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Work like a girl: Redressing gender inequity in academia through systemic solutions

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Work like a girl: Redressing gender inequity in academia through systemic solutions

Abstract

Historically, the professional structure of higher education has provided restricted employment, career, and leadership opportunities for women. This is exacerbated where there is an intersection between gender and race, culture, religion, or age. Women continue to be underrepresented in senior leadership positions across a range of disciplines, and this lack of representation of women within the professional structure of higher education itself acts as a barrier for more women reaching senior levels within institutions. More women are needed in higher positions to increase representation and visibility, and to encourage and mentor others to then aspire to follow a similar path. This critical review examines gender equity across the major career benchmarks of the academy in light of the impact of the personal contexts of women, systemic processes, and cultural barriers that hinder career progression. Research-based systemic solutions that work towards improved gender equity for women are discussed. The findings from this critical review highlight the need for global systemic change in higher education to create ethical equities in the employment, career, and leadership opportunities for women.

Keywords

Gender, inequity, equality, women, academia, higher education

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The experience of people working in academia who identify as women is very different to that of men. Discrepancies in academic work (e.g., in terms of career progression and outputs realised) between men and women have been apparent for several decades,-with gender inequities unfairly disadvantaging women, and women from minority groups in particular. The coronavirus (COVID-19) pandemic has raised further concerns for gender equity within academia. This has been especially true for academic women with caregiving roles who balance their research and teaching loads with additional pressures resulting from diminished childcare, school closures, and the need to home-school their children or moving family members with chronic health conditions into the family home. During the COVID-19 pandemic period, publications by women dwindled across disciplines, while the proportion of research published by men increased (Andersen et al., 2020; Muric et al., 2020; Vincent-Lamarre et al., 2020). More males than females were called on as COVID-19 experts (Gabster et al., 2020; Rajan et al., 2020), and the overall research productivity of female academics has been lower than that of men (Burzynska & Contreras, 2020; Cui et al., 2020; Myers et al., 2020), as seen in the database of higher education literature during COVID-19 (Butler-Henderson et al., 2020). The effects of COVID-19 are particularly concerning because they have amplified many of the gender disparities already noted in academia. This article provides a critical review that examines gender equity across the major career benchmarks of the academy: grants and funding, publishing and citations, service, opportunities to attend professional development and conferences, and leadership opportunities. In particular, the article examines equity in the light of the personal contexts and experiences of women. It continues by proposing systemic solutions, through legislation, policy, leadership and support, professional structure, and culture, norms and attitudes aimed at creating a positive and inclusive culture that allows women to thrive irrespective of their caregiving responsibilities or domestic load. This critical review has implications for leaders and policymakers who have an ethical responsibility to implement change.

Current evidence and literature

Defining equity in academia

Gender equity in academia has most frequently been examined through the lens of equality, that is, the goal of women reaching parity with men in employment gains, salary, leadership positions, career progression, and the absence of harassment (Aiston & Fo, 2020; Mason & Goulden, 2004). This kind of framing usually includes hallmark metrics of academic performance (e.g., publications, funding success, and academic impact) (Bailyn, 2003; Mason & Goulden, 2004). While this definition of equity is important, there is also a need to consider elements of the personal lives of women that differ from men – such as childcare roles and broader family responsibilities – to ask how these may impact and be impacted by their work. This is particularly important given the strong correlations between satisfaction in these areas, and personal wellbeing and family outcomes (Mason & Goulden, 2004). Although the goal of women to achieve equality in academic metrics may be an appropriate aspirational target, the personal and social costs for women of pursuing these outcomes must also be considered. Bailyn (2003), for instance, suggests that conflating equality and equity in academia ignores life outside of the academy. Research that has examined the careers of women in academia has found persistent family-work conflict (Gatta & Roos, 2004). Other studies have also noted that female academics with caregiving responsibilities report feeling guilty about not being able to fulfil their expected responsibilities, or experiencing a sense of discord between work priorities and those of life outside the workplace (Toffoletti & Starr, 2016; Ward & Wolf-Wendel, 2004). Along with such feelings come stress, fatigue, and anxiety (Acker & Armenti, 2004; Ward & Wolf-Wendel, 2004). Overall, even the quest for gender neutrality (social structures which treat men and women equally) ignores the individual experiences of women, especially in respect to their homelife (Bailyn, 2003).

