews: connection with the performance of religious codes, standards of prevention. Greece: management terms as epidemic, endemic, community health. Use of curative and preventive medicine. Hippocrates forerunner of medical

Stage	Evolutionary conception	Moments
Middle Age	Setback in terms of public health, through the influence of the dominant church. Major pandemics, leprosy, smallpox, cholera, bubonic plague in Europe, China, India, the Middle East, during the XI-XIII centuries.	practice and medical code first recognized to date. Rome: Followers of the Greek medical doctrines, innovative environmental and community health. China: Important development in environmental health, individual and collective hygiene, preventive health.
		Phase of average age: largest urban concentration, development of land and sea routes, church influence on the care component, war situations, poor socioeconomic conditions, malnutrition Renaissance Stage: XVII-XVIII centuries, awakening of humanity against the dogmas. Expansion of geographic knowledge. Invention of printing. New philosophical systems. Flowering of art. Trade expansion. Industry appearance: appearance of anatomy, physiology, experimental medicine, first scientific investigations, including the field of preventive medicine and disease control.
Modern Age	Develops between the XIV and XV, in the Renaissance period. Appears recognition of some conditions of risk and protection against diseases of the time. Despite the scientific, public health does not receive any direct benefit during this period.	Inequality of health from other scientific technical developments, boom of sexuality and thus sexually transmitted diseases. Discovery of the natural process of some diseases such as scarlet fever, increased assertive diagnoses by clinical observation and epidemiological. Checking the relationship between cause effects such as scurvy. Work began addressed social interventions.
Contemporary	It extends from the Industrial Revolution to the present day. Important advances in public health, research, treatment, and prevention. Commodification of health services.	In Germany, Rudolf Virchow, deepened the study of typhus. We conducted the first international conference on health, which culminated a century later with the establishment of the World Health Organization. They originated professions

Stage	Evolutionary conception	Moments
	Ownership rights of citizens against the concept of health care from the state, through public assistance.	such as medicine and nursing. Koch gave rise to the creation of bacteriology microscope. Fleming discovered penicillin and all its possibilities starting the...
	The epidemiological transition and health transition.	Medical era: understanding of the disease as a preventable condition, to reduce morbidity and mortality and improve the living conditions.
	Rise of multiple-causality.	Psycho-Social Era: advances in psychological components, social and ecological function of disease control.
	Regulatory changes and development of social movements against the requirement of public health.	Epidemiological Era: development of research on health determinants.
	Alma Ata: Health for All by the Year 2000	Epidemiology as a method of knowledge to approach the study of diseases, their prevention and control. Statement by WHO on the health of communities, most especially on developing countries.
	Development and renewal of primary health care and family medicine.	Revaluation of the impact of environmental health in the development of public health.
	Development of community nursing. Investment of the population pyramid. Three demographic transitions.	

**Table 4.** Stages of evolutionary development of public health

Within the evolutionary development of public health this has gone through many different stages, from the ignorance of their importance in the health-disease process, with a magical religious development, to implementation policivas connotations for control of communicable diseases, or the commodification of health services. It is now when public health has attracted interest from all kinds of thinkers and administrators, some with the encouragement to expand services to all communities at low cost and with high quality, in terms of expanding other economic power, some social.

But for decades to developing countries to enable them to plant objectives, reduce the health burden from communicable diseases such as HIV-AIDS, tuberculosis, vaccine-preventable diseases, acute respiratory infections and reduce the social and economic impact of theseReduce disease, disability and premature mortality, noncommunicable diseases such as hypertension, diabetes, kidney failure, cancer, dental gold diseases, mental illness and injuries from external causes such as domestic violence, accidents transfixed, the trauma. Reduce the risk factors associated with the disease burden, through habits and healthy lifestyles, healthy nutrition, reduction or elimination of smoking habits, alcohol, psychoactive substance use, increased physical activity, weight control, sexual behavior safe and responsible. Reduce morbidity and mortality through all life cycles. [19, 20, 21] Reduce inequalities in health for the entire population. Protect the health of the population through the improve-

ment of the environmental conditions and the assurance of food safety. Strengthen psychosocial protection for the entire population. Strengthen the institutional health. Improve the quality of health care for all communities, with priority for the vulnerable. Strengthen the health sector response to disasters, emergencies and epidemics. Strengthen public health components for the entire population. Governments are committing to free health, public and affordable and accessible to all. [22, 23, 24]

## 9. The nursing professional in public health

Nursing care is the science of human health. The nurse dedicated his professional life to providing care to people in order to maintain health and reduce the risks or potential, compared to this. The singular focus of nursing as profession and art, focusing on the study of the response of the individual or community to a health problem as it can be presented or looming on the situational analysis of the community, from another perspective, in addition to the need of every human being to take care of yourself from the biological, emotional, social and spiritual, i.e., from a holistic projection. Critical thinking is formed in which the nurse is based on the foundation of the search for answers to questions and challenges facing a complex situation and how to deal with this situation. Nursing practice provides mechanisms by which the nurse uses their views, knowledge and skills to diagnose and treat diseases wings needs or problems facing individuals or groups of the population.

