Central gender theoretical concepts in health research: the state of the art

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ABSTRACT

Despite increasing awareness of the importance of gender perspectives in health science, there is conceptual confusion regarding the meaning and the use of central gender theoretical concepts. We argue that it is essential to clarify how central concepts are used within gender theory and how to apply them to health research. We identify six gender theoretical concepts as central and interlinked—but problematic and ambiguous in health science: sex, gender, intersectionality, embodiment, gender equity and gender equality. Our recommendations are that: the concepts sex and gender can benefit from a gender relational theoretical approach (i.e., a focus on social processes and structures) but with additional attention to the interrelations between sex and gender; intersectionality should go beyond additive analyses to study complex intersections between the major factors which potentially influence health and ensure that gendered power relations and social context are included; we need to be aware of the various meanings given to embodiment, which achieve an integration of gender and health and attend to different levels of analyses to varying degrees; and appreciate that gender equality concerns absence of discrimination between women and men while gender equity focuses on women’s and men’s health needs, whether similar or different. We conclude that there is a constant need to justify and clarify our use of these concepts in order to advance gender theoretical development. Our analysis is an invitation for dialogue but also a call to make more effective use of the knowledge base which has already developed among gender theorists in health sciences in the manner proposed in this paper.

INTRODUCTION

There is growing recognition within the health sciences that gender awareness is crucial to avoid gender bias in research.4 In addition, international research shows strong and abiding associations between gender inequality and patterns of morbidity and mortality and there is accumulating evidence that lack of gender sensitivity can negatively impact the healthcare provided for women and men.4 Yet, in spite of this increasing awareness, there is a lack of conceptual clarity and need for more theoretical development.1 2 Self-evidently, theoretical developments that build on concepts that are confused are likely to be confused themselves. Therefore, we argue that it is essential to clarify the use of central gender theoretical concepts within health science. We do this with the objective of contributing to greater conceptual stringency and of providing a coherent and dynamic conceptualisation for gender research in the health sciences.

SIX CENTRAL BUT PROBLEMATIC CONCEPTS

We have identified the following six interrelated gender theoretical concepts as central but problematic in health science and in need of clarification: sex; gender; intersectionality; embodiment; and gender equality and gender equity. Through a reading of key theorists who employ these concepts in their work we identify how they can be used to illuminate health issues. To cover multiple perspectives, the authors of this paper are from several disciplines, including family medicine, midwifery, nursing, physiotherapy, public health, rehabilitation medicine, sociology and sports medicine. Four smaller groups addressed one or two concepts, according to the following framework:

1. Background, history and importance of the concepts
2. Basic underlying assumptions
3. Examples of their utilisation within the health sciences
4. Problems in how the concepts have been used or the use they lend themselves to
5. Our recommendations for future research on gender and health.

All texts relating to the concepts were repeatedly read and discussed by the full author group to strive for consensus and stringency.

SEX AND GENDER

Today the concepts of ‘sex’ and ‘gender’ are commonly used to refer respectively to the biological and the social aspects of being a man or a woman. In his well-known concept of the ‘one-sex model’, Laqueur concludes that from Aristotle until the Enlightenment, women were seen as having the same reproductive organs (and thus the same ‘sex’) as men, but women’s organs were envisioned as an inverted (inside the body) but imperfect version of men’s.5 During the 18th century this model was replaced by the ‘two-sex model’ in which the developing academic medicine emphasised the biological differences between men and women. The concept of sex came to be used in research about men and women no matter whether the focus was biological or sociocultural.1 As a consequence, biological factors were wrongly attributed to what were actually social and psychological determinants of...
health. For example, much of women’s illness was attributed to female reproductive anomalies. During the 1970s the concept of ‘gender’—referring to the social processes associated with being a man or a woman—began to be used by feminist researchers to break with the tradition of equating women with their negatively defined biology. Although this feminist critique was important, it fostered the neglect of biological factors in favour of gender and the social aspects of health and illness.

