What Men Can Do to Reduce Gender Inequality in Science, Medicine, and Global Health: Small Wins and Organizational Change

Authors: Jill Yavorsky, George Banks, and Alyssa McGonagle

Abstract:

Background: Gender inequality remains a pressing issue in science, medicine, and global health. Much of the scientific literature focuses on inequality-reduction strategies specific to women. Far less attention, however, has been paid to men’s roles in reducing gender-based barriers, despite that men dominate nearly all authority structures within science, medicine, and global health and thus have greater power to influence organizational cultures and women’s upward mobility.

Methods: We review literature from business and social sciences, apply them to areas of science, health, and medicine, and deliver eight actionable, evidence-based recommendations with a distinct focus on involving men in organizational change. We highlight both “small wins” (practices that all men can implement) and organizational-level strategic culture and policy changes.

Findings: Our recommendations are as follows: (1) Men should ensure that women have ample space to communicate their ideas; (2) Male leaders should seek out and highlight women’s contributions; (3) Men should take public stances against other men’s actions and language that demean, harass, and negatively stereotype women; (4) Men should actively promote cultural artifacts in organizations that equally represent both genders; (5) Leaders should implement policies that support work-family balance, such as flexible work arrangements and paid family leave; (6) Men should use flexible work arrangements and paternity leave options, encourage other men to do the same, and refrain from evaluating men and women differently when they use them; (7) Men should diversify their networks to include women and ensure they disperse information about advancement opportunities to both men and women; (8) Finally, men in leadership positions should advocate for, and, importantly, sponsor women.

Interpretation: We argue that men play a critical role in reducing gender-inequality and can take concrete actions to promote the advancement of women in science, medicine, and global health.

Funding: We received no funding for this work.
What Men Can Do to Reduce Gender Inequality in Science, Medicine, and Global Health: Small Wins and Organizational Change

Empirical evidence is overwhelming regarding the need to address gender inequality in science, medicine, and global health [1]. Attention to this topic in the popular media also continues to grow [2]. Reducing gender inequality is important not only because of its moral imperative but also because our society could face distinct labor shortages in STEM [1] and stymied innovation growth as a result of not fully utilizing the talent of both men and women [3]. Yet, gender inequality is not unique to science, medicine, and global health. It exists in forms of wage, promotion, and leadership gaps, as well as sexual harassment and hostile environments across a range of industries [4, 5]. Despite longstanding, documented evidence of this widespread problem and the implementation of various interventions, such inequality remains.

Applying an interdisciplinary approach, we present evidence-based recommendations for reducing gender inequality from business and applied social sciences and extend this knowledge to science, medicine, and global health. We take a unique perspective: we focus on men. We highlight that much of the literature, as well as the mainstream media, has focused on what women can do to increase their human capital (e.g., higher education and leadership training) to be better positioned to enter and succeed in STEM [6, 7]. Interventions have also focused on organizational strategies [8]. Less attention, however, has explicitly concentrated on the roles of men in reducing gender-based barriers in science, medicine, and global health.

We argue that a focus is needed on what men can do to support gender equality using a “small-wins model” [as successfully illustrated in the technology industry; 9]. This conceptual approach acknowledges that no single intervention will completely address the issue of gender inequality, but “concrete and implementable actions that are of moderate importance and
produce visible results” (i.e., small wins) may accumulate over time and provide positive, incremental improvements in reducing inequality [9, p. 735]. We contend that men’s participation is critical to incremental change because men dominate nearly all power structures within STEM and beyond. For example, in the U.S., men represent 93.5% of Chief Executive Officers in Fortune 500 firms [10], constitute the majority of full professors [11], own two-thirds of non-farm businesses [12], and represent two-thirds of doctors and lawyers in the most lucrative and prestigious specialties in their fields [13]. This means that men, broadly, have significantly greater influence than women do on organizational culture, promotion, and retention decisions as well as policies and practices. In addition to power differences, many women lack true male workplace allies who are willing to publicly advocate for gender equality. While many men express egalitarian beliefs privately (to spouses, friends etc.) [14], there has been a notable absence of men publicly devoted to this cause [15], due to a variety of reasons (men’s lower perceived legitimacy to advocate on the behalf of women, bystander effects, etc.) [16, 17]. However, if gender equality is to occur, men will need to play a critical role. Our commentary delivers a set of eight actionable, evidence-based recommendations with a focus on involving men in organizational change.

