3 Gender inequity in health

Gita Sen and Piroska Östlin[1]

1. Introduction

During the last half century, a great deal of evidence has accumulated based on work in almost all the social sciences and humanities as well as some of the natural sciences about the presence, scope and depth of gender inequality and inequity throughout much of known history and in practically every part of the world. In connection with the tenth anniversary of the Fourth World Conference on Women in Beijing a number of agencies reviewed the evidence on gender and development and found gender inequality to be widely present (Sen, 2006). While its forms vary across time and space and may be blatant or more subtle, the system of gender power that places women in subordinate social positions has been remarkably pervasive and persistent. The consequences of gender power can be felt by women and men in practically every field, and most certainly in health (Lorber, 1997).

[1] This chapter is based on the Final Report of the Women and Gender Equity Knowledge Network (WGEKN) (Sen et al. 2007) of the Commission on Social Determinants of Health. Core members of the Knowledge Network: Rebecca Cook; Claudia Garcia Moreno; Adrienne Germain; Veloshnee Govender; Caren Grown; Afua Hesse; Helen Keleher; Yunguo LIU; Piroska Östlin (Coordinator); Rosalind Petchesky; Silvina Ramos; Sundari Ravindran; Alex Scott-Samuel; Gita Sen (Coordinator); Hilary Standing; Debora Tajer; Sally Theobald; Huda Zurayk.

Gender analysis does not mean simply disaggregating the data by sex and counterposing men's health versus women's health. It requires, instead, an analysis of the power differentials that shape the relations between women and men along multiple dimensions, and hence affect their health. Because women are typically at the subordinate end of these power differentials and tend therefore to be negatively affected by them, gender analysis primarily focuses on the implications for women. This chapter mainly follows this approach. However, reference is also made to the effects of gender power relations on men's health, and also on how this is different from the ways in which gender relations affect women's health. For transgender and intersex people, gender analysis goes further to include the social determinants of gender identity and their consequences for health.

2. Gender as a social determinant of health

While a number of concepts[1] have evolved over the years to provide analytical bases for understanding and action, central to most of them is the role of gender power in organizing relations among people, creating and sustaining unequal values, norms, behaviour and practices, and structuring organizations to reflect and consolidate those same beliefs and relationships. Gender affects people's "functionings" and their capabilities (Sen, 1999). Gender relations operate through processes of *having, being, knowing* and *doing; these processes* differentiate, stratify, subordinate, and place people in hierarchies, and particularly, though not only, in the case of transgender and intersex people, marginalize and exclude them.[2]

Women have less land, wealth and property in almost all societies; yet they have higher burdens of work in the economy of "care" - ensuring the survival, reproduction and security of people, including young and old (Elson, 1993). For example, in Cameroon, Kenya, Nigeria, the United Republic of Tanzania and other countries in sub-Saharan Africa, while women undertake more than 75% of agricultural work they own less than 10% of the land. In Pakistan, women own less than 3% of the land and the situation is no better in the Americas: 11% of land in Brazil, 13% in Peru, 16% in Nicaragua and 22% in Mexico are owned by women (Grown et al., 2005). Girls in some contexts are fed less, educated less, and are more physically restricted; and women are typically employed and segregated in lower-paid, less secure, and "informal" occupations. For example, women's estimated earned income is around 30% of men's in countries surveyed in the Middle East and North Africa, around 40% in Latin America and South Asia, 50% in Sub-Saharan Africa and around 60% in the Central Eastern Europe/Commonwealth of Independent States, East Asian and industrialized countries (ILO, 2006, cited in UNICEF, 2007).

Gender hierarchy governs how people live and what they believe and claim to know about what it means to be a girl or a boy, a woman or a man. Girls and women are often viewed as less capable or able (Summers, 2005), and in some regions they are seen as repositories of male or family

[1] Subordination, discrimination, bias, patriarchy, gender system, hegemonic masculinity to name a few.

[2] Transgender and intersex people are not the only ones to face social exclusion; but the distinction between social exclusion and unequal inclusion is an important one.

honour and the self-respect of communities (Fazio, 2004). Restrictions on their physical mobility, sexuality, and reproductive capacity are perceived to be normal; and in many instances, accepted codes of social conduct and legal systems condone and even reward violence against them. Findings from the WHO multi-country study on women's health and domestic violence showed that the reported lifetime prevalence of physical or sexual partner violence, or both, varied from 15% to 71%, with two sites having a prevalence of less than 25%, seven from 25% to 50%, and six from 50% and 75%. Between 4% and 54% of respondents reported physical or sexual partner violence, or both, in the past year (Garcia-Moreno et al., 2006).

Women are thus seen as objects rather than subjects (or agents) in their own homes and communities, and this is reflected in norms of behaviour, codes of conduct, and laws that perpetuate their status as lower beings and second class citizens.[1] Even in places where extreme gender inequality may not exist, women often have less access to political power and lower participation in political institutions from the local municipal council or village to the national parliament and the international arena. For example, women are under-represented in all national parliaments: in June 2011, they accounted for 19% of parliamentarians worldwide. Nordic countries have the highest rates of participation (41%), followed by the other European countries and the Americas (22%), Sub-Saharan Africa (19%), Asia (18%), the Pacific (12%), and Arab states which rank lowest, with a regional average of less than 12% (Inter-Parliament Union Database, 2011).

While the situation described above is true for women compared with men in general, there can be significant differences among women themselves based on age or life-cycle status, as well as on the basis of factors including economic class, caste, and ethnicity.

A similar general situation to that of women also holds for transgender and intersex people who are often forced to live on the margins of mainstream society with few material assets. They face extreme labour market exclusion which often leaves them with little other than sex-work as a means of survival, and they are often ostracized, discriminated against, and brutalized (IDS Bridge Cutting Edge Pack on Gender and Sexuality).

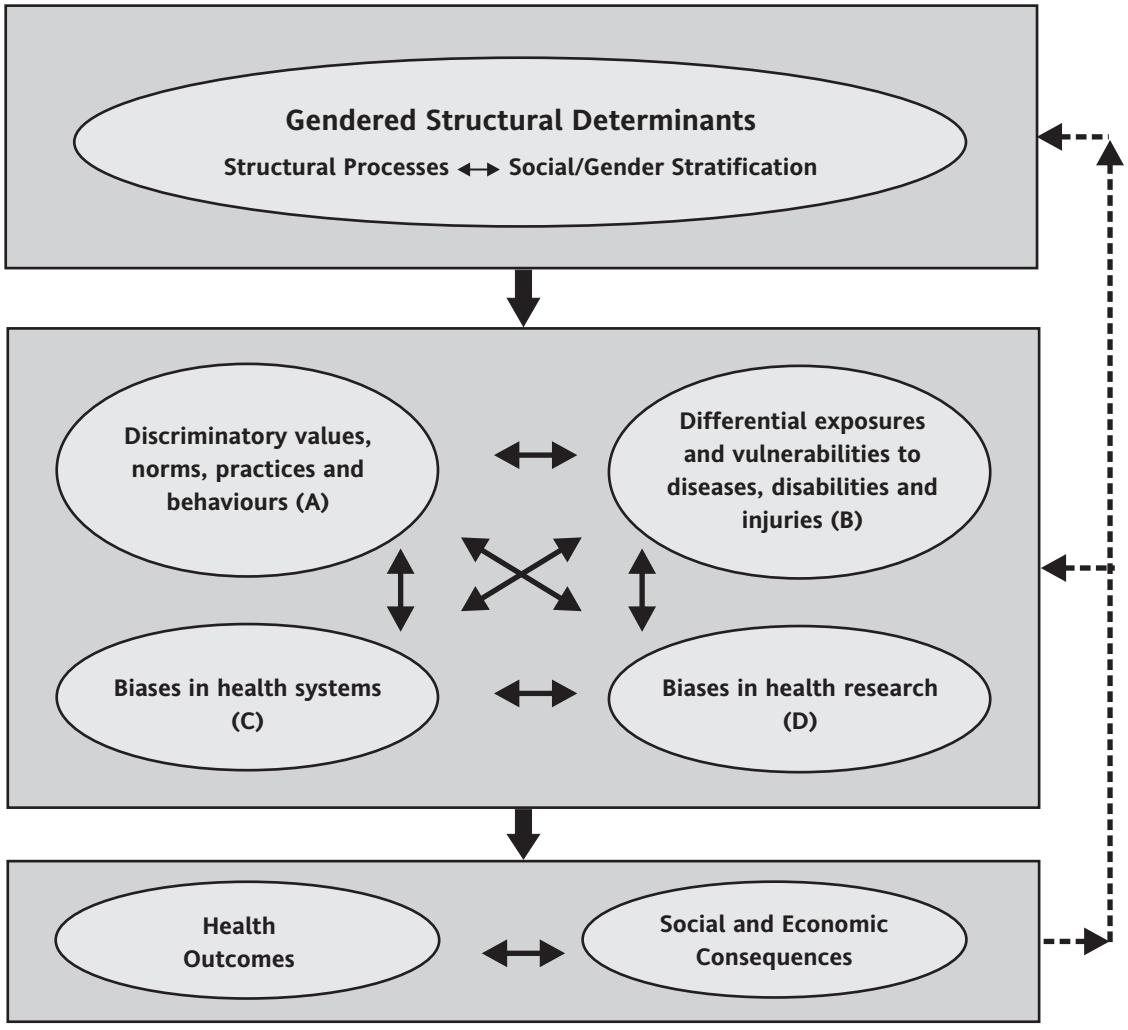
The other side of the coin of women's subordinate position is that men typically have greater wealth, better jobs, more education, greater political power, and fewer restrictions on behaviour. Moreover, men in many parts of the world exercise power over women, making decisions on their behalf, regulating and constraining their access to resources and personal agency, and sanctioning and enforcing behavioural norms through socially condoned violence or the threat of violence. Again, not all men exercise power over all women; gender power relations are intersected by age and life-cycle as well as the other social stratifiers such as economic class, race or caste (Iyer et al., 2008). Poor women and those who belong to subordinated racial or caste groups, for instance, tend to be near the bottom of the social order, bearing multiple burdens of poverty, work load, discrimination and violence. At the same time, gender systems often allow possibilities for some women to exercise

