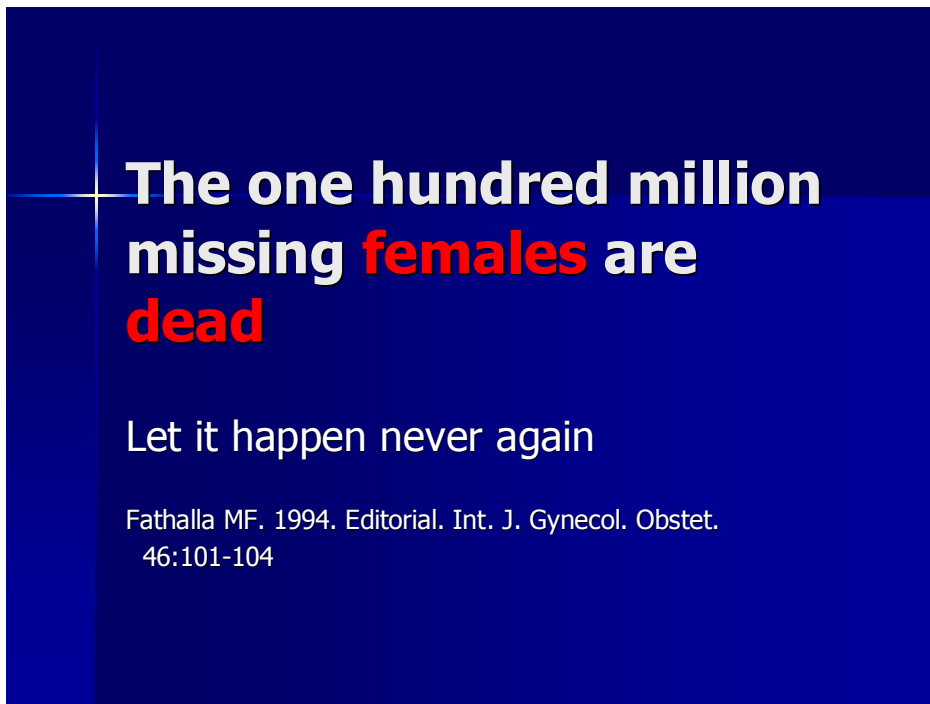


On Women's Health and Rights
Lectures, Speeches and Statements
Mahmoud F. Fathalla

The missing millions Hasselt University 20 March 2012

The missing millions has been a frequent headline in the Egyptian press in the last few months. It is about millions of dollars missing in the country because of corruption of the previous political regime, and with hope that they may be recovered back. But the millions we talk about in this presentation are more precious than dollars and euros, and there is no hope that they will be recovered.



As I put it in 1994, in an editorial to FIGO's First World Report on Women's Health, "One Hundred Million Females are Missing", and they are dead. I based the number on an earlier report in 1990 by the Nobel Laureate, economist Amartya Sen, that more than one hundred million women are missing.

More than **100 million** women
are missing.

Sen A.: New York Review of
Books. 20 December; 61, 1990

Although I said in my 1994 editorial “Let it happen never again”, it is still happening. A recent article last year in the New York Times, put the number as 160 million, and still counting.

160 Million and Counting

By ROSS DOUTHAT
New York Times
June 26, 2011

In framing this presentation, I hoped that Professor Ombelet will forgive me if I borrow or plagiarize the three nice themes of his Ob/Gyn Journal: Fact, Views and Vision.

Let us start with the facts, and first the evidence. The evidence for this alarming finding is based on a careful demographic analysis of the sex ratios in various populations, compared to the expected ratios if societies offered equal health conditions to both males and females.

Demographers report that the ratio of males to females in the population is a maximum at birth and then declines steadily with age, becoming less than unity at some age point, which demographers refer to as the “cross over” point, when there will be more females than males in the population after that age.

Why does the sex ratio change with age in favour of females? It is because the female of the species is the stronger biological sex, despite what lay people may think.

