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Linkages between Public Health and Health Demography

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Abstract:

The need to embark on the mission of clarifying the confusion in the application of terms such as demography, public health and health demography and setting boundaries among them, and bringing to fore their founding fathers underscored this essay. It is hoped that scholars and practitioners would find this academic essay very useful in adding to their understanding of the different disciplines and especially, in knowing what was originally their own and what was borrowed through association.

As John Graunt is considered by many historians to have founded the science of demography, so also is John Snow noted to be the founder of public health. The relevance of demographic characteristics in public health planning is strongly acknowledged by public health practitioners each time they call for community assessment before any intervention planning takes place. The place of sociology during public health program execution is recognized when mainstreaming science with culture in order to make programs sustainable. This is the significant contribution made by Max Weber. Statistics as a science of numbers has been demonstrated to have a place on public health practice, and each time statistically evidence based advocacy is invoked during program execution, the contribution of Florence Nightingale comes to mind.

The fusion of public health, demography, biostatistics and sociology brought about health demography as a discipline. Hence the founding fathers of all these fields come together to become the fathers of health demography. This is why health demography is described as a child with many fathers.

Just as demographic characteristics affect public health planning, so also public health intervention affects demographic characteristics. When public health affects the life of the people, their demography is also affected. Before any public health intervention takes place in a community, an understanding of their demographic characteristics and culture are necessary. In other words, the Demographer and the Public Health specialist must agree to work together for a good public health intervention program to succeed. It is therefore a truism that for any good public health intervention program to succeed, the knowledge and skills of demography and public health must be fused and applied in that program.

The interdependence between public health and demography is better understood with the saying; the Demographer lays the foundation upon which the Public Health practitioner builds. Both disciplines require complementing knowledge and skills to operate. For the Public health practitioners, this association is underscored each time a call is made for a baseline assessment to be conducted in a community before any intervention commences, or an end line measurement is suggested to determine the impact of the intervention.

The fusion of public health, demography and sociology gave birth to health demography. A health demographer is that social scientist who has the combined advantage of the knowledge and skills of public health, demography and sociology and applies them in resolving the societal dilemma. He is better described as a public health demographer. As an emerging field, health demographers are rare professionals around the world.

Keywords: Public, Health, Demography, Sociology, Biostatistics

1. Introduction

The essence of this essay is among other things to present an academic view points on the concepts demography and public health as disciplines, to clearly explain the linkages between demography and public health, examine the relevance of demographic characteristics to public health practice, to examine the emergence of health demography as a discipline and the role of a health demographer in public health practice.

1.1. Statement of Problem

The need to embark on the mission of clarifying the confusion in the application of terms such as demography, public health and health demography and setting boundaries among them and bringing to fore their founding fathers has been a concern for population health professionals. This is the very mission of this academic work.

1.2. Rationale for this Essay

It is hoped that scholars would find this research work very useful in adding to their understanding. Practitioners of the different disciplines would also find the work useful for the purpose of knowing what is originally their own and what is borrowed through association. This is an attempt to redefine the different disciplines and their relationships. Whether the author has made a success of his objectives or not is left to posterity to decide.

2. What is Demography?

Demography was coined from two Greek words; “demos” means “the people” and “*graphō*” which means “measurement”. (<http://en.wikipedia.org/wiki/Demography>)¹.

Demography is the branch of social sciences concerned with the study of human populations, their size, structure and change (through births, deaths, and migration), and their relationship with the natural environment. Demographic indicators could include population size, population growth rate, crude birth rate, crude death rate, total fertility rate, life expectancy and infant mortality. As well, it would include estimated and projected gender and age distributions according to medium, high, low and constant fertility variants. In short, demographic changes affect all areas of human activity: economic, social, cultural and political. Demographers have the knowledge of understanding past trends of a population and applying this in preparing for future developments and policies affecting the people. The understanding of demographic developments can provide important explanations of observed economic and social trends. Consequently, demography becomes an important ingredient in public policy analysis and development (Legislative Assembly of New Brunswick 2008)²

