

Proximate determinants of fertility and reproductive health

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The dramatic decline in mortality rates during the nineteenth century put the countries of the world into an imbalanced stage of demographic transition. Developed societies adopted fertility control methods and achieved a balance in their annual rate of population growth, whilst developing countries and traditional societies are still confronted with the following serious hazards:

1. Poor health of women particularly reproductive health and related problems
2. High infant mortality rate and still birth rate
3. High Maternal Mortality Rate (MMR)
4. Low social respect of women as it is becoming hard for them to fulfil the responsibilities of child bearing and peak expected compatible performance in the office or field.

The International Conference on Population Development (ICPD) held at Cairo in 1994 took due cognizance of these issues and made it mandatory for all the participating countries of the World to reduce the prevailing high levels of their indicators by 2015. Subsequently these indicators also became part of the Millennium Development Goals formulated by 199 countries of the World in New York at the onset of the new millennium.

Massive attempts have been made all over the world to reconstruct public opinion by promoting ICPD and Millennium Development Goals to achieve Women dignity, health and reproductive rights. These attempts have achieved some (but not striking) permanent success. The main reason is that traditional societies whether living in developed or under developed countries, are more in tune to their religious values and their religious leaders inhibit strongly in hidden words against the use of contraceptive methods. Even in developed societies, the birth rate has recently increased. Figures from the Statistics and Research Agency¹ reveal that the number of children born to Northern Ireland mothers rose markedly between 2003-2004. In 2004 there were 22,318 births to Northern Ireland mothers, showing an increase of 3.1% on the 2003 figure. This is largest annual percentage increase since 1979. The stillbirth rate remains at 5 / 1000 but infant deaths reached 5.3 / 1000 because 6.7% of the mothers were in their teenage years.

The population in Northern Ireland has increased by five percent over the last decade, according to the census figures in 2002². The figures also show that on 29th April 2001, there

were more women than men living in Northern Ireland with 863,818 females to 821,449 males. Table I shows the expected population by the end of 2004².

With the advent of the latest theory of population, the issue seems easier. Kingsley Davis and Judith Blake were the first sociologists to recognise that socio-economic behaviour interacts with biological aspects of human reproduction. John Bongaarts and Robert C Potter³ developed inhibiting factors of fertility and the mathematical relationship of fertility with the following four proximate determinants of fertility:

- 1) age of marriage
- 2) post-partum infundity (breast feeding)
- 3) contraception
- 4) abortion

Direct abortion in most of the societies is forbidden but it is allowed to either save the life of mother suffering from cancer or a likelihood of the child being born with significant handicap. There is a need to provide safe abortion services, where they are available; however, the first three measures entail direct relativism for making a significant dent on fertility and thereby reducing the high levels of maternal mortality. Implementation of a combined social and health agenda will help reduce maternal mortality rates. Breast feeding and use of contraception will be acceptable to the traditional / religious group who are still reluctant to use contraception. (In some orthodox Muslim societies contraception is prohibited but breast feeding is encouraged for 2 years; more education would clarify the actual reason for encouragement of breast feeding in Islam which apart from other reasons is contraception indeed!).

With a significant increase in MMR, it is time that doctors and sociologists work together to educate people about the grim outcomes of a high rate of population growth and ill-health of women throughout the world.

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Table 1 – Expected population in Northern Ireland – 2004

Age group summaries	Numbers			Percentages		
	Persons	Males	Females	Persons	Males	Females
All ages	1,710,322	836,491	873,831	100.0	100.0	100.0
All aged under 16	383,344	196,741	186,603	22.4	23.5	21.4
All aged under 18	437,484	224,514	212,970	25.6	26.8	24.4
All aged 16 & over	1,326,978	639,750	687,228	77.6	76.5	78.6
All aged 18 & over	1,272,838	611,977	660,861	74.4	73.2	75.6
All aged 16-29	330,107	167,124	162,983	19.3	20.0	18.7
All aged 30-44	377,519	185,126	192,393	22.1	22.1	22.0
All aged 45-59F / 64M	344,105	190,146	153,959	20.1	22.7	17.6
All aged 60F / 65M & over	275,247	97,354	177,893	16.1	11.6	20.4
All aged 16 to 59F / 64M	1,051,731	542,396	509,335	61.5	64.8	58.3
All aged 75 & over	105,951	38,880	67,071	6.2	4.6	7.7

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REFERENCES:

1. Statistics press notice- births and deaths in Northern Ireland (2004). Belfast: Northern Ireland Statistics and Research Agency (NISRA), 2005. Available from: <http://www.nisra.gov.uk/archive/demography/>
2. Osborne B. Analysis: NI figures. BBC News 2002 Sep 30. Available from: http://news.bbc.co.uk/1/hi/northern_ireland/2288237.stm. Last accessed September 2006.
3. Bongaarts J, Potter RG. *Fertility, biology and behaviour; an analysis of the proximate determinants*. New York: Academic Press; 1983.

publications/births_deaths/births_and_deaths_2004.pdf. Last accessed: September 2006.

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