## A global review of male offspring preference and gender bias in the caring of children

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## Educational aims

- To review factors that cause population gender imbalance (male excess).
- To review gender-based inequalities in health care.
- To identify factors that may alleviate both of the above.


## Key words

Induced abortion, female, birth rate, infant, newborn, sex ratio, human rights, abuses, infanticide

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## Introduction

Gender bias in access to health care is common in many parts of the world, and this discrimination may even lead to death, not only in childhood and adult life, but also in-utero. This bias is particularly prevalent in South Asia and China where males are prized. Indeed, it has been estimated that more girls have been killed in the last half century, simply because they are females, than the sum total of all males killed in all the wars in the $20^{\text {th }}$ century. ${ }^{1}$ For example, in the Indian subcontinent, female babies are considered undesirable as they would require a dowry in order to be married off. Conversely, a male would grow up and upon marrying, would acquire a dowry. Furthermore, male children along with their wives and families are expected to care for the husband's (and not the wife's) parents. ${ }^{2}$

For this reason, in India country alone, it was estimated that by 2006, half a million female foetuses had been aborted annually, resulting in a total deficit (up to 2006) of around 10 million females over the previous two and a half decades. ${ }^{3}$

This preference has been attributed to the Confucian patriarchal tradition that is characterised by strong son preference and female subordination. ${ }^{4}$ Patriarchy thus becomes an "explicit or implicit notion [...] an overarching concept to signify a fundamental power differential between men and women in which women are invariably the victims and men the unnamed perpetrators of gender wrongs". ${ }^{5}$

This bias persists postnatally, into childhood and even into adult life. In the
paediatric age group, this bias depends on traditional family practices and accepted societal norms. ${ }^{6}$

Indeed in South and East Asia, there is a significantly higher female under-5 mortality compared to males, and this is in stark contrast to the rest of the world. ${ }^{7}$ While demographic studies have shown a higher male to female ratio at birth, in the absence of gender discrimination, age-specific mortality is lower among females across all age groups. ${ }^{8}$

For example, excess female mortality was evident in the 'Million Death' China study in all socio-economic and demographic categories and occurs due to gender discrimination in one of three ways: ${ }^{9}$

- Prenatal gendercide
- Differential care and feeding of children
- Differential presentation of children for preventative or curative healthcare by their families.


## Prenatal gendercide

Female infanticide has long been practiced in countries such as China. ${ }^{10}$ Modern and scientifically accurate methods for antenatally determining gender have been available since 1975 with the use of chorionic villous sampling, ${ }^{10}$ Antenatal sexing was later facilitated by non-invasive ultrasound technology. ${ }^{11}$

The efforts to eradicate female babies and children due to son preference has led to a significant number of missing women, particularly in Asia. This was first noted in 1990 and the original estimate claimed that over a hundred million women were "missing". ${ }^{12}$

## Differential care, feeding and healthcare of children

Many studies have shown that in India, hospital inpatient ( $84 \%$ males vs $16 \%$ females) and outpatient ( $65 \%$ males vs $35 \%$ females) attendance was much greater for male than for female children. ${ }^{13}$ Moreover, duration of inpatient stay from admission to death (in fatal conditions) was significantly shorter for female children, probably due to late presentation to hospital. ${ }^{13}$

In India, this bias also extends to vaccination, with female children having lower vaccination rates than male children. ${ }^{14}$ This same study also showed long-term nutritional neglect, even leading in many instances to stunted growth. ${ }^{14}$

The same findings are evident in several Chinese studies where the issue is
exacerbated by the 'one-family, one-child policy. ${ }^{\prime 2}$ This policy began to be enforced in China in 1979 following a government attempt to curb overpopulation. At this time, China contained a quarter of all of humanity on seven percent of the planet's arable land, with two thirds of the population aged under thirty. Inevitably, in a society which prizes males, parents will desire that the single child will be male at any cost.

The policy was enforced by discretionary and widely varying rewards and punishments which included enormous fines, confiscations of belongings and even dismissal from work and forced abortions. In rural areas, a second child was generally permitted only if the first child was female, a further clear acknowledgment of the traditional son preference. ${ }^{8}$

Societal paediatric gender bias extends to similar cultures, including Pakistan, ${ }^{16}$ Bangladesh, ${ }^{17}$ Nepal, ${ }^{18}$ and South Korea. ${ }^{19}$ Sporadic reports of gender bias have also arisen in Egypt, ${ }^{20}$ Tunisia, ${ }^{21}$ Peru, ${ }^{22}$ Chile. ${ }^{23}$

This is in stark contrast to developed countries wherein women account for $85 \%$ of all consumer purchases including $80 \%$ of healthcare expenditure. ${ }^{24}$ This is partly due to the baby-boomers, born between 1946 and 1964, with successful careers, investments made during "boom" years and inheritances from parents or husbands (who they have outlived). They are thus far more financially empowered than any previous generation of women. ${ }^{25}$

## Discussion

India and China alone comprise a third of the world's population, and it is therefore clear that gender bias in paediatric healthcare is widely prevalent.