[1] The concept of citizenship has been interrogated and expanded to include not only the public sphere but also politics within the home (Pitanguy, 2002).

power and authority over other women richer over poorer women, older over younger women, for example and even along some dimensions, over poorer men (Sen & Iyer, 2011).

The impact of gender power for physical and mental health of girls, women and transgender/intersex people, and also of boys and men can be profound. It affects health norms and practices, exposures and vulnerabilities to health problems and the ways in which health systems and research respond. While gender systems tend to change slowly, they can sometimes be altered by sudden sharp bursts of social upheaval. The social upheavals set off by the civil rights and women's movements of the 1960s and the intensified focus on a broad human rights agenda at the United Nations conferences of the 1990s have challenged the narrower understanding of human rights that had prevailed until then (Laurie & Petchesky, 2008).

Figure 7: Framework for the role of gender as a social determinant of health



Note: The dashed lines represent feedback effects
Source: Sen and Östlin (2010)

The pathways from the gendered structural determinants to the intermediary factors that determine inequitable health outcomes are summarized in Figure 7. The intermediary factors are discussed in more detail in the following section.

3. Intermediary factors: understanding the pathways

The conceptual framework (Figure 7) proposes several pathways to explain how different factors interact at the individual and collective level to generate inequities that influence the health status of women and men in a given population.

The intermediary factors are broadly four-fold: (A) discriminatory values, norms, practices and behaviours in relation to health within households and communities; (B) differential exposures and vulnerabilities to disease, disability and injuries; (C) biases in health systems; and (D) biased health research. These intermediary factors result in biased and inequitable health outcomes, which in turn can have serious economic and social consequences for girls and boys, women and men, for their families and communities, and for their countries.

(A) Discriminatory values, norms, practices and behaviours in relation to health within households and communities

Gendered norms in health manifest in households and communities on the basis of values and attitudes about the relative worth or importance of girls versus boys and men versus women; about who has responsibility for different household/community needs and roles; about masculinity and femininity; who has the right to make different decisions; who ensures that household/community order is maintained and deviance is sanctioned or punished; and who has final authority in relation to the inner world of the family/community and its outer relations with society (Quisumbing & Maluccio, 1999).

Gender-biased values translate into practices and behaviour that affect people's daily lives, as well as key determinants of wellness and equity such as nutrition, hygiene, acknowledgement of health problems, health-seeking behaviour, and access to health services. Health equity and wellness can be affected through the preferred sex of children, and practices surrounding coming of age and menarche, adolescence, sexuality and marriage, childbirth, widowhood and divorce. Many, though not all, of these practices are in the areas of sexuality, biological reproduction and the life-cycle.

Worsening sex-ratios and the problem of so-called "missing women", especially in parts of East and South Asia, due to preference for sons has been well documented (Sen, 1992; Croll, 2002; Banister, 2004). It is estimated that 60 million girls are missing in Asia (UNFPA, 2007). The pressure to bear sons has led to increasing use of ultrasound technologies followed by second trimester abortions that can carry significant risks for the pregnant woman. Drastic declines in female:male sex ratios have resulted in kidnapping, forced marriages, and trafficking in girls and women. In South Asia, these practices have worsened in recent decades with rising aspirations for consumption (linked to economic globalization and growth), and growing prevalence and intensification of the use of dowry as a means to meet those aspirations (Klase & Wink, 2003; WHO, 2011).

Adolescence is, almost everywhere, the time when masculine and feminine roles are strongly defined, with boys being groomed for independence, strength and authority, while girls are trained to suppress their capacities and abilities.

> These social norms create the conditions in which some young and adult men (in the family or outside of it) sexually abuse girls or use physical violence against them, the preference by some adult men for younger female sexual partners, and the practice of sexual coercion by too many men and boys against girls (Barker, 2006).

Practices around sexuality sometimes include ritual (and painful) "deflowering" of brides, and sanctioned marital rape. They are also among the most punitive of deviance from the social norm by women, subordinate castes/races, or lesbian, gay, bisexual, transgender people. At least since the UN conference on Human Rights in Vienna in 1993, "honour" killings and other forms of violence on the basis of sexuality are increasingly recognized as such in the global arena.

Childbirth practices that affect the survival of infants and mothers are among those that have been most extensively documented, yet the links between maternal nutrition and well-being and infant survival have not yet been effectively translated into policy. Maternal mortality itself has undergone many policy ups and downs and these have made the problem impervious to multiple policy initiatives (Sen, Govender & Cottingham, 2007).

Widowhood, in many societies, is a time of greater impoverishment and weaker financial capacity to address health needs, along with other practices that may demean or subordinate women (Chen et al., 2005). For example research in Kenya revealed significant violations of widows' human rights, especially in HIV affected households, including through property grabbing and

> ...customary practices of wife inheritance and ritual cleansing, the latter involving a short-term or one-time sexual liaison with a man paid to have sex with the widow to cleanse her of evil spirits thought to be associated with her husband's death (Human Rights Watch, 2003). In the latter two cases, women are granted conditional access to their homes and property in exchange for enduring these practices which are often conducted without condoms, presenting new risks for further spread of HIV" (ICRW, 2004).

Norms around masculinity not only affect the health of girls and women but also of boys and men themselves. Research with men and boys in various settings worldwide has shown how inequitable and rigid gender norms influence the way men interact with their intimate partners on a wide range of issues, including HIV and sexually transmitted infection (STI) prevention, contraceptive use, physical violence (both against women and between men), domestic chores, parenting and men's health-seeking behaviours (Barker & Ricardo, 2005). A global systematic review of factors shaping young people's sexual behaviour confirmed that gender stereotypes and differential expectations about what is appropriate sexual behaviour for boys compared to girls were key factors influencing the sexual behaviour of young people (Marston & King, 2006).

> These and other studies affirm that both men and women are placed at risk by specific norms related to masculinity. In some settings, for example, being a man means being tough, brave, risk-taking, aggressive and not caring for one's body. Men's and boys' engagement in some risk-taking behaviours, including substance abuse, unsafe sex and unsafe driving may be seen as ways to affirm their manhood. Norms of men and boys as being invulnerable also influence men's health-seeking behaviour, contributing to an unwillingness to seek help or treatment when their physical or mental health is impaired. In sum, prevailing notions of manhood often increase men's own vulnerability to injuries and other health risks and create risks for women and girls (Barker, Ricardo & Nascimento, 2007).

Challenging gender norms, especially in the areas of sexuality and reproduction touch the most intimate personal relationships as well as a person's sense of self and identity. No single or simple action or policy intervention can therefore be expected to provide a panacea for the problem. Targeting women and girls is a sound investment but outcomes are dependent on integrated approaches and the protective umbrella of policy and legislative actions (Keleher & Franklin, 2008). Multi-level interventions are needed, including three sets of actions: (1) creating formal agreements, codes and laws to change norms that violate women's human rights, and then implementing them; (2) adopting multi-level strategies to change norms including supporting women's organizations; and (3) working with boys and men to transform masculinist values and behaviour that harm women's health and their own.

(B) Differential exposures and vulnerabilities to disease, disability and injuries

In a wide range of countries male survival at all ages is inferior to that of females and this is reflected in lower life expectancy for men. However, there are also a number of countries such as Bangladesh, Tonga, Afghanistan, Nepal, Malawi, Benin, Botswana, Cameroon, the Central African Republic, Kenya, the Niger, Nigeria, Pakistan, Qatar, Tuvalu and Zambia where women's life expectancy is either lower or equal to that of men (WHO, 2006). Even where men die earlier than women, most studies on morbidity from both high- and low-income countries show higher rates of illness among women. Thus, women's potential for greater longevity rarely results in their being or feeling healthier than men during their lifetimes. This so-called "gender paradox" (Danielsson & Lindberg, 2001) and the ways in which biological and social determinants interact to produce it are not yet fully understood, but there is a growing body of evidence about health differences between men and women.