Bailyn (2003) proposed that equity in academia should be understood fundamentally in terms of fairness. Accordingly, considerations of equity should not assume a view that only encompasses the experiences of women in the workplace, but rather a more holistic perspective that also considers the life outside of work, as well as the intersections and overlaps between these two domains. A definition of equity based on fairness is underpinned by the notion that equity cannot be achieved when any one group is systematically disadvantaged in relation to another, resulting in untenable and unrealistic ideals which judge what it means to be a successful academic against benchmarks designed for the advantaged group (Bailyn, 2003). From this perspective, a holistic assessment of the position of women in academia and of gender imbalances in traditional academic measures of success becomes relevant and important for the design of new systematic responses aimed at promoting equity in the academy.

Equity in the presence or absence of children

Being both a woman academic and a mother entails a challenging balancing act that can feel akin to walking on top of broken glass (McCutcheon & Morrison, 2018). The metaphorical path of broken glass represents *the motherhood penalty*, the barriers academic mothers face within the academy that cause their careers to lag behind those of academic fathers and academic women who are childfree (Cummins, 2017). Unequal home workloads, living arrangements, and institutional barriers may perpetuate these gaps, resulting in increased working hours, raised stress levels (Baker, 2012), destructive forms of working, and eroded wellbeing (Cummins, 2017). Minello (2020) points out that the age at which most women embark upon their career in academia also corresponds to their peak reproductive period. The decision to either have children or not can be met with bias and discrimination, yet research provides us with compelling evidence that those women who choose to have children are at the greatest disadvantage (Myers et al., 2020). The challenge involved in balancing the dual roles of mother and academic leads to a greater frequency of work-family conflicts (McCutcheon & Morrison, 2018). Such conflicts may be responsible for many women choosing to no longer pursue a career in academia or the overrepresented proportion of female academics employed as casual staff. However, ameliorating the challenging workload burdens and known structural barriers can result in higher levels of success for women in the academy (Cummins, 2017).

The argument regarding gender equity and women in academia often centres around the additional child-rearing responsibilities taken on by women who are mothers in comparison to men who are fathers. This is despite research which clearly shows that women academics are more likely to delay having, or choose not to have, children when compared to non-academic women (Gatta & Roos, 2004). Toutkoushian et al. (2007) argue that it is an asset for men in academia to marry a non-employed wife who can support their academic pursuits, while marriage and children for women in academia can limit a woman's career growth because women tend not to make decisions which may negatively affect their husband's career (such as relocating for a tenured academic position). Baker (2010a) suggests other reasons, beyond caregiving for children, for the academic gender gap between men and women, including the greater perceived social capital of men compared to women, different academic priorities (women prioritising teaching over research), the shorter career length of women, and the greater likelihood that women will care for elderly or disabled parents/siblings, move or forgo a tenured position to support their partner's career, and/or accept more responsibility for housework. Thus, a holistic approach to understanding the academic gender gap and to reducing gender discrimination in academia should also pay due attention to women who do not have children.

Research performance standards

Research performance standards and assessments of the impact of academic research have been criticised on the grounds that they fail to reflect the core work of academics engaged in research-active duties, since the typical workload often includes significant amounts of time spent on teaching, supervision, and dissemination of research (Allen et al., 2020; Allen, 2019; Miller, 2019; Spence, 2019). The reported problems of binary-based performance and productivity have been found to have negative outcomes for academics, including mental health problems, untenable workloads, and high levels of stress (Else, 2017; Evans et al., 2008; Gorczynski, 2018; Winefield et al., 2003). These problems are intensified by issues related to a lack of gender equity which have been widely documented across a range of research performance standards (van der Besselar & Sandstrom, 2016). This section will explore the evidence for gender inequity across these standards and its implications for career-based outcomes such as salary and professional progression.

Grants and funding

Universities in most nations draw their research funding from a range of sources, with government funding schemes usually being the most sought after and, therefore, the most competitive. Success in securing such highly sought-after funding can be pivotal for a researcher's career (Aiston & Fo, 2020). In Australia, for example, the 2020 Australian Research Council (ARC) grants, a highly prestigious and sought-after funding scheme, had a success rate of 21.4 percent across all schemes (ARC, 2020). The ARC criteria are weighted to consider applicants' past successes and are therefore biased against early career researchers. This weighting also contributes to the higher likelihood of men being successful, given that they generally enter academia at a younger age and are less likely to have had career interruptions (Baker, 2010b).