The female of the species is the stronger biological sex

World Life Expectancy at Birth

- | | |
|--------------------|---------------|
| ■ Total population | ■ 67.59 years |
| ■ male | ■ 65.59 years |
| ■ Female | ■ 69.73 years |

CIA The World factbook (2012 estimate)

The life expectancy at birth of females is consistently higher than that of males. Worldwide, on average, women have four more years to live than men. This cannot be completely explained by differences in lifestyle behaviour, where men engage in more risky behaviour and occupations.

The female of the species is the stronger biological sex

	World infant mortality rate
Total	■ 39.48 deaths /1,000 live births
Male	■ 41.42 deaths /1,000 live births
Female	■ 37.4 deaths /1,000 live births

CIA The World factbook
(2012 estimate)

Even infant females enjoy this biological advantage over their male brothers. The infant mortality rate for girls, on world average, is lower than that of boys.

World sex ratio

■ At birth	■ 1.07 male /female
■ Under age 15	■ 1.07 male /female
■ Age 15- 64	■ 1.02 male /female
■ Age 65 and above	■ 0.79 male /female
■ Total population	■ 1.01 male /female

CIA The World
factbook
2012 estimate

For the world at large, the sex ratio at birth is estimated a 1.07 in favour of males. It continues to decline, till at age of 65 and above, there are more females in the population.

Sex ratio in Belgium

- | | |
|---------------------|----------------------|
| ■ at birth | ■ 1.04 male /female |
| ■ under 15 years | ■ 1.04 male) /female |
| ■ 15- 64 years | ■ 1.02 male /female |
| ■ 65 years and over | ■ 0.72 male/ female |
| ■ total population | ■ 0.96 male /female |

CIA The World
factbook
(2012 estimate)

The same trend is seen in Belgium. The sex ratio will drop from 1.04 at birth, to 0.72 by age 65 and over. The result is that in the total population, there are more females.

Sex ratio in Egypt

- | | |
|---------------------|---------------------|
| ■ at birth | ■ 1.05 male /female |
| ■ under 15 years | ■ 1.05 male /female |
| ■ 15- 64 years | ■ 1.03 male /female |
| ■ 65 years and over | ■ 0.82 male /female |
| ■ total population | ■ 1.03 male /female |

CIA The World
factbook
(2012 estimate)

In Egypt, the same trend can be observed. The sex ratio drops from 1.05 at birth in favour of males, to 0.82 to be in favour of females by age 65 and over. Different from Belgium, however, there are more males in the total population.

A female deficit in the total population will result when the biological advantage of being female is more than counterbalanced by a social disadvantage of being a female.

Sex ratio at birth	
■ World	■ 1.07 male /female
■ Belgium	■ 1.04 male /female
■ Egypt	■ 1.05 male /female
■ India	■ 1.12 male / female
■ China	■ 1.13 male /female

CIA The World factbook
(2012 estimate)

The discrepancy in population sex ratio can be seen if we look at data from specific countries. In the world as a whole, the sex ratio is slightly in favour of males. In Belgium, it is in favour of females. In Egypt, it is in favour of males. But the female deficit is more striking in India and China. These differences in ratios may appear to be small. But they translate to large numbers in populations.

When demographers used as a standard for comparison, the female male ratio of 1.022 in sub-Saharan Africa. A region where women are considered to receive less biased treatment, the number of missing women in China was estimated to be 44 million, in India 37 million, and so on, with a total that easily exceeded 100 million worldwide.

That was the evidence for the missing females. What are the causes? The facts are that there is a direct cause, an intermediary cause and an underlying cause. This is of course after excluding a possible confounding factor of emigration and immigration. The direct cause of the missing females is less natality (fewer are born) and/or more mortality (more die).

In the past, one could put the blame for a female deficit on the practice of female infanticide, prevalent in many cultures. But the sad truth is that the practice has not been

completely abolished. It has taken new forms. It has been brought earlier with the utilization of new technologies for the selective abortion of the female foetus, and it has been deferred and changed to a passive form of child death through neglect and discrimination.

The evidence for decreased natality is seen in the skewed sex ratio at birth in countries like India and China, where many more male babies are born because of selective abortion of the female foetus.

Discrimination against the girl child

"Leaders at all levels of the society must speak out and act forcefully against patterns of discrimination within the family, based on preference for sons. One of the aims should be to eliminate excess mortality of girls, whenever such a pattern exists".