It is now increasingly recognised that ‘sex’ and ‘gender’ are essential to an accurate understanding of health and illness. Table 1 shows the conceptualisations of each concept in recent research. First, the ‘static difference’ perspective treats ‘sex’ and ‘gender’ as dichotomous variables on an individual level. This perspective is often used in the research tradition of ‘gender-specific medicine’ which defines itself as ‘the science of how men and women differ in their normal function and in the experience of disease’. Gender-specific medicine’s strong focus on dualisms carries the risk of overemphasising differences between men and women. Also, there is a risk of essentialism, that is, the tendency to generalise differences to all groups of men and women independent of context.

By comparison, gender can be seen as social and relational processes in various contexts. Dichotomous views are criticised and the importance of applying a relational theory of gender (as defined in table 1) is emphasised. Also, the importance of analysing gender in relation to other power structures (eg, class, race/ethnicity, nationality, sexuality) is stressed (see Intersectionality below). This perspective has mainly been developed outside of health science and has been adopted principally in qualitative research on illness experiences. For example, research on lay concepts of health has shown that the doing of health is a form of doing gender. One’s identity as masculine or feminine influences health status, and health behaviours can be ways of demonstrating masculinities and femininities.

The ‘sex in interaction with gender’ perspective focuses on how ‘sex’ and ‘gender’ influence each other (see Embodiment below for examples). This perspective also opens up the potential for analyses of ‘sex’ as a continuum with multiple variations on the X and Y chromosomes, hormonal levels and internal and external genitals.

Based on these observations, our recommendation for future research is based on Connell’s relational theory of gender in which the focus moves from the individual to include the structural level in which gender relations are integrated into arenas such as the labour market and the healthcare system. This theory can profitably be developed to give further analytical attention to how ‘sex’ and ‘gender’ are interrelated.

**INTERSECTIONALITY**

Intersectionality is based on the underlying assumption of heterogeneity within the groups of ‘men’ and ‘women’ and recognises that individuals are defined by multiple, intersecting dimensions, such as gender, class, ethnicity, (dis)ability, sexuality, age, etc. The concept was inspired by postcolonial theory, black feminism and queer theory, and has its roots in Crenshaw’s argument that legal discrimination against black women can only be understood if we appreciate that their experience is greater than the sum of racism and sexism.

The ‘additive’ perspective developed as a critique of the ‘static difference’ perspective (outlined in the section on ‘sex’ and ‘gender’) as a precursor to intersectionality (as outlined in table 2). Additive perspectives seek to move beyond the analysis of various gender differences along separate individual dimensions to instead address the relative importance of gender compared with other factors. In health research, this leads to questions such as: Does gender or does class best explain the male or female excess in a particular health condition? Or, how do class and gender interact to explain differences in men’s and women’s morbidity? In each instance, the underlying question is, where does the most explanatory power lie? From this perspective, the health of men and women is conceptualised as an accumulation of advantages and disadvantages.

The additive perspective has been criticised for ignoring that various axes of power do not necessarily act in unison—but operate in complex ways—upon health. One category, such as ‘race’, takes its meaning from another, such as ‘gender’, and a ‘new uniquely hybrid creation’ emerges at the intersection which becomes the unit of analysis.

For example, with additive perspectives a Canadian study found that poor self-rated health was related to race, class and sexual orientation, but not to gender. However, further intersectional analyses of the same data showed that each axis of inequality interacted significantly with at least one other resulting in the poorest self-rated health among homosexuals with poor income as well as among South Asian women. This exemplifies how the potential to visualise and explain health inequalities increases when intersecting power dimensions are seen as more than the sum of additional components. This is not easily captured by the ‘additive’ perspective which, in an analogy drawn from Choo and Ferree, tends to conceptualise intersections like street corners where several streets cross without an appreciation of how each is transformed by the others.

The place of gender in intersectional analysis has been the subject of debate. Some, such as Hankivsky, argue that the importance of gender should be ‘left open’ in order to allow a more effective understanding of the complexities of health experience to emerge in analysis. Others argue that a social institution, gender, ‘constructs and maintains the subordination of women as a group to men’. Hence gender is the most visible and pervasive part of social identity and should always be the starting point of analysis.