2.1. The founding fathers of demography?

2.1.1. John Graunt (24 April 1620 – 18 April 1674)

John is considered by many historians to have founded the science of demography, the statistical study of human populations. He was a Statistician who published the ground breaking book titled “Natural and Political Observations ...Made Upon the Bills of Mortality”, published in 1662 in London. The Bills of Mortality were the vital statistics about the citizens of London collected over a 70-year period. In his book, hereinafter referred to as *Observations*, Graunt explained that the accounts were kept as the number of deaths rose from the plague, a catastrophic illness whose germs were carried by fleas that lived as parasites on rats. In the year 1625 alone, one-fourth of England's population died, many from the plague. He analysed the vital statistics of the citizens of London and wrote a book regarding those figures that greatly influenced the demographers of his day and those in the centuries that followed. This book is generally acknowledged to be the first published study in the field of demography. Graunt was honoured for his work by being made a charter member of England's Royal Society, which was composed of prominent scientists.

(<http://www.iussp.org/en/about/what-is-demography>)².



It was also noted that as a Clergy, John Graunt concerned himself with taking the statistics of birth, marriages, sicknesses and deaths of members of his congregation and applying this in monitoring the growth of the church. In other words, he wanted to see how vital events in the life of people (demographics variables) affected population growth and diminution. While marriages portend more births and population growth, sicknesses portend more deaths and population decrease. Therefore if the church must grow, it must encourage legal marriages, childbirth, know the sex and age distribution of the congregation, their occupation and income levels and educate members on ways to reduce sicknesses and deaths through practicing healthy living. Thus the church is today not only concerned with the spiritual and physical wellbeing of her people, but to promote their growth in numbers and reduce their diminution in size as well as monitoring the determinants of these vital events. Pioneer of demography who produced the first life table

2.1.2 Reverend Thomas Robert Malthus FRS (13 February 1766 – 23 December 1834)

Thomas Robert Malthus was the first political economist to propose a systematic theory of population. He articulated his views regarding population in his famous book, *Essay on the Principle of Population* published in 1798 and revised in 1803. In *Essay on the Principle of Population*, Malthus proposes the principle that human populations grow exponentially while food production grows at an arithmetic progression. Thus, while food output was likely to add marginal increase in twenty-five year intervals (arithmetic progression), population was capable of doubling (geometric progression) within the same period. This scenario of arithmetic food growth with simultaneous geometric human population growth predicted a future when humans would have no resources to survive on. To avoid such a catastrophe of getting to a point where population could no longer be supported by food supply, Malthus prescribed a deliberate control on population growth through what he described as checks on population growth. He categorized these checks into two; "preventive" and "positive" checks.



The chief preventive check envisaged by Malthus was that of "moral restraint", which was seen as a deliberate decision by men to refrain "from pursuing the dictate of nature in an early attachment to one woman", i.e. to marry later in life when the man is fully ready to support a family. This, it was anticipated, would give rise to smaller families and probably to fewer families' size. Malthus by this prescription did not support birth control within marriages.

Malthus suggested that if population cannot be deliberately controlled by preventive checks, then nature would control population growth through positive checks. By this he meant, any causes that contributed to the shortening of human lifespan. He included in this category poor living and working conditions which might give rise to low resistance to disease, as well as more obvious factors such as high morbidity which weaken the ability of man to procreate, and war and famine which results to high mortality.

(<http://cgge.aag.org/PopulationandNaturalResources1e/CFJan108.html>)³

Malthus was criticized for his inability to see that technological inventions were capable of increasing food production and supply beyond the arithmetic progression and thus capable of supporting population growth. According to Susser, M. (1973)⁴ and Eyles, J. M. (1979)⁵, The Malthusian view posed a major dilemma for the emergence of epidemiology and public health. The mission of epidemiology is to understand and improve the health of populations. In the opinion of Malthusian, this kind of effort is wrong. A socially planned reduction in mortality, for example, would interfere with the lawful operation of increased mortality as a check on population growth, and might very well lead to unintended adverse consequences. The influence of Malthus was so profound that the founders of epidemiology and public health felt compelled to justify their mission by refuting, or more often modifying, the Malthusian view.

