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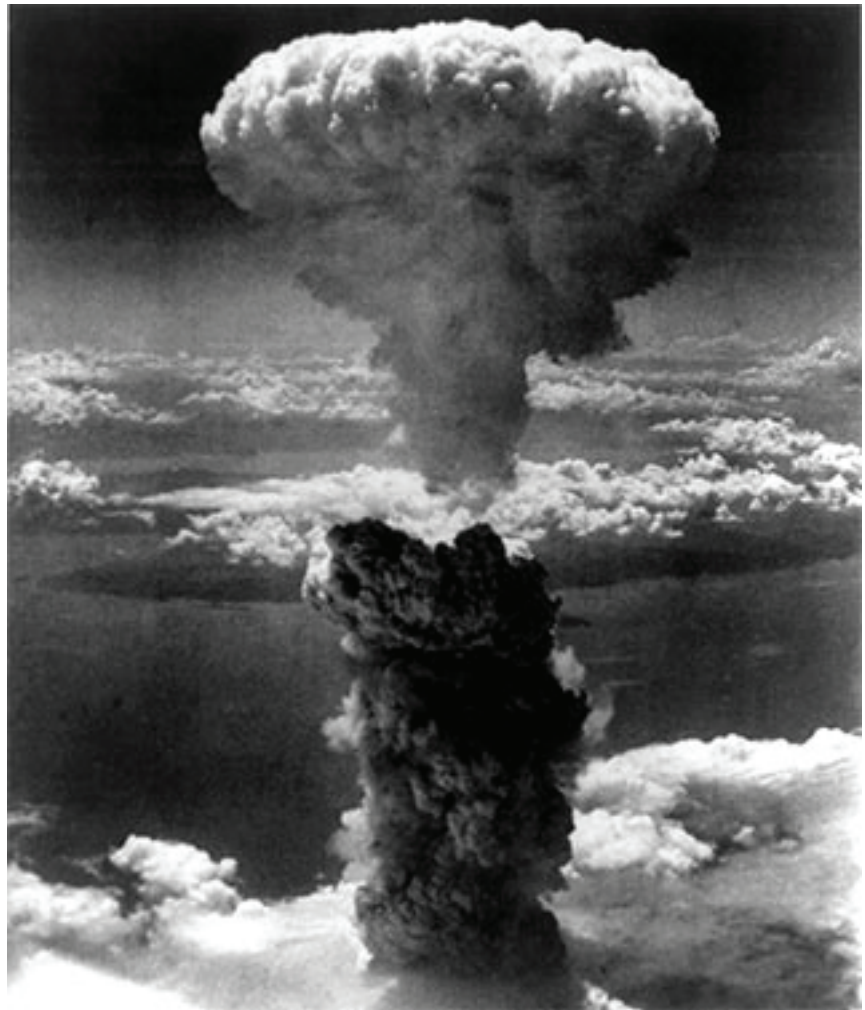
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Well the G20 has come and gone and apart from some fancy rhetoric and a commitment to control the worst excesses, it failed to address any of the basic issues concerning mankind.

Business and economics is not divorced from social and ethical issues, and if most of the world is economically deprived while a small number of people have obscene wealth, then obviously we have failed generally as a species, yet again.

This issue is devoted to the theme of economics and society and all articles published indicate business and economics as the most serious concern

to social advancement, whether it be the failing to stop child slave labour, wars affecting development on all levels and national development from a population viewpoint.

We need to constantly strive to put humanity before destructive, immoral and foolish business practices, but in the doing so, we create all sorts of new sustainable and ethical business that will need to actively repair our planet if we are to all be alive at the end of this century.

ABSTRACT

Non-sustainable and non-ethical business has not only caused the 'Global Financial Crisis' it has also destroyed the planet and any foreseeable future for the life-forms that inhabit it.

We not only have cruel, exploitative, evil, polluting and destructive businesses of no value whatsoever, these same businesses have felt it was okay to deplete the very last resources from the planet, and often for unnecessary goods and with no regard whatsoever to the needs of future generations of people, or other life forms dependent on the same ecosphere.

Simply, the approach has been stupid if not downright evil and we the people of the planet have been totally insane to let a few destroy the entire planet. It is as simple as that.

It does not take a Harvard business degree to see the cause of the global economic meltdown. Indeed it seems a Harvard business degree almost guarantees economic blindness and bad practice, and the majority of global businesses to date have been very poorly run if you look at their full global impact. Could we have ever run a planet more poorly than this? I doubt it.

I am suggesting that unethical and unsustainable business has caused the destruction of the planet and the current financial 'crisis', and that if we turned to sustainable and ethical business most, if not all of these problems would be eliminated.

ETHICAL AND SUSTAINABLE BUSINESS - THE ONLY WAY TO SURVIVE INTO THE FUTURE

Lesley Pocock

Introduction

The global economy has been based on totally false assumptions and extremely poor practices up till now, culminating in the current and inevitable Global Finance Crisis (GFC) and far more importantly as the GFC is merely a symptom of bad practice, the imminent death of our planet.

This global financial and planetary crisis may end up being the only way to save both the planet and humanity as a species, if we can use it as the catalyst for greatly needed change.

While things improved up until the 1960's in terms of advancement of civilization we have been rapidly declining on all indicators since then and global society has now reached its lowest ebb.

After centuries of advancement in areas such as working conditions and hours, wages, quality of product, democracy, female rights and empowerment, abolition of child and slave labour, we have now lost nearly all gains from those decades and the entire global economic system has collapsed as it was always going to under such bad leadership and worst world practice, and the earth is polluted, poisoned and depleted.

Why? The economic/business system was never any good in the first place; it was based on total inequity, greed, mass pollution and false economy, depletion of all natural resources, and using vital natural resources to make and sell rubbish that people have no need of.

The parasite industries (the money market, investment advisors, funds managers, futures managers) produce no product and just extract huge amounts of capital from businesses that should have been viable, and are based on corporate greed and the introduction of middle men who were never needed. Did we ever need Boards of Directors and shareholders leaching from these companies? Probably not. They are

both structures that have inbuilt mechanisms to destroy the companies they represent. We have introduced to business financial drains that do not contribute to the organisation and which have very little value. Rather they have acted as parasites on valuable industries and sucked them dry.

In other words most businesses are unsustainable and therefore unethical unless we have a series of disposable planets. I am not aware that we do.

We have products that are not only useless; most do much harm whether in their production processes, their end product or using valuable resources regardless of any need.

Then we have organised crime as global business leaders. They produce the global rape slave trade (of women and children) which is the 5th biggest 'business' in the world; 'the global drug trade' is the 3rd biggest business - that is, the trade of addicting people to drugs so they become dependent markets.

How can organised crime act so freely in every country if it is not supported by corrupt politicians and business men, and corrupt legal systems? Surely in a properly run country it is easily identified and eradicated.

It seems some countries allow some amoral companies to patent and own food and try to force farmers globally to use their inferior product, which causes direct threat of mass global starvation. That is their business plan - to have everyone reliant on their inferior products. Who gave them that right, and who gave those people the right to give them the right - surely food belongs to all humans. Who gave them that right to patent our food? Who could be that stupid or immoral? What gave the legal system the right to uphold their abominable claims and patents?

The same goes for the 'middle men'. A farmer gets a few cents a litre for the milk he produces and the middle men

take the most and then add poisons and fillers in some cases - to make even more money. Bakers are not going to go out of business via the GFC however - nor will any other business that provides necessary items.

How on earth could we allow someone to own the minerals and other resources of the planet, dig them out and make money for themselves, when they belong to all humanity for the next billion or so years.

When did business become ethical enough to allow it to be self-regulating? It is a little like putting the wolf in charge of the lambs in today's climate of greed, but we did that and the results were the wolves destroyed the planet, and we let them, and we are still letting them.

When most people worldwide have no proper healthcare or doctors, we have idiots stuffing their breasts, their penises, their lips, buttocks, and cheeks with silicone, carcinogens and other foreign bodies and while children die from preventable diseases and most people do not even have basic medical care. Why aren't their doctors required to deliver best practice and if some stupid person thinks their life is going to be changed for the good by insertion of a foreign body - because some corrupt marketer tells them they look ugly or unmanly without such a bit of plastic, then both parties should be sent for psychiatric assessment.

If we had any self respect all these charlatans would be out of business or forced to do proper medical care. This happens in the US while so many Americans themselves go without basic healthcare. The rich are botoxed and injected and the poor get nothing; both end up 'very sick indeed'. Surely if people are not able to make sane health decisions then their doctors should take responsibility and not exploit their weaknesses and vanities. Obesity and cosmetic surgery live alongside dire poverty, total lack of human rights, inequity, injustice, lack of parity and pure evil.

Theft of organs, or the buying of organs from poor well people, in developing nations to give to older unconscionable people in developed nations, (and usually those who have taken all but contributed nothing), a few extra years of life is simply abominable.

This is anti-medicine, as is the callous mutilation industry, known as cosmetic surgery.

Then we have so-called philanthropic organisations trying to take over foreign country's infrastructure and resources and dumping inferior goods on them under the guise of 'helping'. i.e., dumping poor quality goods and services in developing world countries and expecting them to be 'grateful'. A whole new unethical industry has built up here so that those genuinely trying to do some good in the world are thwarted by the 'commercial philanthropists' who use others' money to keep themselves employed, when if they had any decent motives they'd pay for these projects themselves and forgo wages. There are quite a few of these organisations operating in Iraq at the moment and securing 'perpetual contracts' under the guise of helping. They rely on complicit or corrupt Iraqis of course. New US President Barak Obama however has stated that the US does not want to take over Iraqi infrastructure and resources so Iraq would be well served to make sure this does not happen by default. There is a growing industry of people going into war zones purely for financial purposes of exploitation of markets.

The absolute worst of evil markets however has to be 'child porn' (i.e. rape, grievous bodily harm, psychological torture). Okay we are used to rampant exploitation and abuse; but I personally am not used to seeing children raped to death - due to the size differential, as happens in US "snuff movies" where children are sexually tortured and killed on film for 'adult entertainment'. And of course 'child porn' in our 'monkey see, monkey do' world has caused a massive proliferation of child rape, assault and murder.

Our very children have become commodities to be used when they were meant to be protected by adults. Funny that in this world adults have rights and the small and defenceless (animals and children) have responsibilities and few rights - surely the legal system got that one wrong as well. The young and vulnerable are the ones who need rights, and adults should have responsibilities and be kept to them. There is no moral justification whatsoever for the rape and degradation of women and children no

matter how lucrative the market is for some.

The same goes for the adopting of third world babies by the super rich who then leave them to be looked after by nannies when the child was better off with their own mother who they could have supported financially if they really cared about the child. But 'giving birth' is no longer a human function for some; if it can be avoided and the job passed to a third world woman who is fed the message that her own child is better off with some rich person's nanny. Why damage your own body when you can damage someone else's?

The cult of celebrity (worship of societal parasites) is also a symptom of our sick society. Once heroes were clever, or wise, or courageous, or kind and decent; not those who 'got a boob job' or who cleaned up on the stock market or 'got their face on television or Facebook' - which has to represent the most shallow and worthless sentiments of humanity.

So firstly we have non-sustainable and non-ethical business proliferating, but what about the type of product sold and the type business itself?

Capitalism is based on the very ideals that inevitably destroy an entire planet - the need for ever larger markets (i.e. increasing population on an already over populated planet) and constantly increasing markets (over-production and depletion of finite resources that were meant to last for several billion more years).

The concept of 'inbuilt redundancy' into products to necessitate constant replacement or investment is just a cynical marketing ploy. The marketing and advertising industry coerce weak people and feed them on false goals and images to better market to them, things they don't need and which ultimately destroy civilisation - if we can lay claim to being civilised in the first place.

Does the word need plastic flowers, penis and breast implants, shopping channels, and personalised number plates? Many plastic goods are made of oil derivatives and so are many medicines - should we not be going without plastic frippery so we can continue to heal the sick for a few more centuries?

Is manufacture of a product that is unnecessary, that causes a depletion of resources, and that has bad byproducts a worthwhile business? Yes, if we have a series of disposable planets, and no, if we do not. Necessary goods and services are those that relate to ongoing needs of life - food, clothing, shelter and medical care and not much else.

And then there is the labour aspect. We still have masses of human trafficking and slavery outside of the lucrative global rape business. Women do most of the world's work for the least of the world's wages. Animals, women and children are now exploited like throwaway products. They have always been treated very badly - but arguably there has been no darker age than the current one. It is probably not a coincidence that the re-emergence of Sodom and Gomorrah on earth, has occurred in the age with a predilection for sodomy. So 'modern business' now extends to criminal, cruel and unjust acts against fellow humans and fellow creatures of the planet. Who let this happen?

War /Defence budgets are the most backward and uncivilised aspects of human business (and that is what it is and why it is perpetuated). Little money is spent on positive, preventive and fruitful behaviours like peace. Rather the wealth of all nations, that belonged to all their people, has been wasted on total rubbish. If we used our 'defence budgets' to defend our very existence then we have found the money we need to use on planetary repair and survival. The earth can NOT be saved at this stage by merely ceasing our destructive behaviour - to survive now we have to actively repair, invent, design and produce processes and products to mend the planet. There is a whole new world of sustainable and ethical business opportunities.

I don't think this was meant to be a disposable planet. We have made it so however. And the 'disposable generations' have just about disposed of the lot. Most of the world's rampant consumers have been led to believe everyone lives well and has always lived well, but it is not the case - this throwaway society is a product of the last few generations and also does not represent the global distribution of wealth; some of the people of the planet are stuffing their faces with food

to the point of obesity - while most others go hungry.

With the corporate greed has also come social greed and we no longer care that one person has so much, rather we covet their wealth and aim to be like them.

Surely the man who collects our garbage and the nurse who cleans up our body waste should be paid more than some TV or film 'star'. Work with no value whatsoever tends to be well paid while real and vital work is looked down upon and poorly rewarded.

This is the only era where some people expect to have it all. They do not realise that the rest of the world, has always gone without up until now, just so they can have it all and that most products they use are not and never were necessary, and that the wasting of the world's economy on rubbish is the direct cause of global poverty - wealthy society is taking food out of the mouth of starving children to pay for rubbish that depletes the planet and has no worth.

Once people voted for the political party that would do the best for the country. Voting for who is going to give you the most money is a modern phenomenon.

We should all be prepared to live at the standard whereby everyone has the basics. Communism has been shown to be a disincentive so there still needs to be scope for the talented and intelligent to get ahead, a place for both the termites and the albatrosses of society, but not at the expense of basic life needs of others.

How do we even tolerate society's extreme commercial practices that do great harm, and say it is okay on either a moral or sanity basis? Where is the morality or sense in utilising all the world's resources in a generation and not leaving any for future generations, or along with our disposable society do we see the planet as also disposable - but that is okay, we have had our lifetime - who gives a hoot about anyone else? We've stuffed our faces and bodies with too much food. Who cares if babies are starving?