A review of the 2019 ARC data shows that of the 13,960 applicants across all schemes, only 27.5 percent were women. While the success rate was slightly higher for women applicants – 24.5 percent compared to 22.8 percent for men – the outcome was that 2,307 males secured funding in comparison to 939 women (ARC, 2020). The ARC statistics have been explained by the organisation as reflecting a consistent pattern in which women apply for prestigious grants only once, whilst men apply up to three times, or until successful. Few studies have been published examining the distribution of research funding, but what has been published tends to bear out the Australian data set. For example, a study of grant amounts awarded by the USA's National Institute of Health found that the average female first-time primary investigator (PI) received 24 percent less funding than their male counterparts (Oliveria et al., 2019).

A multiplier effect emerges. Because more men receive ARC grants, this means that men have more opportunities to further their research agenda and are thus more likely to be better positioned to gain promotion at an earlier point in their career than are women. This contributes to the disparities found in senior university appointments, with men accounting for approximately three quarters of Level E (Professor) positions (9,043 men compared to 3,048 women) (ARC, 2019). The disparity in progress along the research track has a knock-on effect on employment roles more broadly in the university sector, with women holding nearly twice as many (62.2%) teaching and learning positions as men (33.7%) (ARC, 2019).

Publishing and citations

Determining the number of women who publish in comparison to men is critical, since quantity of publications, frequency of citation, and the quality of publication outlets are often prerequisites for tenure and promotion. Moreover, making sure that women are appropriately represented as academic authors (including in citations) ensures that their contributions are acknowledged and their perspectives heard. Using a sample of more than 1.5 million medical research papers, Nielsen et al. (2017) reported a strong positive correlation between women authorship and the likelihood of a study including gender and sex analysis, an important variable in medical research that is critical when determining how health services should respond to women.

Despite the positive outcomes that can be expected from an equitable share of publications, the global figures for female authorship across many disciplines are bleak. In an analysis of 5,483,841 research papers and review articles across the sciences, social sciences, and the arts, Larivière et al. (2013) found that women accounted for less than 30 percent of fractionalised authorship. While some scientific fields (including nursing, education, and social work) showed higher rates of publication by female authors, others (such as engineering, high-energy physics, mathematics, computer science, philosophy, and economics) had much lower rates, and the humanities as a whole were also heavily dominated by men. More recent studies have identified the same disparity in political science (Teele & Thelen, 2017), higher education (Williams et al., 2017), medicine (Nielsen et al., 2017), surgery, computer science, physics, and maths (Holman, et al., 2018). The COVID-19 pandemic has further contributed to these disparities. One study has shown that, since the outbreak in January 2020, only a third of all authors across 1,370 COVID-19 related papers have been women (Pinho-Gormes et al., 2020).

Not only are there relatively fewer female academic authors, but their papers also tend to be cited less frequently than those of their male counterparts. Larivière et al. (2013) found that articles with women in first author positions received fewer citations than those with men in the same positions. Interestingly, an analysis of 1.5 million research papers across a broad range of disciplines also found that men cited their own papers 70 percent more often than did women (King et al., 2017).

Author order is another measure of success: in science the first author is often the academic who is tasked with executing the study, while the last is the academic responsible for leading the study. Both positions are important depending on the stage of an academic's career. Across disciplines, Lariviere et al. (2013) found that for every article with a female first author, there are nearly two (1.93) with men as the first author. At the same time, Filardo et al. (2016) found that meaningful gains could be detected in the assumption of the first author position by women between 1994 and 2009, but that female first authorship seems to have plateaued over the last decade and has even declined in some high impact journals. In the field of cardiovascular research, Lerchenmüller et al. (2018) found that women were more likely to be listed as first author, but that this positioning is detectable primarily for publications in less influential journals, and that these first authorships did not translate into last author (leadership) positions years later. Finally, in a 2017 study of 1.5 million medical research papers, 40 percent included women as first authors while only 27 percent had women as last authors (Nielsen, et al., 2017).