3. What Is Public Health?

Knowing that morbidity and mortality are averse to population wellbeing and growth, a deliberate and proactive attempt were therefore put in place by different population practitioners to prevent their incidences from occurring out of proportion. This practice is today known as Public Health; which is the need to prevent sickness (morbidity) and high death (mortality) rate. Overall, public health is concerned with protecting the health of entire populations. These populations can be as small as a local neighborhood, or as big as an entire country.

According to Acheson Report (1988)⁶, Public health is defined as a social and political concept aimed at improving health, prolonging life and improving the quality of life among whole populations through health promotion, disease prevention and other forms of health intervention. Public health professionals try to prevent problems from happening or re-occurring through implementing educational programs, developing policies, administering services, and conducting research. They are not clinical medical practitioners.

There are many distinctions that can be made between public health and the clinical health professions. While public health is comprised of many professional disciplines such as medicine, dentistry, nursing, optometry, nutrition, social work, environmental sciences, health education, health services administration, and the behavioural sciences, its activities focus on entire populations (demography) rather than on individual patients. Doctors usually treat individual patients one-on-one for a specific disease or injury. Public health professionals monitor and diagnose the health concerns of entire communities and promote healthy practices and behaviours to assure our populations stay healthy.

One way to illustrate some of the breadth of public health is to look at some of the notable public health achievements in the 20th century. The following were selected as the "Ten Great Public Health Achievements-United States, 1900-1999" by the U.S. Centres for Disease Control and Prevention (CDC). These include; Vaccination, Motor-vehicle safety, Safer workplaces and Control of infectious diseases (Acheson Report 1988 *ibid*)⁷

Public health is that approach to medicine that is concerned with the health of the community as a whole. Public health is therefore community health. It has been said that: "Health care is vital to all of us some of the time, but public health is vital to all of us all of the time." The mission of public health is to "fulfil society's interest in assuring conditions in which people can be healthy." The three core public health functions are:

The assessment and monitoring of the health of communities and populations at risk to identify health problems and priorities;

The formulation of public policies designed to solve identified local and national health problems and priorities;

To assure that all populations have access to appropriate and cost-effective care, including health promotion and disease prevention services, and evaluation of the effectiveness of that care

3.1. The founding fathers of public health practice?

3.1.1 John Snow

John Snow (1813–1858) is revered as a founding father of public health as field of practice. Anesthesiologists remember him as the physician who first demonstrated how anesthesia affected the human physiology. John Snow is also known for the inhalers he designed and for administering chloroform to Queen Victoria during the delivery of two of her children. He is also celebrated as a founder of the modern science of epidemiology. During the cholera epidemic in London, 1848–49, Snow proposed the unconventional notion that the dread disease was caused by a particle that was ingested orally, rather than by a befouled component of miasmatic air. Then, during the epidemic of 1853–54, he gathered the body of data that others would cite after his death as conclusively supporting his theory that cholera was primarily spread by sewage–contaminated water.



Snow formulated his theory of cholera transmission and undertook shoe–leather epidemiological investigations a decade before Pasteur's ground–breaking experiments on microbes. His ability to reason among events occurring at different levels of organization — from the molecular to the physiological, from clinical observations on individual patients to data drawn from entire populations — presage the "biopsychosocial model" of health and disease developed in the 1970s. (<http://johnsnow.matrix.msu.edu/aboutjohn.php>)

