Gender, health and the 2030 agenda for sustainable development

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Abstract  Gender refers to the social relationships between males and females in terms of their roles, behaviours, activities, attributes and opportunities, and which are based on different levels of power. Gender interacts with, but is distinct from, the binary categories of biological sex. In this paper we consider how gender interacts with the 2030 agenda for sustainable development, including sustainable development goal (SDG) 3 and its targets for health and well-being, and the impact on health equity. We propose a conceptual framework for understanding the interactions between gender (SDG 5) and health (SDG 3) and 13 other SDGs, which influence health outcomes. We explore the empirical evidence for these interactions in relation to three domains of gender and health: gender as a social determinant of health; gender as a driver of health behaviours; and the gendered response of health systems. The paper highlights the complex relationship between health and gender, and how these domains interact with the broad 2030 agenda. Across all three domains (social determinants, health behaviours and health system), we find evidence of the links between gender, health and other SDGs. For example, education (SDG 4) has a measurable impact on health outcomes of women and children, while decent work (SDG 8) affects the rates of occupation-related morbidity and mortality, for both men and women. We propose concerted and collaborative actions across the interlinked SDGs to deliver health equity, health and well-being for all, as well as to enhance gender equality and women’s empowerment. These proposals are summarized in an agenda for action.

Introduction

Globally, the average life expectancy gap between men and women is 4.6 years, with women outliving men in all countries, and a gap of over 10 years in some cases. In addition, the global burden of disease disproportionately affects men in terms of disability-adjusted life years, although women are more likely to spend a longer time living with a disability.

In part, these differences may be due to the impact of sex: biological differences between males and females in growth, metabolism, reproductive cycles, sex hormones and ageing processes. Even when men and women are equally exposed to a risk or disease, the health consequences may be different for each sex. For example, among men and women who smoke tobacco, women appear to develop severe chronic obstructive pulmonary disease at younger ages than men and with lower cumulative cigarette smoke exposure. However, biological explanations for differences between men and women have limited powers to explain the worldwide differences in health outcomes throughout human history, including in times of rapid demographic and epidemiological transition. These differences are largely due to the social phenomenon of gender.

Gender refers to the roles, behaviours, activities, attributes and opportunities that any society considers appropriate for boys and girls, and men and women. Gender also refers to the relationships between people and can reflect the distribution of power within those relationships. An understanding of gender requires understanding the complex social processes through which people are defined and linked and how this evolves over time. These processes operate at an interpersonal level, at an institutional level and across wider society, in government, the institutions of the state and whole economies. At all these levels, gender is an important, but modifiable determinant of health across the life course. Taking this perspective avoids polarization between men (as perpetrator) and women (as victim), and recognizes and addresses the needs of transgender people.

Gender intersects with other drivers of inequities, discrimination, marginalization and social exclusion, which have complex effects on health and well-being. These intersectional drivers include ethnicity, class, socioeconomic status, disability, age, geographical location, sexual orientation and sexual identity. Intersectionality refers to the meaning and relationship between these factors, in processes and systems of power at the individual, institutional and global levels. The concept of intersectionality builds on, and extends, a gendered analysis of health, by identifying how relationships of power interact with these drivers and gender at different levels.

This paper reflects on the relationship between gender and health in the context of the sustainable development goals (SDGs). The design of the goals is based on interdependence – meaning that no single goal can be achieved without action in other goals. We consider SDG 5 (that is, achieve gender equality and empower all women and girls) as it interacts with SDG 3 (that is, ensure healthy lives and promote well-being for all at all ages), and how both gender and health intersect across multiple other SDGs in ways that can either hinder or enhance health equity.

Gender and health

Beyond SDGs 3 and 5, gender equality is a cross-cutting feature of Transforming our world: the 2030 agenda for sustainable development and is key to realizing women’s and girls’ rights and catalysing progress across all SDGs. There are six gender-specific indicators within SDG 3 on health:
(i) maternal mortality ratio; (ii) births attended by skilled health personnel; (iii) new human immunodeficiency virus (HIV) infections, by sex; (iv) satisfactory family planning with modern methods; (v) adolescent birth rate; and (vi) coverage of essential health services, including reproductive and maternal health. Aside from the SDG 3 targets, SDG 5, which includes the elimination of violence against women and girls, has important implications for health.