How dare we let a few rich men literally destroy an entire planet- for yet more money. Who gave the planet

to these people? I didn't. How can they assume they have any right? Why are we not STOPPING them?

So it has all gone wrong every single bit of it, and current corporate greed and its global repercussions - the assumption that because other pigs had their snouts in the trough it was open season in the piggery of life, to steal life savings from the elderly, from families, from those who've worked hard all their lives, as is still happening in the US.

Then we have the abominable exploitation and torture of animals bred to be unable to live naturally and that live cruel and horrible lives of torture as human products to be eaten, penned, tanned, engorged. so they will be made into better food or clothes or unnecessary products to be consumed by man.

Someone also actually thought it was okay, and some legal and political system also said it was okay, for some unconscionable people to dig holes all over the planet, to extract the resources for themselves and leave humanity the mess, forever.

So morals and ethics seem to have disappeared and inanity, greed and selfishness has replaced them or are we so cowardly that we'll blindly and mutely trot along to the end of the earth and see it destroyed by a few. We can watch it all dying on television while that lasts, and then just disappear like dullards into universal oblivion - even the dinosaurs did much better than us, and they were meant to be creatures of small brain.

We are at our lowest moral ebb, an era of world's worst practice, and with everyone wanting the last few resources for themselves, before we sink into our own detritus.

And we sell, destroy and exploit everyone and everything - the animals who managed to get it right are mostly endangered, apart from those used as our food who are living in appalling cruel and disgusting manners.

Yes it is appalling and it has depleted our planet to the stage that the scientists have totally given up, and yes, they are right in that even stopping our bad practices at this stage will see the demise of the planet and the species.

The only way we can now survive is

actively fixing the same and inventing processes and systems to assist the earth to right itself. That is, by coming up with new ethical and sustainable business. We do not want more of the same.

Rules of new ethical business are planet sustaining and sustaining of human and other earthly life.

So the future holds both challenges and so many opportunities to re-think business concentrating on ethical practices, and so many opportunities have opened in areas of green industry, disposal and remedying of waste products, recycling, coming up with major innovative ways to repair the planet, the air, the land, the seas, the waterways.

This can happen on a universal and a national basis and those industries that actually address these issues will be the business leaders of the new world, which can now only survive on ethics, equity, parity, and respect. Only food that does not leave a footprint should be sold.

Is this just evil, insanity and lack of intelligence that has brought us to our knees? Is it an innate evil in mankind that he cannot do the right thing, and are we creatures of such selfishness and greed that we are happy to destroy the planet for everything and everyone else just as long as we can have a bit to keep for ourselves. Can we not learn to be great - again?

Or have we got it wrong to date because we are primitive, and unintelligent. Are we yet to qualify as satient beings?

We live in a world of high infant mortality rates, lack of healthcare, degraded unviable cities, and we call this civilization. It should be called anti-civilisation as it does not even meet basic population requirements. Surely a clever business person is one who can make a product without destroying half the planet in the doing so?

And customers must also start to demand proper products and services. Men have to say no to the global pimps and procurers. Farmers must learn to keep and grow their own seeds and rebel against anyone who tries to coerce or bully them. We must all rebel.

Now this is the big picture of course,

the planetary picture, but at this late stage, we ignore it at our peril. We are on a planet where every life form has to survive by killing and eating each other and no matter how enlightened we may one day become; we are stuck with that situation and that cruel reality. But it does not mean however that we do not strive with all that we have to turn this cruel world around and if we worked together then we have a world of support behind us.

Lesley Pocock

The author has set up with other international people the Save the Planet / Planetary Survival website where we are seeking a billion registrations of support for a new sustainable planetary approach to equity and parity and ongoing viability.

Register your ownership of the planet at: www.planetarysurvival.net

A REVIEW ON THE MOST IMPORTANT CONSEQUENCES OF WARS AND ARMED CONFLICTS

ABSTRACT

Among different forms of violence, collective ones which include wars and armed conflicts that occur within or between countries, are among the most important and simultaneously the most neglected types of violence. The chief aim of the present article therefore is twofold. First it explains why such important issues are overlooked by the international communities. Then it reviews some of the most important interrelated consequences of these phenomena in the areas of health, socio-economics and environment.

Key words

Collective violence, War, Armed conflict, Health, Socio-economics, Environment.

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Introduction

According to the World Health Organization (WHO) violence can be defined as: "The intentional use of physical force or power, threatened or actual, against oneself, another person, or against a group or community, that either results in or has a high likelihood of resulting in injury, death, psychological harm, mal-development or deprivation"⁽¹⁾.

Evidence suggests that among different forms of violence, collective ones, which include wars and armed conflicts within or between countries, are among the most important and simultaneously the most neglected types of violence⁽²⁾. WHO defines these types of violence as: "the instrumental use of violence by people who identify themselves as members of a group - whether this group is transitory or has a more permanent identity - against another group or set of individuals, in order to achieve political, economic or social objectives"⁽³⁾.

Based on the WHO's estimation in the year 2000 nearly 310,000 people died from war-related injuries⁽⁴⁾. However, such mortality unevenly affected different parts of the world. According to the statistics, mortality caused by the wars has been estimated to be the 11th leading cause of death in the African Region (AFR) whilst it has been estimated to be the 18th leading cause of death in the Eastern Mediterranean Region (EMR), the 34th in both the European Region (EUR) and South-East Asia Region (SEAR), the 62nd in the American Region (AMR) and the 66th in the Western Pacific Region (WPR)⁽³⁾.

On the face of these figures, mortality caused by war-related injuries should be considered as one of the most urgent public health problems especially within

the AFR and EMR⁽⁵⁾. The chief aim of the present article therefore is twofold. First, it explains why wars and armed conflicts are overlooked by the international human communities, then it reviews some of the most important interrelated consequences of these phenomena in the areas of health, socio-economics and environment. It should be noted that such basic understandings might help to determine the true extent of the wars and armed conflicts. They might also assist to apply the efficient procedures to prevent, reduce and control the devastating impacts of wars and armed conflicts⁽⁵⁾.

Why wars and armed conflicts are overlooked by the international communities?

There are a number of reasons which contribute to the negligence of wars and armed conflicts by the international communities⁽²⁻⁴⁾. In what follows, three noteworthy reasons are discussed:

The first reason is related to the place where wars and armed conflicts occur. As it has been mentioned earlier, wars and armed conflicts usually happen within the developing regions such as AFR and/or EMR where there are either natural resources such as oil, diamonds, etc. and/or non-democratic governments that distribute wealth and power disproportionately. Both incentives increase the likelihood of wars and armed conflicts within or between countries. However, the place of occurrence i.e. developing countries, decreases the likelihood of proper and timely reactions by international communities.

The second reason is that usually and for political purposes, the number of casualties is manipulated by both

sides of the conflict. Moreover, due to unsafe situations it would be impossible to gather reliable data from the field during wartime. Therefore, it is extremely difficult to determine the true magnitude of wars and armed conflicts in terms of mortality, morbidity and disability of both combatants and ordinary people who are trapped in the crossfire between two sides of the conflict.

The third and the final reason is related to the unavailability of baseline data for comparison purposes. As mentioned earlier wars and armed conflicts are often the matters of concerns within the developing world. In this part of the world and under normal circumstances, vital statistics are not reliably gathered. As a result, when wars and armed conflicts erupt, there is usually no baseline data for assessment. Therefore, it is extremely difficult to determine how wars and armed conflicts change the trend of mortality, disability and/or morbidity within the involved communities.

The most important consequences of wars and armed conflicts

It is possible to divide the impacts of wars and armed conflicts into three interrelated categories, which include health, socio-economics and environment⁽⁶⁻⁹⁾. (Figure 1).

It is worth emphasizing that as Figure 1 depicts, each category is closely related to other categories. For instance, the socio-economic and environmental consequences of wars and armed conflicts have indirectly a great devastating impact on health. One is able to observe such devastating consequences in Iraq, where due to continual under funding, poor physical infrastructure, shortage and mismanagement of provisions, lack of up to date skills and knowledge and staff shortages, the quality of state health services is extremely poor^(9&10).

1. Health consequences of wars and armed conflicts

The consequences of wars and armed conflicts on human health can be divided into three following categories: mortality, disability and morbidity.

1.1. Mortality

The most important and the most recognized health consequences of wars and armed conflicts is mortality due to war-related injuries. Wars and armed conflicts not only cause mortality among combatants but also among people who are caught within the warring zone. The increased mortality rates among ordinary people, especially high risk groups such as infants, during armed conflicts have been well documented in Africa⁽¹¹⁾. In Iraq two successive surveys, which were carried out after March 2003 i.e. the beginning of the war mainly by the US and UK led coalition forces, have shown that until 2006 nearly 655,000 Iraqi people have died due to air strikes from invading forces and violence^(12&13).

1.2. Disability

After death, disability is the second most tragic consequence of wars and armed conflicts in the area of health. The most important reason which increased the likelihood of being disabled either among combatants or ordinary people, is trauma due to exposure to explosive material, especially landmines. However, in some African countries people are brutally and deliberately disabled through mutilation by the military forces⁽³⁾.

1.3. Morbidity

Morbidity by itself can be divided into infectious and non-infectious diseases. Infectious diseases are usually common during wartime due to population displacement and overcrowding within refugee camps, greater exposure to vectors, inadequate water supplies and lack of sanitation, and lack of access to health care services such as immunization⁽³⁾.

Non-infectious diseases which include mental distress, depression, post-traumatic stress disorder (PTSD) and suicidal behavior are also common during and after wartime due to a variety of reasons such as loss of family members, rape, torture, eye witnessing death and extreme violence, etc⁽³⁾.

2. Socio-economic consequences of wars and armed conflicts

The socio-economic consequences of wars and armed conflicts may consist of interruption and failure of social systems and services, collapse of social cohesion and harmony, population displacement,

budget diverting from social services to military expenditure, destroying public health infrastructure, disruption of food supplies, etc⁽⁹⁾.

Let us only focus on diverting budgets from social services to military expenditure. Evidence suggest that annually national governments in several less developed countries spend \$10 to \$20 per capita on military expenditure whilst only \$1 per capita on health-related expenditure. The United States of America also provides an interesting example for more developed countries. Whilst among all nations this country ranks first in military expenditure it ranks 38th in Infant mortality rate⁽¹⁴⁾. In addition, the US 2007 budget proposal diverted budgets further from programs for the poorest people, to defense and homeland security⁽¹⁵⁾.

3. Environmental consequences of wars and armed conflicts

Environmental consequences of wars and armed conflicts could be disastrous. For instance, before and during the war extra use of non-renewable fossil fuels occurred due to military forces movement. Besides, during any military confrontations, hazards of toxic and/or radioactive wastes are released into the environment and as a result air, soil and both surface and groundwater are contaminated. Ignition of more than 600 oil well fires in Kuwait during 1991 by the retreating Iraqi troops is just one example⁽¹⁴⁾.

Conclusion

Wars and armed conflicts are among the most neglected ongoing problems within human communities. Due to their nature it would be extremely difficult to determine their true impacts on the areas of health, socio-economics and environment. Nevertheless, the scientific communities both in developed and developing worlds must take responsibility through collaborative efforts in order to scrutinize the devastating impacts of wars and armed conflicts.

The scientific publishers must also take responsibility to publish the results of those studies for the attention of other scientists, and more importantly, the politicians and ordinary people. By taking these steps one might hope that not only the true extent of the wars

and armed conflicts are determined but also the efficient procedures are applied to prevent, reduce or control the devastating consequences of these social sicknesses.

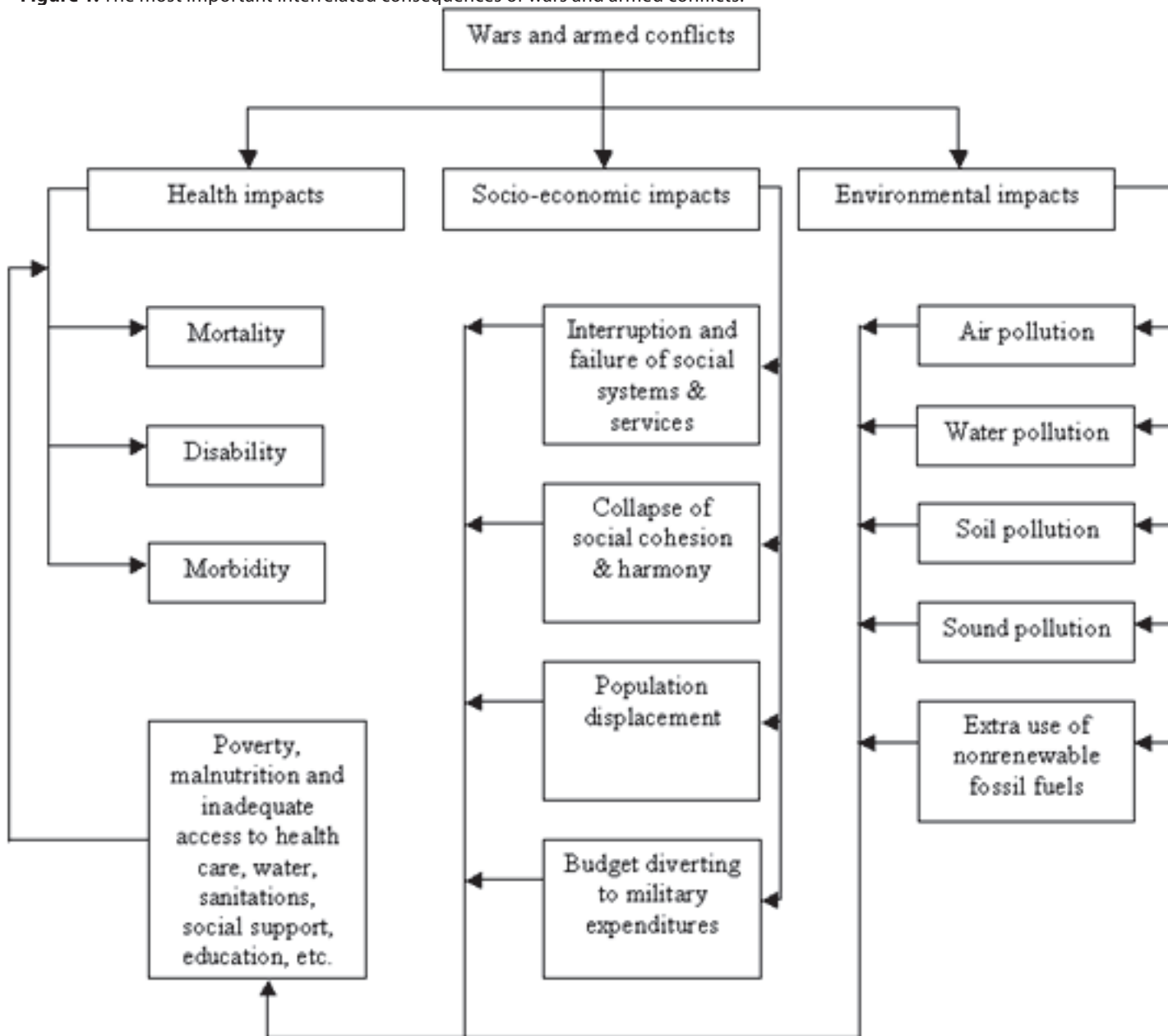
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Figure 1. The most important interrelated consequences of wars and armed conflicts.