4. What Are The Relevance Of Demographic Characteristics To Public Health Practice?

- The demographic characteristics of a society determine its current and future public health needs. Public health planning cannot be effective without an understanding of the age, sex and distribution of the population of a society.
- Age structure and sex ratio affect the types of health problems encountered, The health needs of a population differ considerably by age and by sex. A population's history of birth and death rates changes the age structure in a way that is easy to predict. Generally, a fertility decline reduces the proportion of children in a population, while a decline in death rates increases life expectancy and the proportion of elderly in the population. In the less developed world with high population growth rate the age structure of the population is usually "young" because birth rate is high. The major emphasis of health care policy is on prenatal, postnatal and maternity care. The maternal and child health needs are even more of a priority because the proportion of the population at younger ages is even higher. Sex ratio can affect public health care needs. For most age groups, the sex ratio (that is the ratio of males to females) is close to equal. In general, however, men have higher death rates than women. As a result, at older ages sex ratios are generally much lower. That is, there are many fewer men than women. While women are likely to have longer life spans than men, they are also more likely to become widows and to have to care for themselves at older ages.
- Population growth rates affect future needs for health care delivery. Population growth rates can affect the size and rate of growth in health care needs in a population. Specifically, provision of health services to a rapidly growing population is more difficult than to a population growing more slowly.
- The existence of substantial immigrant and refugee populations can also be important. Sudden population growth can be the consequence of an uncontrolled in-migration into a country. This could be due to famine, an epidemic outbreak or civil unrest in a border country. It could be due to a protracted civil war. Such unplanned population explosion can be detrimental to the initial plan for the residents of the society; as accommodation will be affected, sanitary services will be in jeopardy, security would be affected adversely, health and educational needs will equally be affected, etc.
- Demographic characteristics influence public health policies and programs. According to Emily Grundy, the health and healthcare needs of a population cannot be measured or met without knowledge of its size and characteristics. Demography is concerned with this essential 'numbering of the people' and with understanding

population dynamics, that is; how populations change in response to the interplay between fertility, mortality, and migration. This understanding is a pre-requisite for making the forecasts about future population size and structure.

A review of past demographic conditions assists in the analysis of both the present and the future conditions of the society. The number of very old people in a population, for example, depends on the number of births eight or nine decades earlier and risks of death at successive ages throughout the intervening period. The number of births in a population depends not just on current patterns of family building, but also on the number of women 'at risk' of reproduction. Similarly, the number of deaths (and their distribution by cause) is strongly influenced by age structure. Formal or pure demography is largely concerned with answering questions about how populations change, and how these changes can be measured. When population stays healthy life expectancy increases and when population is sickly, life expectancy falls.

5. The Linkages between Public Health and Demography.

- Just as demographic characteristics affect public health planning, so also public health intervention affects demographic characteristics. When public health affects the life of the people, their demography is also affected.
- Before any public health intervention takes place in a community, an understanding of their demographic characteristics and culture are necessary. Public health discipline focuses on the protection of the population from the influence of morbidity and mortality. From the time you wake up until the time you go back to bed, public health impacts every area of your life. Public health does this through the promotion of good health intervention programs. But public health intervention programs cannot take place without knowing the level of the problem situation in the community. The reason is to determine the depth of the problem, how the problem affects the different layers of the population in the community and how many people are affected. This kind of assessment requires an understanding of the demographic characteristics and culture or lifestyle of the people in the community.
- In other words, the Demographer and the Public Health specialist must agree to work together for a good public health intervention program to succeed. Still put in a better way, for any good public health intervention to succeed, the skills of demography and public health must be fused and applied in that program. It therefore suggests that demographic knowledge and skills are important in any public health planning and intervention.

6. The Emergence of Health Demography as a Discipline

The fusion of the two disciplines (Public Health and Demography) gave birth to another discipline called *Health Demography*. The need to develop the knowledge of statistically determining the size and the structures of the population, scientifically diagnosing their health challenges and responses, and making recommendations for the best intervention programs and strategies to alleviating these challenges; all in one person, gave birth to Health Demography. By way of definition, Health Demography is the discipline that statistically studies the size and structures of the population of a community, scientifically diagnosing their health challenges and making recommendation for the best intervention programs and strategies to alleviating these challenges. Health demography studies the relationship between public health and demography. As a field, it studies the association between the health conditions of the people and their demographic characteristics. Put in another way, health demography studies the impact of population characteristics on the health conditions of the people and its policy implication.

