Gender and Rehabilitation

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Why sex and gender matter in interventions and research for rehabilitation within health systems

Sex and gender matter in interventions and research for rehabilitation within health systems because females, males, and intersex people have different biologies—and women, men, and gender minorities have different gendered social experiences—that affect their health behaviors, opportunities, and outcomes.

For example, globally, women experience higher rates of chronic musculoskeletal conditions like osteoarthritis than men (1) due to social and biological factors (2). Despite this, health interventions and research communities have for a long time treated male patients as the default, which has implications for the quality of care that everyone else receives. Care designed for the default man stems from, and further perpetuates, gender and sex disparities in health systems.

This is just one example of the gendered nature of the health system in which rehabilitation care is received. It is important that rehabilitation care, like other forms of service delivery, is contextualized within the broader context of gendered health systems. Some examples of the gendered nature of the health system are provided below.

- Who provides care is gendered; women are disproportionately represented in the lower tiers of the health workforce, providing the majority of low paid, or unpaid, care, and men are disproportionately represented in more technical positions (3). Care provided within the community and household, including post-rehabiltation care, is also disproportionately provided by women.

- Who leads is gendered; while women make up 75% of the health workforce, they only make up 25% of those in decision-making roles (4).

- Access to health services is gendered; for example, health systems financing mechanisms like user fees have been shown to decrease women's use of health services in low- and middle-income countries, and in some contexts, women require permission from the male head of household to access care (5).

- What services are offered (and funded) is gendered; people may require specific types of rehabilitation care due to sex or gender-specific needs. However, what rehabilitation services are prioritized (and funded) is often determined by what those in power think is important, which is affected by a person's worldview and individual experiences. Less diverse leadership may therefore prioritize care that fits within a specific worldview at the expense of others. In addition, while disease burdens are sometimes used to prioritize care, they are often calculated based on the overall proportion of a population that is affected, which can miss the needs of specific groups, including women and children.

- What medical products and technologies are developed and offered is gendered; fewer resources are often allocated to medical products and technologies for women and children (5), including those needed for sex or gender-specific disability, as a result of many of the reasons above.

All of this contributes to rehabilitation access and utilization barriers for vulnerable groups, which affect morbidity and quality of life.

The missing link of gender in interventions and research for rehabilitation

Within the broader field of interventions and research for rehabilitation, researchers have begun to explore and describe differences in rehabilitation needs by sex. For example, a recent analysis of data from the 2019 Global Burden of Disease Study includes sex-disaggregated results (1), which sheds important new light on global sex-specific rehabilitation needs. Globally in 2019, women accounted for just over half (1.22 billion) of an estimated 2.41 billion individuals with conditions that would benefit from rehabilitation services, but they spent more years living with disability than men (163 million vs. 146 million) (1).

While researchers are beginning to explore and describe global differences in rehabilitation needs by sex, there has been a lack of analysis that combines sex and gender (7,8). The National Institutes of Health (NIH) refer to sex as "biological differences between females and males" and gender as "socially constructed and enacted roles and behaviors which occur in a historical and cultural context and vary across societies and over time" (9). Rehabilitation research has often conflated sex and gender—usually referring to gender as a synonym for sex (7).

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The conflation of sex and gender in rehabilitation interventions and research muddles scientific understandings of how sex and gender influence health behaviors, opportunities, and outcomes, which has implications for morbidity and mortality rates. It additionally contributes to false understandings of gender as binary and marginalizes gender minorities in health interventions and research.

How gender shapes rehabilitation

Gender affects who is afflicted by particular diseases and injuries that necessitate rehabilitation services. For example, men experience more brain injuries than women due to gendered social expectations that shape the activities, behaviors, and occupations that men engage in, such as professional contact sports, construction, and the military (7). In the United States, women are more susceptible than men to traumatic brain injuries caused by domestic violence (7), which is inextricably related to gendered power relations in a context where one in seven women and one in 25 men have been injured by an intimate partner (10).

Just as gender shapes differences in rehabilitative needs, it shapes gendered differences in how people experience rehabilitation services, including assistive technologies. For example, in Spain, women have a high cardiac rehabilitation dropout rate in part because they are dissatisfied with the content of cardiac rehabilitation programs (11), which have more often been designed with men in mind. Similarly, in a study of mobility and satisfaction with lower limb orthoses and prostheses in Sierra Leone, women had the poorest mobility outcomes and were the least satisfied with assistive devices (12).

Broader societal gender inequities—like the inequitable distribution of household labor and resources—also have implications for rehabilitation access, use, and outcomes. For example, in the United States, many women juggle paid work, household labor, and family care, which may hinder their ability to access rehabilitation or adhere to a rehabilitation regimen. Likewise, women's lower economic status in many contexts serves as a barrier to health care access due to their inability to pay for services or the unwillingness of family members to allocate resources for women's health care (5).

In addition, gender shapes caregiving, which is important at every level of the rehabilitation care continuum. For example, in the United States, 65% of informal caregivers are women (13), and women are more likely to experience caregiver burden, defined as "the multidimensional toll that caregivers experience to their social, emotional, spiritual, financial, and physical wellbeing" (14). In low- and middle-income countries, women provide the vast majority of non-institutional and unpaid care (5). Similarly, in a study comparing the gendered experiences of caregivers to older persons with health impairments in the Netherlands, women caregivers reported higher caregiver burden, had partners with greater care needs, provided more hours of care a week, reported more secondary stressors in their lives, and received less help from others than men caregivers (15).

Towards more gender equitable rehabilitation within health systems

Sex and gender "mutually affect and shape health behaviors, opportunities, and outcomes" (7) and should both be considered in all areas of interventions and research for rehabilitation within health systems. The inclusion of sex and gender in health systems research and interventions more broadly ensures better science, cost savings, and more equitable health programs and policies (16). The inclusion of sex and gender analyses in interventions and research for rehabilitation within health systems will ensure that rehabilitation services are responsive to both the biological and social needs of users.

How to address sex and gender in interventions and research for rehabilitation within health systems

- The use of the terms 'sex' and 'gender' should reflect their distinct meanings.
- Data should be disaggregated by sex, gender, and other social factors, such as age and race, so that disparities in rehabilitation needs, access, use, and outcomes can more easily be identified.
- Sex-disaggregated analyses should not perpetuate the idea that men and women are biologically predisposed to certain health conditions and afflictions when the link is social. For example, when researchers say that sex predicts a particular health outcome, they often mean that gendered social factors predispose people to a particular disease or injury. Such analyses suggest that gendered health disparities are somehow natural and thus unchangeable, which makes it difficult to address health inequities. This often occurs when gender and sex are conflated.
- Many rehabilitation-related studies "control" for sex or describe the number of men and women in a particular study

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but do not provide a sex and gender analysis, often because differences and disparities cannot be precisely measured using quantitative methods. This is a missed opportunity to engage in a qualitative exploration of how sex and gender interact to affect rehabilitation access, use, and outcomes among a small number of people, which could help larger studies ask better questions and ultimately inform better rehabilitation services.

- Biomedical researchers and social scientists should work together to discern how social factors like gender and biological factors like sex interact to inform rehabilitation needs, access, use, and outcomes as well as caregiving. This would inform more socially inclusive rehabilitative care within health systems.

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