Male-female differences in health vary in magnitude across different health conditions. The Global Burden of Disease estimates for 2002 (WHO, 2003a) indicate that 68 out of the 126 health conditions have at least a 20% difference between women and men. These numbers suggest that male-female differences in health are widespread (Snow, 2008). One area where differences exist is in health conditions and risks directly related to reproduction. Other areas where women lose more disability-adjusted life years (DALYs) than men, as indicated by female:male ratios, include those related to eye sight (e.g. trachoma, cataract, age-related vision disorders, glaucoma), migraine, mental health (e.g. post-traumatic stress disorder, panic disorder, unipolar depressive disorder,

insomnia, obsessive compulsive disorder), muscle and bone strength (e.g. rheumatoid arthritis, osteoarthritis, other musculoskeletal disorders, multiple sclerosis), ageing (e.g. Alzheimer and other dementias), nutrition (e.g. other nutritional disorders, iron-deficiency anaemia, vitamin A deficiency) and burns (Snow, 2008).

Areas where men lose more DALYs than women, as indicated by male:female ratios, include those related to excess consumption (e.g. gout, alcohol use disorder, drug use disorder, lung cancer, oral and oropharyngeal cancers, liver cancer, oesophageal cancer, stomach cancer, cirrhosis of the liver, ischemic heart disease, peptic ulcer disease), infectious diseases (e.g. lymphatic filariasis, hepatitis B, trypanosomiasis, tuberculosis, schistosomiasis, leprosy, leishmaniasis, onchocerciasis) and deaths or injuries caused by drowning, falls and road traffic accidents. In addition, there are extreme consequences from violent individual or collective practices and behaviours (e.g. war, violence, other intentional injuries, poisoning, and self-inflicted injury) (Snow, 2008).

Male-female differences in health vary in magnitude across different health conditions. Some health conditions are determined primarily by biological sex differences. Others are the result of how societies socialize women and men into gender roles supported by norms about masculinity and femininity, and power relations that accord privileges to men, but which adversely affect the health of both women and men. Risk and vulnerability have to be understood, not only in bio-medical terms, but in social terms.

An important difference in the way in which gender roles and norms affect women's versus men's health is that women rarely have any control over them, while male ill-health is more likely to result from men's own behaviour, e.g., rash driving or excessive alcohol consumption. Globally, 2.7 times as many men as women die from road traffic injuries. Males are not only more likely than females to drive after they have been drinking, but when simulated driving was evaluated among 18-year-olds who had their blood alcohol raised experimentally, girls drove more cautiously as they became more inebriated, while boys became more reckless (Snow, 2008; Oei & Kerschbaumer, 1990).

Violence against women is another consequence of "macho" behaviour and the epitome of unequal power relationships between women and men (Garcia-Moreno, 2002). While causes of violence are multiple and interlinked, gender inequity and norms of masculine behaviour that sanction violence include the gendered effects of poverty, low education, and alcohol consumption. The health consequences of violence against women are many: death and injuries ranging from cuts, bruises to permanent disabilities, STIs, HIV infection and AIDS, unwanted pregnancy, gynaecological problems, miscarriage, stillbirth, chronic pelvic pain and pelvic inflammatory disease, depression, post-traumatic disorder, and others (WHO, 2005; ARROW, 2005; Campbell, 2002; Astbury, 2002; Gielen et al., 2000; Coker et al., 2000; Letourneau, Holmes & Chasedunn-Roark, 1999).

Smoking is an area where men have traditionally borne the bulk of the health effects. Globally, women comprise about 20% of the world's more than 1 billion smokers (Haglund, 2010). However, with considerable gendered marketing by the cigarette companies,[1] smoking is seen as both an

[1] For example, Virginia Slim's ad targeting the emancipated woman...*You've come a long way baby*!

emancipating and coping strategy for women and this gender shift is most notable among the young. Data from 151 countries show that about 7% of adolescent girls smoke cigarettes as opposed to 12% of adolescent boys. In some countries, almost as many girls smoke as boys (WHO, 2009). Future projections of tobacco-related deaths must consider these changing gender trends in smoking[1] (Snow, 2008; WHO, 2003b).

The workplace is another critical arena determining gendered health differentials. The gendered division of labour, exemplified by the allocation of specific tasks to men and women is extensive and pervasive in all countries, regardless of level of development, wealth, religious orientation or political regime.[2] These factors negatively affect women's social position relative to men's and the resulting inequities contribute to gender inequities in health (Messing & Östlin, 2006; Östlin, 2002a; Östlin, 2002b).

In terms of health hazards in the workplace, both in high- and low-income countries, work-related fatalities are more common among men, due to the fact that men work in environments with greater risk for accidents, e.g. transportation, mining, fishing and fire fighting (Laflamme & Eilert-Petersson, 2001; Islam et al., 2001). Nonetheless, women's occupational health hazards are not insignificant. Evidence mainly from high-income countries suggests that women more than men are engaged in work characterized by considerable demands and little control, with highly repetitive movements and awkward postures, often facing intense exposure to the public (Messing, 2004; Östlin, 2002a; Östlin, 2002b). For example, women are the majority of those involved in lower levels of health care, which involves higher risks of infection (e.g. from biological agents in hospitals, needle injuries), violence, musculoskeletal injuries and burnout (WHO, 2002; Mayhew, 2003; Aiken et al., 2002; Josephson et al., 1997).

The few studies that exist for developing countries show that, for example, in *maquiladoras*[3] in Latin America, women are exposed to chemicals, ergonomic hazards, noise and stress (Cedillo Becerril et al., 1997). Among women, 17% had a cumulative trauma disorder diagnosed on physical examination (Meservy et al., 1997), with almost twice as many women as men reporting such disorders. Where access to safe water and sanitation does not exist, women are at higher risk of water-borne diseases when washing laundry and utensils in affected canals (Watts, 2004). Women cooking on open stoves not only are at risk of burns, but are at high risk of illness due to smoke pollution, as was found in India (Mishra et al., 1999) and Guatemala (Albalak et al., 2001). In

[1] There are differences in the biology of male and female lungs, such that an equivalent exposure to nicotine does greater damage to the female This underlying sex difference in vulnerability may contribute to the convergence of lung cancer rates (i.e. more cancer for less smoke among women), but changes in smoking patterns account for the majority of the convergence (Snow, 2008).

[2] Messing and Östlin (2006) found that women in general face unequal hiring standards, unequal opportunities for training, unequal pay for equal work, unequal access to productive resources, segregation and concentration in female sectors and occupations, different physical and mental working conditions, unequal participation in economic decisions-making, and unequal promotion prospects.

[3] A *maquiladora* is a factory that imports materials and equipment on a duty-free and tariff-free basis for assembly or manufacturing and then re-exports the assembled product usually back to the originating country. Most of these are on the Mexican side of the border between Mexico and the United States.

developing countries, nearly 2 million poor women and children die annually from exposure to indoor air pollution caused by smoke from cooking fuels. Many more suffer from acute and chronic respiratory infections (Smith, Metha & Maeusezahl-Feuz, 2004).

Unlike some other social determinants, it is impossible to ignore biology when considering why health outcomes for women and men may be different. The complex interplay between sex (as a biological factor) and gender (as socially shaped) is one that has to be disentangled in tracing causality. For example, young women worldwide between the ages of 15 and 24 are 1.6 times as likely as young men to be HIV-positive. In sub-Saharan Africa, approximately 6.2 million young people are infected, 76% of whom are females (UNAIDS, 2004, 2006). In sub-Saharan Africa and the Caribbean, young women are 3 times and 2.4 times, respectively, more likely than men to be HIV-positive. In Trinidad and Tobago, the number of women between 15 and 19 years old with HIV is 5 times higher than among adolescent males (UNICEF, 2003). In Swaziland, HIV prevalence among pregnant women attending antenatal clinics rose from 4% in 1992 to 43% in 2004 (UNAIDS, 2006). How much of women's greater vulnerability to HIV infection is due to female biology, and how much can be attributed to girls' and women's lack of power in sexual relationships? Understanding the roles that biological difference and social bias play is important to understanding differential exposure and vulnerability. However, analyses of gender and health are currently undermined by conflation of sex and gender in much of the epidemiologic and clinical literature, thus precluding any meaningful reflection on the contributions of genetics versus gendered socialization to health vulnerabilities (Snow, 2008).