Other SDGs have been categorized by the United Nations Entity for Gender Equality and the Empowerment of Women (UN Women) as either gender-sensitive or gender-sparse, reflecting the importance of viewing the entire SDG framework through a gender lens. We apply this wider gender perspective to improve understanding and to inform action on health, focusing on the impact on health outcomes.

Conceptually, gender has been described as influencing health and well-being across three domains: (i) through its interaction with the social, economic and commercial determinants of health; (ii) via health behaviours that are protective of, or detrimental to, health outcomes; and (iii) in terms of how the health system responds to gender, including how it affects the financing of and access to quality health care. We have extended this framework to outline how several different SDGs impact on each of these three domains (Fig. 1). The domains interact with each other; for example, governance (social determinants domain) determines responses by the health system to a situation (health system domain). The domains also all operate in a wider sociopolitical, cultural and historical context, shaping a range of intersectional drivers of inequalities, exclusion and discrimination that operate alongside gender. Using this framework, we provide evidence of the linkages across gender and the health-related targets of a range of SDGs including, but not limited to, the SDGs on health and gender (Table 1).

### Social determinants

The landmark 2008 Commission on the Social Determinants of Health reported that the global burden of disease, and major causes of health inequities, arise from the different conditions in which people are born, grow, live, work and age. These conditions are affected by inequities in power, money and resources, and all of them are affected by gender. The underlying contexts of socioeconomics and politics (governance, macroeconomic policies, cultural norms and social values), social position (education, occupation, ethnicity and gender) and wider social environment (community cohesion, and social group and individual behaviours) are all represented as targets of SDG action.

For example, girls’ access to education (linked to SDG 4, quality education) has a measurable impact on their own, and their children’s, health outcomes. The beneficial effect of education can be affected by macro-level political and economic forces which result in contraction of welfare provision (including health-system cuts), wage depression and food insecurity. These factors are included in SDGs 1 (no poverty), 2 (zero hunger), 8 (decent work and economic growth) and 10 (reduced inequalities) and all have been shown to have adverse effects on child and maternal health. Similarly, rapid privatization programmes in post-communist countries (linked to SDG 9, industry, renovation and infrastructure) have shaped gendered differences in mortality over and above the micro-level determinants of health. SDG 8 (for promoting economic growth, full and productive employment and decent work for all) is strongly linked to health and gender. Examples of interactions among SDGs 3 and 5 and other SDGs are provided in Table 1.

### Health behaviours

Sociocultural norms and related patterns of behaviours differ according to gender. These can affect health behaviours in different ways for a variety of conditions. There is growing recognition of the roles in risk-taking played by sociocultural norms and related qualities and patterns of behaviours traditionally associated with being a man (referred to as masculinity). The behaviours include avoiding condom use, greater use of harmful substances and lower rates of seeking testing and treatment for HIV. These expressions of masculinity can also impact on the health of girls and women, for example through violence, sexually transmitted infections and unwanted pregnancies. In terms of differential exposure to products that are harmful to health (SDG 12, responsible consumption...
Table 1. Selected examples of interactions of sustainable development goals 3 (health) and 5 (gender) with other global goals across three domains of gender and health