Some evidence has found that women submit papers at lower rates than men (Teele & Thelen, 2017). Such a disparity in research output may arise from a combination of many, possibly interrelated, factors. Women may lack the confidence to submit their work to highly prestigious competitive journals (Correll, 2004) or may have few role models or mentors who encourage them to aim high (Holman et al., 2018). Opportunities to publish research may be another factor (a result of diminished grants and funding). Research has also shown that women are more likely than men to have their conference submissions rejected (Hospido & Sanz, 2019), which means fewer opportunities for collaboration and co-authorship. In science, technology, engineering and mathematics (STEM) subjects, men are roughly twice as likely as women to be invited by editors to submit their work (Holman et al., 2018), with another study finding that journal editors and editorial board members in medicine are more likely to be male (Alonso-Arroyo et al., 2020). The methodological preferences of top tier journals may exclude the kinds of work that female scholars are disproportionately interested in, such as qualitative research (Teele & Thelen, 2017). Male-dominated networks and institutions that are unsupportive of family-related career disruptions are additional barriers standing in the way of women submitting and publishing their work.

Service

Recent literature suggests that a gender imbalance can also be detected with regards to faculty service loads, with women being more likely to undertake service roles, and internal service roles in particular (Guarino & Borden, 2017). The time demands of service roles impede women from taking up leadership opportunities and this may impact women more heavily if they are employed on a part-time basis (Hannum et al., 2015). Further, it is necessary to consider the intersection between gender and race, culture, religion, or age, which further impedes service opportunities for women, as can be seen in studies focusing on the experiences of African American (Davis & Maldonado, 2015), Chinese (Zhao & Jones, 2017), Saudi (Abalkhail, 2017), and South Asian (Bagguley & Hussain, 2014) women. However, leadership opportunities increased in these cultures when there was family support for the woman (Abalkhail, 2017; Bagguley & Hussain, 2014).

Differences can also be identified at the discipline level, with more women in the liberal arts taking on service and public policy roles than in the fields of business, law, fine arts, and STEM (Guarino & Borden, 2017). Whilst service roles can contribute to promotion, these roles are often performed at the expense of other activities, such as research and external collaborations, which are more valuable for achieving promotions and external appointments (Guarino & Borden, 2017).

Professional development and conference attendance

Professional development – activities ranging from attending seminars, workshops, and conferences, to undertaking training courses and peer mentorship – continues to play an important part in career advancement. Whilst many institutions provide funding for professional development for all staff, women frequently report that carer responsibilities make it difficult to attend, including the scheduling of events outside of school hours, or the need to travel for attendance (Abalkhail, 2017). International travel is a major barrier, making it difficult to access professional development and engage in networking opportunities (Thomas et al., 2019), a situation that is further exacerbated in cultures in which women are not permitted to travel alone (Abalkhail, 2017). In addition, compared to men, women have fewer opportunities to take part in professional development related to leadership or management (Abalkhail, 2017; Hannum et al., 2015). Further, the increasing casualisation of university teaching in many countries has an additional impact on professional development. Professional development, outside of standard *Introduction to Teaching* courses, is often not made available to casual and sessional teaching staff (Crimmins, 2017). Where professional development is available, casual and sessional staff are often required to complete it unpaid and in their own time, rather than as a compensated part of their work. The casualisation of staff in academia may be an additional burden on women with responsibilities external to their work.

Institutional, non-gendered policy and workplace culture should facilitate, not limit, women when it comes to pursuing regular professional development opportunities (Moodley & Toni, 2017). This includes allowing time for travel – including planning and recovery time pre- and post-journey – and providing more equitable access to professional development for geographically dispersed faculties (Thomas et al., 2019). Chuang (2019) proposed that institutions offer women-only training programmes to promote equality in professional development. Such programmes have already been implemented in many higher education institutions and their effectiveness requires further evaluation.

Moreover, the long-term impact of COVID-19 on international travel and budget restrictions on the professional development opportunities of women is yet to be seen.

Leadership opportunities

There is an extensive literature on the topic of leadership opportunities, or the claimed lack thereof, for women in higher education. At the simplest level, the fact that the proportion of females in academic posts diminishes at each successively higher step on the academic career ladder provides strong support for the hypothesis that there is a lack of such opportunities (Carr et al., 2018; Diamond et al., 2016; Jena et al., 2015; Thornton, 2005). Further, such outcomes do not account for the intersection of gender with discipline, race, age, and other factors, all of which can result in an increase in this barrier. While the presence of women in the sciences, for example, has been increasing, an alarming differential attrition can also be detected at the highest levels (e.g., among tenured faculty). In Germany, for instance, between 2005 and 2010, the proportion of STEM professors who were women saw a marked increase of 4.1 per cent. However, many German women still seem to avoid pursuing such careers, noting that the male-dominated STEM culture prevents them from reaching top academic positions (see Best et al., 2013). Similarly, an examination of the areas in which women hold senior leadership positions in higher education identified a trend towards teaching and learning or community engagement roles instead of research-based senior leadership roles (Moodley & Toni, 2017). Simply put, a culture which steers women into posts that are less likely to support promotion will provide fewer opportunities for women to hold leadership positions (Valian, 2004). Often, this lack of leadership opportunities can be linked to a lack of support.