International Conference on Population and Development convened in Cairo in September 1994, Paragraph 4.17

As to discrimination against the girl child, let me share with you this call from the Cairo International Conference on Population and Development, a call to eliminate excess mortality of girls where there is a pattern of discrimination within the family.

Gender differentials in infant and child mortality, Egypt DHS 2000

	Male	Female
Neonatal mortality	32.6	25.2
Post-neonatal mortality	22.4	29.3
Child mortality	14.6	16.1

Some time ago, I looked at data from Egypt Demographic Health Survey about infant and child mortality, when segregated by sex. In the neonatal period, the female infant is still protected by her biological advantage, and mortality sex ratio is less. After the neonatal period, the social disadvantage begins to show up, and more female babies die.

That was the direct cause of less natality and more mortality. But there is an intermediary cause for less natality which cannot be ignored. This intermediary cause is us and our technology.

It is the utilization or abuse of new technologies for foetal sex determination and selective abortion of the female foetus.

Then there is the underlying cause of it all: son preference.



It is rightly said that a picture is better than 100 words. This picture poster demonstrates son preference, where the poor mother lies distressed, feeling guilty, the grand mother shows the undesired female baby, the older girl child does not understand what it is about, and the father turns his face away from the bad news.

Son preference: An old tradition

A body of Chinese poetry, *The Book of Songs*, believed to date from 1000-700 B.C., offers this advice to new parents:

When a son is born
 Let him sleep on the bed
 Clothe him with fine clothes.
 And give him jade to play with. ...

When a daughter is born,
 Let her sleep on the ground,
 Wrap her in common wrappings,
 And give her broken tiles for playthings.

(Glenn D. A dangerous surplus of sons. *The Chronicle*: 4/30/2004)

The phenomenon of son preference is deep rooted in some cultures. A body of Chinese poetry, the book of songs, believed to date from 1000-700 B.C., offers this advice to new parents:

When a son is born
 Let him sleep on the bed
 Clothe him with fine clothes
 And give him jade to play with
 When a daughter is born
 Let her sleep on the ground
 Wrap her in common wrappings
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(Glenn D. A dangerous surplus of sons. *The Chronicle*: 4/30/2004)

Gender preferences for children

According to comparative data from Demographic and Health Surveys, gender preferences for children vary dramatically from one country to another.

Son preference was most prominent in a band of countries stretching from North Africa, through the Near East, to South Asia. The extreme preference for sons is found in India, Bangladesh, Nepal, and Egypt, but a distinct preference for sons is also evident in Turkey, Tunisia, Pakistan, Sri Lanka, Jordan, and Morocco.

(Arnold, 1997)

Comparative data from Demographic and health surveys show that gender preferences for children vary dramatically from one country to another. Son preference was most prominent in a band of countries stretching from North Africa, through the Near East, to South Asia. The extreme preference for sons is found in India, Bangladesh, Nepal and Egypt, but a distinct preference for sons is also evident in Turkey, Tunisia, Pakistan, Sri Lanka, Jordan and Morocco. China and the Koreas were not included in the surveys and so do not show up. (Arnold, 1997)

These were the facts. We move to the views which show different perspectives, depending on the angle from which you look at the problem and its impact.

The missing millions

FACTS, VIEWS & VISION

- Human rights
- Public health
- Economists
- **Demographic**
- Social

In a human rights view, the issue is clear: a flagrant human right violation and a serious discrimination against women.

A public health view considers the impact on young adults when there are fewer females to marry. Will this increase the incidence and prevalence of sexually transmitted infections/

Economists are clam. They say do not worry about the problem of the female deficit. Trust in the forces of the market. When there is shortage of a commodity in the market, in this case the human female, its price will rise, which in turn will stimulate more production, which in the end will restore the balance of supply and demand in the market.

I want to say more about the next view, the demographic impact. In a demographic view, it may be said that a society with fewer girls is guaranteed to reproduce itself at lower rates, and fewer girls might be exactly what the teeming societies of the third world needed. But this is not the case in countries where there is son preference but no sex selective abortion.