ABSTRACT

The main purpose of a Jordan Population Analysis is to simulate how the Jordanian population changes according to its components of growth: mortality, fertility and migration. Based on past information, assumptions are made about future trends in these components of change. Then, the projected rates are applied to the age and sex structure of the population, in a simulation taking into account that people die according to their sex and age, and that women have children.

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Introduction

In most developing countries, the availability of data has improved greatly in recent decades. All countries have expanded and strengthened the capabilities of their statistical offices, including activities related to information on population. In addition, most nations have begun to take housing, agricultural and industrial censuses as well.

We now need to encourage Jordanians to improve data collection through new computer programs that now make readily availability tabulations appropriate for national planning. Furthermore, we need to encourage cooperation with professionals of technical assistance in this country. Improvement programs and facilities have accelerated the process of collecting and publishing information, but the availability of information is not the only concern. If data are available in our country but not analyzed, it is the same as if the data did not exist. The analysis, too, must be timely, as it may rapidly become obsolete in a highly dynamic society. The development of microcomputer programs can accelerate the process of analyzing the data.

Thus, an analysis of the Jordanian population will provide the framework for development of the labor force and for economic growth, and therefore are important in the short term for estimating the future costs of social protection, such as for Jordan Social Security Corporation (JSSC) as the main pressures and therefore catalysts for change in social security systems have been demographic.

These pressures are principally the fact that; people are living longer, and women are having fewer children.

See below for an example of JSSC systematic pressures

Therefore, the financing of a traditional "pay-as-you go" system is becoming increasingly challenging. This is true of Western European Countries where a number of significant changes have been made, but is increasingly seen in other parts of the world, where the change, if any thing has been quicker. There are a number of reasons for such changes: increasing prosperity in many countries, social changes, and people marrying later and soon. These pressures have led to a change in the dependency ratio for Jordan. The Dependency Ratio is the ratio of total population (0-14) age to total population (15-64) age at determined year for young, for example. The young ratio is greater than the old ratio, since number of (0-14) population age greater than (65-) age population and mortality rates are also greater; see Figure 1 below which shows the dependency ratio from 1997 to 2006 and the estimated ratio for the future year 2007:

Objective:

In this project I'm attempting to:

- Estimate the sex and specific population for the year 2007.
- Provide summarized results for the selected year with a graph presentation.
- Show age-total indicators such as growth rates, average age, total fertility rates, life expectancy and infant mortality rates.

All components of Jordan Population Analysis research operate in Microsoft Excel for Windows software environment. I used a mathematical and statistical software analysis packages such as Minitab and NCSS. Additionally, I used a VBA module to draw population pyramids.

Projection Applied Method

The "cohort component method" is used

for the population analysis of Jordan. This method is described as follows:

- Dividing the total population of the base year into sex-age component (cohorts);
- Estimating the 2007 year of each cohort taking into account death and migration;
- Calculating the newborn by fertility rates and female population.

Population Projections:

A base population is determined, that agrees with known demographic characteristics of the country. Levels of mortality, fertility, and migration are determined for the base year and projected to future years. Then the base population is projected into the future according to the projected components of change.

- A base population is obtained after analyzing the available age and sex structure.
- One aspect of mortality must be projected: the pattern by age and sex.
- Two aspects of fertility must be projected: the level and the age pattern.
- Two aspects of migration (international migration) must be estimated: the total number of migrants and their age and sex composition.

With the projected components of population growth, the population can be projected by age and sex.

The component method of projecting a population follows each cohort of people of the same age throughout its lifetime according to its exposure to mortality, fertility, and migration. Starting with a base population by sex and age, the population at each specific age is exposed to the chances of dying as determined by projected mortality by age and sex. Once the deaths are estimated, they are subtracted from the surviving population, and those remaining alive become older.

Fertility rates are projected and applied to the female population in childbearing ages to estimate the number of births every year. Each cohort of children born is also followed through the time by exposing it to mortality.

Finally; the component method

takes into account any in-migrants (immigrants) who are incorporated into the population and out-migrants (emigrants) who leave the population. Migrants are added to or subtracted from the year of the projection period, resulting in the projected population by age and sex, as well as the crude death and birth rates, rates of natural increase, and rates of population growth for each year. The projection can be carried out by single ages or by groups of ages.

Although most population projections are currently made by 5-year age groups, projections by single ages are becoming more frequent and may be the dominant type in the near future. Both alternatives can be described in a similar manner and hence, in order to simplify the symbols, the single age projection is described here.

Base Population By Age And Sex:

The research results indicated that not only age, but month and year of birth are widely recognized. Also, the distribution of the population by single years of age indicates that although there is some preference for ages ending in 0 or 5, the problem is limited.

Consequently, before accepting a population to serve as a base for the projections, an evaluation of the completeness of enumeration and the extent of age misreporting should be undertaken and adjustments made as required. Information from post-enumeration surveys also will help in evaluating the quality of the base population data. See figure 3 below which shows the total number of population for males and females from 1997 to 2006 and the projected population for the future year 2007:

Migration:

Introduction:

Since few countries in the world have population registers to collect information on migration, this component of population has to be neglected because of unavailability of immigration information and data. Thus, I would to talk about migration in brief.

With the improvement of economic conditions and the increase of communication and transportation systems, people increase their desire

to change residence. A mere change of residence however does not always constitute a migratory movement. Although there is no precise definition for migration, it is understood that it involves a certain distance. Thus, a change of residence within a relatively small area (a city or the smallest administrative division) is not considered a migratory movement. A migratory move also implies an intention that the move may be permanent. Hence, a migrant is a person who moves a certain distance with the intention that the move to be permanent and the move affects the population growth of the areas of both origin and destination.

Migration is, therefore, the third component of the population growth of an area, together with fertility and mortality.

Thus, to estimate the number of emigrants for next future year 2007, one must do a 5- year average calculating for male, female and total; see (figure 4) below which indicates the number of immigrants curves at age x for male and female in projected year 2007.

Mortality:

Since reliable information on deaths and population is available from registers and censuses, direct calculations of mortality can be made based on these data. The crude death rate is the most common and the easiest to calculate, but often more complicated measures are needed because they provide additional information. Infant mortality, in particular, is an important indicator of a country's development. Age specific death rates for other ages are also important in deciding which ages to target for particular programs. Life expectancy is a useful summary measure because it takes into account the mortality situation at each age yet expresses the result in a single figure.

Thus, estimated mortality rates are constructed by using "Sum of 2 Exponentials" new modified models for male and female:

Model Fit:

Estimated Number of Deaths = $A * EXP(-B * (x)) + C * EXP(-D * (x))$,

where A, B, C, & D are integers, and x represents single age.

The survival rates $P(x, t, s)$ are calculated by using the mortality rates in year t : $q(x, t, s)$ as the following below:

We need to suppose that the deaths in any given age are spread uniformly during a year. Then, for $0 < h < 1$, we have:

$$\begin{aligned} \bullet \quad {}_h q_x &= h * q_x & ({}_h q_x &= 1 - h \cdot q_x) \\ \bullet \quad ({}_{(1-h)} q_{x+h} &= (1-h) q_x / (1-h \cdot q_x) \\ ({}_{(1-h)} p_{x+h} &= (1 - q_x) / (1-h \cdot q_x) \end{aligned}$$

Thus,

$${}_1 p_{x+1/2} = \frac{{}_{1/2} p_{x+1/2} * {}_{1/2} p_{x+1}}{(1 - q_x) / (1 - 1/2 * q_x) \cdot (1 - 1/2 \cdot q_{x+1})}$$

Life Table:

A Life table describes the extent to which a generation of people (the life table cohort) dies off with age. Life table is the earliest and most important tool in demography. It is widely used for descriptive and analytical purposes in demography, public health, epidemiology, population geography, biology and many other branches of science.

Also, a life table serves useful purposes both within the demographic community and in the world at large. And it is the source of estimates of the life expectancy at birth. In addition, it provides survival ratios for each age or age group that are used in making population projections. Life insurance companies use life tables (which they call actuarial tables) to determine their clients' probable life spans and hence their insurance premiums according to their particular characteristics.

Each country has to have a life table that includes basic data about age, death rate, and survival rate for the population in that country classified by sex that can be used by insurance companies for calculating premiums, which has a rational relationship with age. Insurance companies might not accept one's policy at a certain age because of high risk.

I use the Coale-Demeny regional model life table. This set is used for various theoretical and estimation purposes. In demographic estimation, fragmentary information on mortality is compared with the models to estimate infant mortality and other specific parameters. Model mortality patterns are used in reconstructing life tables. For projection purposes, model life specific levels of life expectancy at birth.

Loop starting from $x=0$ and terminated at $x= 100$.

1. The initial value of $Lm(x) = 100,000$ at $x=0$
2. Calculate $Qx(m) = nx * mx(m) / (1 + (nx - ax(m)) * mx(m))$ & $Qx(f) = nx * mx(f) / (1 + (nx - ax(f)) * mx(f))$.
3. Calculate $Px(m) = (1 - q_x) / (1 - 1/2 * q_x)$. $(1 - 1/2 \cdot q_x + 1)$
4. Multiply $Lm(x)$ by $(1 - Qm(x))$ by to get $Lm(x+1)$ & $Lf(x)$ by $(1 - Qf(x))$ by to get $Lf(x+1)$.
5. The initial value now is $Lm(x+1)$, redo the above steps until $x=100$

Notice that at $x= 100$; the mortality rate equals to 1, therefore survival rate will be equal to zero and hence the population at age 100 will be approximately zero.

See figure 5 in above which shows the probability of survival to age x and probability of death at age x curves (from 1000,000 at age 0) in 2007.

Some observations from the life table for Jordan:

1. Males in Jordan at year 2007 will have higher mortality rates than females until age 69 and the opposite from 70 to 99 age groups based on the life expectancy for both sexes.
2. From previous life tables for Jordan in general males have higher death rates. This could be due to high-risk job positions that males practice, also most accidents affect men, especially during the young period.
3. Newborns in Jordan have high mortality rates for both sexes (infant mortality rate).
4. There are few people in Jordan who will live to be more than 90 years old, but if we compare this with previous years their numbers are greater, due to the medical improvements in Jordan, especially in the surgical field.

Fertility

Introduction:

Like mortality, fertility has begun to decline in many developing countries in recent decades, such as "Jordan", which is a developing country, but in only some countries has the decline been as striking as the decline of mortality. Thus, in spite of significant reductions, birth rates (the number of births per

100,000 populations) are still greater than mortality rates.

As with mortality, the procedure used to measure the level of fertility in a population depends on the availability of data and on the detail of the information. For cases where vital registration is complete, fertility can be measured directly using classical indices (demographic indicators). Unfortunately, most developing countries do not have reliable vital statistics, and hence techniques have been developed to measure fertility indirectly based on census or survey information, such as (Jordan Statistical Department).

To formulate or evaluate policies concerning population growth, information is needed not only on the number of births, but also number and age of women having births.

So, I will discuss the following techniques used in measuring fertility:

Direct Estimation of Fertility

Based on information on births and population, several indices can be calculated for measuring fertility and reproduction. Such information, which is not always free of errors, is provided by vital registers, census and surveys.

The most frequently used indices or demographic indicators are presented:

1. Crude birth rate and its standardization (for estimating the impact of changing age structure on fertility) that is related to population growth.
2. Age specific fertility rate and the total fertility rate and their standardization (mainly for analyzing the change in marital fertility and proportion of women married).
3. Gross and net reproduction rates.

Indirect Estimation of Fertility

The projection of fertility shares certain similarities with the projection of mortality. In most cases, the level of total fertility rates is projected first, and then the pattern of the age-specific fertility rates is estimated. Occasionally, these steps are reversed: the age pattern of fertility is projected first, and then the corresponding total fertility rates are calculated. For developing countries, the first sequence is the most frequently used because the second one requires

reliable information and historical time series that only developed countries are likely to have.

For projecting the level of fertility, we have to determine a trend of total fertility rates between the base-year level and the target level.

Fertility Assumptions

In the first step, fertility assumptions are described generally in terms of the following groups of countries:

- High-fertility country: those that until 2045 has no fertility reduction or only an incipient decline.
- Medium-fertility country: those where total fertility rate (TFR) is declining but whose level is still above 2.1 children per woman in 2000-2045.
- Low-fertility Country: those with TFR at or below 2.1 children per woman in 2000-2045.

In terms of the ultimate TFR level's assumption, I have concentrated on three variants: low, medium, and high are set out. The ultimate TFR level is determined according to the TFR in the base year as shown in the table below:

Additionally, I have used four options to interpolate the TFRs in the base year (2000) and the target year (2045). They are set out as follows:

Let $t=0$ the base year; $t=T$ the target year; TFR_0 : the TFR in the base year;

TFR_1 : the TFR in the target year. Then, the TFR in year t ($0 < t < T$) is obtained by:

Linear Option : $TFR_t = (1 - t/T) TFR_0 + t/T TFR_1$

Logistic Option: $TFR_t = \frac{1}{2}(TFR_0 + TFR_1) + \frac{1}{2}(TFR_0 - TFR_1) \cos(\pi t / T)$

Rapid Option : $TFR_t = TFR_0 + (TFR_1 - TFR_0) \sin(\pi t / 2T)$

Slow Option : $TFR_t = TFR_1 + (TFR_0 - TFR_1) \cos(\pi t / 2T)$

* Note on assumptions:

In the first step, Jordan is grouped into the following three categories:

- (i) High-fertility: if Jordan had no fertility reduction or only a small decline.
- (ii) Medium-fertility: if Jordan TFR has been declining but whose level is still above the replacement level (2.0 children per woman).
- (iii) Low-fertility countries: if Jordan TFR

is below the replacement level or alike.

And I have four alternative assumptions which are then set out for each group.

1. Under Medium variant, The TFR in Jordan high-fertility declines on average by 1 child per woman for every 5 years; the TFR in Jordan medium-fertility reaches the replacement level before 2050; the TFR in Jordan low fertility remains below the replacement level and reaches by 2045-2050 the fertility of the cohort born in the early 1960s.
2. Under Low -fertility variant, in high and medium-fertility countries the ultimate TFR is set lower than Medium variant by 0.5 children per woman; in low-fertility countries the ultimate TFR is set lower than Medium variant by 0.4 children per woman.