Promotions and career progression

The recent tradition of benchmarking academic performance standards across metrics such as grants and funding, publications and citations, and service, professional development, and leadership roles may have a detrimental impact on the promotion and career progression of women. Marital status and the presence of children under six years old in a household inversely correlate with the proportions of women who secure tenure track positions, sometimes referred to as an ‘ongoing permanent position’ in certain countries (Baker, 2010b; Wolfinger et al., 2008). It has been reported that 70 percent of tenured positions are held by married men with children compared to only 40 percent of married women with children (Mason & Goulden, 2004).

In addition to the cumulative impacts of disparities across particular metrics, career progression in academia also reflects the broader gendered barriers that are evident in society at large. Women are often represented equally at lower professional levels yet underrepresented among roles with higher status and higher salaries (Catalyst, 2021). Women in academia perceive barriers to career progression less often in terms of incidents of specific discrimination and more often as a result of the ‘pervasive subtle institutional or cultural forms of discrimination’ (Monroe, et al., 2008, p. 216). As an example, Monroe et al. (2008) found that when women hold higher status positions in academic settings, others often perceive their role as one involving service, while when the same role is occupied by a male it is seen as a position of power. Subtle internalised biases of this sort may combine with the more overt inequities faced by women to create barriers that persist even in the face of attempts at structural reform.

This narrative review of the literature on gender equity in academia has revealed discrepancies between men and women in relation to the major career benchmarks of the academy: grants and funding; publishing and citations; and service, professional development, and leadership roles. It is plausible that being a woman leads to career disadvantage and that this disadvantage is intensified for women from minority groups (Khan et al., 2019). Given the assumed goal of securing gender equity in academia, there is merit in exploring the systemic solutions offered in the literature. The remainder of this review will focus on strategies and approaches which address gender inequity in the academy.

Discussion: Systemic solutions and recommendations

Findings of gender inequity across major career benchmarks serve as a call for radical changes in policy and practice in academia. Gatta and Roos (2004) identified the personal accommodations made by female professors as a way in which to cope with gender inequity at a large state university in the United States of America. They determined that, rather than agitate against university policy and practice, the female professors interviewed found it easier to modify their own personal circumstances in order to manage the conflict between work and home. One of the most concerning

accommodations reported was the choice to delay having children as a way of overcoming the challenges of childcare. Another study reported that some female academics adopted a "life strategy" of only having one child in order to minimise the years of childcare and child rearing that would compete with their work commitments (Lendák-Kabók, 2020). The personal coping and the resiliency of women towards institutional processes that might wittingly or unwittingly undermine gender equity should not be discounted. Nonetheless, it is imperative that leaders within the academy also pursue best-practice gender equity initiatives that have specific fit and merit for their institutions. Our review identified six areas for potential systemic intervention: legislation, community level support, university policy, leadership and support, the professional structure of higher education, and culture, including norms and attitudes.

Legislation

Gender equality and diversity in the Australian academic sector is governed by a legal and regulatory framework which has progressed and developed throughout the past four decades (Winchester & Browning, 2015). The main laws governing gender equality and diversity in Australia include the Sex Discrimination Act 1984 (Cth) and the Workplace Gender Equality Act 2012 (Cth) (the WGE Act). The WGE Act established the Workplace Gender Equality Agency, which is responsible for administering the WGE Act and is charged with promoting and improving gender equality in Australian workplaces. More comprehensive than its preceding legislation, the Workplace Gender Equality Act expands its coverage to include men, requires the reporting of outcomes rather than processes, and amends the compliance framework (Sutherland, 2013).

In addition to the general legislation that applies in the workplace, the Australian Government introduced regulatory frameworks tailored specifically for the academic sector. The Tertiary Education Quality and Standards Agency (TEQSA) was established in 2011 to regulate and assess the quality of Australia's large, diverse, and complex higher education sector. In 2017, TEQSA issued a guidance note focused on diversity and equality, applying the Higher Education Standards Framework (Threshold Standards) 2015. This legislation (and the guidance) includes a reference to student diversity and equality, yet does not include a similar reference to staff diversity or to the gender composition of the academic staff (TEQSA, 2017).