| Health domains (SDG 3) | Links to gender (SDG 5) | Selected examples | Links to other SDGs | Sources |
|------------------------|-------------------------|-------------------|---------------------|---------|
| Social determinants domain | | | | |
| Premature mortality, preventable morbidity | Gendered differences in income are often associated with poorer health outcomes | Globally there are 122 women aged 25–34 years living in extreme poverty for every 100 men of the same age group. Up to 30% of income inequality is due to inequality within households, including between men and women, with women more likely than men to live on below 50% of the median national income. Women accrue fewer years of formal paid employment than men, due to childbirth and their gendered role as main carers. Wage depression and gender pay-gaps are widespread, leaving women less well-off than men. In India, Dalit women, who are lower-caste women in a poorer socioeconomic population group, have a life expectancy 14.6 years shorter than upper-caste women. In both stable and crisis settings, older age, female sex, economic deprivation and rural residency are frequently associated with poor health outcomes. | 1 (no poverty); 7 (affordable & clean energy); 8 (decent work and economic growth); 10 (reduced inequalities); 13 (climate action) | Institute for Health Metrics and Evaluation, 2018; UN Women, 2018; Overseas Development Institute, 2014 |
| | Gendered differences in occupation can lead to different exposure to risks of premature mortality and preventable morbidity | Health risks are higher for men working in extractive and construction industries and road transport jobs or drafted into armed conflicts. Risks of indoor air pollution are higher for women working in the home due to the use of unclean combustible fuels caused an estimated 4.3 million deaths in 2012 and women and girls accounted for 6 out of every 10 of these deaths. Women working in flower farming and their children and newborns have greater exposure to pesticides and chemical residues than men do. | | |
| | Climate change can have a disproportionate impact on women | Girls and women in climate-related disasters such as flooding are at greater risk than boys and men because they are less likely to be able to swim | | |
| Mental and physical health | Girl’s education and their lower socioeconomic position can impact on health outcomes | Worldwide, 15 million girls of primary school age will never get the chance to read or write in primary school compared with 10 million boys. The proportion of time spent on unpaid domestic and care work by women is 2.6 times greater than for men | 1 (no poverty); 4 (quality education); 6 (clean water and sanitation); 16 (peace, justice and strong institutions) | UN Women, 2018 |
| Nutrition | Gendered norms and practices about food distribution often disadvantage girls and women | Women are up to 11 percentage points more likely than men to report food insecurity (i.e. secure access to sufficient amounts of safe and nutritious food for normal growth and development and an active and healthy life). Within households men and boys are often given greater quantities of food and more nutritious food than women and girls. | 2 (zero hunger); 6 (clean water and sanitation) | UN Women, 2018 |

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### Health domains (SDG 3)

| Health domains (SDG 3) | Links to gender (SDG 5) | Selected examples | Links to other SDGs | Sources |
|------------------------|-------------------------|------------------|---------------------|---------|
| Communicable diseases  | Gendered patterns in exposure can make women more vulnerable to communicable diseases | School teachers, who are more likely to be female, are at higher risk for influenza due to greater contact with children; men are more susceptible to H5N1 influenza through work in fowl and poultry slaughtering and processing industries. Women may face increased exposure to infection with malaria linked to gender-defined occupations (e.g. seeking water and fuel or agricultural tasks, at peak biting times of mosquitos). Men, however, may have higher malaria risk due to working in fields, mines, ponds and other high-exposure locations. In the 2013–2016 Ebola virus disease epidemic, women were found to be at higher risk of infection due to caring roles within the household, whereas men were more at risk due to their involvement in burial rituals | 8 (decent work and economic growth) | UN Women, 2018<sup>11</sup>; WHO, 2010<sup>10</sup>; WHO, 2007<sup>17</sup>; Davies & Bennett, 2016<sup>18</sup> |

### Health behaviours domain

| Noncommunicable diseases | Gendered patterns of risk exposure to unhealthy products (especially alcohol and tobacco) tend to increase morbidity and mortality in men | Gendered patterns in exposure to noncommunicable disease risk and poor health-care-seeking behaviours contributes to excess male mortality. Corporate strategies towards expanding markets for smoking and alcohol use are increasingly designed to include women, particularly younger women, from low- and middle- income countries | 2 (zero hunger); 12 (responsible consumption and production) | UN Women, 2018<sup>11</sup> |
| Communicable diseases    | Gender norms can affect the uptake of preventive services by women | Women are less likely to accept services from male community drug distributors for neglected tropical diseases when male members of the household are not present | 8 (decent work and economic growth) | Theobald et al. 2017<sup>19</sup> |