In this review, we recommend changes at both a macro level (organizational policies and practices that men can champion and implement), as well as a micro level (practices that require distinct behavioral changes by men). We begin with a discussion of the role men can play in developing an organizational culture to support gender equality (see recommendations 1-4) and then proceed to men’s role in areas of promotion and retention of talented women (see recommendations 5-8). We focus on these two areas because of their documented importance for facilitating the critical changes needed for true gender equality [9, 18].
**Organizational Culture and Climate**

A significant body of scholarship has theorized and empirically documented the many ways that organizational cultures are gendered [19, 20]. Organizational cultures, particularly in male-dominated firms and industries, often privilege men’s interests and values and more highly reward attributes and skills that are stereotypically associated with and assumed “inherent” to men [4, 19]. Even when climates are not overtly hostile toward women, they can still advantage men through mundane, everyday practices that favor men’s opinions and contributions and promote bonding that privileges men’s relationships with other men [21]. As values are ingrained over time, gendered biases and practices become deeply held and difficult to change. We advocate for men to work toward dismantling these everyday practices that promote gender inequality.

*Change Communication and Status Norms.* Research indicates that men tend to dominate conversation space in mixed- and male-dominated settings [22, 23] and men’s ideas are considered more influential than those of women, even when they express identical perspectives [4]. Men are also more likely than women to be viewed as leaders when they contribute ideas to a group discussion [24]. These studies point to the importance of specifically drawing attention to women’s voices. Men can do this in two ways. First, men can simply listen more and ensure that a variety of people, women included, have ample space to communicate their ideas (Recommendation #1). Second, men, particularly those in leadership positions, can seek out and highlight women’s contributions, considering that they are often overlooked (Recommendation #2). Because men tend to have greater social status and are assumed to have greater competence than comparable women [4], men can play a significant role in changing this dynamic by lending their own social status to vouch for women’s merits and ideas.
Ultimately, the goal is to change organizational cultures that routinely dismiss or ignore women’s ideas to a point where women’s ideas are habitually recognized and men’s validation is not necessary for them to gain traction. In the meantime, we urge men, especially leaders, to solicit opinions (“Abigail, I have not yet heard from you on this issue), bring attention back to women’s ideas when they are interrupted ("Abigail, I think someone interrupted you before you had finished your complete thought, would you like to elaborate?"), and endorse the utility of women’s ideas (Abigail, that’s a promising idea. Let’s discuss your idea some more”). Not only will these practices foster a more inclusive environment for women, they will also help organizations implement the most optimal ideas by including and vetting ideas from diverse perspectives [25]. Developing such communication and status norms in science, medicine, and global health-based organizations would help weaken stubborn gender status hierarchies and ensure that organizations fully utilize the skills, expertise, and knowledge of all members.