While the legislative framework described above provides the necessary legal basis for promoting gender equity in academic institutions, additional measures are required in order to improve the representation of women in higher education, especially at senior levels, and to better reflect the diversity of female academics, including Indigenous women, women of colour, women from non-English speaking backgrounds, and women with disabilities. Winchester and Browning concluded that the focus of the legal framework, as well as of national organisations (such as Universities Australia), on productive diversity – as opposed to gender equality – has been a positive shift which is reflected in the opening of universities to wider participation from the Australian community (Winchester & Browning, 2015). Lipton, however, found that, paradoxically, the structure and discourse of equality and diversity prevents the development of a sustainable and lasting change (Lipton, 2017). Overall, the existing data about the effects of various legal interventions on actual outcomes is anecdotal, and the existing literature does not provide direct evidence regarding the causal relationship between legislative developments and changes in gender equality and diversity in the academic sector. More research is thus needed to further understand the effects of various legislative approaches on diversity and equality, to evaluate their implementation, and to measure their outcomes.

University policy

Gender-focused equity policies have been increasingly common in institutions of higher education since the 1980s. However, despite decades of university policy designed to redress issues of equity and inclusion, the evidence suggests that women academics still face significant systemic barriers in their work. Cummins (2017) notes that, despite the presence of family-friendly policies in higher education, academic women who utilise these policies are often penalised for doing so, and micro-inequities as well as micro-politics within the culture of higher education are frequently founded on the expectation that women must 'fit in' (Aiston & Fo, 2020). An examination of gender equity at a policy level is critical, given that men remain over-represented in the leadership positions that are often involved in the creation or oversight of policy. Anicha et al. (2020) explicitly noted that people who identify as men are less likely to be personally affected by the very issues such policies are developed to address. Anicha et al. (2020) emphasised that this lack of lived experience of the impacts of gender bias and discrimination implies the need to raise the critical consciousness of university policymakers, a consciousness that should, importantly, be informed by an

intersectional lens that recognises the interplay of gender, race, and (dis)ability in academics' experiences and working lives.

Critiques of formal policies and programmes, such as the Athena SWAN programme, that are designed to increase the participation of women in the academic workforce and to improve career advancement include: a) the claim that they are focused on 'fixing the women' rather than the system; b) feminist critiques of the programmes' close ties to neoliberal views and managerial practices which favour metrics and performative targets and goals; and c) that such programmes are limited in the reality of what they can achieve given the need for individuals to change their own practices in order to ensure their success (Tzanakou & Pearce, 2019). Universities' research policies have increasingly shifted to focus on *quality* rather than on capacity building (Blackmore, 2021). These policy shifts hold particular challenges for women who more often have to balance caring responsibilities in their personal lives as well as frequently taking on more caretaking responsibilities in the course of their work in the form of administrative and pastoral care roles, while their male counterparts tend to have more freedom and flexibility to focus on research (Aiston & Jung, 2015; Gatta & Roos, 2004). Calls persist for policy development that is intersectionally informed, capable of addressing complex challenges, and, first and foremost, grounded in notions of epistemic justice and the importance of valuing knowledge production in all academic disciplines (Blackmore, 2021). When women have influence over policy-decisions, the number of women in senior leadership positions increases (Sabharwal, 2013).

Leadership and support

Until systemic change occurs across higher education, there will be a continued disparity in the presence of women in senior leadership roles in academia. Policies and processes continue to be barriers to the appointment and promotion of women, particularly into leadership positions and require urgent change (Abalkhail, 2017; Hannum et al., 2015). For example, in Saudi Arabia, men hold a high proportion of senior leadership positions, so unless men support changes to recruitment and promotion practices, the cycle will continue, blocking the career progression pathway for many women in this country (Abalkhail, 2017).

Role models and mentorship continue to be strong facilitators for women taking on leadership roles (Davis & Maldonado, 2015; Hannum et al., 2015). A direct correlation has been established between a lack of mentorship opportunities and the limited number of women in leadership positions in higher education (BlackChen, 2015; Hannum et al., 2015). Effective leadership and mentoring schemes (Eveline & Booth, 2004), and workshops aimed at identifying and tackling gendered barriers to women's advancement within institutions (Bird, 2011) and within disciplines (for example 'Society for Women in Philosophy' [http://swipuk.org/]), also show strong potential for addressing gender inequity in academia.