### Health system domain

| Universal health coverage | Gendered patterns of employment may affect women's access to health-care services | Women have longer lifespans, but often fewer years of paid employment and accrued pension than men. Therefore women may have less access to health-care services in their old age as a result of smaller contributory pensions. A lower percentage of women than men have control over how they spend their own earnings. Women have lower purchasing power than men when men act as the head of the household or when there is no male earner in the household. This affects women's risk of experiencing catastrophic health spending. | 1 (no poverty); 4 (quality education); 8 (decent work and economic growth); 10 (reduced inequalities); 16 (peace, justice and strong institutions); 17 (partnerships for the goals) | UN Women, 2018<sup>11</sup>; Theobald et al., 2017<sup>17</sup>; Davies & Bennett, 2016<sup>16</sup>; Dey et al., 2009<sup>21</sup>; Regitz-Zagrosek, 2011<sup>22</sup> |

Gendered stereotyping by health-care providers and gendered differences in presentation of diseases can affect diagnostic and treatment pathways. Gender norms can affect the uptake of services by women. Gendered patterns of work can affect access to public health interventions. Health systems may not take account of how unequal gender norms, roles and relations affect health. Analysis of the 2013–2016 Ebola virus disease epidemic revealed a lack of data indicators disaggregated by sex. The early response to the epidemic ignored the different roles of men and women (e.g. men buried the dead, while women cared for sick people at home) and hence the different potential pathways for transmission of the virus.

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### Health domains (SDG 3) Links to gender (SDG 5) Selected examples Links to other SDGs Sources  

| Health workforce | Gender affects the health workforce itself | Gender discrimination interacts with multiple types of discrimination based on other drivers of inequalities. Older people can face discrimination accessing health services. Ethnic minorities, such as Roma, and migrants (especially illegal migrants) and patients with long-term illness faced discriminatory barriers accessing health services in Greece. Gender bias and the wider stigma and discrimination in society deter transgender women from seeking care. Gendered institutional responses: Gender bias and the wider stigma and discrimination in society deter transgender women and girls, especially sexual and reproductive services. Health-system responses during the 2016 Zika virus emergency response did not take account of unequal gender norms, roles, and relations. Women who were already marginalized were advised to avoid pregnancy, apparently without an acknowledgement of their difficulties in access to contraceptives, sex education, and safe abortion practices. | |  
| Governance | Gendered institutional responses can affect peoples’ physical and mental health. Quick-offer gender parity in decision-making positions and leading and/or participating in institutional committees and other decisions are predominantly made by men can hinder choices, information and service access for women and girls, especially sexual and reproductive services. Health-system responses during the 2016 Zika virus emergency response did not take account of unequal gender norms, roles, and relations. Women who were already marginalized were advised to avoid pregnancy, apparently without an acknowledgement of their difficulties in access to contraceptives, sex education, and safe abortion practices. | Gender-related health systems are not gender-neutral. Health systems themselves are not gender-neutral. The role of gender within health systems relates to concepts of universal health coverage (SDG 3), pathways of care including the impact of gender stereotypes and gender-related stigma that drive inequalities (SDG 10, reduced inequalities), principles of accountability and inclusivity (SDG 16, peace, justice and strong institutions), and the gendered experience of the health workforce itself (SDG 8, decent work and economic growth; SDG 16, peace, justice and strong institutions). However, there are concerns that decision-makers in the global health system are not well-prepared to understand, and effectively respond to, the structural, social, commercial and frequently gendered determinants of the major emerging burdens of disease. This is especially true for those determinants associated with environmental degradation, poor urban planning and unsustainable patterns of consumption. A recent analysis revealed the extent and nature of low gender awareness in the emergency responses to Ebola and Zika virus epidemics and in longer-term planning for health-system resilience (Table 1). It has been estimated that at least half of the world’s 7.3 billion people do not receive the essential health services they need, with substantial unmet need for a range of specific interventions. |