Where biological sex differences interact with social determinants to define different needs for women and men in health, policy efforts must address these different needs. Significant advocacy is required to raise attention and sustain support for other services that address the specific health needs of poor women, and those in low-income countries, thereby reducing their exposure and vulnerability to unfavourable health outcomes. Not only must neglected sex-specific health conditions be addressed, but sex-specific needs in health conditions that affect both women and men must be considered, so that treatment can be accessed by both women and men without bias. Two intertwined strategies to address social bias are tackling the social context of individual behaviour, and empowering individuals and communities for positive change. Strategies that aim at changing high risk life-styles would be more effective if combined with measures that could tackle the negative social and economic circumstances (e.g. unemployment, sudden income loss) in which the health damaging life-styles are embedded. Individual empowerment linked to community level dynamics is also critical in fostering transformation of gendered vulnerabilities. For strategies to succeed, they must provide positive alternatives that support individuals and communities to take action against the status quo.

(C) Gendered politics of health systems

Evidence suggests that health care systems may in many ways fail to achieve gender equity from the perspective of women as both consumers (users) and producers (carers) of health care services.

Women as consumers of health care

Women in most places need more health services than men. A large part of this additional need can be attributed to women's use of preventive services for contraceptives, cervical screening, and other diagnostic tests (Gijsbers van Wijk, van Vliet & Kolk, 1996), but it can also be attributed to an excess of female health problems (for example musculoskeletal disorders) that are not caused by reproductive morbidity. Although in low-income countries reproductive problems and other chronic diseases play a large role in explaining gender differences in health, women may also have less access to health care services than men (Puentes-Markides, 1992) due to a series of barriers at the individual, familial, and community levels that stand between women and their access to health care.[1] The principal barriers are the following:

(1) Women themselves, their families and health care providers need to be *aware* of the existence of a health problem. They may look upon health problems, such as chronic pain, depression and reproductive tract infections, as normal or natural aspects of women's biology or everyday activities (Iyer, 2005).

(2) Women may refuse to *acknowledge* the health problem by choosing to remain silent if they fear adverse reactions from the family, community and health care providers. For example, adolescent girls in Koppal, India (Iyer, 2005) or young women with TB in the Socialist Republic of Viet Nam (Long et al., 2001) do not publicly acknowledge their health problems, because it would lead to poorer chances for marriage.

(3) Even when women and their families *acknowledge* the need for treatment, *social and financial barriers* may be encountered before health care can be utilized (Iyer, 2005). In some places, because of discrimination within the household, granting preferential allocation of resources to male health needs or requiring consent from partners or other family members, girls are likely to receive less expensive and more home-based care than boys (Lane, 1987) and are also more likely to suffer from outright neglect of their health needs than boys (Ahmed et al., 2000).

Physical and economic barriers may also prevent women from accessing health services, due to long distances to health facilities and lack of transportation, user fees or lack of private/public insurance coverage. For example, out-of-pocket expenditures for public and private health care services, drive many families into poverty, especially in developing countries (Krishna, Kapila & Pathak, 2004). This situation has been termed the “medical poverty trap” (Whitehead, Dahlgren & Evans, 2001). Under-the-counter payments, referring patients from the public service to their own private clinic, making patients pay for drugs and supplies that should be provided free, recommending unnecessary interventions which they can charge for are examples of abusing users

[1] The unwillingness to acknowledge health problems may occur also among men in both low- and high-income settings. Masculine norms of men and boys as being invulnerable may influence their health seeking behaviour, contributing to unwillingness to seek help or treatment when their physical or mental health is impaired (Barker et al., 2007).

of services, sometimes contributing to maternal deaths (Parkhurst & Rahman, 2007; George, Iyer & Sen , 2005).

(4) Women in some cultures are *reluctant to use health services* because respect, privacy, confidentiality and information about treatment options are not ensured by the often overworked, underpaid and gender-insensitive health care providers (George, 2007; Govender & Penn-Kekana, 2008). There is growing evidence on how women (and men) may be abused by care providers physically, verbally and economically (Govender & Penn-Kekana, 2008), as well as a large literature on the physical abuse by health care workers of women undergoing labour (Freedman, 2005). Verbal abuse of women seems often to be linked to health care workers presuming that women have "violated" roles and behaviours that are seen as appropriate for them, and to health care workers taking out their own frustrations on patients (Kim & Motsei, 2002).

In highly patriarchal societies, socio-cultural and/or religious norms and practices restrict social and physical contact between women patients and male care providers (Govender & Penn-Kekana, 2008; Holroyd, Twinn & Adab, 2004; Rizk et al., 2005). In many cultures, women are reluctant to consult male doctors. For example, women seeking antenatal care in Saudi Arabia and Thailand strongly preferred female doctors (Nigenda et al., 2003). The lack of female medical personnel itself- a reflection of gender bias in educational opportunity - is an important barrier to utilization of health services for many women (Zaidi, 1996).

Women as health providers

A majority of the health work force at large (i.e. physicians, nurses, community health workers, etc.) is female, and the contributions of women to formal and informal health care systems are significant (George, 2008; Gupta et al., 2003; JLI, 2004; Ogden, Esim & Grown, 2006; Schindel J, 2006; WHO, 2006). But it is undervalued and unrecognised, partly due to unavailability of sex disaggregated data on the care economy.

Female carers in the health system are less likely to occupy positions that involve decision making and more likely to become unemployed than male counterparts (De Koninck, Bergeron & Bourbonnais, 1997; Fox, *Schwartz & Hart*, 2006; Kassak et al., 2006; Magrane, Lang & Alexander , 2005; Mayorova et al., 2005). Many studies have shown that women are often expected to conform to male work models that ignore their special needs, such as childcare or protection from violence. A study in the United States of America revealed that more female doctors than male doctors are found in specializations where taking care of family responsibilities are more accepted (De Koninck, Bergeron & Bourbonnais, 1997). Women more often than men have to work part-time in order to be able to combine gainful employment with family responsibilities (Fox, *Schwartz & Hart*, 2006; George, 2007; Mayorova et al., 2005). A meta-analysis of studies on physicians' suicides has revealed highly elevated suicide risk among female doctors (Schernhammer & Graham, 2004).

Community health workers may be subjected to violence in some settings (George, 2008). For example, studies in Pakistan (Mumtaz et al., 2003) and India (George, 2007) revealed that female

community health workers have reported often being harassed when they are on their way to or performing work. The fear of being exposed to physical or sexual violence en route makes them hesitant to attend to the obstetric needs of patients at night.

Home carers have been estimated to provide up to 80% of all health care and 90% of HIV/AIDS related illness care (Uys, 2003). In the context of the HIV/AIDS epidemic, it is generally recognized that women and girls are the principal caregivers and bear the greatest degree of responsibility for the psychosocial and physical care of family and community members (Ogden, Esim & Grown, 2006). However, home carers remain unsupported and unrecognized by the health sector and policy makers. There are documented health effects on these caregivers. Female home caregivers in Japan had higher scores for work burden and depression than their male counterparts (Sugiura, Ito M & Mikami, 2004) and in Chile, home caregivers reported insomnia, stress, stomach ailments, over-sensitivity, anxiety, sadness, depression, loneliness, anguish and worry (Reca, Alvarez & Tijoux, 2002).

Absence of effective accountability mechanisms for available, affordable, acceptable and high quality health services and facilities may seriously hinder women and their families from holding government and other actors accountable for violations of their human right to health. The recent review by Govender and Penn-Kekana (2008) argues that gender biases and discrimination occur at many levels of the health care delivery environment and affect the patient-provider interaction. Ensuring good interpersonal relationships between patients and providers an important marker of quality of care requires a broader approach of gender-sensitive interventions at multiple levels of policies and programmes.

Health sector reforms can have fundamental consequences for gender equality and for people's lives and well-being, as patients in both formal and informal health care, paid and unpaid care providers, health care administrators and decision makers. However, health sector reforms implemented in many countries have tended to focus on their implications for the poor. Their consequences for gender equity in general, and particularly in health care, have seldom been discussed or taken into consideration in planning (PAHO, 2001). Key reform measures, such as decentralization, financing, privatization of services and priority-setting methodologies may differentially affect women and men due to the positions they occupy in society, the different roles they perform, and the variety of social and cultural expectations and constraints placed on them (Östlin, 2005). For example, decentralization can inadvertently support more conservative agendas in reproductive health, particularly in services for adolescents (Aitken, 1999). Furthermore, a range of gender biases have been revealed in some priority setting methodologies for reform, such as DALYs, which lead to the underestimation of women's burden of disease. These systematic gender biases are generated through various technical and conceptual limitations (Hanson, 2002). Not surprisingly, health sector reform strategies, policies and interventions introduced during the last two decades have had limited success in achieving improved gender equity in health (Batthyany & Correa, 2010).

Minimizing gender bias in health systems requires systematic approaches to building awareness and transforming values among service providers; steps to support improvements in (especially poor) women's access to services; recognition of women's role as health care providers;

and building accountability for gender equality and equity into health systems, and especially in ongoing health reform programmes and mechanisms.

(D) Health research

Gender discrimination and bias not only affect differentials in health needs, health seeking behaviour, treatment, and outcomes, but also permeate the content and the process of health research (Sen, George & Östlin et al., 2002; Östlin, Sen & George et al., 2004; Theobald, Nhlema Simwaka & Klugman et al., 2006).