Impact of the female deficit

A demographic view

- A society with fewer girls is guaranteed to reproduce itself at lower rates.
- Fewer girls might be exactly what the teeming societies of the third world needed.

A comparative study of Demographic and Health Surveys in seven countries where is strong son preference showed that in the absence of any gender preferences, contraceptive prevalence would increase by 3-25 percent from its current level and that pregnancy rates would decrease by 9 to 21 percent. The corresponding percentages estimated for Egypt were 7.7 to 11.6. (Arnold F. 1997. A comparative study of DHS data)

Impact of son preference on fertility

In the absence of any gender preferences, it was estimated that contraceptive prevalence, in seven countries where there is strong son preference, would increase by 3-25 percent from its current level and that pregnancy rates would decrease by 9-21 percent. The corresponding percentages estimated for Egypt, were 7.7 and 11.6.

(Arnold F. 1997. A comparative study of DHS data)

I recall in my practice that I delivered a woman in her tenth child. All her previous children were girls. She asked me, if the child was female, to perform sterilization immediately post-partum, because she will not be able to resist the social pressure to get pregnant again. That was before the days of ultrasound foetal sex diagnosis. Fortunately, she had a male baby, for which I was gratefully thanked and rewarded, as if I had a role in it.

The missing millions

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- Human rights
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- **Social**

Then there is a social view, and it may be alarming. There are some bells of alarm ringing.

Impact of the female deficit Social perspective

High sex ratios at birth in some Asian countries due to a strong preference for sons will affect future marriage patterns and fertility patterns.

Eventually , it could cause unrest among young adult males who are unable to find partners.

CIA The World factbook 2012

The US CIA warns that high sex ratios at birth in some Asian countries due to a strong preference for sons will affect future marriage patterns and fertility patterns. Eventually,

it could cause unrest among young adult males who are unable to find partners. (CIA The World fact book 2012)

The missing millions

FACTS, VIEWS & VISION

- Let it happen never again:
 - Law
 - The health profession
 - Women empowerment
 - Social change

Now, we move from the views to the vision, the vision about the remedy. Is the future solution in the law, in the health profession, in women empowerment, or in social change? There is already some experience with these solutions, particularly in India.

Sex- selective abortion and the law- The case of India

Fetal sex determination and medical termination of pregnancy on the basis of foetal sex have been illegal since 1994. Under the law, prenatal diagnostic scans are allowed for the detection of genetic abnormalities, but sex determination tests are forbidden. Those caught are subject to a fine, imprisonment, and suspension of the medical practitioner's license.

India had an experience with the law. Foetal sex determination and medical termination of pregnancy on the basis of foetal sex have been illegal since 1994. Under the law, prenatal diagnostic scans are allowed for the detection of genetic abnormalities, but sex determination tests are forbidden. Those caught are subject to a fine, imprisonment, and suspension of medical practitioner's license. What was the outcome?

Sex- selective abortion and the law- The case of India (cont.)

- **However, in a national survey of 1.1 million households in India, Jha et al (2006) concluded that prenatal sex determination followed by selective abortion of female fetuses is the most plausible explanation for the low sex ratio at birth in India. Women most clearly at risk are those who already have one or two female children.**
- **Based on conservative assumptions, the practice was estimated to account for about 0.5 million missing female births yearly in India, translating over the past 2 decades into the abortion of some 10 million female fetuses.**

Jha P et al. Low female-to-male sex ratio of children born in India: national survey of 1.1 million households. *Lancet* 2006; 367: 1211-1218.

A paper in the *Lancet* in 2006, 12 years after the law, reported on a national survey of 1.1 million households in India. Based on conservative assumptions, the practice of sex-selective abortion accounted for about 0.5 million missing female births yearly in India, translating over the past two decades into the abortion of some 10 million female fetuses. Jha P et al. Low female-to-male sex ratio of children born in India: National survey of 1.1 million households. *Lancet* 2006; 367: 1211-1218.

The missing millions

FACTS, VIEWS & VISION

- Let it happen never again:
 - Law
 - The health profession
 - Women empowerment
 - Social change

Can the health profession do it? Let us look again at India.