Gender-based discrimination exists in all healthcare spheres, including medical, surgical and preventive aspects of medicine. Inherent social, deep-rooted prejudices against girls, in large tracts of the world, causes parents and carers to devote less time, energy and financial resources into caring for female than for male children. These biases may be explicit or implicit and are enormously difficult to eradicate.

This has led to a dearth in women and it has been estimated that in Asia alone, the number of missing women is in the region of 163 million. ${ }^{26}$ A European Commissioner responsible for Employment and Social Affairs has quoted unofficial United Nations calculations that "estimate that 200 million females are missing in the world; women
who should have been born or grown up, but were killed by infanticide or selective abortion". ${ }^{27}$

The large number of missing women has led to speculation that antisocial behaviour and violence will rise in affected regions. ${ }^{28}$ For example, in China, unmarried men are known as guanggun (bare sticks). The implication is that such individuals unwittingly become outcast as they are perceived to be somehow threatening to the public order, with overtones of bullying and banditry. ${ }^{5}$

It has been noted that such males are likelier to be attracted to serve in military organizations, potentially threatening global security, especially since this demographic imbalance will occur in global political hotspots. ${ }^{29}$

Historical precedent for such events exists and indeed, it has been noted that male population youth bulges coincided with Europe's imperial expansion after 1500, Japan's imperial expansion after 1914, the Cold War civil uprisings in Algeria, El Salvador, and Lebanon, and the recent rise of Islamist extremism in Muslin countries such Afghanistan, Iraq, and Pakistan. The proposed reason for this is that "third and fourth sons" frequently fail to find prestigious or even meaningful positions in their societies and channel their energies into religious and/or political ideologies. ${ }^{30}$

Developed countries are not immune the effects of gender imbalance in adult life. It has been shown that a male-biased secondary sex ratio (the sex ratio in mature and fertile adults) affects men by influencing them to forego considerations about their future and attempt to access immediate rewards (including becoming indebted) in courtship rituals such as the purchase of engagement rings. ${ }^{31}$

## Conclusion

In Malta, no such inherent or acquired $\mathrm{M} / \mathrm{F}$ imbalances exist. ${ }^{32}$ While the country is experiencing an influx of refugees, mostly from Africa, it is also experiencing an influx of affluent foreigners from all parts of the world. While there is no extant research that attempts to identify inequalities in health care, to this author's knowledge, all such children are admitted and treated in the same ways that a Maltese child would be. However, this should not result in complacency and it is our collective duty as healthcare providers to watch out for and prevent any such inequalities.

Potential solutions in countries and regions where healthcare imbalance continues include strict medical regulation with regard to selective abortion and education at all levels. The latter is crucial and reassurance may be drawn by the trends exhibited in South Korean. This country was in the forefront in the utilisation of sex-selective technology, greatly distorting the country's M/F. ${ }^{33}$ However, by 2007, $M / F$ in this country had dropped to conventionally accepted values, a change attributed to the region's rapid economic growth and development, with a reduced son preference. ${ }^{34}$

## References

1. De Reus LA. Half the Sky: Turning Oppression Into Opportunity for Women Worldwide. J Family Theory \& Rev 2010;2:98-103.
2. Leone T, Matthews Z, Dalla Zuanna G. Impact and determinants of sex preference in Nepal. Int Fam Plan Perspect. 2003;29:69-75.
3. Jha P, Kumar R, Vasa P, Dhingra N, Thiruchelvam D, Moineddin R. Low female[corrected]-to-male [corrected] sex ratio of children born in India: national survey of 1.1 million households. Lancet 2006;367:211-218.
4. Poston D, Zhang I. China's unbalanced sex ratio at birth: How many surplus boys have been born in China since the 1980s? In Tucker J, Poston D eds. Gender Policy and HIV in China: Catalyzing Policy Change. New York: Springer; 2009.
5. Greenhalgh . Patriarchal Demographics? China's Sex Ratio Reconsidered. Pop Dev Rev 2013;38:130-149.
6. Asfaw A, Lamanna F, Klasen S. Gender gap in parents' financing strategy for hospitalization of their children: evidence from India. Health Econ. 2010;19:265-79.
7. World Health Organization. Disease and injury regional estimates-Cause-specific mortality: regional estimates for 2008. WHO Health statistics and health information systems website, 2008.
8. Hesketh T, Xing ZW. Abnormal sex ratios in human populations: causes and consequences. Proc Natl Acad Sci USA. 2006;103:13271-5.
9. Million Death Study Collaborators, Bassani DG, Kumar R, Awasthi S, Morris SK, Paul VK, Shet A, Ram U, Gaffey MF, Black RE, Jha P. Causes of neonatal and child mortality in India: a nationally representative mortality survey. Lancet. 2010;376:1853-60.