Research content: Gender imbalances in research content include the following dimensions:

***Slow recognition of health problems that particularly affect women**:* For example, it is only within the past decade or so that serious research into the prevalence of reproductive tract infections and the health consequences of domestic violence has occurred (Garcia-Moreno, 2002). The lack of research is obvious also in areas concerning menstruation and non-lethal chronic diseases that affect women disproportionately, such as rheumatism, fibromyalgia, and chronic fatigue syndrome (Doyal, 1995).

***Misdirected or partial approaches to women's and men's health needs in different fields of health research**:* Occupational health research and safety regulations are mainly focused on health hazards in formal employment, where men predominate. Thus, research has long ignored the problems of indoor air pollution and smoke-filled kitchens, factors that are critical to the health of poor women in the developing world (Smith & Maeusezahl-Feuz, 2004; Albalak et al., 2001). Misdirected or partial approaches may also affect men. Because of gender stereotyping, reproduction is viewed as women's domain, resulting in a neglect of study on male reproductive health problems related to occupational exposures (Varga, 2001). Nonetheless, many chemicals, ionizing radiation, toxic contamination, high temperatures and sedentary work have been identified as hazardous to the male reproductive system (Bonde & Storgaard, 2002). Similarly, mental health research often ignores the role of reproduction in relation to men's mental health (Astbury, 2002).

***The lack of recognition of the interaction between gender and other social factors**:* Little attention is being paid in health research to the interaction between gender and other social stratifiers, such as socioeconomic class, race, ethnicity or sexual orientation (Sen & Iyer, 2011). Like co-morbidity, these causal interactions make problems more complex and require more intensive research efforts. A positive example of such efforts is in the area of HIV/AIDS. There was recognition relatively early on that women were especially vulnerable because of genderpower inequities, which are often related to the economic inequities between men and women (Smith, 2002; Turmen, 2003). While there has been research on this, particularly in Africa, much more attention needs to be paid to this issue in other parts of the world.

Research process: Gender imbalances in research process include the following dimensions:

***Data*:** Health data in individual research projects and in national and regional data systems is still not systematically collected or disaggregated by sex. The reliability of data when collected in the

home or community and through records of health service providers is sometimes questionable in societies where gender biases exists in health-seeking behaviour, or where social norms whereby women are expected to suffer silently prevail. For example, several studies suggest that prevalence rates of tuberculosis in women may be under-estimated (Thorson & Johansson, 2004; Thorson, Long & Larsson, 2007, Thorson & Diwan, 2001; Begum et al., 2001; Johansson et al., 2000).

One good example of recording sex-disaggregated, gender-sensitive and gender-specific health data comes from Malaysia. In 2000, the Asian-Pacific Resource & Research Centre for Women (ARROW) published *A Framework of Indicators for Action on Women's Health Needs & Rights after Beijing* (ARROW, 2000). This publication was developed as a tool for all government, non-government and international organizations to use in monitoring implementation of the Beijing Platform for Action. Another good practice comes from Sweden, where every year since 1994, the annual Statement of Government Policy has declared that a gender equality perspective must permeate all aspects of government policy (Swedish Institute, 2004). At the national level in Sweden, one of the main measures that have been taken to integrate a gender perspective into every policy area, including health research, is that all official statistics should be sex-disaggregated.

The importance of having good quality data and indicators for health status disaggregated by sex and age from infancy through old age cannot be overstated. Gender-sensitive and human rights-sensitive country-level indicators are essential to guide policies, programmes and service delivery; without them, interventions to change behaviours or increase participation rates will operate in a vacuum.

Gender-sensitive methodologies*:* Research methodologies are not always sensitive enough to capture the different dimensions of disparity. For example, a study comparing the utility of active and passive case-finding methods for tuberculosis[1] in Nepal found that females made up 28% of the 159 TB cases who came to the clinic, whereas with active case-finding the percentage of female TB cases detected rose to 46% of 111 cases identified (Cassels et al., 1982). There are a number of evaluated tools available today for counteracting methodological biases. For instance, the *BIAS FREE* Framework[2] is an innovative tool designed to provide a unified approach to detect methodological and other types of biases that derive from *any and all* social hierarchies. The Framework identifies three major forms of bias maintaining hierarchy, failing to recognize differences and using double standards and employs a set of 20 analytical questions to alert users to its presence in research (Eichler & Burke, 2006).

Representation of women and men in clinical trials*:* Research results based on studies of male subjects are seen as universally valid and applicable to women, which is not always the case. In response to critics, efforts have been made to include more women in relevant clinical trials and pharmaceutical research. In 1993, the National Institutes of Health Revitalization Act in the United States required the inclusion of women and minority groups in all human subject research, except

[1] Active case finding is looking systematically for cases of active tuberculosis, rather than waiting for people to develop symptoms of the disease and present themselves for medical attention (passive case finding).

[2] BIAS FREE is an acronym for Building an Integrative Analytical System For Recognizing and Eliminating InEquities.

when it is inappropriate to the purpose of the research or the health of the subjects (Mastroianni, Faden & Federman, 1994). Similar measures have been implemented in many other countries (Caron, 2003).

Gender balance in research communities, ethical committees, and in research funding and advisory bodies*:* The gender imbalance in ethical committees, research funding and advisory bodies, and the differential treatment of women scientists have been acknowledged as contributing factors to gender bias in research (Wennerås & Wold, 1997; Park, 2002). There is also growing evidence of differential treatment of female scientists in terms of career opportunities, salary and as applicants for research funds. It has been shown that female applicants for post-doctoral fellowships in Sweden had to be 2.5 times more productive than their male colleagues to obtain the same peer review rating for scientific competence (Wennerås & Wold, 1997).

4. What can be done?

Gender inequity damages the physical and mental health of millions of girls and women across the globe, and also of boys and men despite the many tangible benefits it gives men through resources, power, authority and control. Because of the numbers of people involved and the magnitude of the problems, taking action to improve gender equity in health and to address women's rights to health is one of the most direct and potent ways to reduce health inequities and ensure effective use of health resources. Deepening and consistently implementing human rights instruments can be a powerful mechanism to motivate and mobilize governments, people and especially women themselves.

Remove the organizational "plaque"[1]

Many of the organizational structures of government and other social and private institutions through which gender norms and practices need to be confronted have been in existence for decades, even centuries. Thickly encrusted with traditional (i.e. male-dominated) values, relationships, and methods of work, it is naive to expect these same structures to automatically deliver gender equality and equity. Working towards gender equality challenges longstanding power structures, and patriarchal social capital (“old boys' networks”) within organizations. It crosses the boundaries of people's comfort zones by threatening to shake up existing lines of control over material resources, authority, and prestige. It requires people to learn new ways of doing things about which they may not be very convinced and from which they see little benefit to themselves, and to unlearn old habits and practices. Resistance to gender-equal policies may take the form of trivialisation, dilution, subversion or outright resistance, and can lead to the evaporation of gender-equitable laws, policies or programmes.

[1] Plaque here refers to a strong buildup and encrustation of material that is difficult but essential to remove, e.g. removal of dental plaque is essential for optimal oral health.

Tackling this requires effective political leadership, well designed organizational mandates, structures, incentives and enforceable accountability mechanisms. It also requires actions to empower women and women's organizations so that they can collectively press for greater accountability for gender equality and equity. Murthy (2008) observes that four kinds of accountability mechanisms - human rights instruments, legislation, governance structures and other tools have been used by citizens to press for accountability on gender and health. Among other things, Murphy recommends that accountability strategies should be extended to the private health sector and donors; that resources should be earmarked to respond to gender specific health needs and that mechanisms for enforcement of policies should be improved. In their paper on gender-mainstreaming in health, Ravindran and Kelkar-Khambete (2008) argue that the gap between intention and practice is large. This can be attributed to depoliticising and de-linking of gender mainstreaming from social justice agendas; top-down approaches; hostility within the global policy environment to justice and equity concerns; privatisation and retraction of the state's role in health.

Seven approaches that can make a difference:[1]

1. Address the essential structural dimensions of gender inequity

- Transform and deepen the normative framework for women's human rights and achieve them through effective implementation of laws and policies along key dimensions.
- Ensure that resources for, and attention to access, affordability and availability of health services are not damaged during periods of economic reforms, and that women's entitlements, rights and health, and gender equality are protected and promoted.
- Support through resources, infrastructure and effective policies/programmes the women and girls who function as the "shock absorbers" for families, economies and societies through their responsibilities in caring for people, and invest in programmes to transform both male and female attitudes to caretaking work so that men begin to take an equal responsibility in such work.
- Equip and empower women, particularly through education, so that their ability to challenge gender inequity individually and collectively is strengthened.
- Increase women's participation in political and other decision-making processes from household to national and international levels so as to increase their voice and agency.

2. Challenge gender stereotypes and adopt multilevel strategies to change the norms and practices that directly harm women's health

- Create, implement and enforce formal international and regional agreements, codes and laws to change norms that violate women's rights to health.