It may be important to track women as they progress through the academic pipeline in order to identify specific leaks and barriers from an organisational perspective (not at the individual researcher level) so that comprehensive policies and implementation plans can be developed. Most interventions in this field focus on the individual academic, asking them to opt into, and thus give their time to, participation in mentoring, education, professional development, and networking opportunities (Laver et al., 2018). As a result of these interventions, Lavers et al. (2018) found some, albeit small, improvements in promotion, retention, and remuneration, with the authors recommending that institutions instead employ "top-down" approaches that change culture and management.

The professional structure of higher education

Research has suggested that the main reasons for the current gender gap in higher education are common structural barriers experienced by women, such as lack of institutional support, academic culture, and greater caregiving responsibilities (Peterson, 2017). In response to these structural barriers, a range of frameworks and action plans have been implemented across some institutions in Australia with the aim of tackling this gender gap, including The Women's Executive Development Programme and the Australian Vice Chancellors' Committee's Action Plan for Women Employed in Australian Universities (Winchester et al., 2015). The notion of 'family-friendly' policies has played a prominent role within some of these strategies, with the aim of allowing women to make use of more flexible working hours and involvement in the workplace as they juggle their caregiving responsibilities. For example, the implementation of increased flexibility in the tenure clock has gained increasing popularity (Gatta & Roos, 2004). The existence of tenure tracking began at a time when the typical academic was a white male with a wife (Hoschild, 1975; Thornton, 2005). A tenured position is an indefinite academic post, so the notion of flexibility in tenure tracking

means pausing or stopping the clock, or lengthening probationary periods, to match the needs of, for example, caregiver responsibilities or maternity leave (Thornton, 2005). Such flexible approaches may help to stabilise women's roles within institutions and assist women in eventually climbing towards more senior roles. However, recent research has found that *family-friendly* practices such as these are not always as effective as originally intended. These policies have often been found to be applied unevenly across staff and those women who make use of them are viewed as less dedicated to or serious about their jobs, ultimately impacting their chances of reaching top-tier positions (Manchester et al., 2013). Such perceptions should be a consideration for institutions adopting such plans.

Culture, norms, and attitudes

Long-held cultural norms about femininity may contribute to ongoing cultural norms and attitudes towards women in academia. Cultural sexism, social disadvantage based on gendered positioning, has become a normal feature of women's academic lives (Savigny, 2017; 2019). For example, the *Old Boys'* network in academia is regularly attributed to the masculinist exclusion of women from decisions, mentoring opportunities and promotions (Savigny, 2017). Stereotypes and cultural norms continue to emphasise the role of women as caregivers (Blair-Loy, 2009; England, 2010; Hays, 1996). Women are often expected to take on the primary responsibility for the care of their family and home life, even if employed and earning an income (Blair-Loy, 2009). These norms and expectations are influenced by gender stereotypes which can be perpetuated by the absence of equal gender ratios in leadership positions. For institutions to challenge norms and social attitudes, women need to be valued, respected, represented, and visible in senior roles.

A more gender-balanced pool of referees, editors, and editorial boards might also lead to a more balanced acceptance of conference presentations and publications. Pinho-Gomes et al. (2020) suggest a voluntary disclosure of gender in the submission process to allow editorial boards to monitor gender inequalities in authorship and to encourage research teams to foster equality. Given that female referees evaluate male- and female-authored papers in a similar way, but male referees are more positive towards papers written by men (Hospido & Sanz, 2019), professional development might be offered to male reviewers and editors in order to raise their awareness of this issue and challenge underlying biases and assumptions. In addition, triple-blind reviewing, in which the author's identity is blinded to both reviewers and the editorial team, could become more common practice.

Westring et al. (2012) supported the notion that a culture conducive to women's academic success should be informed by four key areas: equal access, work-life balance, freedom from gender biases, and supportive leadership. In this article it is also suggested that institutions should consider their role in legislation and university policy as well as challenging the traditional professional structure of higher education and culture, norms and attitudes that perpetuate gender inequity. Although universities can adopt systemic changes to minimise inequality between men and women, it is also necessary that academic women and their partners critically examine inequities in their relationships, domestic duties, and career sacrifices as well (Baker, 2010a).

There are undoubtedly differences in the ways in which women experience academic work, and these differences may be further intensified by factors such as cultural background, the decision to have or not to have children, and the choice of relationship partner. Research performance standards sit against a backdrop of systemic pressures driven by governmental priorities and university rankings (Allen, 2019; Allen et al., 2020). Institutions that hope to operate in a way that is truly equitable to all women should consider instances of multiple marginality (Turner, 2002).