## Key points

- In many parts of the world, particularly Asia, male offspring are highly prized over female offspring.
- Societal pressures arising from an ancient Confucian ethic lauds the value of the male over the female.
- Unwanted females are aborted or neglected in childhood, leading to severe genderbased healthcare inequalities.
- Education and improving economic circumstances have been shown to alleviate such gender-based healthcare inequalities.
- We must be eternally vigilant in order to prevent gender-based inequalities or ones based on other dichotomies, such as race.

10. Warren MA. Gendercide: The implications of sex selection. New Jersey: Rowman \& Allanheld. 1985.
11. Hull TH. Recent trends in sex ratios at birth in China. Pop Dev Rev 1990;16: 63-83.
12. Sen A. More Than 100 Million Women Are Missing (20 December 1990). New York Review of Books 1990,37:20.
13. Sachar RK, Verma J, Dhawan S, Prakash V, Chopra A, Adlaka R. Sex bias in health and medical care allocation. Indian J Matern Child Health. 1990;1:63-5.
14. Pande RP.Selective gender differences in childhood nutrition and immunization in rural India: the role of siblings. Demography. 2003;40:395-418.
15. Bulte E, Heerink N, Zhang XB. China's one-child policy and 'the mystery of missing women': ethnic minorities and male-biased sex ratios. 0xford Bulletin Econ Statistics 2011;73:21-39.
16. Nuruddin R, Hadden WC, Petersen MR, Lim MK. Does child gender determine household decision for health care in rural Thatta, Pakistan? J Public Health (0xf). 2009;31:389-97.
17. Rousham EK. Socio-economic influences on gender inequalities in child health in rural Bangladesh. Eur J Clin Nutr. 1996;50:560-4.
18. Pokhrel S, Snow R, Dong H, Hidayat B, Flessa S, Sauerborn R. Gender role and child health care utilization in Nepal. Health Policy. 2005;74:100-9.
19. Chun H, Khang YH, Kim IH, Cho SI. Explaining gender differences in ill-health in South Korea: the roles of socio-structural, psychosocial, and behavioral factors. Soc Sci Med. 2008;67:988-1001.
20. Yount KM. Gender bias in the allocation of curative health care in Minia, Egypt. Popul Res Policy Rev 2003;22:267-95.
21. Obermeyer $C M$, Cárdenas R. Son preference and differential treatment in Morocco and Tunisia. Stud Fam Plann. 1997;28:235-44.
22. Larme AC. Health care allocation and selective neglect in rural Peru. Soc Sci Med. 1997;44:171123.
23. Vega J, Bedregal P, Jadue L, Delgado I. Gender inequity in the access to health care in Chile. Rev Med Chil. 2003;131:669-78.
24. Fox S, Duggan M. Mobile health 2012. Pew Research Center's Internet American Life Project [Internet] 2012.
25. Brown M, Orsborn C. Boom: Marketing to the Ultimate Power Consumer--the Baby Boomer Woman. New York: AMACOM Div American Mgmt Assn. 2006.
26. Guilmoto CZ. Sex-ratio imbalance in Asia: Trends, consequences and policy responses. LPED/IR 2007 Paris:1-12.
27. Diamantopoulou A. Violence against Women: Zero Tolerance. Lisbon, Centro de Congressos de Lisboa, 4-6 May 2000. http://europa.eu/rapid/press-release_SPEECH-00-161_en.pdf
28. Park CB, Cho NH. Consequences of son preference in a low-fertility society - imbalance of the sexratio at birth in Korea. Pop Dev Rev 1995;21:59-84.
29. Hudson V, Den Boer AM. Bare Branches: The Security Implications of Asia's Surplus Male Population. Cambridge: MIT Press; MA. 2004.
30. Heinsohn G. Söhne und Weltmacht. Terror im Aufstieg und Fall der Nationen. Bern: Orell Füssli; 2003.
31. Griskevicius V, Tybur JM, Ackerman JM, Delton AW, Robertson TE, White AE. The financial consequences of too many men: sex ratio effects on saving, borrowing, and spending. J Pers Soc Psychol. 2012;102:69-80.
32. Grech V, Vella C, Vassallo-Agius P, Savona-Ventura C. Gender at birth and meteorological factors. Int J Risk Safety Med 2001;13:221-224
33. Gu B, Roy K. Sex ratio at birth in China, with reference to other areas in East Asia: what we know. Asia Pac Popul J. 1995;10:17-42.
34. Das Gupta M, Chung W, Shuzhuo L. Is There an Incipient Turnaround in Asia's 'Missing Girls' Phenomenon? World Bank Policy Research Working Paper 4846, 2009.

[^0]:    Abstract
    Gender-based discrimination against females is rampant in certain parts of the world. This extends to children and to their care, and occurs mainly in South Asia and China. Bias is widespread and includes inpatient and outpatient healthcare, access to vaccinations and to food, leading to outright neglect. This has led to up to 200,000,000 missing women worldwide. Education and active corrective measures are desperately needed.