I assumed the target year 2045 to find the purpose "year 2007", by the reverse way; which means I found fertility rates through ages 15 to 49 for females from the years 2006 to 2045 by applying all the above options and interpolations based on the base year fertility rates, and TFRs.

From the above graph, the year 2000 curve remains uninfluenced by the changes in selections fertility decreasing trend and childbearing option, since it's the base year for our estimation of future 2007 fertility rates at specific ages.

According to Intermediate variant and World pattern, we will have in the (future) year 2007:

The analysis focuses on a number of fertility indicators, including levels, patterns, and trends in both current and cumulative fertility; the length of birth intervals; and the age at which women marry and initiate child-bearing. Furthermore, information on current and cumulative fertility is essential in monitoring the progress and evaluating the impact of the population programs in Jordan. Still further decline can be expected in the future.

Levels and Trends

At future fertility levels, a woman in Jordan will have an average of 3.18 children - a total fertility rate that is 9 percent lower than the rate recorded earlier as the pace of decline in 2000

(3.53 children per woman). While fertility has continued to decline, recently it has slowed.

Significant differentials in fertility exist among subgroups, a difference of almost one child. There are also large differences in fertility by educational attainment of women. Women who have attended higher than secondary education have the fewest children in their lifetime, while women with preparatory education have more than women with no education.

Age at First Marriage

One of the factors influencing the fertility decline has been the rising age at which Jordanian women marry.

For example, the proportion of women age 20-24 who are still single has increased from 61 percent in 2000 to 66 percent in 2007. The proportion of women ages 20-24 who were married by age 18 has decreased from 14 percent in 2000 to 10 percent in 2007.

One of the more important effects of the increase in the age at marriage has been a reduction in childbearing in adolescence; in the year 2007 the overall level of childbearing among women age 15-19 is 3 percent, a 25 percent reduction in teenage childbearing from 4 percent in 2000.

Data on steps taken to control fertility is of considerable importance to family planning program planners because it gives insight into one of the principal determinants of fertility and serves as a key measure for assessing the success of the national family planning program.

Knowledge of Contraceptive Methods

Knowledge of family planning methods among currently married women in Jordan has been universal for some time. One hundred percent of married women have heard of the pill, followed by female sterilization (98 percent), while injections and the male condom are known to about nine of every ten women. On average, a married woman knows about 10 family planning methods.

Women under age 30 are more likely than older women to mention the desire to have children, while infecundity and menopause are more often reported by older women. Husband's

or respondent's disapproval of contraception is mentioned more often by younger women than by women age 30 and over. Fear of side effects is cited more often by younger women than older women. Married women who were not using contraception at the time of the survey, but reported that they intended to use, were asked about the method they intend to use.

Need For Family Planning

Radio and television are the major sources of information about family planning in the media besides print and other sources. To assess the effectiveness of those media for disseminating family planning information, all ever-married women were asked if they had heard, seen or read messages about family planning on the radio, television or other mentioned sources during the few months prior to the survey.

Information on fertility preferences and on the intention to use family planning in the future is of particular interest to policymakers and program managers as they seek to address the contraceptive needs of nonusers who are concerned about spacing or limiting their childbearing.

Despite the increased use of family planning methods, the increase in age at first marriage, and the apparent decline in fertility, the Jordan Population Analysis reveals a number of continuing challenges. Although it is encouraging to note that the level of unmet need for family planning services in 2007 was lower than that in the 2000, many women want to stop childbearing or delay the next birth for at least two years, but are not using a contraceptive method.

Note: Usually the fertility rate at a specific age is decreasing until age 44 then it remains stable at the age axis, since the ability of a group of woman to have children in later ages might impact on her health and on her children (infant mortality rate "IMR") and (total fertility rate), and might influence on brain cells and the child's brain caused by the mother's physical condition, which refer to:

Direct factors:

1. Loss of fertility for woman

2. Hormone disturbance
3. Medication capsules and doses.
4. The "Diabetic disease"
5. Heredity
6. Iron (Fe) "out of range".
7. CEA: smoker.

Indirect factors:

1. Education level
2. Number of males.
3. Residences.
4. Income
5. Worker women

Jordan Population Analysis Results

As of 2007, the population was estimated at 5.7 million, and it is expected to reach 6 million by the year 2010. Population growth averaged 2.60 percent in 1997, and 2.51 percent in 2007.

The high rate of growth in 2007 reflected the influx of immigrants to Jordan from Iraq, and the inflow of a large number of guest workers. The rapid increases in population have created several problems for the country - namely, shortages in food, water, housing, and employment opportunities, as well as strains on the education system and the urban infrastructure. Fertility declines in Jordan have contributed to slowing the population growth rate.

Urbanization is a particularly important topic in Jordan. Historically, internal rural-to-urban migration, as well as immigration, has contributed to rapid urban growth. Recent international crises have also impacted flows of migration into Jordan.

Results of my Jordan Population Analysis project indicate that the age structure of the population has changed considerably since 1997 - the result of changes in fertility, mortality, and migration dynamics. The proportion of the population under 15 years of age declined from 37.5 percent in 1997 to 37.2 percent by 2007, while the proportion of those age 65 and over has been rising; from 3.3 percent in 1997 to 3.4 percent by 2007.

Fertility has been declining in Jordan from 1997. This project has found that the total fertility rate declined from 3.53 children per woman in 1997 to 3.18 in 2007; fertility fell almost one child more

between 1997 and 2007.

Mortality has also increased in Jordan. The crude death rate, estimated at 3 per thousand in 1997, had increased to 4 by 2007. The infant mortality rate also declined from 13 per thousand in 1997 to 7 in 2007. Drops in infant mortality, translate into increased life expectancy for the population: in 2007, life expectancy in Jordan reached 71.3 for males and 73.9 for females.

Population

The percent distribution of the population by group age and sex serves two purposes. The first is to show the effects of past demographic trends on the population and to give an indication of future trends. The second is to describe the context in which various demographic processes are operating.

Population Growth Rate

From chart 9 we can see that growth rate is fluctuating from 1997 to 2007 because of changing in births and population for both sexes.

Sex Ratio

One can observe from chart 10 above that the male population is greater than female population in the years 1997-2007 during which time the sex ratio has decreased from 1.09 in 1997 to 1.06 in 2007. This implies that the female population changes more than male population.

Life Expectancy:

From figure 11 we can conclude that the life expectancy at birth is increasing between 1997 to 2007 for both sexes, though it decreased for males less than for females during this time period. This difference is a result of the increase in mortality rates for males, which has many social and physical causes.

Infant Mortality

Estimates of levels, trends, and differentials in neonatal, post-neonatal, and child mortality are important both for monitoring and evaluating ongoing health programs and for use in formulating future policies. The levels of infant and child mortality are viewed as basic indicators of the socioeconomic situation, quality of life, and general standard of living in a society.

Thirteen of 1,000 infants born in the

year 1997 and seven of 1,000 infants born in the year 2007 will not survive to their first birthday. These mortality rates indicate that there has been an improvement in child survival in Jordan since 1997, when infant mortality rates were 13 and 3 crude deaths per thousand children, respectively, see figure 12.

As expected, infant mortality is slightly lower among males than among females (28 per 1,000 and 26 per 1,000 respectively in 1997, though in 2007 it is slightly higher among males than among females 28 per 1,000 and 28.4 per 1,000 respectively). However, child mortality is the same for both sexes. The relationship between mother's age (at birth) and infant mortality shows a U-shaped curve. These mortality measures are substantially higher among children born to mothers less than 20 or age 40 and over. First births and higher-order births experience higher mortality, indicating a shallow U-shaped relationship between birth order and mortality.

Population By Year of Birth

The purpose of graphing the population by year of birth rather than by age groups is to relate certain irregularities of the age structure to historical facts that may have affected

the age distribution. In this case, cohorts are followed easily on the vertical axis of the graph. For ease, a semi-logarithmic scale is used where the population age structure may be considered as a map of its demographic history.

Persons of the same age constitute a cohort of people who were born during the same year (or period); they have been exposed to similar historical facts and conditions in the nation. The age structure of the whole population at a given moment may be viewed as an aggregation of cohorts born in different years. A graphic representation of the age structure of the population, such as an "age pyramid" shows the different surviving cohort of people of each sex in Jordan.

The age pyramid illustrations in figures 13 & 14 below represent a population which show a nominal value measure in which fertility fluctuated significantly during the future 2007 (that is approximately systematic increasing male and female population from), and insignificant fluctuations in fertility for both sexes; where age has been affected by the small impact of mortality changes.

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An example of JSSC systematic pressures is explained in the following diagram:

Year	Population	Population Force	Labour Force	Employed	Not Employed	Contributors (actives)
2004	5,489,848	4,232,598	1,257,250	1,081,235	176,015	519,372
2005	5,614,032	4,324,093	1,289,939	109,347	180,591	528,875

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The ultimate TFR level is determined according to the TFR in the base year as shown in the table below:

Ultimate TFR level				
Initial level = 3.53				
Initial level		1	2	3
from	to	high	intermediate	low
	1.5	2.1	1.7	3.53
1.5	2.1	2.1	1.85	1.5
2.1	2.6	3.53	2.1	1.6
2.6		2.6	2.1	1.6



Figure 1

Dependency Ratios



Figure 2 below illustrates the procedure of this method. Basic Procedure for Jordan Population Projection