[1] These policy recommendations were submitted to the WHO Commission on Social Determinants of Health, in September 2007, as part of the Final Report of the Women and Gender Equity Knowledge Network (Sen et al., 2007).

- Work with boys and men through innovative programmes for the transformation of harmful masculinist norms, high risk behaviours, and violent practices.

3. Reduce the health risks of being women or men by tackling gendered exposures and vulnerabilities

- Meet women's and men's differential health needs. Where biological sex differences interact with social determinants to define different needs for women and men in health, policy efforts must address these different needs. Not only must neglected sex-specific health conditions be addressed, but sex-specific needs in health conditions that affect both women and men must be considered, so that treatment can be accessed by both women and men without bias.

- Tackle social biases that generate differentials in health-related risks and outcomes. Where no plausible biological reason exists for different health outcomes, policies and actions should encourage equal outcomes. More comprehensive policies are required that balance working lives with family commitments. Domestic work, including care for other family members, needs to be acknowledged as work and work-related health risks need to be addressed regardless the location of the workplace. Family leave policies must mandate that men share these responsibilities with women. Social insurance systems must ensure that even those who may not have had formally recognized and remunerated occupations are also protected when not working or ill.

- Address the structural reasons for high-risk behaviour. Strategies that aim at changing health damaging lifestyles of men (or women) at the level of the individual are important but they can be much more effective if combined with measures to change the social environment in which these lifestyles and behaviours are embedded. These measures should tackle the negative social and economic circumstances (e.g. unemployment, sudden income lost) in which the health damaging lifestyles are embedded.

- Empower people and communities to take a central role in these actions. For strategies to succeed they must provide positive alternatives that support individuals to take action against the current status quo, which may be either gender blind or gender biased.

4. Transform the gendered politics of health systems by improving their awareness and handling of women's problems as both producers and consumers of health care, improving women's access to health care, and making health systems more accountable to women

- Provide comprehensive and essential health care, universally accessible to all in an acceptable and affordable way; ensure that user fees are not collected at the point of access to the health service, and prevent women's impoverishment by enforcing rules that adjust user fees to women's ability to pay; offer care to women and men according to their needs, their time and other constraints.

- Develop skills, capacities and capabilities among health professionals at all levels of the health system to understand and apply gender perspectives in their work.

- Recognize women's contributions to the health sector, not just through formal, but also informal care. Women as health providers in auxiliary, volunteer and informal care need multiple linkages to formal and professional sectors: training, supervision, acknowledgement and support, functioning referral systems linking them to drugs, equipment and skilled expertise.

- Strengthen accountability of health policy makers and health care providers to gender and health. Incorporate gender into clinical audits and other efforts to monitor quality of care.

5. Take action to improve the evidence base for policies by changing gender imbalances in both the content and the processes of health research

- Ensure collection of data disaggregated by sex, socioeconomic status, and other social stratifiers by individual research projects as well as through larger data systems at regional and national levels, and the classification and analysis of such data towards meaningful results and expansion of knowledge for policy.

- Women should be included in clinical trials and other health studies in appropriate numbers and the data generated from such research should be analysed using gender-sensitive tools and methods.

- Funding bodies should promote work that broaden the scope of health research and links biomedical and social dimensions, including gender considerations.

- Strengthen women's role in health research. Redress the gender imbalances in research committees, funding, publication and advisory bodies.

6. Take action to make organizations at all levels function more effectively to mainstream gender equality and equity and empower women for health by creating supportive structures, incentives, and accountability mechanisms

- Gender mainstreaming in government and non-government organizations has to be owned institutionally, funded adequately, and implemented effectively. It needs to be supported by an action-oriented gender unit with strong positioning and authority, and civil society linkages to ensure effectiveness and accountability.

- Effective interventions for women's empowerment need to build on and reinforce authentic participation ensuring autonomy in decision making, sense of community and local bonding. If these interventions are integrated with economic, education, and/or political

sectors, they can result in greater psychological empowerment, autonomy and authority and they can substantially affect a range of health outcomes.

7. **Support women's organizations which are critical to ensuring that women have voice and agency**

   - Such organizations are often at the forefront of identifying problems and experimenting with innovative solutions and prioritizing demands for accountability from all actors, both public and private. Their access to resources has been declining in recent years.

5. Conclusions

The key conclusions reached by the Women and Gender Equity Knowledge Network (WGEKN) are the following:

1. Gender power relations function as a key social determinant of health and of inequity in health.

2. While girls and women as well as inter-sex and transgender people are typically more at risk of poor health outcomes because of gendered norms, structures, behaviours and practices, boys and men are also negatively affected by gendered norms and behaviours.

3. Although gender inequity in health is pervasive and persistent, it can be changed through effective political leadership, well designed policies and programmes, and institutional incentives and structures.

The seven policy approaches outlined by the WGEKN and discussed in the previous section encompass a set of priority actions that need to be taken both within and outside the health sector, and which need the engagement and accountability from all actors international and regional agencies, governments, the for-profit sector, civil society organizations and people's movements. Health ministries and WHO and have critical leadership roles in mobilizing national and international political will, respectively, and energizing coalitions and alliances. Yet, no individual or organization can be exempt from action to challenge the barriers of gender inequity. Only by concerted action can the vicious circles of health inequity, injustice, ineffectiveness, and inefficiency be broken.

References

Ahmed SM et al. (2000). Gender, socioeconomic development and health-seeking behaviour in Bangladesh. *Social Science & Medicine,* 51:361-71.

Aiken L et al. (2002). Hospital nurse staffing and patient mortality, nurse burnout, and job dissatisfaction. *Journal of the American Medical Association,* 288:1987-93.

Aitken B (1999). Implementation and integration of reproductive health services in a decentralized system. In: Kolehmainen-Aitken R, ed. *Myths and realities about the decentralization of health systems*. Boston, Management Sciences for Health.

Albalak R et al. (2001). Indoor respirable particulate matter concentrations from an open fire, improved cookstove and LPG open fire combination in a rural Guatemalan community. *Environmental Science and Technology,* 35:2650-2655.

ARROW (2000). *A Framework of Indicators for Action on Women's Health Needs & Rights after Beijing*. Kuala Lumpur, Asian-Pacific Resource & Research Centre for Women.

ARROW (2005). Monitoring ten years of ICPD implementation: the way forward to 2015. *Asian Country Report*. Kuala Lumpur, Asian-Pacific Resource & Research Centre for Women.

Astbury G (2002). Mental health: gender bias, social position, and depression. In: Sen G, George A & Östlin P, ed. *Engendering international health: the challenge of equity* Cambridge, MIT Press.

Banister J (*2004)*. Shortage of girls in China today. *Journal of Population Research,* 21(1):19-45.

Barker B & Ricardo C (2005). Young men and the construction of masculinity in sub-Saharan Africa: implications for HIV/AIDS, conflict, and violence. Washington, DC, World Bank (Social Development Papers: Conflict Prevention and Reconstruction Paper No. 26).

Barker G (2006). Engaging Boys and Men to Empower Girls: Reflections from Practice and Evidence of Impact. New York, United Nations Division for the Advancement of Women (EGM/DVGC/2006/EP.3).

Barker G, Ricardo C & Nascimento M (2007). Engaging Men and Boys to Transform Gender-Based Health Inequities: Is There Evidence of Impact? Geneva, World Health Organization and Instituto Promundo in collaboration with the MenEngage Alliance.

Batthyany K & Correa S (2010). Gender, Health and Poverty in Latin America. In: Sen G & Östlin P, ed. *Gender Equity in Health: The Shifting Frontiers of Evidence and Action* New York, Routledge (Taylor & Francis).

Begum V et al. (2001). Tuberculosis and patient gender in Bangladesh: sex differences in diagnosis and treatment outcome. *International Journal of Tuberculosis and Lung Disease*, 5:604-610.

Bonde JP & Storgaard L (2002). How work-place conditions, environmental toxicants and lifestyle affect male reproductive function. *International Journal of Andrology*, 25:262-268.

Campbell JC (2002). Health consequences of intimate partner violence. *The Lancet*, 359:1331-1336.

Caron J (2003). *Report on Governmental Health Research Policies Promoting Gender or Sex Differences Sensitivity*. Prepared for the Institute of Gender and Health. Canada, Canadian Institutes of Health Research.

Cassels A et al. (1982). Tuberculosis case-finding in Eastern Nepal. *Tubercle*, 63:175-185.

Cedillo Becerril LA et al. (1997). Establishing Priorities for Occupational Health Research among Women Working in the Maquiladora Industry. *International Journal of Occupational and Environmental Health*, 3:221-230.

Chen M et al. (2005). *Progress of the World's Women 2005: Women, Work and Poverty.* New York, United Nations Development Fund for Women.

Coker AL et al. (2000). Physical health consequences of physical and psychological intimate partner violence. *Archives of Family Medicine,* 9:451-457.

Croll E (2002). Fertility decline, family size and female discrimination: a study of reproductive management in East and South Asia. *Asia-Pacific Population Journal*, 17(2):11-38.