Implications for an ethical responsibility

The present review of literature has implications for institutions by providing an evidence base that highlights an ethical responsibility for (re)assessing and addressing the balance of gender equality. Systemic responses for gender inequality are urgently needed in academia and our findings have specific implications for policymakers and leaders. In an effort to respond to local and global market pressures, the priorities of policymakers seem to focus (not necessarily consciously or deliberately) on advancing male academics. Operating from an *ethic of markets*, policymakers acknowledge the economic priorities of their government, reflecting the need to advance local university rankings and research image in a competitive global marketplace. Such needs involve, among other things, the 'seal of excellence' provided by steady success in winning grant funding and in creating high-quality publications – features that are not conducive to research hiatus, flexible working hours, or a focus on teaching, all of which may be perceived

as associated with women. In other words, in seeking to position local academic institutions in an international space that appeals to global standards, gender equality is often treated as a financial sacrifice made for the 'national and institutional good' within an economic environment that may be hostile to such goals (see also Finefter-Rosenbluh & Levinson, 2015).

With this in mind, increasing attention is being paid in the literature to the moral purposes of leadership and policy (e.g., Levinson & Finefter-Rosenbluh, 2016), with calls to place a greater emphasis on the shared-value outcomes of twenty-first century educational institutions. Such values include gender and racial equity, social justice, and work opportunities for all (e.g., Furman, 2003). As Furman (2004) noted, while traditional leadership and policy studies have taken a somewhat value-neutral approach to examining what leadership is or how it is done and by whom, contemporary scholarship appears to be focusing on the moral purposes of leadership and on how these may be achieved in educational institutions as communities of practice.

Thus, in addressing the (im)balance of gender equality in academia, it is worth taking account of and (re)emphasising the tripartite ethical framework commonly used in the field of education. Developed by Starratt (1994, 2003), this framework highlights three complementary forms of ethics which underlie the ethical practice of an institution. These "ethics" are as follows. (a) The *ethic of justice*, according to which fairness and equal treatment are a key value in an institution that uniformly applies the same standards (of justice) to all working individuals. (b) The *ethic of critique*, which highlights barriers to fairness, acknowledging that it is inadequate to work for fairness within existing social and institutional arrangements if they themselves are unfair. Individuals must, therefore, critique the system and explore how policies, practices, and structures might be unfair and involve moral issues that benefit some groups while failing others. (c) The *ethic of care*, which highlights the importance of an absolute regard for the dignity and intrinsic value of each individual as a human being. In discussing the ethic of care, Starratt incorporates the foundational work of Gilligan (1982) and Noddings (1984), and in particular the premise that relationships are, ultimately, at the centre of human social life. It is, therefore, crucial to highlight the responsibility of individuals to be caring in their relationships with others, including in academia.

Although a limitation of this critical review is the narrative nature by which it was conducted, future research that takes an ethical approach towards thinking about gender balance in academia may help to create a novel social discourse in which the voices of the marginalised are clearly heard and institutional inequities are carefully and systematically addressed.

Conclusion

This critical review has implications for systemic change and highlights the gender gaps in the academic workplace. Considering the core concerns outlined above for the pursuit of gender equity in academia, it is proposed that the pursuit of systemic approaches towards gender equity, as identified in the literature, have merit and implications for leaders and policy makers. These are: legislation, university policy, ethical leadership and support, the professional structure of higher education, culture, including norms and attitudes. As seen both throughout the COVID-19 pandemic and before, women's work in academia has not been treated with equity when compared to the work done by men and this inequity is evident across all major career benchmarks: grants and funding, publishing and citations, service, professional development, and leadership opportunities. Indeed, the recent pandemic has magnified the inequities that already existed (Myers et al., 2020). These major benchmarks have already been criticised on the grounds that they are at odds with the core purpose of the academy (i.e., seeking truth and new knowledge) (Allen et al., 2020; Allen, 2019; Miller, 2019; Spence, 2019). This review demonstrates that the pursuit of these metrics can also come at a ruinously high personal and social cost for women.

Author contributions

All authors contributed to the drafting of the manuscript, review of the literature, and initial critical review. KA, KBH, and AR engaged in final edits.

Conflict of interest

The authors certify that they have no affiliations, memberships, financial interest of funding associated with the subject matter discussed in this manuscript.

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