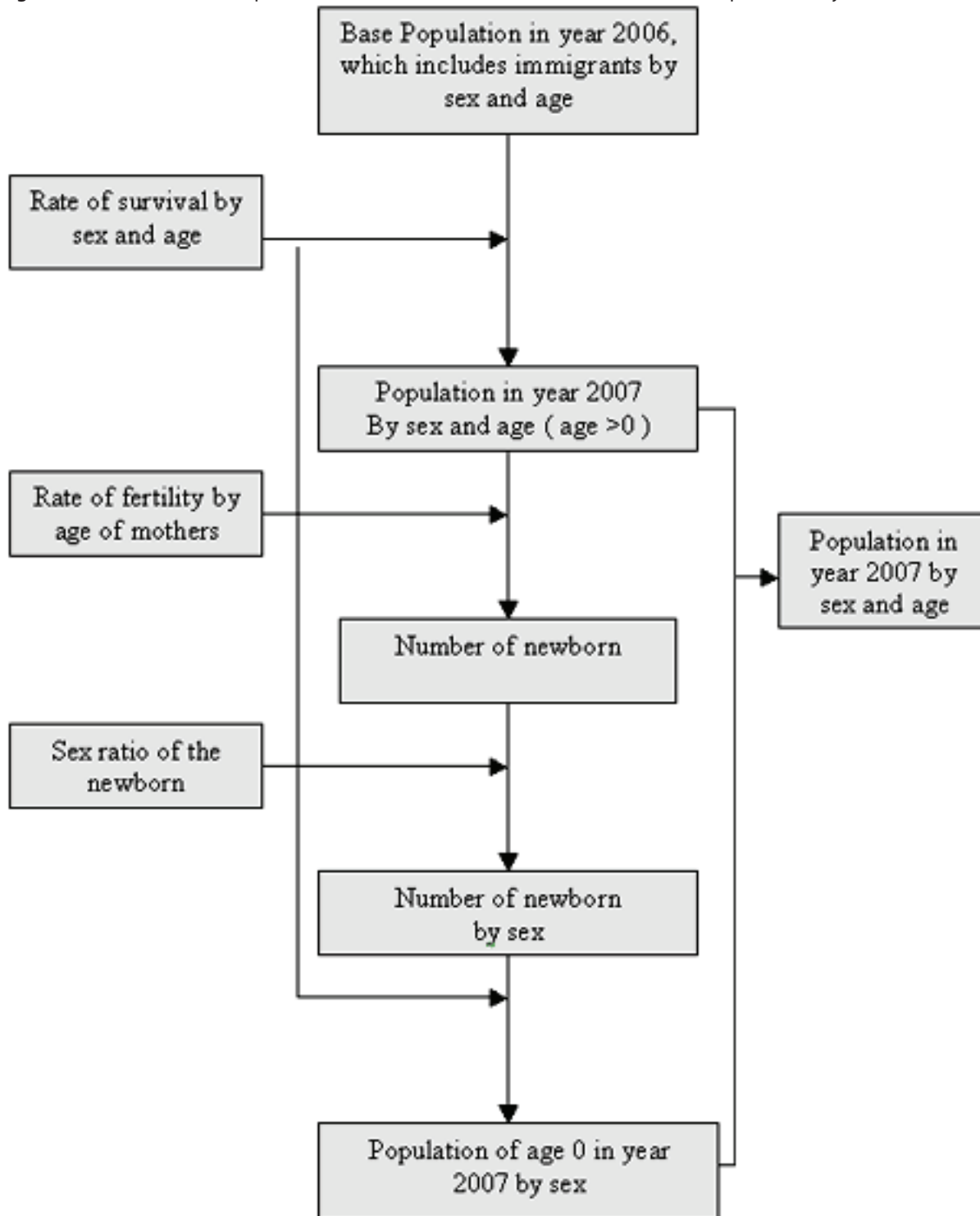


Figure 3

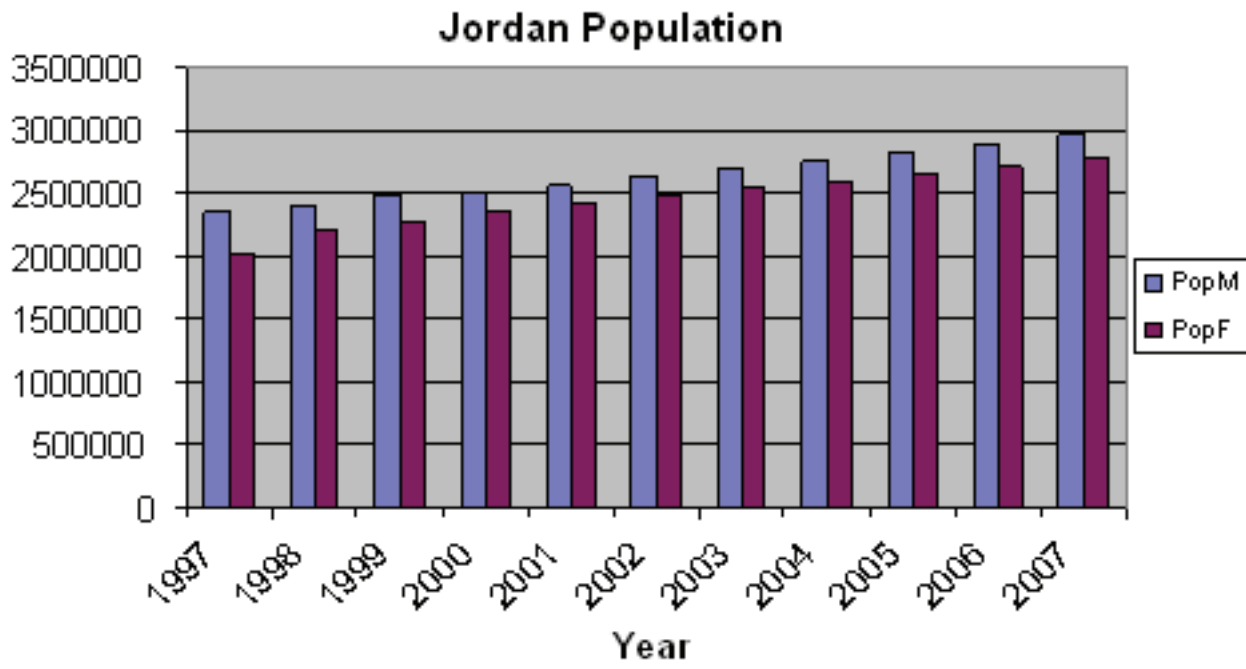


Figure 4

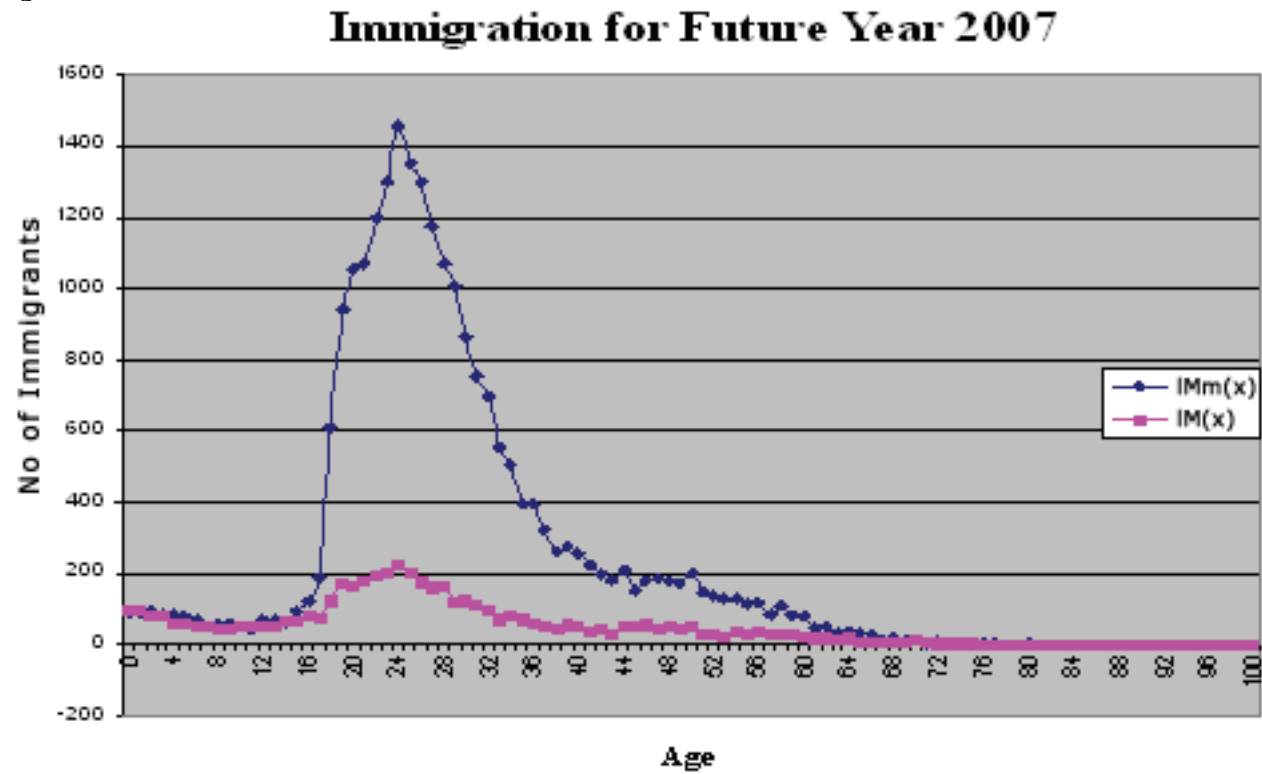


Figure 5

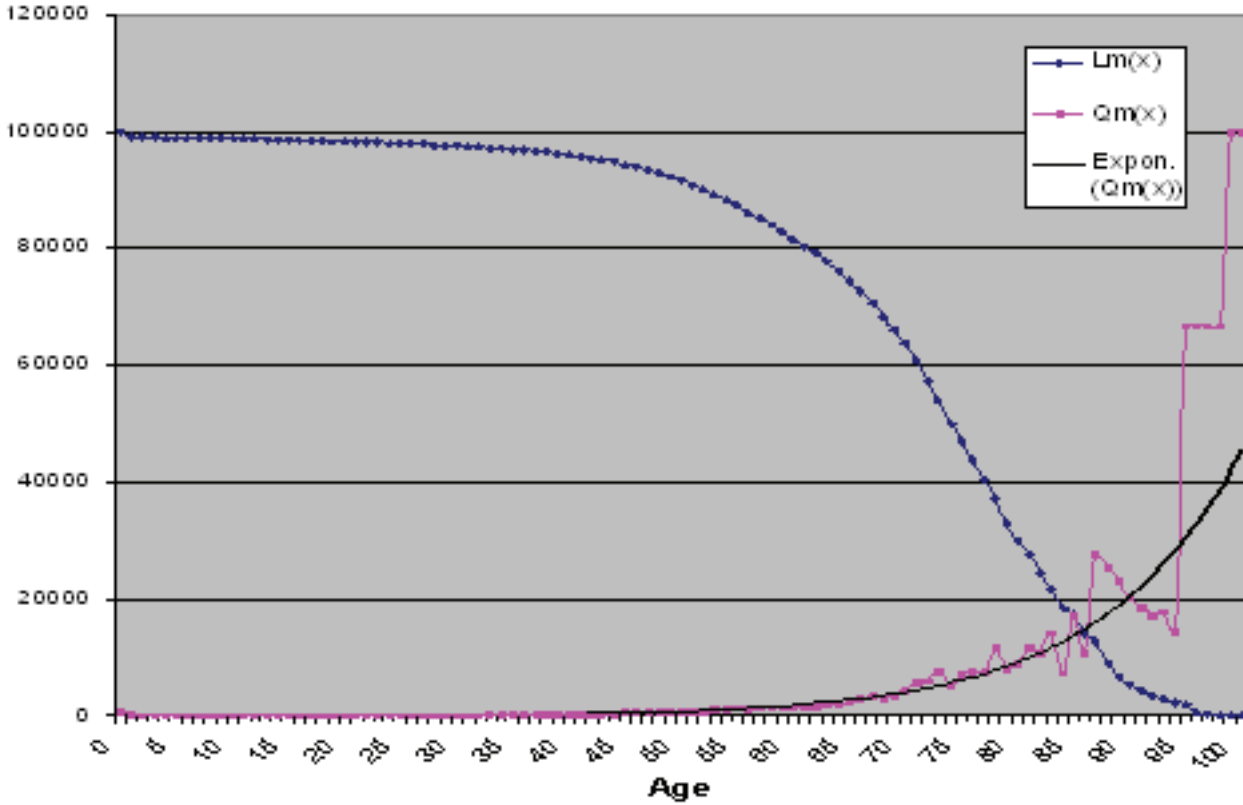
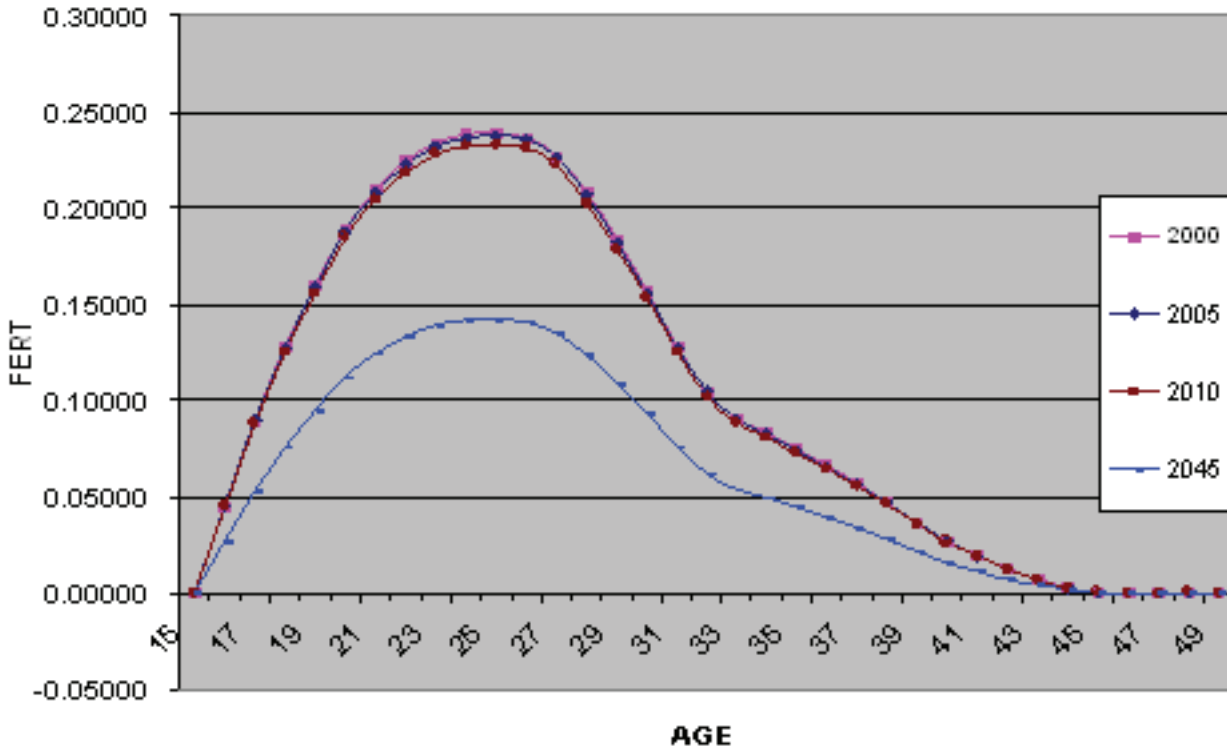


Figure 5



According to Intermediate variant and World pattern, we will have in the (future) year 2007

	Childbearing	Late	Intermediate	Early
Decreasing Trend				
Linear		3.31	3.31	3.31
Logistic		3.45	3.45	3.45
Rapid		3.18	3.18	3.18
Slow		3.49	3.49	3.49
		TFR	TFR	TFR