We propose that the answer to the question of whether gender should be ‘left open’ as to its relevance in analysis (Hankivsky) or always kept as a ‘starting point’ (Shields) hinges on the health issue in question and the context of analysis (who is being studied, where and when). Particular intersections of interest and the place of gender within them are ‘context dependent’ upon the wider social orders, including power relations, of which they are a part. It is therefore important to ask why a category such as gender is stable or unstable at any point in time, why it is changing (or not changing), and with what implications for health and for other life experiences.

We suggest that intersectionality should go beyond additive analyses and study complex intersections as well as ensure that gendered power relations and social context are included.

**EMBODIMENT**

Embodiment is a concept focusing on how the body interacts with the environment. It originated in phenomenology and is based on a view of the body-mind as a dialectic and holistic unit, in contrast to the Cartesian split between body and mind. The strive for holistic models of body, health and disease within the health sciences has led to a number of different perspectives on the concept of embodiment and how to use it, from among which we will describe three (table 3).

First, the phenomenological conceptualisation is based on philosopher Merleau-Ponty’s notion of lived experience,
focusing on how perceptions and consciousness are linked to the body. Among many others, the physiotherapist and philosopher Bullington has developed Merleau-Ponty’s concept of the ‘lived body’ in medical rehabilitation. She has shown that chronic pain is a bodily and an existential phenomenon. In order to be successful, rehabilitation must be holistic and address the material body and the diminished sense of self as well as the withdrawal from the surrounding society. The lived body is thus viewed as a fundamentally intertwined unity of mind-body-world.

Second, the concept of social embodiment places greater emphasis on social processes and gender relations. Using a social constructionist perspective, Connell emphasises that bodies are at the same time agents and objects of social practices. Bodily practices affect the formation of social structures, which in turn generate new practices which involve and affect bodies in continuous processes where embodiment concerns what bodies do and what is done to bodies. Anorexia is an example of a gendered form of social embodiment.

Third, in the epidemiological framework of ecosocial theory, embodiment is conceptualised as the biological incorporation of the material and social world, or in other words, how bodies are changed—temporarily or permanently—by environmental and behavioural factors. Krieger emphasises the multilevel nature of embodiment by integrating the soma, the psyche and society in various historical and ecological contexts and views the health impact of gender relations as one example of embodiment. Although she acknowledges that human beings have individual agency, the main focus is on the role of societal conditions in the production of population health inequalities and on biomedical formulations of health/disease. Fausto-Sterling and coworkers refer to Krieger’s notion of embodiment in their integration of embodiment with developmental systems theory in order to illuminate how sex/gender differences emerge during the first years of life. While enormous individual variability in behaviours exists at birth, the authors show how cultural gendered practices lead to different treatment of boys and girls and that this treatment may have tangible and long-term effects on their bodies and brains.

Embodiment is a promising concept for analysing how sex and gender become interwoven as part of life, but health researchers seldom address the different usages and meanings of the concepts. Our recommendation is that we need to be aware that embodiment has been developed within different traditions, with various degrees of integration of gender and health perspectives as well as with different levels of analyses.

### GENDER EQUALITY AND GENDER EQUITY

The concepts of gender equality and gender equity are based on the assumption that the distribution of opportunities, resources and responsibilities between women and men should not disfavour either group. To simplify, gender equality concerns ‘equal rights’ (absence of gendered discrimination) while gender equity concerns needs-based approaches. What ‘rights/needs’ means in practice is strongly disputed. We analyse two perspectives on this dispute (‘sameness/difference’ and ‘fairness’) in relation to the ‘rights/needs’ perspective (table 4).

#### Sameness-difference

The concept of gender equality originated in social science and feminism. At the Beijing Conference on Women (1995), it was criticised, primarily by conservative groups, for ignoring that women and men sometimes differ. However, this is a misunderstanding since the concept of gender equality acknowledges similarities and differences between women and men. Instead, gender equity was suggested as a concept acknowledging that women and men sometimes have different needs, for social and biological reasons. But the
concept gender equity was strongly opposed by feminist and human rights groups, arguing that this concept was open for subjective interpretations and could be used to justify discrimination. As a consequence, UN policy documents generally use the concept gender equality. But in policy documents on health, gender equity is still used, since it is generally accepted that in relation to health, men and women can have similar needs and different needs. The ‘difference’ perspective on gender equity increases the risk of overemphasizing health differences between women and men.