The health profession and sex- selective abortion

In 1986, the Federation of Obstetric and Gynaecological Societies of India passed a resolution against prenatal sex determination and medical termination of pregnancy because of the sex of the foetus. All members of the federation are asked to desist, dissociate, and discourage female foeticide as it is a "crime against humanity". However, there is ample published evidence of rampant sex determination and female foeticide.

Sheth s. 2006. Missing female births in India. Lancet 367: 185-186.

As far back as 1986, FOGSI, The Federation of Ob/ Gyn Societies of India, passed a resolution against prenatal sex determination and medical termination of pregnancy because of the sex of the foetus. The resolution was strongly worded. All members of the federation are asked desist, dissociate, and discourage female "foeticide" as it is a crime

against humanity. As professor Shirish Sheth remarked in a lancet paper, there is ample evidence of rampant sex determination and female foeticide. (Sheth S. 2006. Missing female births in India. Lancet 367: 185-186.

The missing millions

FACTS, VIEWS & VISION

Let it happen never again:

- Law
- The health profession
- **Women empowerment**
- Social change

Is women empowerment the answer? Let us again take a lesson fro India.

Trends in sex-selective abortions in India

Declines in the ratio of born girls were much greater in mothers with 10 or more years of education than in mothers with no education, and in wealthier households compared with poorer households.

Jha P. et al 2011. Trends in selective abortions of girls in India: analysis of nationally representative birth histories from 1990 to 2005 and census data from 1991 to 2011. Lancet 377; 1921 – 1928.

In a Lancet paper last year, about trend in sex selective abortion, declines in the ratio of born girls were much greater in mothers with 10 or more years of education than in mothers with no education, and in wealthier households compared with poorer households.

Women empowerment and sex selection

- Thus far, in India, female empowerment often seems to have led to more sex selection, not less.
- In many communities, women use their increased autonomy to select for sons, because male offspring brings higher social status.

As the study showed, at least thus far in India, female empowerment often seems to have led to more sex selection, not less. In many communities, women use their increased autonomy to select for sons because male offsprings bring higher social status.(Jha P. et al 2011. Trends in selective abortions of girls in India: analysis of nationally representative birth histories from 1990 to 2005 and census data from 1991 to 2011. Lancet 377; 1921 – 1928).

The missing millions

FACTS, VIEWS & VISION

- Let it happen never again:
 - Law
 - The health profession
 - Women empowerment
 - Social change

This leads us to social change, probably the ultimate answer. Let us look at one success story.

The Republic of Korea – a success story

- In the 1980s and 1990s, the Republic of Korea had a highly imbalanced sex ratio at birth that reached almost 116. By 2007, the ratio had returned to 107.
- It appears that a combination of factors contributed to this shift. Two decades of exceptional economic growth led to fundamental changes in Korean society. A "Love Your Daughter" media campaign was successful.

World Health Organization 2011. Preventing gender-biased sex selection: an interagency statement.

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combination of factors contributed to this shift. Two decades of exceptional economic growth led to fundamental changes in Korean society, as well as a successful “love your daughter” media campaign. (World Health Organization 2011. Preventing gender-biased sex selection: an interagency statement).

The missing millions

FACTS, VIEWS & VISION

- Let it happen never again:
 - Law
 - The health profession
 - Women empowerment
 - Social change
- **New ethical challenges**
 - Sex selection: - Pre-fertilization
 - Pre-implantation
 - for gender balance, not gender bias

I cannot end without referring to emerging new ethical challenges brought about by two factors: first, the availability of pre-fertilization and pre-implantation sex selection, and the demand for gender balance in the family, not gender balance, The jury are still out. But the issues make many organizations uncomfortable.


FIGO Resolution on "Sex Selection for Non-medical purposes"

FIGO

- **Deplores all forms of discrimination against women and the use of any medical techniques in any way that would exacerbate discrimination against either sex.**
- **Affirms that selection is of particular ethical concern when it is driven by value differences ascribed to either sex or that arise from pervasive gender stereotypes.**

Adopted by the FIGO General Assembly in Kuala Lumpur, Malaysia on 7th November 2006

FIGO General Assembly in 2006 adopted a resolution that deplores all forms of discrimination against women and the use of any medical techniques in any way that would exacerbate discrimination against either sex. The resolution also affirmed that sex selection is of particular ethical concern when it is driven by value differences ascribed to either sex or that arise from pervasive gender stereotypes.