Figure 7

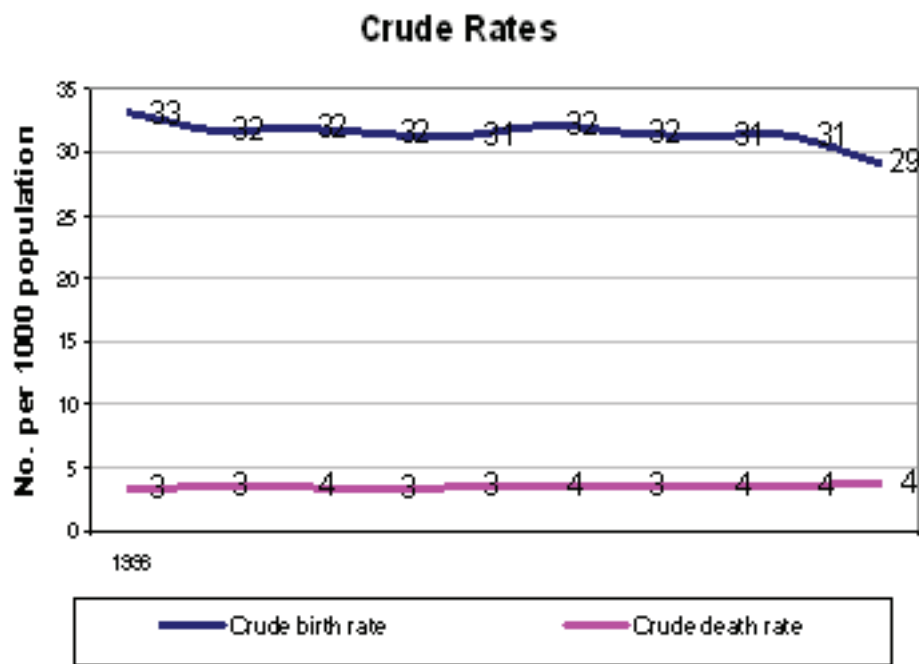


Figure 8

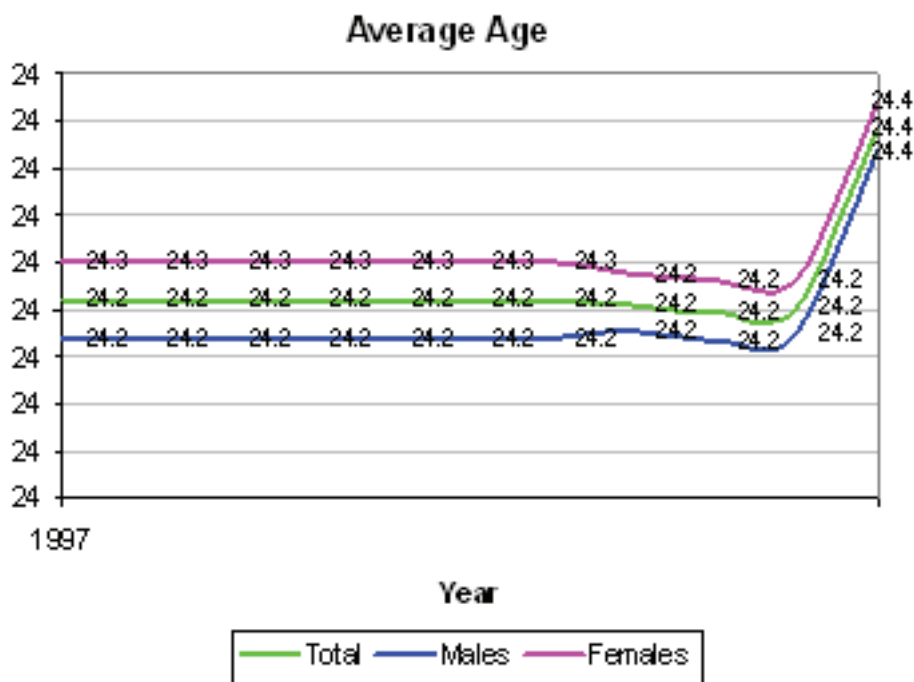


Figure 9

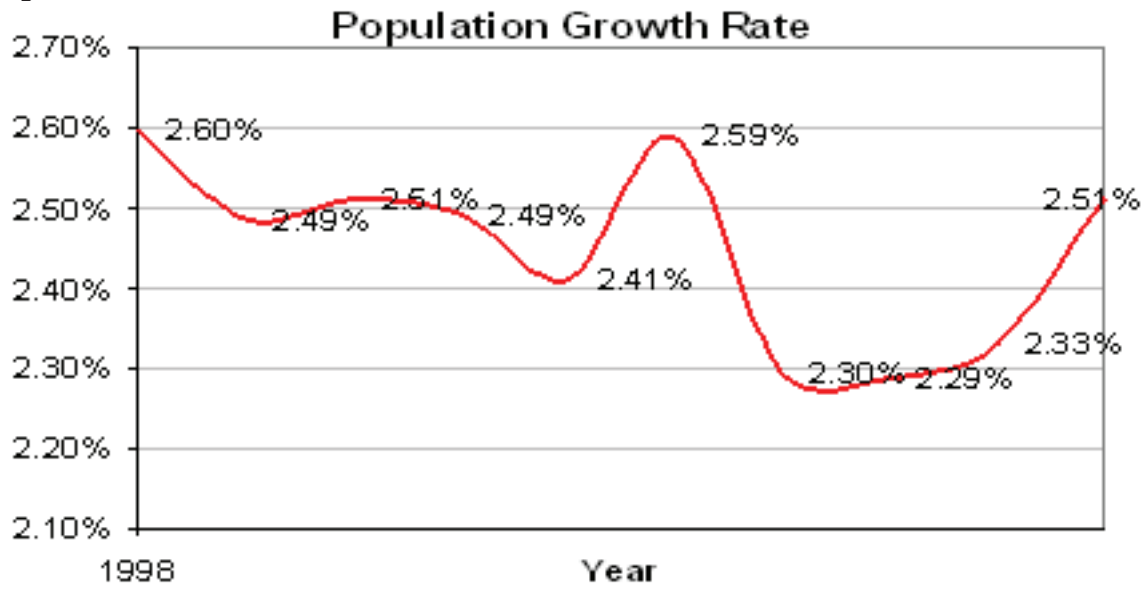


Figure 10

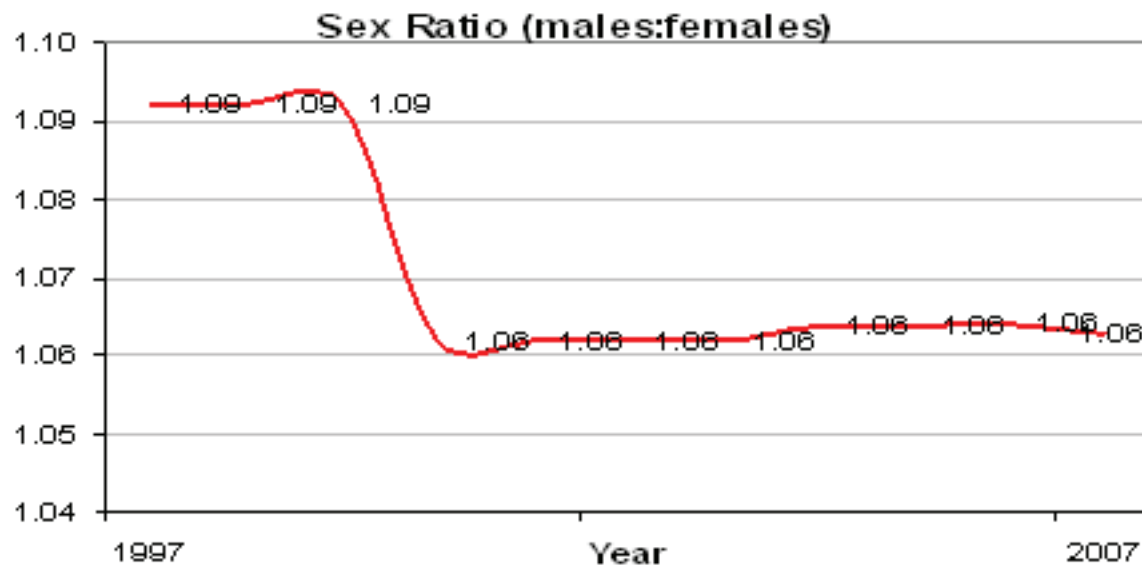
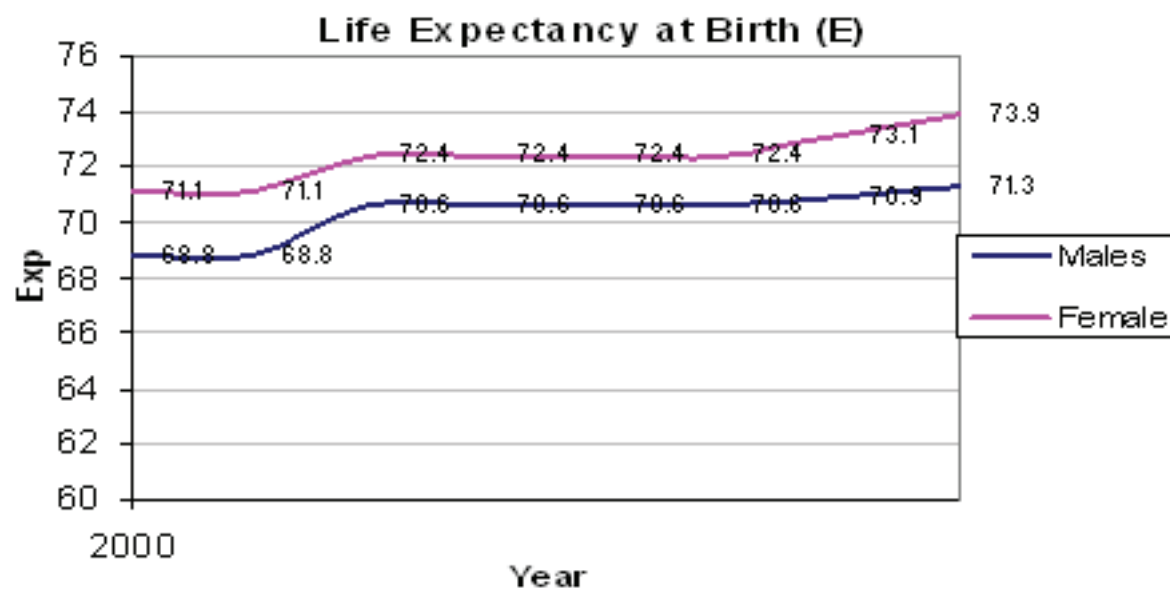


Figure 11



The second is to describe the context in which various demographic processes are operating

AGE	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
0-4	12.8%	12.8%	12.8%	12.8%	12.8%	12.8%	12.8%	12.8%	12.8%	12.8%	12.7%
5-9	12.6%	12.6%	12.6%	12.6%	12.6%	12.6%	12.6%	12.6%	12.6%	12.6%	12.3%
10-14	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%
15-19	11.0%	11.0%	11.0%	11.0%	11.0%	11.0%	11.0%	11.0%	11.0%	11.0%	10.8%
20-24	10.6%	10.6%	10.6%	10.6%	10.6%	10.6%	10.6%	10.6%	10.6%	10.6%	10.4%
25-29	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	8.9%	9.0%	9.0%	9.1%
30-34	7.8%	7.8%	7.8%	7.8%	7.8%	7.8%	7.8%	7.8%	7.8%	7.8%	7.8%
35-39	6.3%	6.3%	6.3%	6.3%	6.3%	6.3%	6.3%	6.3%	6.3%	6.3%	6.5%
40-44	4.7%	4.7%	4.7%	4.7%	4.7%	4.7%	4.7%	4.7%	4.7%	4.7%	4.9%
45-49	3.4%	3.4%	3.4%	3.4%	3.4%	3.4%	3.4%	3.3%	3.3%	3.3%	3.5%
50-54	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%
55-59	2.2%	2.2%	2.2%	2.2%	2.2%	2.2%	2.2%	2.2%	2.2%	2.2%	2.2%
60-64	1.9%	1.9%	1.9%	1.9%	1.9%	1.9%	1.9%	1.9%	1.9%	1.9%	1.9%
65-69	1.4%	1.4%	1.4%	1.4%	1.4%	1.4%	1.4%	1.4%	1.4%	1.4%	1.5%
70-74	0.9%	0.9%	0.9%	0.9%	0.9%	0.9%	0.9%	0.9%	0.9%	0.9%	0.9%
75-79	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
80-84	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.2%
85-89	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
90-94	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.0%
95-	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Figure 12

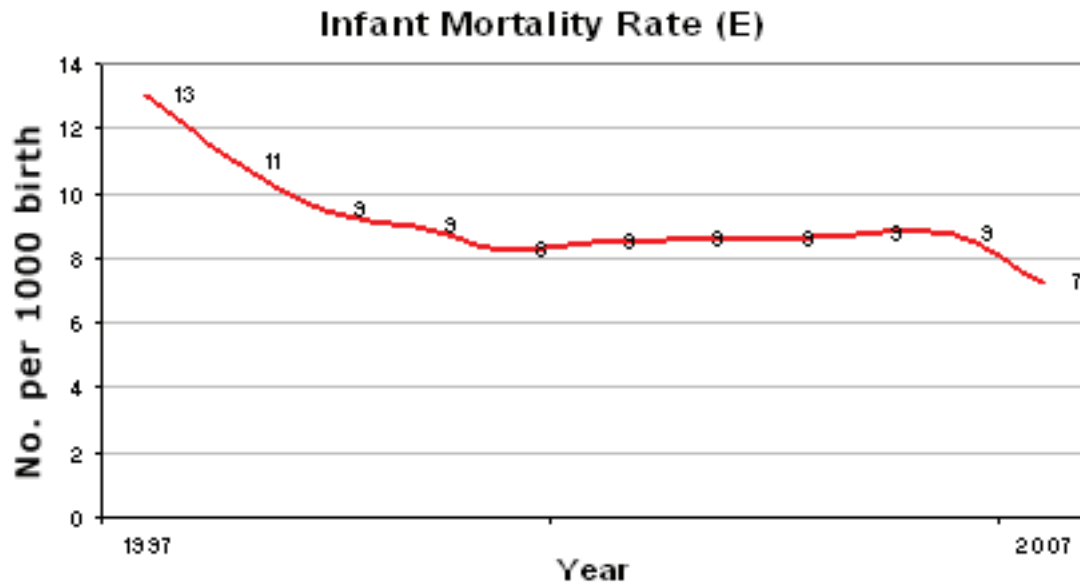


Figure 13

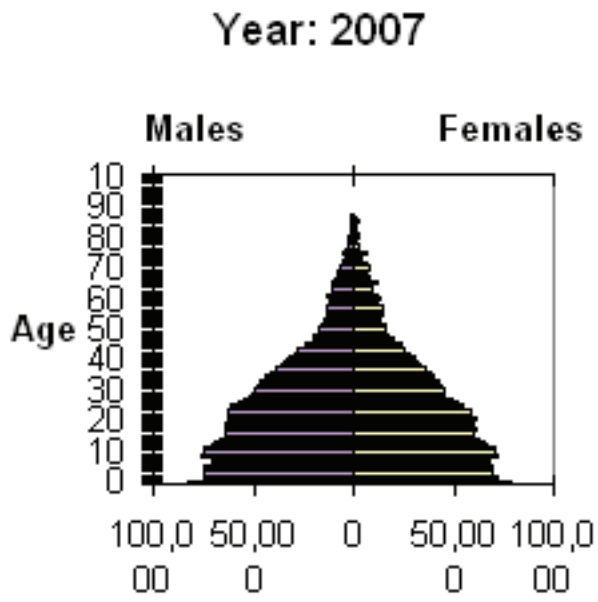
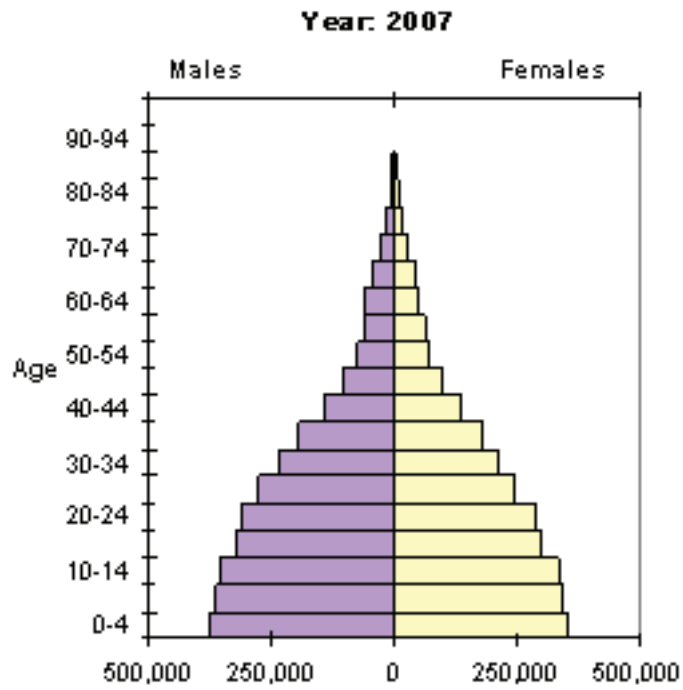


Figure 14



ABSTRACT

Major changes are occurring in Medical Science in terms of Consciousness research and Mind Body Medicine. This article examines the progression of Medicine in the past 100 years and examines the growth of the Complementary and Alternative Medicine and the Wellness industry and the role of Quantum Physics in underpinning the new science of Mind Body Medicine. It also looks at healing from a new diagnostic perspective as well as looking at the social, environmental and relational aspects of health.

Key words: Biomedical Model ,Allopathic treatment, healing, psychoneuroimmunology, Quantum physics, Mind Body Medicine, Consciousness research, general practice, person centered diagnosis, social determinants of health, Health Promotion, Relaxation Response, relationship.

We live in a time of tremendous cultural complexity. Different world views and traditional healing methods are converging on western culture creating new ways of looking at the world and enhancing new modalities in the practice of medicine.

The traditional biomedical model of western medicine stems from the Newtonian ideal of a materialistic universe where everything can be measured and quantified. Indeed the essence of materialistic science which arose in the 1800's is based on reductionism, materialism and determinism. This led to the concept that the body as a machine, whether it be composed of organs, structures or chemicals could be rectified by putting the parts together and rectifying the chemical imbalances.

In this model of the human being, society was seen as the collection of individuals molded by economic forces where health was defined as the survival of the fittest. The presupposition in the biomedical field of medicine was that human beings lived and breathed in a random universe and had illnesses which were a function of external environmental causes or due to defects in their genetic structure. This gave power to the physician who was able to rectify the situation as a parochial redeeming force and where the patient was purely a recipient of treatment for an illness which they could do nothing about.

This to an extent is still the case in modern medicine. Even though it is known that the placebo response⁽¹⁾ accounts for 30-40% of cure in patients, this is often considered to be only a factor taken into account when doing double blind trials to assess pharmaceutical products.