Fairness: With the fairness perspective the concept gender inequalities has been assumed to refer to differences that are not necessarily unfair while gender inequities refer to unfair differences between women and men. The perspective may have emerged because some definitions of gender equity emphasise the word ‘fairness’, to clarify that fairness of policy can require a needs-based approach, thus giving more resources to one group (eg, allocating substantial resources to women’s pregnancy/delivery-related health),

The fairness perspective is in accordance with the well-established broader (ie, not related to gender) definition in public health research of health inequity as avoidable and unfair health differences (eg, across social groups) and health inequality as health differences that are not necessarily unfair (eg, between young and old people). However, to disconnect the concept gender equality from assumptions of fairness is problematic, as the concept inherently refers to fairness and is widely used that way. In health science and social science, a commonly used definition of gender equality is Susan Moller Okin’s which emphasises ‘fairness between women and men in all spheres of life’.

In policy, the concept gender equality has strong foundations in international human rights law, and calls for the ‘absence of discrimination’ or absence of ‘limitations set by stereotypes, rigid gender roles and prejudices’, whereby relating this concept to fairness.

We argue that gender equality should be defined as absence of discrimination and gender equity as meeting the needs of women and men, whether similar or different. To illustrate what this can mean in practice for research, we describe below how the research focus can determine which concept should be applied, as suggested, for instance, by Payne and Doyal.

Gender equality can refer to the societal power relations between men and women as possible social determinants of health. For example, gender equality in marriage/cohabitation (measured as shared household duties) has been shown to be a determinant of mental health for women and men. Gender equity can be an adequate concept for research on needs-based prevention, treatment and rehabilitation. One example is research on gender inequities in unmet needs for hip/knee surgery, which shows that though a majority of those receiving the treatment are women, there are also more women than men who need treatment but do not get it.

Table 2 Conceptualisations of intersectionality

<table>
<thead>
<tr>
<th>Perspectives</th>
<th>Additive</th>
<th>Intersectional</th>
</tr>
</thead>
<tbody>
<tr>
<td>Origins</td>
<td>Critique of unitary experience of gender—that is, of the ‘static difference’ perspective (see table 1)</td>
<td>In antidiscrimination debate as well as in postcolonial theory, black feminism and queer theory. Crenshaw argued for a move away from ‘single-axis analyses’ of race and gender towards an appreciation that black women’s intersectional experience is greater than the sum of racism and sexism. Strengthened by poststructuralist emphasis on the deconstruction of binary sex and gender as primary categories of experience</td>
</tr>
<tr>
<td>Limitations</td>
<td>The addition of other axes of inequality to gender to identify where most explanatory power lies</td>
<td>Dimensions of inequality do not simply accumulate. Instead one category such as ‘race’ takes its meaning from another such as ‘gender’</td>
</tr>
<tr>
<td>Strengths</td>
<td>Goes beyond sex/gender as static difference to draw attention to differences within and similarities across the group of men and women</td>
<td>Promotes the analysis of new hybrid structures and identities which emerge at the intersections of inequality</td>
</tr>
</tbody>
</table>

Table 3 Conceptualisations of embodiment

<table>
<thead>
<tr>
<th>Perspectives</th>
<th>Phenomenology</th>
<th>Social embodiment</th>
<th>Epidemiological</th>
</tr>
</thead>
<tbody>
<tr>
<td>Origins</td>
<td>A dialectic and holistic body philosophy. The body is an object that I have and a subject which I am</td>
<td>Gender relational theory: concerns patterned relations between and among women and men that form gender as a social structure</td>
<td>Ecosocial theory: emphasises the multilevel and dynamic interplay between processes and structures relevant for health and the production of population health inequalities</td>
</tr>
<tr>
<td>Limitations</td>
<td>The lived body describes the daily experiences of having and being a body. Mind-body-world is intertwined in a wholeness and cannot be separated from each other</td>
<td>The interplay between bodies, social relations and social structure is a collective and reflexive process</td>
<td>The material and social world changes the body, thereby creating population patterns of health and disease</td>
</tr>
<tr>
<td>Strengths</td>
<td>Offers an explicit holistic meaning of the embodiment concept in clinical practice</td>
<td>A general framework which needs further contextualisation</td>
<td>Dominant focus on structures rather than on agency</td>
</tr>
</tbody>
</table>