| Links to gender (SDG 5) | Gender affects the health workforce itself | Gender-related health systems are not gender-neutral. Health systems themselves are not gender-neutral. The role of gender within health systems relates to concepts of universal health coverage (SDG 3), pathways of care including the impact of gender stereotypes and gender-related stigma that drive inequalities (SDG 10, reduced inequalities), principles of accountability and inclusivity (SDG 16, peace, justice and strong institutions), and the gendered experience of the health workforce itself (SDG 8, decent work and economic growth; SDG 16, peace, justice and strong institutions). However, there are concerns that decision-makers in the global health system are not well-prepared to understand, and effectively respond to, the structural, social, commercial and frequently gendered determinants of the major emerging burdens of disease. This is especially true for those determinants associated with environmental degradation, poor urban planning and unsustainable patterns of consumption. A recent analysis revealed the extent and nature of low gender awareness in the emergency responses to Ebola and Zika virus epidemics and in longer-term planning for health-system resilience (Table 1). It has been estimated that at least half of the world’s 7.3 billion people do not receive the essential health services they need, with substantial unmet need for a range of specific interventions. |

| Links to other SDGs | Gender-related health systems are not gender-neutral. Health systems themselves are not gender-neutral. The role of gender within health systems relates to concepts of universal health coverage (SDG 3), pathways of care including the impact of gender stereotypes and gender-related stigma that drive inequalities (SDG 10, reduced inequalities), principles of accountability and inclusivity (SDG 16, peace, justice and strong institutions), and the gendered experience of the health workforce itself (SDG 8, decent work and economic growth; SDG 16, peace, justice and strong institutions). However, there are concerns that decision-makers in the global health system are not well-prepared to understand, and effectively respond to, the structural, social, commercial and frequently gendered determinants of the major emerging burdens of disease. This is especially true for those determinants associated with environmental degradation, poor urban planning and unsustainable patterns of consumption. A recent analysis revealed the extent and nature of low gender awareness in the emergency responses to Ebola and Zika virus epidemics and in longer-term planning for health-system resilience (Table 1). It has been estimated that at least half of the world’s 7.3 billion people do not receive the essential health services they need, with substantial unmet need for a range of specific interventions. |

SDGs: sustainable development goals, UN, United Nations, WHO, World Health Organization, UNESCO, World Health Organization Regional Office for Europe.

a Some of the examples used do not refer to specific research studies but to a combination of research and analysis by organizations such as UN Women. It is outside the scope of this article to cite to every source of evidence. Readers should consult the reference list of cited reports for more information.

b The reference list of cited reports for more information.
SDG target 3.8 on achieving universal health coverage (UHC) aims to ensure that all people have access to quality health services, while also protecting against exposure to financial hardship. Financed by domestic public sources, UHC is a key strategic priority for strengthening health systems, and for the equitable and effective provision of needed, available, affordable and gender-sensitive health and social care.

UHC is based on concepts of equity, as set out in SDGs 1 (no poverty), 4 (quality education), 5 (gender equality), 8 (decent work and economic growth) and 16 (peace, justice and strong institutions). However, recent analysis has shown that even a well-functioning health-care system that is making progress towards UHC is not automatically equitable and gender-balanced. Unless explicit attention is paid to gender and the other intersectional drivers of inequalities, UHC may fail to improve equity. UHC may even exacerbate gender inequality since some groups of the population have greater health needs, but lower financing capabilities than others. Monitoring UHC focuses on two discrete components of health-system performance: levels of effective coverage; and financial risk protection. Table 1 provides some examples of how gender interacts with these two components.

In terms of effective coverage, health systems can monitor health inequalities covered by SDG target 5.1 (end all forms of discrimination against women and girls everywhere). They can also monitor other dimensions of inequity relevant in national contexts, such as defined in SDG 10 (reduced inequalities) and SDG target 17.18 (by 2020, enhance capacity-building support to developing countries...to increase significantly the availability of high-quality, timely and reliable data disaggregated by income, gender, age, race, ethnicity, migratory status, disability, geographic location and other characteristics relevant in national contexts). To achieve UHC, the health-system response must include comprehensive analyses to document who is being left behind in service access and to find out why.