Disrupt Sexist, Hostile, and/or Exclusionary Behavior. An abundance of research indicates that women continue to experience hostile or unwelcoming work environments in STEM-related organizations, including but not limited to those that tolerate sexist comments/jokes, sexual harassment, and incivilities [1]. Male allies, who are often bystanders to hostile situations, play a critical role in disrupting behavior by men who demonstrate little commitment to promoting, or worse, specifically oppose, gender equality in the workplace. Social science research on masculinity clearly demonstrates that men often desire and seek approval from other men [21, 26]. Although men may also seek approval from women, men tend to be the greatest arbiters of other men’s status and thus, men carry more influence in deciding men’s social status in organizations [26]. If men began losing status by other men when they engaged in sexist behaviors, their behaviors would likely change.
Accordingly, we advocate that men take *public* stances against other men’s actions and language that demean, harass, and stereotype women (Recommendation #3). This stance is critical because male bystanders often do not step-in to publicly oppose such actions [16, 17]; instead they may only offer *private* support (or none at all) to targeted women. When men remain silent in the face of sexism, the perpetrators’ status remains intact and their actions unchallenged. Consequently, perpetrators may think they have tacit approval from the group [27]. Challenges, particularly by high-status males, could disrupt this dynamic and establish new norms to signal that engaging in this behavior no longer represents a route to social status.

In addition to status advantages that men have in disrupting sexist behaviors, men may be seen as more *impartial* when they confront sexism. Indeed, study findings suggest that men are viewed as more objective and less “self-serving” when they advocate for gender equality [28]. Taken together, this research speaks to the criticality of men in taking an active role in confronting and disrupting gender-biased behavior.

*Remove Gendered Cultural Artifacts.* Considering that men continue to dominate high-status positions in science, medicine, and global health, we urge men (at all levels) to actively promote cultural artifacts in organizations that more equally represent and attract both genders (Recommendation #4). Cultural artifacts relay information about and reflect an organization’s culture. They are observable and include, but are not limited to, organizational language, symbols, and practices. Such artifacts can influence the degree to which women feel that they belong in and want to engage in spaces that continue to be proportionally dominated by men, like science, medicine, and global health. Unfortunately, men’s interests, goals, and values are more often reflected in organizational artifacts, especially in male-dominated contexts [19, 20, 29].
Gendered job titles and job advertisements are examples of cultural artifacts that may consciously or unconsciously promote men’s greater fit for an organizational role. Indeed, research indicates that women perceived less of a “professional fit” between themselves and male-dominated jobs that emphasized the importance of masculine-typed attributes (e.g., competitiveness) or included masculine-oriented imagery (“looking for coding ninja”) in job advertisements [30]. Because of “lack of fit” perceptions, women were also less interested than men were in applying for such masculinized jobs than when job advertisements were more gender-neutral. Emphasis on masculine-stereotyped behaviors may also occur during performance evaluations wherein managers primarily value workers’ displays of masculine-typed behaviors (agentic practices) and devalue displays of feminine-typed behaviors (communal practices) [20, 31]. Yet, both sets of attributes are important to success in team-related or patient-based work common in science, medicine, and global health. The explicit valuing of both communal and agentic behaviors may lead women to feel more positive attitudes toward STEM jobs and encourage a greater sense of belongingness, as research indicates [32]. Thus, we encourage male leaders to be vigilant about the attributes that they advertise, stress, and reward.

In the fields of science, medicine, and global health, cultural artifacts both within and outside of the workplace may adversely affect gender equality. Outside of the workplace, important informal social gatherings, often intended to promote social networking and bonding among coworkers, may reflect stereotypical male interests in ways that limit women’s participation or interest (e.g., playing golf or poker). Male co-workers may specifically exclude women from these gatherings, or women may decline to participate if they have lack the skills or knowledge required to participate in these activities (due to broader gender socialization norms). Moreover, if networking and bonding activities consistently occur outside of standard work
hours, they could further limit women’s participation due to greater childcare responsibilities. Thus, we encourage people in positions of organizational power to take inventory of current practices, assess their neutrality and make modifications to incorporate more gender-balanced activities. While all leaders should strive to incorporate this recommendation, male leaders may face less resistance in leading this charge, for two reasons. First, organizational actors may interpret pushes by male leaders to de-masculinize cultural symbols and practices as stemming from more “altruistic” origins of wanting to benefit the organization as a whole, rather than “only” women (given gendered assumptions around objectivity when men and women advocate for equality) [28]. Second, change-resistant men may oppose gender-outsiders (women) encroaching on men’s presumed “entitlements” to practices that celebrate men and masculinity [33, 34]. More generally, cultural shifts will require that men (leaders and non-leaders) do not devalue activities or practices associated with femininity or women and actively participate in them to make them the norm.