Hartelijk dank
 Merci beaucoup
 Vielen Dank
 Thank you very much

References

ACOG Committee on Ethics. Committee Opinion No. 360. February 2007. Reaffirmed 2011, Sex selection.

Arnold F. 1997. Gender preferences for children. Demographic and Health Surveys . Comparative Studies No. 23. Macro International Inc., Calverton, Maryland, USA.

Attia SS, Esmail MM. 1998. The gender gap and discrimination against women. In Moreland RS, editor. Understanding demographic behavior in Egypt: Studies from the Demographic and Health Survey, 1995. National Population Council, Cairo.

Central Intelligence Agency. The Work of a Nation. The Center of Intelligence The World Fact book. Page last updated on February 8,2012

Coale AJ. 1991. Excess female mortality and the balance of the sexes in the population: An estimate of the number of "missing females". Population and Development Review 17:517-523.

Egypt Demographic and Health Surveys. <http://www.measuredhs.com>

Fathalla MF. 1994. The one hundred million missing females are dead: let it happen never again. International Journal of Gynecology and Obstetrics 46: 101-104

- Fathalla MF. 1998. The missing millions. *People & the Planet* 7 (number 3):10-11
- Fathalla MF. 2000. The Girl Child. *International Journal of Gynecology and Obstetrics*, Special issue: World Report on Women's Health. 70:7-12
- Fathalla MF. Issues in Women's Health and Rights- International, Arab Regional and Egyptian Perspectives. *International Planned Parenthood Federation Arab World Region*. 2008. Chapter 4. The missing females. p 85-97.
- FIGO Resolution on "Sex Selection for Non-medical purposes"
Adopted by the FIGO General Assembly in Kuala Lumpur, Malaysia on 7th November 2006
- FIGO Committee for the ethical aspects of human reproduction and women's health. 2006 Ethical guidelines on sex selection for non-medical purposes. *Int J Gynec Obstet* 92:329-330
- Financial Times. 2006. Beijing backs away from criminal law on abortion. June 26.
- Glenn D. A dangerous surplus of sons. *The Chronicle*: 4/30/2004
- Human Fertilization and Embryology Authority. 2003. Sex selection: options for regulation.
<http://www.hfea.gov.uk> (accessed January 3, 2006)
- Imam Z.1994. India bans female feticide. *British Medical Journal* 309: 428
- Jha P, Kumar R, Vasa P, Dhingra N, Thiruchelvam D, Moineddin R. 2006. Male-to - female sex ratio of children born in India: national survey of 1.1 million households. *Lancet* 367: 211-218
- Jha P , Kesler MA, Kumar R, Ram F, Ram U, Aleksandrowicz L, Bassani DG, Chandra S, Banthia JK. Trends in selective abortions of girls in India: analysis of nationally representative birth histories from 1990 to 2005 and census data from 1991 to 2011. *The Lancet*, Volume 377, Issue 9781, Pages 1921 - 1928, 4 June 2011. Published Online: 24 May 2011
- Klasen S, Wink C. 2002. A turning-point in gender bias in mortality? An update on the number of missing women. *Population and Development Review* 28: 285-312
- Ross Douthat . 160 Million and Counting. *New York Times*. Published: June 26, 2011
- Sen. A. 1989. Women's survival as a development problem. *Bulletin of the American Academy of Arts and Sciences* 43 (no.2): 14-29
- Sen. AK. 1992. Missing women. *British Medical Journal* 2; 304: 586-7

Sen A. 2003. Editorial. Missing women-revisited. *British Medical Journal* 327:1297-1298

Sheth SS. 2006. Missing female births in India. *The Lancet* 367:185-186

Singh A. 2007. Selective abortion: Missing Indian baby girls. *British Medical Journal* 16 November 2007. www.bmj.com/cgi/eletters/335/7728/1018#180028

United Nations. 1994. Report of the International Conference on Population and Development. A/Conf.171/13.

World Health Organization 2011. Preventing gender-biased sex selection: an interagency statement.