The structures and processes of oppression and discrimination that exist in society will also play out within health systems. Entrenched gender-based discrimination affects the global health workforce, most whom are women. Discrimination in different areas of the health-care services is evidenced by gender pay gaps, lack of formal employment, physical and sexual violence, and lack of representation in leadership and decision-making. Health-system strengthening needs to better address how gender, power and social status can shape who is chosen as a health worker. At the very least, the health system should adopt good human rights practice to do no harm. It should ensure that it does not replicate or amplify local, often highly gendered, power dynamics that exclude or discriminate against certain population groups, including women, ethnic minorities and others.

**Synergies and interactions**

While there is an implicit logic that the SDGs interact with and depend on each other, there is little consideration of how this works to support more coherent and effective decision-making to better facilitate monitoring, evaluation and evidence-informed action. A recent detailed analysis of interactions across the SDGs did consider SDG 3 along with SDGs 2 (zero hunger), 7 (affordable and clean energy) and 14 (conserve and sustainably use the oceans, seas and marine resources for sustainable development). However, the analysis did not contain detailed analysis of the interactions, enabling or otherwise, with SDG 5.

Another analysis looked at six sectors, family planning; maternal, newborn and child health; nutrition; agriculture; water, sanitation and hygiene; and financial services for the poor, across 76 studies in low- and middle-income countries. The study showed that gender equality and indicators of women’s and girls’ empowerment were associated with improvements in a variety of health and development outcomes. Furthermore, these associations were cross-sectoral, suggesting that to fully realize the benefits of promoting gender equality and women’s empowerment, the development community must collaborate in coordinated and integrated ways across multiple sectors.

**Conclusion**

Realizing the right to health and well-being of all people by acting on existing gender inequities and their complex determinants is challenging. Several factors hinder progress. There is a tendency for government departments and development partners to take ownership of particular goals, including SDG 3. Action is needed that is multidisciplinary...
This paper has sought to unpack the complex relationship between gender and health equity across three domains: social determinants, health behaviours and health-system responses. These domains in turn will impact on, and be influenced by, progress across all SDGs, and not just SDGs 3 and 5. We conclude that those seeking to achieve SDG 3 need to shift their thinking and action in several areas, as outlined in Box 1. We propose an action agenda to improve health equity outcomes while also advancing gender equality and women’s empowerment. Adopting this agenda will accelerate progress for all people, in all their diversities, to realize to their fullest potential, their right to health and well-being across their life course.

Competition interests: None declared.
Resumen

Género, salud y la agenda 2030 para el desarrollo sostenible

El género hace referencia a las relaciones sociales entre hombres y mujeres en términos de roles, comportamientos, atributos y oportunidades, y se basan en diferentes niveles de poder. El género interactúa con, pero es distinto de, las categorías binarias del sexo biológico. En este documento, consideramos cómo el género interactúa con la agenda 2030 para el desarrollo sostenible, incluidos los Objetivos de Desarrollo Sostenible (ODS) 3 y sus objetivos para la salud y el bienestar, y el impacto en la equidad en salud. Proponemos un marco conceptual para comprender las interacciones entre género (ODS 5) y salud (ODS 3) y otros 13 ODS, que influyen en los resultados de salud. Exploramos la evidencia empírica de estas interacciones en relación con tres dominios de género y salud: el género como determinante social de la salud; el género como conductor de conductas de salud; y la respuesta de género de los sistemas de salud. El documento destaca la compleja relación entre salud y género, y cómo estos dominios interactúan con la amplia agenda de 2030. A través de los tres dominios (determinantes sociales, comportamientos de salud y sistema de salud), encontramos evidencia de los vínculos entre género, salud y otros ODS. Por ejemplo, la educación (ODS 4) tiene un impacto cuantificable en los resultados de salud de mujeres y niños, mientras que el trabajo decente (ODS 8) afecta las tasas de morbilidad y mortalidad relacionadas con la ocupación, tanto para hombres como para mujeres. Proponemos acciones coordinadas y colaborativas entre los ODS interconectados para generar equidad en salud, salud y bienestar para todos, así como para mejorar la igualdad de género y el empoderamiento de las mujeres. Estas propuestas se resumen en una agenda de acción.
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