Danielsson M & Lindberg G (2001). Differences between men's and women's health: The old and the new gender paradox. In: Östlin P, Danielsson M, Diderichsen F, Härenstam A & Lindberg G, eds. *Gender Inequalities in Health. A Swedish Perspective.* Cambridge, Harvard University Press.

De Koninck M, Bergeron P & Bourbonnais R (1997). Women physicians in Quebec. *Social Science & Medicine*, 44:1825-32.

Doyal L (1995). *What makes women sick: Gender and the political economy of healh,* New Brunswick, Rutgers University Press.

Eichler M & Burke MA (2006). The BIAS FREE Framework: a new analytical tool for global health research. *Canadian Journal of Public Health*, 97:63-68.

Elson D (1993). Gender-aware analysis and development economics. *Journal of International Development*, 5:237-247.

Fazio I (2004). The family, honour and gender in Sicily: models and new research. *Modern Italy*, 9:263-280.

Fox G, Schwartz A & Hart KM (2006). Work-family balance and academic advancement in medical schools. *Academic Psychiatry*, 30:227-234.

Freedman L (2005). Achieving the MDGs: Health systems as core social institutions. *Development*, 48:19-24.

Garcia-Moreno C (2002). Violence against women: consolidating a public health agenda. In: Sen G, George A & Östlin P, ed. *Engendering international health: the challenge of equity*. Cambridge, The MIT Press.

Garcia-Moreno C et al, on behalf of the WHO Multi-Country Study on Women's Health and Domestic Violence against Women Study Team (2006). Prevalence of intimate partner violence: findings from the WHO multi-country study on women's health and domestic violence. *The Lancet*, 368:1260-1269.

George A (2007). The outrageous as ordinary: primary health care workers' perspectives on accountability in Koppal district, Karnataka State, India. Brighton, Institute of Development Studies, Sussex University (Doctoral thesis).

George A (2008). Nurses, community health workers, and home carers: gendered human resources compensating for skewed health systems. *Global Public Health*, 3(Suppl 1):75-89.

George A, Iyer A & Sen G (2005). Gendered health systems biased against maternal survival: preliminary findings from Koppal, Karnataka, India. Brighton, Institute of Development Studies (Working Paper No 23).

Gielen AC et al. (2000) Women's lives after an HIV-positive diagnosis: disclosure and violence. *Maternal and Child Health Journal*, 4:111-120.

Gijsbers van Wijk CM, van Vliet KP & Kolk AM (1996). Gender perspectives and quality of care: towards appropriate and adequate health care for women. *Social Science & Medicine*, 43:707-720.

Grown C, Rao Gupta G & Kes A (2005). *Taking Action: Achieving gender equality and empowering women*. Report of the UN Millennium Project Taskforce on Education and Gender Equality. London/Virginia, Earthscan.

Govender V & Penn-Kekana L (2008). Gender biases and discrimination: a review of health care interpersonal interactions. *Global Public Health*, 3(Suppl 1):90-103.

Gupta N et al. (2003). Assessing human resources for health: what can be learned from labour force surveys? *Human Resources for Health*,1:5.

Haglund M (2010). Women and tobacco: a fatal attraction. Editorial. *Bulletin of the World Health Organization*, 88:563.

Hanson K (2002). Measuring up: gender, burden of disease, and priority-setting. In: Sen G, George A & Östlin P, eds. *Engendering international health: the challenge of equity.* Cambridge, MA, MIT Press.

Holroyd E, Twinn S & Adab P (2004). Socio-cultural influences on Chinese women's attendance for cervical screening. *Journal of Advanced Nursing*, 46:42-52.

Human Rights Watch (2003). Double standards: women's property rights violation in Kenya. Human Rights Watch Reports, 15(5)(A).

ICRW (2004) *To Have and to Hold: Women's Property and Inheritance Rights in the Context of HIV/AIDS*. Washington, DC, International Center for Research on Women.

IDS BRIDGE Cutting Edge Pack on Gender and Sexuality. Available: http://www.bridge.ids.ac.uk/reports_gend_CEP.html#Sexuality

Inter-Parliament Union Database. Women in National Parliaments. Available: http://www.ipu.org/wmn-e/world.htm

Iyer A (2005). *Gender, caste, class, and health care access: Experiences of rural households in Koppal district, Karnataka*. Trivandrum, Achutha Menon Centre for Health Science Studies, Sree Chitra Tirunal Institute for Medical Sciences and Technology.

Iyer A, Sen G & Östlin P (2008). The intersections of gender and class in health status and health care *Global Public Health*, 3(Suppl 1):13-24.

ILO, LABORSTA Database. Available: http://laborsta.ilo.org (cited in: UNICEF (2007) *The State of the World's Children 2007. Women and Children: The Double Dividend of Gender Equality*. New York, UNICEF).

Islam SS et al. (2001). Gender differences in work-related injury/illness: analysis of workers compensation claims. *American Journal of Industrial Medicine*, 39:84-91.

Jha P et al. (2002). Estimates of global and regional smoking prevalence in 1995, by age and sex. *American Journal of Public Health*, 92:1002-1006.

JLI (2004). *Human resources for health: overcoming the crisis*. Cambridge, Joint Learning Initiative, Harvard University Press.

Johansson E et al. (2000). Gender and tuberculosis control: perspectives on health seeking behaviour among men and women in Vietnam. *Health Policy*, 52:33-51.

Josephson M et al. (1997). Musculoskeletal symptoms and job strain among nursing personnel: a study over a three year period. *Occupational and Environmental Medicine*, 54:681-685.

Kassak KM et al. (2006). The providers of health services in Lebanon: a survey of physicians. *Human Resources for Health*, 4:4.

Keleher H & Franklin L (2008). Changing gendered norms about women and girls at the level of household and community: a review of the evidence. *Global Public Health*, 3(Suppl 1): 24-57.

Kim J & Motsei M (2002). "Women enjoy punishment": attitudes and experiences of gender-based violence among PHC nurses in rural South Africa. *Social Science & Medicine*, 54:1243-1254.

Klase S & Wink C (2003). “Missing Women”: Revisiting the Debate. *Feminist Economics*, 9(2-3):263-299.

Krishna A, Kapila M & Pathak S (2004). Falling into poverty in villages of Andhra Pradesh: Why poverty avoidance policies are needed. *Economic and Political Weekly*, 17:3247-3256.

Laflamme L & Eilert-Petersson E (2001). Injury risks and socioeconomic groups in different settings - Differences in morbidity between men and between women at working ages. *European Journal of Public Health*, 11:309-313.

Lane SD et al (1987). The 'hierarchy of resort' examined: status and class differentials as determinants of therapyfor eye disease in the Egyptian delta. *Urban Anthropology*, 16:151-182.

Laurie M & Petchesky RP (2008). Gender, health, and human rights in sites of political exclusion. *Global Public Health*, 3(Suppl 1):25-41.

Letourneau E, Holmes M & Chasedunn-Roark J (1999). Gynecologic health consequences to victims of interpersonal violence. *Women's Health Issues*, 9:115-120.

Long NH et al (2001). Fear and social isolation as consequences of tuberculosis in VietNam: a gender analysis. *Health Policy*, 58:69-81.

Lorber J (1997). *Gender and the Social Construction of Illness*. Thousand Oaks, CA: Sage Publications.

Magrane D, Lang J & Alexander H (2005). *Women in US Academic medicine: Statistics and medical school benchmarks*. Association of American Medical Colleges.

Marston C & King E (2006). Factors that shape young people's sexual behaviour: a systematic review. *The Lancet*, 368:1581-1586.

Mastroianni AC, Faden R & Federman D (1994). Women and health research: a report from the Institute of Medicine. *Kennedy Institute of Ethics Journal*, 4:55-62.

Mayhew C (2003). Occupational violence: a neglected occupational health and safety issue? *Policy and practice in health and safety*, 1:31-58.

Mayorova T et al (2005). Gender-related differences in general practice preferences: longitudinal evidence from the Netherlands 1982-2001. *Health Policy*, 72:73-80.

Meservy D et al. (1997). Ergonomic risk exposure and upper-extremity cumulative trauma disorders in a maquiladora medical devices manufacturing plant. *Journal of Occupational and Environmental Medicine*, 39:767-73.

Messing K (2004). Physical exposures in work commonly done by women. *Canadian Journal of Appied Physiology*, 29:639-656.

Messing K & Ostlin P (2006). *Gender equality, work and health: a review of the evidence*. Geneva, World Health Organization.

Mishra VK, Retherford RD & Smith KR (1999). Biomass cooking fuels and prevalence of tuberculosis in India. *International Journal of Infectious Diseases*, 3:119-129.

Mumtaz Z et al. (2003). Gender-based barriers to primary health care provision in Pakistan: the experience of female providers. *Health Policy and Planning*, 18:261-269.

Murthy RK (2008). Strengthening accountability to citizens on gender and health.

Global Public Health, 3(Suppl 1):104-120.