We need a profound renaissance in western medical care following Osler⁽²⁾ the brilliant physician who lived 100 years ago. Osler said that medicine is an art which considered the constitution of the patient and has principles of action

and reason in each case. This means that the individual patient and their uniqueness in being and constitution has to be taken into account when treating the patient.

The biomedical model which is used by most of western medicine is in fact only one modality in a multiplicity of modalities of healing which are now coming more into fashion as now more and more of the Australian population begin to use complementary and alternative medicine. These modalities include nutritional and environmental medicine, herbalism, acupuncture, homeopathy, musculo-skeletal medicine , and also mind body medicine.

Following World War 2 and the meeting of eastern and western cultures, naturopathic, herbal and nutritional medicine became more acceptable. Medicine also began to be seen as related to psychological wellbeing.

It is as if the pieces of the puzzle regarding the nature of the human being was beginning to be unraveled particularly with greater understanding of the nature of psychological development and the growth of quantum physics.

The growth of the science of psychoneuroimmunology⁽³⁾ shows that our thoughts and feelings influence the body through the mechanisms of the nervous system and the circulatory system.

Candice Pert⁽⁴⁾ showed that the neuropeptides in the brain which she calls the molecules of emotion are found throughout the body, particularly concentrated in the specific organs of the immune system. She therefore showed that our emotions and feelings are inextricably tied up with the physiology and functioning of the body. Mind body medicine focuses on the interaction of the brain, mind and body and behavior and the powerful ways in which social, spiritual and behavioral factors can directly affect health.

Disease thus becomes literally lack of ease and for many people is a wake up call to greater health. The implications of mind body medicine is that we have more control over our bodies and our minds than the biomedical model has led us to believe.

It also has tremendous implications as to the nature of consciousness. If the brain is in fact just an organ then it is highly impossible for this organ to be able to change itself through the mind which in the biomedical model is a purely epiphenomena of the functioning of the material of the brain. In order for the mind to change the brain logically this presupposes that the mind therefore exists outside the brain.

Unfortunately consciousness has been a term which has been derided in western medicine and western psychology, particularly by the psychiatric profession who consider that the brain is purely an organ that can be changed by the use of psycho active drugs.

However the evidence is to the contrary. Not only do our states of mind influence our state of wellbeing but also our society and culture influence the way we think and the way we think has a profound affect on our biology.

Quantum science⁽⁵⁾ shows that the consciousness of the observer influences the outcome of the experiment. Quantum science also shows that on an atomic level events occur instantly and are non linear. Dr Dean Radin⁽⁶⁾ in his book *Entangled Minds* shows that experiments pertaining to realisations ESP are more robust than double blind trials used for pharmaceutical drugs.

This gives us food for thought. It is evident that the body with its trillions of cells working in coherence and harmony cannot function purely as a chemical factory but in fact works as a living quantum organism.

Quantum science has also shown that the essence of matter is information and energy expressed in the form of waves. We are not what we seem but are in fact as energetic beings connected with the total matrix of life on the planet. This conclusion which comes from the new quantum science is still viewed with perplexity by the majority of medical scientists, biologists and psychologists

who are to a certain extent trapped by the methodology of their disciplines. More and more we live in a globalized interconnected world and rising on the horizon is a new science which shows how our biology is intimately related to society.

Indeed consciousness and healing is not only about ourselves but is about the larger system of which we are part. Some of these realizations are derived from the world's wisdom traditions and many of these realizations are now being calibrated through science. Tools such as truth, gratefulness, love and compassion are becoming fundamental aspects of a full healing system.

The emerging world view seems clearly to deal with whole organisms, whole human beings and a much more holistic view of everything including ecological systems where every part is related to everything else.

Dr Leo Galland⁽⁷⁾ has created a person centered diagnosis in which for diagnosis the individuality of the patient is foremost. He seeks to integrate disease, physiology and psycho social functions. He divides the diagnosis into mediators, antecedents, triggers and effects of sickness on the individual patient. Triggers are what starts the illness and can be emotional, physical or infectious. Mediators are the biochemical processes that occur and are reinforced or decreased by the psychology of the patient and the social circumstances. Antecedents are basically the factors that predispose the person to the illness and are mainly genetic, although it must be realized that genetic determinants only make up about 5% of the population.

We see that within the context of this form of diagnosis, emotional and social stimulants may well be the greatest determinant of disease especially when we realize the body mind and spirit is an integral unit.

It is unfortunate that in western general practice the doctor hasn't got the time to understand the social and life factors affecting the patient. The consumer need for instant satisfaction and instant cure and the tremendous emphasis on the use of drugs as the cure all has demoted medicine to a pure technology. As doctors we are losing our art and our pathway as the

Australian Government has no respect for the medical professional or the life sciences, purely seeing medicine as another economic process that has to be manipulated for profit. Unfortunately doctors and their patients are not indices in a monetary gain. The healing process which is innate in a human being cannot function without appropriate education and opportunity for recuperation. This kind of intercession by a physician is only possible with an extended consultation where there has to be a greater patient centered diagnosis. In the prevailing system there is no opportunity for this to occur and this is one of the reasons why we are seeing the huge increase in degenerative disease in the overall population, which obviously impacts adversely on the GDP of the nation.

Sir Professor Michael Marmot⁽⁸⁾ is the advisor to the World Health Organization (WHO). He has produced 10 social determinants of health for the WHO which are:

1. Social and economic circumstances strongly effect health throughout life. Stress harms health.
2. The effects of early development in the neo-natal period and infancy last a lifetime.
3. Social exclusion creates suffering and morbidity.
4. Stress in the workplace increases the risk of disease
5. Job security increases health, well-being and job satisfaction.
6. Unemployment is deleterious to health.
7. Social support, friendship, good social relations and strong supportive networks improve health at home, work and in the community.
8. Addiction to drugs and alcohol is influenced by social determinants.
9. Nutrition is a key determinant of health.
10. Transport through the use of walking and exercise in a sustainable environment.

It is evident that a healthy nation and the health of an individual in society is tied up and inextricably related to human rights, human justice, lifestyle change, reduction of stress and the fundamental conditions for resources and health including peace, shelter, education, food, income, a stable eco

system, sustainable resources, social justice and equity (Ottawa Charter for Health Promotion 1986)⁽⁹⁾.

The scientific explanation for this is now forthcoming through the field of mind/body medicine. By enhancing each person's capacity for self-knowledge and self-care, it emphasizes techniques which contribute towards a more coherent and healed society.

Since the 1960's mind/body interactions⁽¹⁰⁾ have become an extensively researched tool and include such techniques as meditation, imaging, the physiology of expectancy (placebo response), cognitive behavior intervention, stress management, relaxation therapy and yoga.

Once it is understood that a human being is not just an assembly of human parts but contains emotional, mental and spiritual dimensions that cannot be reduced to material processes, then what exactly does healthy mean in such a multi-dimensional being? How many levels of being - physical, emotional, mental, spiritual - should a doctor treat? Can I be healthy if I am spiritually malnourished? (Reference Ken Wilbur⁽¹¹⁾).

Dr Herbert Benson,⁽¹²⁾ Harvard physician and the inventor of the Relaxation Response has stated that 60-90% of visits to doctors are in the mind/body stress-related realm. He views health as being akin to a 3-legged stool - The first being pharmaceuticals, the second being surgery and procedures and the third leg he defines as relaxation response, nutrition, exercise, stress management and above all else the belief system of the patient.

Indeed, the key to healing is relationship. Being loved is about being seen and being able to express yourself in a situation where you can be heard. Social isolation doubles death rates and social relationships impact on our physiology. The most famous mind/body medical trials are the increases in survival time in patients with breast cancer attending support groups (David Spiegel⁽¹³⁾) and stress reduction techniques healing malignant melanoma (Fauzey and Fauzey⁽¹⁴⁾) and reduction of heart disease with physical confirmation of widening of the coronary arteries through a comprehensive lifestyle program treating the mind and

body (Dr Dean Ornish)⁽¹⁵⁾.

Perhaps one of the greatest things we can say as regards the new form of integrative healing is that once the individual knows that their life matters to someone then it cannot be taken back⁽¹⁶⁾. Once we know that our life is important and treasured and others feel this way about us then this has huge effect on our survival and health.

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DOMINATING FACTORS ON EDUCATIONAL DEPRIVATION OF CHILD LABOUR IN BANGLADESH

ABSTRACT

The core objective of this study is to investigate the influences of some selected socio-economic and demographic factors on education of child labor in Bangladesh. To do so the data has been collected from Gaibandha district using purposive sampling technique through a structured questionnaire. Data has been analyzed using various statistical tools (percentage distribution, test, and logistic regression analysis). The study results reveal that 63.80% of child laborers have completed their primary education and only 11.80% have completed class VI or more. Again, a few (11.70%) of them have continued their education smoothly and most of them (88.30%) have not continued their education. Consequently, most of the child laborers are deprived of education. About 81.50% of child laborers have left school due to poverty. Age, salary, working hours per day and working place have positively significant effects on educational progression when parental education has negative and father's education has a stronger effect than mother's. Finally, evidence from the study indicates that poverty and unconsciousness or lack of education of parents lead to increase the prevalence and intensity of child labor and decrease the likelihood of maintaining their normal educational progression.

Key Words: Child Labor, Educational Deprivation, Gaibandha District, Chi-square, Logistic regression.

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Introduction

Work that is performed for payment and outside of the family by someone who is under age, and allowed by the country in which the child resides, is known as child labor (Budhwani et al., 2004). Education is the backbone of a nation. Moreover children are the future of a nation. The International Labor Organization (ILO, 2006) estimated in 2004, the global number of child laborers aged 5-17 years was 218 million. There were 117.2 million boys and 100.5 million girls. In that time child labor was mostly concentrated in the Asia-Pacific region and Sub-Saharan Africa with 122.3 and 49.3 million respectively with 5.7 million in Latin America and the Caribbean. The rest of the child laborers were in other regions of the world. Glick and Sahn (2000) have found high returns in the labor markets for investments in education for both men and women. In another study, Glick and Sahn (1997) have identified that the earning of women and men increase with schooling in both self-employment and wage employment. Similarly, in studies by others, Psacharopoulos (1994) has consistently shown that child education has higher returns than other physical assets. Despite these apparent benefits and high potential returns to education, the level of education and educational attainment remain remarkably low in most developing countries like Bangladesh, and child labor participation, considered to be a competing activity to schooling, continues to be a common phenomenon. Rahman (1999) found that Bangladesh is considered to be one of the child-labor abundant countries and the number of child laborers is 6.58 million out of the 34.45 million children in the age group of 5-14 years. Also this report has shown child labor constitutes about 12% of the total labor force of Bangladesh. Bangladesh Bureau of Statistics (BBS, 2003) revealed that the total number of child laborers aged 5-17 years is 7.90 million with 73.50% boys and 26.50% girls. This report also revealed that the child laborer aged 5-17 years in rural and urban areas are 81.01% and 18.99% respectively. Khanam and Ross (2008) have shown that school attendance and grade attainment are lower for children who are working. The results of this study further have shown that the effect of household permanent income, parental education and presence of secondary school education is higher for grade attainment than school attendance. Maitra (2003) has estimated results that there is no gender differential in current enrolment status but grade attainment is higher for girls, relative to boys. Also an increase in the permanent income of the household is always associated with an increase in educational attainment and parental education has a positive and statistically significant effect on the educational attainment of children, and

mother's education has a stronger effect on both school enrolment and grade attainment of children compared with father's education. Khanam (2008) have shown that the education of parents significantly increases the probability that a school-age child will specialize in study and the presence of very young children (aged 0-4) in the household increases the likelihood that a school-age child will combine study with work. This report has further shown that the children who are sons and daughters of the household-head, as opposed to being relatives living in the household, are more likely to combine study and work but less likely to specialize in work. Though many researchers have been studied and Government and non-Government steps have been increasing, there is a halt in the declining trend of child laborers and increasing trend of educational progression. This raised a crucial situation for our country development, as a response to this situation, some researchers made attempts to understand the reasons behind this stagnation of child laborers and have come up with various explanations. Thereafter, the policy makers are still trying to make policies to reduce the number of child laborers and increase the educational progression of child laborers. So, there is better scope to study the facts, causing child laborers and low educational progression for them. The findings of the study may help to understand the effect of risk factors of high number of child laborers and low educational progression, and identifying strategies to take educational development programs for child laborers.

Data and Methods

The data on 1157 child laborers, through purposive sampling technique by a structured questionnaire, was collected from the Gaibandha district which is one of the disadvantaged localities of Bangladesh in terms of poverty, low rate of education, increasing child labor, deprivation of basic health facilities and disaster. We think that it will be a representative sample in terms of various characteristics of the whole of Bangladesh. Educational progression was calculated by using the formula which considered as a dichotomous dependent variable Y. It took the value 1 if the child laborers were below normal progress (<100) and 0 otherwise. The explanatory variables were age, salary, working hour per day, family size, working place, occupation of household head, father alive, educational attainment of parents. Age is measured by the number of completed years at last birthday. Chi-square statistic and logistic regression techniques were applied for finding the appropriate pattern of child laborers.

Results and Discussion

Study population was 1157 child workers of whom 81.80% were males and 18.20% were females, in Table 1. The study proclaims greatest percentages (90.90%) were Muslim and 9.10% non-Muslims child laborers. The vulnerable age structure of child labor with 30.50%, 54.70% and 14.80% aged 5-11 years, 12-14 years and 15-17 years respectively. Among the respondents 80% were enrolled in school. But, when asked about current attendance at schools, only 19.20% reported that they were still going to school and 80.80% have already dropped out of school. Among the respondents who have left school, 81.50% reported 'poverty' as the main cause behind leaving school. In this collected sample, 63.80% have obtained education at primary level, while only 11.80% have completed class VI or more.