Nursing care encompasses autonomous and collaborative, which lend to people of all life cycles, families, groups and communities, sick or well, in all contexts, broadly include advocacy health, disease prevention, diagnosis and interventions to community care for the sick, disabled and dying people, as well as for populations at risk or pathology community. Essential functions are nursing or patient advocacy community from the bioethics field, promoting a safe environment, research, participation in health policy and management of the resources needed to promote recovery and rehabilitation strategies of patients and health-care systems. [25, 26]

The first theory is born with Florence Nightingale nursing, and this theory is precisely what is closer to public health, the theorist of nursing care of the environment to provide a safe environment for patients, explores the importance of habits hygiene to prevent disease and preserve health, structure management plans of patients according to the support of their families and communities. From there arose new models each with new philosophical and epistemological contributions to understanding the nursing and care as science. Nursing in its historical development has gone through several stages, as yet been able to focus on the acquisition of technical and scientific knowledge in other historical moments were delegates in other professions, has been moving in the categorization of the profession. With the publication of the book "Notes on Nursing" by Florence Nightingale in 1852, laid the basis of nursing as a profession, in her book Florence attempt to define the specific contributions of nursing to health care both individual and community. Her spirit of inquiry is based on pragmatism. The objective of the model is to preserve the patient's vital energy and based

on the action exerted by nature on individuals place it in the best possible conditions to act on it. Her theory focuses on the environment; she believed that a healthy environment was necessary to apply a suitable nursing care. She says "there are five key points to ensure health: clean air, pure water, efficient drainage, cleanliness and light." Another of her contributions refers to the need for home care nurses provide services in home care, should teach patients and their families to help themselves to maintain their independence. Nightingale's theory has significantly influenced other theories: Adaptation Theory, Theory of Needs Theory and Stress.

The basis of the theory of Nightingale is the environment: all conditions and external forces affecting the life and development of an organism. Nightingale describes five major components of a positive or healthy environment: adequate ventilation, adequate lighting, sufficient heat, the fumes control and noise control. To Nightingale physical environment consists of the physical elements in which the patient is treated, such as ventilation, temperature, hygiene, light, noise and elimination. For Nightingale psychological environment can be adversely affected by stress and Nightingale as the social environment that includes clean air, water and proper disposal involves collecting data about the disease and prevention of it, which is one of the most important contributions to the development of epidemiological studies in public health. [27, 28]

Another important theorist for public health nursing is Nola Pender with her "model of health promotion". This theory identifies the individual cognitive-perceptual factors that are modified by situational characteristics, personal and interpersonal, which results in participation in health-promoting behaviors, when there is a pattern for action. The model of health promotion concepts used to identify behaviors relevant to health promotion and to integrate research findings so as to facilitate the generation of hypotheses affordable.

This theory continues to be refined and expanded in its ability to explain the relationships among the factors thought to influence health behavior change at the community level. In the context of this theory health is a highly positive. The definition of health is more important than any general statement. The person is the individual and theorizes center. Each person is defined in a unique way by its own pattern and cognitive-perceptual variables factors. The environment described accurately with the representation of the interactions between the factors and perceptual, cognitive-modifying factors that influence the occurrence of health-promoting behaviors at the individual and collective.

The nurse on this theory has the responsibility to provide basic health care as care for the communities, from the aspects of disease prevention and health promotion.

A theoretical level most nursing programs develop public health issue as a central axis with practical theoretical approach, by raising awareness of models of public health work, the historical evolution of this, including the primary health care, effective participation in the development of policies, programs and health plans for communities. Paradigm shifts in coping with the risk factors and protective factors and the determinants of health, come together for a secure training of nurses with expertise in being, knowing and doing, which fa-



facilitate development of strengths that allow populations to manage their health components from its own needs. [29, 30, 31]

Nursing as a profession, in a holistic way is inclusive of the strengths, opportunities, needs and threats to the community is exposed, evaluates to base diagnoses and plans to raise from the educational interventions, the practical and political order improve the quality of life of the population to their work. It strengthens trans interdisciplinary work, as in the inter integration.

## 10. Conclusion

Nursing professionals within our academic role, research, and administrative assistance, we focus on the daily work to the attention of the people to provide public health care consistent with the needs of communities, the environment and the conditions existing at the time participate in the work. One of the opportunities that are currently nursing professionals is fresh out of training and development of skills in all matters relating to primary health care, including education as a tool to strengthen social development, is a permanently open door.

Public health has been established for professional nursing in a working strategy with wide projection. Population dynamics, environmental, socio-economic conditions, among many others offer the possibility of deepening concretely and specifically against the background of each of the populations, their needs and finding efficient solutions to achieve the desired changes and eventually support the prolonging life years in good condition and excellent quality of life.

However for all this possibilities into the profession and the public health, we cannot ignore the social weight that represents the life conditions of communities into development countries specially all the topics related with health, education, work and housing. These components also are affected by environmental conditions, inequality and inequity facing health services and the precarious conditions to resolve the situations of risk that they face daily.

It is important to look at the context of the work of professional nurse into public health in a prospective of development, integrity and support in which development the self-sufficient countries can support through economic and scientific-technical alliances to those most vulnerable. The economy, which finally can be the more important factor for health development support, investigation, technology, social responsibility between others, should have redistribution which benefits needy population to achieve the benefits of a better quality of life.

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## Author details

Carmen Luisa Betancur P.

Teachers associated Pereira Technological University (Pereira, Colombia), Teachers associated Andean University Foundation, Sectional Pereira (Pereira, Colombia), Coordinating expertise in epidemiology, FUA, sectional Pereira, Colombia

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