According to Kawachi and Subramanian quoting Pol and Thomas (1992)⁹, health demography is perhaps best defined as the application of the contents and methods of demography to the study of health status and health behaviour of the people living in a community. Thus health demography concerns itself with the manner in which such factors as: the age, marital status and income influence both the health status and health behaviour of Population, and in turn, how health related phenomena affect demographic attributes.

7. The Founding Fathers of Health Demography

In the views of Pol and Thomas (ibid 1992)¹⁰ the problem with health demography is that many professionals in the fields of social, physical and medical sciences lay claim to the field of health demography. These include demography, public health, medical sociology, biostatistics, statistics, epidemiology, population studies and health economics. Of a truth, health demography is a baby of many fathers; every one of them has contributed to the nurturing of the baby from cradle to adulthood. The baby answers to the needs of the fathers; depending on the one that calls. Health demography therefore must be a loyal child.

This author can only select a few of the founding fathers who have played prominent roles in the growth of health demography, for inclusion in this essay. The founding fathers mentioned here are by no means the only fathers of health demography. The selection is based on the author's biases. At this point this author wishes to acknowledge the following heroes: John Graunt (father of demography), Robert Malthus (father of population studies), John Snow (father of public health), Max Weber (father of sociology), and Florence Nightingale (father of applied biostatistics).

7.1 Max Weber

Max Weber was born in Erfurt, Germany in 1864 and died in Munich in 1920. He was one of the foremost founders of sociology. His works are numerous, but amongst them are some that are popular, which were translated into English such as *Economy and Society*, *The Protestant Ethic and the Spirit of Capitalism*, *The City*, and *The Sociology of Religion*.

Max Weber was a German sociologist, philosopher, and political economist whose ideas influenced social theory, social research, and the entire discipline of sociology. Weber is often cited, with Emile Durkheim and Karl Marx, as among the three founding creators of sociology (<http://www.versobooks.com/authors/1229-max-weber>).

Weber was a key proponent of methodological anti positivism, arguing for the study of social action through interpretative rather than purely empirical means, based on understanding the purpose and meaning that individuals attach to their own actions. Weber's main intellectual concern was the understanding of the processes of rationalization, secularisation, and "disenchantment" that he associated with the rise of capitalism and modernity, and which he saw as the result of a new way of thinking about the world. Weber is best known for his thesis combining economic sociology and the sociology of religion, elaborated in his book '*The Protestant Ethic and Spirit of Capitalism*', in which he proposed that Ascetic Protestantism was one of the major "elective affinities" associated with the rise in the Western world of market-driven capitalism and the rational-legal nation-state. His analysis of bureaucracy emphasised that modern state institutions are increasingly based on rational-legal authority.

Weber popularized the field of sociology as a science which attempts the interpretive understanding of social action to arrive at a casual explanation of its course and effects. Sociology seeks to formulate categories of concepts and generalized consistencies of observed processes. Action is human behaviour which the acting individual attaches subjective meaning. It can be overt or covert. Action is social when, by virtue of the subjective meaning attached to it by the acting individual(s), it takes account of the behaviour of others and is thereby guided. Social action may be oriented to past, present, or predicted future behaviour of others. Others may be concrete people or indefinite pluralities.

Knowing why people do things the way to do them helps in determine what to do to bring about a change, which is public health intervention. This is the relevance of sociology to public health.

7.2. Florence Nightingale (12 May 1820 – 13 August 1910)

She applied statistical analysis to health problems, contributing to the establishment of epidemiology and public health practice. Developed statistical graphics especially for evidence based advocacy. This is a major relevance of biostatistics to public health planning and intervention.