Oei TP & Kerschbaumer DM (1990). Peer attitudes, sex, and the effects of alcohol on simulated driving performance. *American Journal of Drug and Alcohol Abuse*, 16:135-146.

Ogden J, Esim S & Grown C (2006). Expanding the care continuum for HIV/AIDS: bringing carers into focus. *Health Policy and Planning*, 21:333-342.

Östlin P, Sen G & George A (2004). Paying Attention to Gender and Poverty in Health Research: Content and Process Issues. *Bulletin of the World Health Organization*, 82:740-745.

Östlin P (2002a). Examining 'work' and its effects on health. In: Sen G, George A & Östlin P, ed. *Engendering international health: the challenge of equity*. Cambridge, The MIT Press.

Östlin P (2002b) Gender inequalities in health: the significance of work. In: Wamala S & Lynch J, ed. *Gender and socioeconomic inequalities in health*. Lund, Studentlitteratur.

Östlin P (2005). What evidence is there about the effects of health care reforms on gender equity, particularly in health? World Health Organization, Regional Office, Health Evidence Network.

PAHO (2001). *Evaluating the impact of health reforms on gender equity - a PAHO guide*. Washington, DC, Pan American Health Organization.

Park P (2002). All things unequal, in pay. *The Scientist*, 16:16.

Parkhurst JO & Rahman SA (2007). Life saving or money wasting? Perceptions of caesarean sections among users of services in rural Bangladesh. *Health Policy*, 80:392-401.

Pitanguy J (2002). Bridging the Local and the Global: Feminism in Brazil and the International Human Rights Agenda. *Social Research*, 69:805-820.

Puentes-Markides C (1992). Women and access to health care. *Social Science & Medicine,* 35:619-626.

Quisumbing AR & Maluccio JA (1999). *Intrahousehold Allocation and Gender Relations: New Empirical Evidence*. New York, World Bank, Development Research Group/Poverty Reduction and Economic Management Network (Policy Research Report on Gender and Development, Working Paper Series, No. 2).

Ravindran TKS (2008). Gender mainstreaming in health: looking back, looking forward *Global Public Health*, 3(Suppl 1):121-142.

Reca IC, Alvarez M & Tijoux M E (2002). The hidden costs of home care: a research methodology for case studies. Santiago. PAHO/Chile.

Rizk DE et al. (2005). Determinants of women's choice of their obstetrician and gynecologist provider in the UAE. *Acta Obstetricia et Gynecologica Scandinavica,* 84:48-53.

Schernhammer ES & Graham AC (2004). Suicide Rates Among Physicians: A Quantitative and Gender Assessment (Meta-Analysis). *American Journal of Psychiatry*, 161:2295-2302.

Schindel JCD et al. (2006) *Workers who care: a graphical profile of the frontline health and health care workforce*. San Francisco, Robert Wood Johnson Foundation.

Sen AK (1992). Missing women. *British Medical Journal*, 304:586-587.

Sen AK (1999). *Development as Freedom*. New York, Alfred A. Knopf.

Sen G (2006). The quest for gender equality. In: Utting P, ed. *Reclaiming Development Agendas: Knowledge, Power and International Policy Making*. New York, Palgrave Macmillan and UNRISD.

Sen G, George A & Östlin P (2002). Engendering health equity: A review of research and policy. In: Sen G, George A & Östlin P, eds. *Engendering international health: the challenge of equity*. Cambridge, The MIT Press.

Sen G, Govender V & Cottingham J (2007) *Maternal and Neonatal Health: Surviving the Roller-Coaster of International Policy*. Bangalore, Indian Institute of Management (MNHP Project) and World Health Organization.

Sen G, Iyer A & George A (2006). Systematic hierarchies and systemic failures: Gender and health inequities in Koppal District. In: Kadekodi G, Kanbur R & Rao V, eds. *Development in Karnataka Challenges of Governance, Equity and Empowerment*. New Delhi, Academic Foundation.

Sen G, Östlin P & George A (2007). *Unequal, unfair, ineffective and inefficient: Gender inequity in health - Why it exists and how we can change it*. Final report to the WHO Commission on Social Determinants of Health by the Women and Gender Equity Knowledge Network. Indian Institute of Management, Bangalore and Karolinska Institutet, Stockholm. Available: http://www.who.int/social_determinants/resources/csdh_media/wgekn_final_report_07.pdf

Sen G & Östlin P (2010). Gender as a social determinant of health: evidence, policies, and innovations. In: Sen G & Östlin P, ed. *Gender Equity in Health: The Shifting Frontiers of Evidence and Action*. New York, Routledge (Taylor & Francis).

Sen G & Iyer A (2011). Who gains, who loses and how: Leveraging gender and class intersections to secure health entitlements. *Social Science & Medicine* (doi:10.1016/j.socscimed.2011.05.035).

Smith KR, Metha S & Maesezahl-Feuz M (2004). Indoor air pollution from household use of solid fuels. In: Ezzati M et al., eds. *Comparative quantification of health risks: the global and regional burden of disease due to selected major risk factors.* Geneva, World Health Organization.

Smith MK (2002). Gender, poverty and intergenerational vulnerability to HIV/AIDS. *Gender and Development,* 2002, 10:63-70.

Snow RC (2008). Sex, gender, and vulnerability. *Global Public Health*, Supplement 1, 3(2):58-74.

Sugiura K, Ito M & Mikami H (2004). Evaluation of gender differences of family caregivers with reference to the mode of caregiving at home and caregiver distress in Japan. *Nippon Koshu Eisei Zasshi*, 51:240-251.

Summers, L. (2005). *Remarks at NBER conference on diversifying the science and engineering workforce.* Available: http://www.president.harvard.edu/speeches/2005/nber.html

Swedish Institute (2004). *Fact Sheets on Sweden: Equality between Women and Men*. Stockholm, Swedish Institute.

Theobald S, Nhlema Simwaka B & Klugman B (2006). Gender, health and development III: Engendering health research. *Progress in Development Studies*, 6(4):1-5.

Thorson A & Diwan VK (2001). Gender inequalities in tuberculosis: aspects of infection, notification rates, and compliance. *Current Opinion in Pulmonary Medicine*, 7:165-169.

Thorson A & Johansson E (2004). Equality or equity in health care access: a qualitative study of doctors' explanations to a longer doctor's delay among female TB patients in Vietnam. *Health Policy*, 68:37-46.

Thorson A, Long NH & Larsson LO (2007). Chest X-ray findings in relation to gender and symptoms: a study of patients with smear positive tuberculosis in Vietnam. *Scandinavian Journal of Infectious Diseases*, 39:33-37.

Turmen T (2003). Gender and HIV/AIDS. *International Journal of Gynecology and Obstetrics*, 82:411-418.

UNAIDS (2004). *Report on the Global AIDS Epidemic 2004: 4th Global Report*. Geneva, UNAIDS.

UNAIDS (2006) .*Report on the Global AIDS Epidemic 2006: 6th Global Report*. Geneva, UNAIDS.

UNICEF (2003). *The Epidemiology of HIV at the start of the 21st Century: Reviewing the evidence*. Geneva, UNICEF.

UNFPA (2007). *The State of world population 2007*. New York, United Nations Population Fund.

Uys L (2003). Guest editorial: longer-term aid to combat AIDS. *Journal of Advanced Nursing*, 44:1-2.

Varga CA (2001). The forgotten fifty per cent: a review of sexual and reproductive health research and programs focused on boys and young men in sub-Saharan Africa. *African Journal of Reproductive Health*, 5:175-195.

Watts S (2004). Women, water management and health. *Emerging Infectious Diseases*, 10:2025-2026.

Wennerås C & Wold A (1997). Nepotism and sexism in peer-review. *Nature*, 387:341-343.

Whitehead M, Dahlgren G & Evans T (2001). Equity and health sector reforms: can low-income countries escape the medical poverty trap? *The Lancet*, 358:833-836.

WHO (2002). *The World Health Report 2002. Reducing risks, promoting healthy life*. Geneva, World Health Organization.

WHO (2003a). *The World Health Report 2003. Shaping the Future*. Geneva, World Health Organization.

WHO (2003b). *Gender and tobacco*. Geneva, Department of Gender and Women's Health, World Health Organization.

WHO (2004). *Beyond the numbers*. Geneva, World Health Organization.

WHO (2005). *WHO's multi-country study on women's health and domestic violence against women*. Geneva: World Health Organization.

WHO (2006). *The World Health Report 2006 - working together for better health*. Geneva, World Health Organization.

WHO (2009). *Women and health: today´s evidence tomorrow´s agenda*. Geneva, World Health Organization.

WHO (2011). *Preventing gender-biased sex selection: an inter-agency statement* (OHCHR, UNFPA, UNICEF, UN Women and WHO). Geneva, World Health Organization.

Zaidi SA (1996). Gender perspectives and quality of care in underdeveloped countries: disease, gender and contextuality. *Social Science & Medicine*, 43:721-730.