Though the working children have very little time to go to school, 79.80% expressed their willingness to go to school. It is observed that most of child laborers enforced by poverty (64%) and one quarter (25.10%) of the respondents mentioned 'family pressure' as the main cause for becoming a child laborer. Working children are the objects of extreme exploitation in terms of toiling for long hours for minimal pay and 36% of the respondent's work 10-14 hours per day, which is obviously hard work and inhumane. It is a matter of more regret that 8% of the respondents work 15 or more hours per day. Though they have to work for a long time without any rest, they get a very poor payment. Some of them work only for food. More than one quarter (27.70%) of the respondents get no salary for their work while 40.20% reported their salary within 1000 Taka per month. As the earning of child labor is very little, they can hardly save any money. More than four fifths (83.10%) of child laborers reported that they couldn't save any money. Drug addiction is a serious social problem in Bangladesh, especially in the study area. If a child becomes drug addicted, he can't continue his normal life and must be out of work. The study found a considerable number (35%) of respondents' addicted to cigarettes and so on. The study depicts that 97.40% of the respondents get the opportunity to play regularly. About three quarters (73.90%) of the respondents reported that television was the main media of their entertainment. It was found that there is a very low awareness level among the respondents and one quarter (23.80%) of the respondents do not know that the Government provides free primary education in our country. 43.90% do not know about the allowance provided by Government for girls at high schools. 80% of the respondents have no idea about the prohibition of child labor. While working with child laborers, it is very important to have sufficient information on household characteristics of child laborers. Table 1 reveals that 89.50% of the child laborers reported their father as household head. The combined family system is decreasing and 91.0% of the respondents are from the single parent family as well as 66.30% of child laborers come from large family sizes as 5.7. The occupation of household head is an important element to affect a family. Day labor seems to be dominant (45%) among the various occupational categories of household head. 43.3% of the child laborers reported the income of household head between 2001 to 3000 Taka per month and 42.70% reported between 1001 to 2000 Taka per month while

7.90% reported that their household head earned not more than 1000 Taka per month. In the same Table it outlines some parental characteristics where 89.50% and 96.6% of the all respondents were found with their fathers alive and mothers alive respectively. We get some important figures about educational attainment of parents, which is a remarkable determinant of child labor. 70.40% of the respondents reported that their fathers are illiterate while 83.40% of the respondents reported that their mothers are illiterate.

Bivariate analysis using chi-square statistic shows that 88.30% of the working children are falling behind, which indicates only 11.70% of child laborers are able to maintain the normal educational progress according to age. It seems that a huge quantity of child laborers are deprived of obtaining education. Among all child laborers 29.70% and 1.80% aged 5-11 years, and 15-17 years respectively, are able to maintain their normal educational progression. Table 2 reflects that the value of unadjusted chi-square statistic with 2 degree of freedom is 30.673 which indicates that the age of child laborers is highly associated with educational progression at zero percent level of significance. The study in the same Table shows that with the increase in the salary range, the percentage of child labor falling behind goes up and the values of unadjusted chi-square statistic with 4 degrees of freedom is observed to be 34.693 which means there is a high association between income and educational progress of child labor at zero percent level of significance. The child laborers who work more hours per day have very little time for study; the consequence is less schooling in terms of educational progression. The value of unadjusted chi-square statistic with 3 degrees of freedom is 128.874, which is asymptotically significant at zero percent level. About 85.50% of the child workers who have been working for less than or equal to one year, are falling behind. Interestingly enough, all (100%) of the child laborers who have been working for more than seven years (8+) are falling behind and the value of unadjusted chi-square statistic with 3 degrees of freedom is observed to be 13.626 for educational progression, which is asymptotically significant. There is a higher association between family size and educational progression. The percentage of child laborers falling behind in each category (of family size), go up with the increase in family size except for the last category (10+). With 3 degrees of freedom, the value of unadjusted chi-square test is 25.544, which is asymptotically significant at zero percent level. The association between educational progression and working place the child belongs to is highly significant at zero percent level of significance tested by the value of unadjusted chi-square statistic with 1 degree of freedom, is observed to be 9.221. Also father alive and education attainment of father and mother are highly associated with educational progression of child laborers.

Results obtained using logistic regression depicts that the age has a positively significant impact on educational progression and child laborers aged 12-14 years are 11.53 times more likely and aged 15-17 years are 26.88 times more likely to fall behind the normal education progress than those aged 5-11 years. The salary has a significant effect on educational progression and the likelihood of falling behind is upward with the increase of salary range. Educational progression is significantly influenced by working

time duration and child laborers worked 5-9 hours, 10-14 hours and above 15 hours per day are 8.085 times, 10.086 times and 14.782 times respectively more likely to be falling behind the normal educational progression than those who worked less than 5 hours. This is due to the fact that, a child spending more time at work, has very little time for study and fails to maintain normal educational progression. So, they are deprived of attaining education. Another significant determinant of educational progression of child labor is the ownership of the working places where they work. Child laborers in such workplaces that don't belong to their families are 3.113 times more likely to be falling behind than those who work in family owned working places. Children with their fathers alive are 60% less likely to be falling behind than those with their fathers dead. But children with their mothers alive are about 43% less likely to be falling behind than those with their mothers dead. Education of parents exerts tremendous effect on educational deprivation of child laborers. The child laborers whose fathers have obtained secondary or more education are about 63% less likely to fall behind than those of fathers who have obtained no education. We found greater impact of mother's education than father's education on educational progression of child laborers as Table 3 shows the child laborers whose mothers have obtained secondary or more education are about 70% less likely to fall behind than those of mothers who are illiterate.

Conclusion

Children are the future leaders of a country and education is the backbone of a nation. In Bangladesh, education and work are often viewed as mutually exclusive in the lives of children. Parents' education is a most essential factor for child development but the academic education of parents is very difficult at their present situation. Thus, the policy makers should be taking the necessary steps to improve their educational qualifications and consciousness by reducing their poverty. The existing illiterate child laborers are the next fathers of this nation, which are another copy of illiterate fathers. Therefore, to reduce child laborers in future, the dominating factors of educational deprivation should be removed. In this context Government can make wider the existing food for education program and so on. The findings of this study can play an important role in identifying the significant indicator for reducing child laborers and removing the dominating factors for the educational development of child laborers. Moreover this study may be used as an information source for further study.

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Table 1: Percentage Distribution of Child Laborers According to Some Selected Socioeconomic, Demographic and Schooling Characteristics.

Characteristics	Frequencies	%	Characteristics	Frequencies	%	Characteristics	Frequencies	%
Educational Qualification			Educational Attainment of Father			Educational Attainment of Mother		
No education	283	24.4	No education	814	70.3	No education	965	83.4
Primary	738	63.8	Primary	276	23.9	Primary	167	14.4
Secondary& above	136	11.8	Secondary& above	67	5.8	Secondary& above	25	2.2
Total	1157	100	Total	1157	100	Total	1157	100
Causes of Child labor			Monthly Saving			Occupation of Household Head		
Willingly	113	9.8	No saving	961	83.1	Agriculture	242	20.9
Family Pressure	290	25.1	250 Taka	121	10.5	Business	185	16
Poverty	741	64	251-500 Taka	70	6.1	Day labor	521	45
Step mother/father	8	.7	501-750 Taka	3	.2	Others	209	18.1
Others	5	.4	751-1000 Taka	2	.1	Total	1157	100
Total	1157	100	Total Taka	1157	100	Salary of Respondents		
Place of Work			Monthly Income of Household Head			No Salary	321	27.7
Shop	207	17.9	Up to 1000TK.	91	7.9	1-1000	465	40.2
Home	97	8.4	1001-2000 TK.	494	42.7	1001-2000	286	24.8
Workshop	94	8.1	2001-3000 TK.	501	43.3	2001-3000	78	6.7
Hotel	163	14.1	3001-4000 TK.	55	4.8	3001+	7	0.6
Agriculture	124	10.7	4001-5000 TK.	11	1	Total	1157	100
Chatal	26	2.2	5001-6000 TK.	3	.2	Play of Regularity		
Mill/Factory	403	34.8	6000+ TK.	2	.1	Yes	30	2.6
Others	43	3.8	Total TK.	1157	100	No	1127	97.4
Total	1157	100	Time Since Left School			Total	1157	100
Religion			6 Months	74	10.3	Willingness to Go to school		
Muslim	1052	90.9	1 Year	136	18.9	Yes	923	79.8
Non-Muslim	105	9.1	More	509	70.8	No	234	20.2
Total	1157	100	Total	719	100	Total	1157	100
Sex			Father Alive			Type of Family		
Male	947	81.8	Yes	1036	89.5	Single	1053	91
Female	210	18.2	No	121	10.5	Combine	104	9
Total	1157	100	Total	1157	100	Total	1157	100
Age			Kind of Addiction			Media of Entertainment		
5-11 years	353	30.5	Cigarette	405	35.0	TV	855	73.9
12-14 years	633	54.7	Ganja	15	1.3	Radio	149	12.9
15-17 years	171	14.8	Injection Drug	1	0.1	Cinema	118	10.2
Total	1157	100	None	736	63.6	Others	35	3.0
No of Years Since Started Working			Total	1157	100	Working Hour Per Day		
1 (Years)	496	42.9	Owner of Work Place			<5 hours	208	18
2-4	559	48.3	Family	139	12.0	5-9 hours	439	37.9
5-7	83	7.2	Others	1018	88.0	10-14 hours	417	36.1
8+	19	1.6	Total	1157	100	15+ hours	93	8
Total	1157	100	Known about Free Primary School			Total	1157	99.9
Enjoy the Work			Yes	882	76.2	Enrolled in School		
Yes	110	9.5	No	275	23.8	Yes	926	80.0
No	1047	90.5	Total	1157		No	231	20.0
Total	1157	100	Known about Prohibited Child Labor			Total	1157	100
Mother Alive			Yes	232	20.1	Family Size		
Yes	1118	96.6	No	925	79.9	1-4	239	20.7
No	39	3.4	Total	1157	100	5-7	767	66.3
Total	1157	100	Cause Behind Leaving School			8-10	142	12.2

Household Head			Poverty	769	81.5	10+	9	0.8
Father	1035	89.5	Lack of Time	29	3.1	Total	1157	100
Mother	89	7.7	Lack of Interest	43	4.6	Still Going to School		
Brother	26	2.2	Parent's Lack of Interest	87	9.2	Yes	222	19.2
Others	7	0.6	Others	15	1.6	No	935	80.8
Total	1157	100	Total	943	100	Total	1157	100

Table 2: Results of Association between Educational Progression and Some Selected Attributes

Characteristics	Educational Progression			Values of χ^2 , df and α	Characteristics	Educational Progression			Values of χ^2 , df and α
	Not Falling Behind (%)	Falling Behind (%)	Total			Not Falling Behind (%)	Falling Behind (%)	Total	
Age of the Respondent					Occupation of Household Head				
5-11 years	29.70	70.30	100	$\chi^2 = 161.882$ df = 2 $\alpha = 0.000$	Agriculture	10.30	89.70	100	$\chi^2 = 4.853$ df = 3 $\alpha = 0.183$
12-14 years	4.30	95.70	100		Business	13.50	86.50	100	
15-17 years	1.80	98.20	100		Day labor	10.20	89.80	100	
Total	11.70	88.30	100		Others	15.30	84.70	100	
				Total	11.70	88.30	100		
Working Hours Per Day					Father Alive				
<5 hours	34.10	65.90	100	$\chi^2 = 128.874$ df = 3 $\alpha = 0.000$	No	4.10	95.90	100	$\chi^2 = 7.446$ df = 1 $\alpha = 0.006$
5-9 hours	9.10	90.90	100		Yes	12.50	87.50	100	
10-14 hours	5.00	95.00	100		Total	11.70	88.30	100	
15+	3.20	96.80	100						
Total	11.70	88.30	100						
Family Size					Mother Alive				
1-4	14.60	85.40	100	$\chi^2 = 7.405$ df = 3 $\alpha = 0.060$	No	5.10	94.90	100	$\chi^2 = 1.675$ df = 1 $\alpha = 0.196$
5-7	11.00	89.00	100		Yes	11.90	88.10	100	
8-10	9.20	90.80	100		Total	11.70	88.30	100	
10+	33.30	66.70	100						
Total	11.70	88.30	100						
Working Place Belongs to					Educational Attainment of Father				
Family	19.40	80.60	100	$\chi^2 = 9.221$ df = 1 $\alpha = 0.002$	No education	8.70	91.30	100	$\chi^2 = 23.521$ df = 2 $\alpha = 0.000$
Others	10.60	89.40	100		Primary	18.10	81.90	100	
Total	11.70	88.30	100		Secondary+	20.90	79.10	100	
					Total	11.70	88.30	100	
Salary					Educational Attainment of Mother				
No salary	18.10	81.90	100	$\chi^2 = 34.693$ df = 4 $\alpha = 0.000$	No education	10.60	89.40	100	$\chi^2 = 21.317$ df = 2 $\alpha = 0.000$
1-1000 Tk.	14.90	85.10	100		Primary	13.80	86.20	100	
1001-2000 Tk.	10.50	89.50	100		Secondary+	40.00	60.00	100	
2001-3000 Tk.	9.00	91.00	100		Total	11.70	88.30	100	
3001+ Tk.	7.70	92.30	100						
Total	11.70	88.30	100						
Years Since Started Working									
1	14.50	85.50	100	$\chi^2 = 13.626$ df = 3 $\alpha = 0.003$					
2-4	10.90	89.10	100						
5-7	2.40	97.60	100						
8+	0.00	100.00	100						
Total	11.70	88.30	100						

Table 3: Logistic Regression Estimates of Educational Progression on Some Selected Variables of Child Labors

Characteristics	Coef- ficient (β)	S.E of Co- efficient	Signifi- cance	Odds ratio	Characteristics	Coef- ficient (β)	S.E of Coef- ficient	Signif- icance	Odds ratio
Age of the Respondent					Working Place Belongs to				
5-11years (ref.)	-	-	-	1.000	Family (r)	-	-	-	1.00
12-14 years	2.445	.282	.000	11.531	Others	1.135	.389	.003	3.113
15-17 years	3.291	.696	.000	26.876					
Salary					Father Alive				
No Salary (r)	-	-	-	1.00	No(ref)	-	-	-	1.000
1-1000	1.168	.340	.001	3.214	Yes	-.915	.541	.091	.400
1001-2000	1.502	.433	.001	4.490					
2001-3000	1.651	.597	.028	5.214					
3000+	2.017	.142	.034	7.520					
Working Hour Per day					Mother Alive				
<5 hour (ref.)	-	-	-	1.000	No(ref)	-	--	-	1.000
5-9	2.090	.319	.000	8.085	Yes	-.559	.862	.517	.572
10-14	2.311	.365	.000	10.86					
15+	2.693	.716	.000	14.782					
No. of Years Since Started Working					Educational Attainment of Father				
1 (r)	-	-	-	1.00	No education(ref)				1.000
2-4	-.014	.272	.958	.986	Primary	-.701	.338	.016	.496
5-7	.618	.873	.179	1.855	Secondary+	-.998	.481	.009	.369
8+	.718	.049	.098	2.050					
Family Size					Educational Attainment of Mother				
1-4(ref)	-	-	-	1.000	No education(ref)	-	-	-	1.000
5-7	.311	.294	.291	1.364	Primary	-.170	.410	.679	.844
8-10	.110	.435	.801	1.116	Secondary+	-1.214	.624	.052	.297
10+	-1.573	.822	.056	.208					
Occupation of Household Head					Constant				
Agriculture (r)	-	-	-	1.00		-.907	1.176	.440	.404
Business	.185	.413	.654	1.203					
Day Labors	.019	.363	.958	1.020					
Others	-.259	.405	.523	.722					

Note: (r) represent reference category.