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### Table 4 Conceptualisations of gender equality and gender equity

<table>
<thead>
<tr>
<th>Perspectives</th>
<th>Gender equality</th>
<th>Gender equity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sameness/difference</td>
<td>Fairness</td>
</tr>
<tr>
<td>Underlying assumptions</td>
<td>Assumed to denote exact sameness between women and men[^13][^34]</td>
<td>Sees inequalities as differences that are not necessarily unfair[^33][^34]</td>
</tr>
<tr>
<td>Potential problems</td>
<td>Can disfavour one gender by treating them exactly the same even when they have different needs[^34]</td>
<td>Ignores the strong human-rights and fairness background of the concept gender equality[^34]</td>
</tr>
<tr>
<td>Strengths</td>
<td>Is easier to measure since it asks for exactly the same level of resource allocation for women and men</td>
<td>Is in accordance with one well-known definition of ‘health equality’[^36]</td>
</tr>
</tbody>
</table>

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### CONCLUDING REMARKS

Our recommendations for future research on health and gender are that:

- The concepts sex and gender can benefit from a gender relational theoretical approach (ie, a focus on social processes and structures) but with additional attention to the interrelations between sex and gender
- Intersectionality should go beyond additive analyses to study complex intersections as well as ensure that gendered power relations and social context are included
- We need to be aware of the various meanings given to embodiment, which achieve an integration of gender and health and attend to different levels of analyses to varying degrees.
- Gender equality concerns absence of discrimination between women and men while gender equity focuses on meeting women’s and men’s health needs, whether similar or different.

An appropriate use of these concepts helps to address the problems associated with static, dualistic perspectives—such as sameness/difference, body/mind, men/women and social/biological—as well as the need for contextualisation of research questions and justification of theoretical standpoints, and therefore holds the potential for more nuanced and higher quality research.

Gender research in the health sciences is a complex field with great potential to make important theoretical contributions to the wider scientific community. Thus, gender researchers in health science can take leadership in a way we have not done before. Although theory development is relatively uncommon in the health sciences compared with other disciplines, it is vital to have clear and well-developed concepts in order to develop well-specified and appropriate research questions. Thus, health science has much to learn from gender research in relation to reflexive approaches, theoretical development, urge for conceptual clarity and epistemological knowledge.

The history of these six concepts shows that they are constantly evolving in response to changes in society, as a consequence of new research findings, and as part of ongoing theoretical developments within the health sciences and the field of gender studies from which they generally derive. They are powerful tools which, if used more systematically and with greater precision than has been the case to date, could significantly advance our understanding of experiences and determinants of illness and disease. Thereby they could make a difference to health science and health policy. Hence, the analysis in this paper is an invitation for dialogue and a call to make more effective use of the knowledge base which has already developed among gender theorists in health sciences.

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**What is already known**

In spite of increasing awareness of the importance of gender perspectives in health science, there is a conceptual muddle within the field.

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**What the manuscript adds to the literature**

Clarification and development of key concepts in gender research in health science, namely: sex and gender, embodiment, intersectionality, gender equity and gender equality. By addressing the problems associated with static, dualistic perspectives—such as sameness/difference, body/mind, men/women and social/biological—as well as the need for contextualisation of research questions and the justification of theoretical standpoints, an appropriate use of these concepts holds the potential for more nuanced and higher quality research in health sciences.
Contributors All authors participated in designing the article and deciding on the analytical framework. AH, KG and CA wrote the section on embodiment. LA, SE, KJ and PV wrote the section on gender equality and gender equity. AH initiated and led the work process. Together with KJ she compiled the full manuscript and wrote the introduction, and conclusions. EA read, commented and developed the final draft. All authors have read and approved the final manuscript.

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