Promotion and Retention of Women

A large body of work shows that gender-based stereotypes lead to biased evaluations of individuals’ abilities and competencies [35]. Such biases influence whose ideas are perceived as credible, the amount of scrutiny applied to one’s accomplishments, and who receives promotions or high-profile assignments [4, 9]. Many of these biases stem from widely-held status beliefs that depict men as more competent and worthy of attention than women, especially in areas culturally associated with men and masculinity such as science, medicine, and global health [35]. Research indicates that these biases can accumulate over the course of women’s careers, suppressing their career trajectories and upward mobility [4]. Notably, biases and resulting career impacts may
compound when women become mothers because of stereotypes that depict mothers as less competent and committed to their organizations, compared to non-mothers and to men [4, 9].

Workplace barriers coincide with simultaneous challenges that women face in their own families, given that women still perform the majority of household work and childcare [36]. Inequality within families makes it even more challenging for women to meet workplace expectations, especially in STEM, where employees work long hours and face expectations of constant availability [37]. Thus, not surprisingly, as women enter mid-career—a time-period that often coincides with parenthood—and start facing stagnating careers and family/work conflict, they are at risk for changing careers or pulling back from demanding STEM or medical-related fields [38]. Thus, addressing issues of promotion and retention are critical for increasing equality, with men playing a key role in achieving gender progress on these fronts.

Change Work/family Policies. Men, especially those in power, should advocate for and implement organizational policies that allow members to meet the demands of both their work and family lives. In particular, the advocacy of two such family-friendly policies are critical to decreasing promotion and retention gender gaps: flexible work arrangements and paid family leave for women and men (Recommendation #5). First, in many organizations, work hours are fixed (e.g., 8am to 5pm) and “face-time” at a set location is required. This is especially true for careers in science, medicine, and global health, in which telecommuting opportunities are limited (e.g., postdocs who labor for long hours “at the bench”). If a worker desires flexible arrangements, s/he must provide a compelling case to her/his employer on the necessity of this arrangement and how it will not impact her/his productivity [39]. As a result, workers who seek “one-off” flexible arrangements (often women) are vulnerable to being perceived as less dedicated to their jobs. Research, indeed, finds that women who request work flexibility are
perceived as less respectable, likeable, and committed to their jobs than comparable men with similar requests [40]. To help reduce potentially career-damaging stigma associated with flexibility, we argue that “opting in” to flexible arrangements should become the default in organizations [18]. Thus, inflexible arrangements would require a conscious choice of “opting-out” of an established workplace norm for both men and women. Further, this would require employers to make a case for why a worker cannot have flexible arrangements [18]. Although flexibility in location may not be possible for some science, medicine, and global health jobs (i.e., researchers that require a laboratory or medical doctors who see patients), flexibility in work times may be feasible in these cases. More broadly, we advocate that organizational leaders cultivate and reward a results-based culture that emphasizes efficiency and outputs instead of face-time. This recommendation aligns with research that indicates employee outputs decline significantly after a 50-hour work-week [41].

Second, men rarely take extended periods of leave after the birth of a child, in part, because U.S. has no federal policy that mandates companies offer paternity leave. On average, men take about two weeks off work post-birth [42]; whereas, the majority of women take eight to twelve weeks off [43, 44]. This disparity means that women bear nearly all of the economic and career risks associated with caring for a newborn child, including potentially losing current projects and, in many cases, foregoing wages (given that federal legislation does not require that companies offer paid leave). Given a poor legislative history for addressing family/work policies in the U.S., men in leadership must advocate for organizational policies that all workers have access to post-birth or post-adoption paid family leave. Notably, one area where this problem is exacerbated is in universities because most universities classify postdocs as temporary employees, limiting their protections. However, simply offering family leave may not be enough.
Research indicates that even when men have access to these policies, many men do not take advantage of them because of fears of reduced future career prospects [44, 45]. Again, designing a family leave policy with opt-in as the default could reduce stigma associated with taking family leave and establish a new cultural norm that prioritizes men’s caretaking and family roles and does not penalize men or women who use such policies.