Florence Nightingale was the first female member of the Royal Statistics Society. She was a celebrated English social reformer and statistician, and the founder of modern nursing. She came to prominence while serving as a nurse during the Crimean War, where she tended to wounded soldiers. She was known as "The Lady with the Lamp" after her habit of making rounds at night. In 1860, Nightingale laid the foundation of professional nursing with the establishment of her nursing school at St Thomas' Hospital in London. It was the first secular nursing school in the world, now part of King's College London. The Nightingale Pledge taken by new nurses was named in her honour, and the annual International Nurses Day is celebrated around the world on her birthday.

8. The Role of a Health Demographer in Public Health Practice

It requires the application of the knowledge and skills of health demography to design a pre-intervention assessment. There is no community that is problem free. There are constraints that exist among the people that would make them not achieve the best that mother earth portents for them. These constraints are defined as problems. Sometimes, the community members may not be able to exactly define what the problem is. The problems may be multiple. The community members may not be able to determine the intensity of each of the several problems. It therefore requires the assistance of some external experts to determine the degree of each of the problems, prioritize them and make recommendations as how to move the community forward. Community assessment is therefore required to be able to carry out any meaningful intervention among the people. The reason for the intervention is to better the lives of community residents. An assessment is the beginning of an intervention. It is called a pre-intervention assessment. It requires the application of the knowledge and skills of health demography to design such pre-intervention assessment.

- The advantages of a pre-intervention assessment are as follows:
 - To determine what the problems are.
 - To determine where the problems are.
 - To determine the degree of each of the identified problems.
 - To prioritize the problems in line with the community desires.
 - To determine how many people are affected by the problems.
 - To determine what age group, sex and class of persons are most affected.
 - To determine those cultural practices which fuel the observed problems.
 - To determine the most cost effective ways to channel scarce resources.
 - To develop the program result framework & the Program Monitoring Plan (PMP).
 - To establish baseline data pre-intervention and End-line evaluation to measure results.
 - To monitor the performance of the program as interventions are going on and guide the program officer based on service statistics.
 - To make recommendations for ways forward.

A population's history of birth and death rates provides a clue to the changes in the age structure and makes it easy to predict future population. This is healthy for policy planning. So understanding demographic structures in the population helps in designing public health interventions for the existing conditions.

It is good to sum this discussion by saying that an understanding of the health demography of a community makes public health intervention easy, since every health challenges has a structure and a pattern in the population. The Health Demographer unravels this structure and pattern thus making strategic planning and decision taking easy.

By way of relationship, the Health Demographer lays the foundation and the Public Health practitioner builds on it. For the Public health practitioners, this association is recognized when they make it compulsory for a baseline assessment to be conducted in a community before any intervention is done among the people. This is so because the project implementers must understand the people, their age distribution, their sex distribution, the population density, the social orientation of the people towards the proposed project and so on. Community assessment is a way of acknowledging the relevance of health demography in the field of public health.

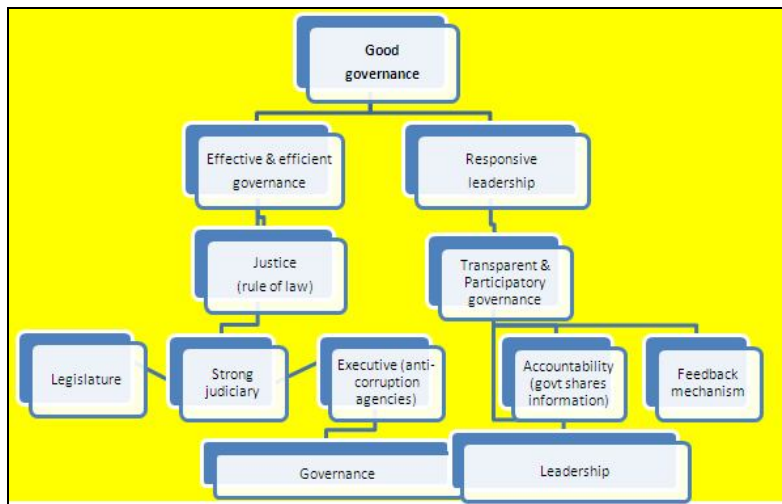


Figure 1: Result Framework for Governance & Leadership. Assumption: That the Political Scene Remains Stable