For men more generally, this means taking advantage of flexible work arrangements and paternity leave options, encouraging other men to do the same, and not penalizing or evaluating women differently when they use these policies (Recommendation #6). If men and women both start taking advantage of such policies, a shift should occur in which co-workers and bosses start to disassociate flexibility with lower commitment and productivity. Hopefully, this would reduce negative “motherhood bias” that limits women’s upward mobility [46]; at the same time, it would facilitate women’s retention, given that they no longer must choose between meeting everyday family or work obligations. Findings from a recent field experiment by Phyllis Moen and colleagues support the latter assertion [47]. The researchers found that broad access to flexible work arrangements among tech employees in a large corporate retailer increased worker retention for both men and women, with no changes in productivity.

Equally Distribute Career-related Information. Prior research finds that men’s career networks tend to be more sex-homogenous and comprised of higher-status workers than those of women [48]. Thus, men often have greater access to higher-status job-leads and/or are recommended for employment and advancement opportunities by people with higher status [48, 49]. We recommend that men take proactive measures to diversify their networks to include women and disperse information about advancement opportunities to both men and women (Recommendation #7). Given that employee referrals are more likely to be hired and experience
wage premiums compared to non-referred candidates [50], men should ensure that their hire referrals, particularly for high-status positions, also include women.

In addition to job leads, men may also have greater information about or access to forthcoming high-profile projects or speaking opportunities because of their typically higher organizational positions. It is critical that men distribute these opportunities to both men and women, because women’s regular performance in high-profile situations can help disassociate male gender from characteristics of authority and expertise [31], which are notably valued and rewarded in the sciences, medicine, and global health. It could also enhance women’s organizational visibility, leading to broader support for their upward mobility. Even men who do not have influence over speaking opportunities or high-profile assignments can be part of a solution by suggesting women participants and refusing to be on an all-male panel or conference.

*Advocate for and Sponsor Women.* Because men tend to have higher organizational statuses, they have greater opportunities to advocate on the behalf of talented people in lower positions. It is imperative that male leaders not only mentor women, but also more importantly, sponsor them (Recommendation #8). Sponsoring occurs when a leader advocates for a person's advancement, vouches for his/her abilities to other leaders/managers, recommends him/her for key assignments, and encourages him/her to pursue advancement opportunities; whereas mentorship is centered around providing career advice [51]. In addition to enhancing a spotlight on women’s work, sponsorship helps women subvert double-bind issues in which women are penalized in ways that men are not for exhibiting self-promoting behaviors [31] because sponsors promote women’s work for them. Unfortunately, research indicates that women are over-mentored and under-sponsored [51], which may stem from people’s gravitation toward same-sex pairings [18]. With a dearth of women in leadership roles, particularly in male-
dominated fields, women may have few, if any, same-sex leaders to choose from. Thus, it is critical that men equally distribute their sponsoring activities to the full dispersion of workplace talent. Leaders can also tie activities related to sponsorship and retention of diverse talent to their performance goals and financial rewards to help the advancement of women.

Conclusion

We have argued that there is a critical need to consider the roles that men can take to support gender equality in the workplace, especially given that men dominate most high-status jobs and/or leadership positions in science, medicine, and global health. This review distinctly diverges from most scholarship that either focuses on what women, or organizations more broadly, can do to improve gender equality in these areas. While these perspectives are important, a long-time missing component has been on concrete, actionable steps that men can take. A “small-wins model” approach that heavily involves men would provide positive, incremental improvement for gender equality in science, medicine, global health, and beyond.
References

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