Objective	Activity	Indicator	Indicator definition	Reporting period (freq)	Method of data collection	Means verification	Responsible person	Targets
Establish good leadership qualities at all levels & structures	Listen to the governed and get feedback from citizens (Government is Accountability).	# of town hall meetings held between government and the governed.	Forum for the govt representatives & the people to interact with a view to getting account of performance & giving feedback.	Quarterly	Using quarterly reporting form	Program report. M&E database	M&E Officer	4 at all levels.
Achieve increased funding for health sector	Conduct advocacy visit to legislators to support motion for increased funding	# of Bills introduced to support increased health sector funding	Legal statute to back up motions raised, debated and passed	Bi-annually	Using bi-annual reporting form	Program report. M&E database	M&E Officer	2
Achieve improved health sector productivity	Advocacy visit to government (local, state and federal) to recruit skilled staff	# of skilled staff recruited. # of staff trained	Staff with speciality recruited. Staff trained on specific job requirement.	Monthly	Using bi-monthly reporting form	Program report. M&E database	M&E Officer	10
Achieve stakeholders ownership of programs	Sensitize & mobilize stakeholders for partnership & ownership	# of functional Stakeholders' forum	Stakeholders forum meet to deliberate on program issues.	Quarterly	Using bi-monthly reporting form	Program report. M&E database	M&E Officer	4
Achieve high data quality in the health facility	Standard tool available in health facility for data collection	% of health facilities using standard tools for data capturing	Health facilities using approved tool to record & report data	Monthly	Using bi-monthly reporting form	Program report. M&E database	M&E Officer	80%

Figure 2: Performance Monitoring Plan (PMP)

9. Conclusion

The mission of presenting an academic view points on the concepts demography and public health as disciplines, to clearly explain the linkages between demography and public health, to examine the relevance of demographic characteristics to public health practice, to examine the emergence of health demography as a discipline and the role of a health demographer in public health practice have all been achieved in this essay. Rarely has there been such a detailed attempt on the mission of setting boundaries among the disciplines of demography, public health and health demography and bringing to fore their founding fathers. There is no doubt that this write up has succeeded in this area.

While demography is the branch of social science concerned with the statistical study of human populations, their size, structure and change (through births, deaths, and migration), and their relationship with the natural environment, public health is concerned with protecting the health of entire populations. These populations can be as small as a local neighborhood, or as big as an entire country.

While John Graunt is considered by many historians to have founded the science of demography; the statistical study of human populations, John Snow is revered as a founding father of public health as field of practice. Since you cannot understand why people do what they do unless you know why they do so, the culture of a society becomes necessary in public health practice. Thus we acknowledge Max Weber one of the fathers of sociology. Each time we discuss the use of statistical evidence to back up advocacy in public health, we remember Florence Nightingale.

The need to develop the knowledge of statistically determining the size and the structures of the population, scientifically diagnosing their health challenges and responses, and making recommendations for the best intervention programs and strategies to alleviating these challenges; all in one person, gave birth to Health Demography. Therefore the fusion of Public Health and Demography gave birth to another discipline called *Health Demography*. Since there is no community that is problem free, the services of a knowledgeable and skilful health demographer will continue to be sort after while designing a pre-intervention assessment in order to resolve the problems of the society.

By way of relationship, the Health Demographer lays the foundation and the Public Health practitioner builds on it. For the Public health practitioners, this association is recognized when they make it compulsory for a baseline assessment to be conducted in a community before any intervention is carried out among the people.

It is good to sum this discussion by saying that an understanding of the health demography of a community makes public health intervention easy. Since every health challenges has a structure and a pattern in the population, the Health Demographer unravels this structure and pattern thus making strategic planning and decision taking easy.

This author conducted an extensive desk review through reading of journals, books and internet browsing in order to accomplish the task of producing this academic essay. The exercise by all standards would be considered a success.

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