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Catalysing gender transformation in research through engaging African science granting councils

Science investments should benefit everyone; however, research still predominantly lacks gender integration, resulting in incomplete findings and inequitable outcomes. Moreover, despite some progress, gender disparities persist in the research workforce. Research funders, including science granting councils, are pivotal in driving gender transformation through shaping knowledge production and research infrastructure. We report on key findings from the Science Granting Councils Initiative (SGCI) in Sub-Saharan Africa (SSA) Gender Equality and Inclusivity (GEI) Project – a multi-year participatory intervention aimed at strengthening the capacities of councils to integrate GEI across their functions. Participating councils were located in 13 African countries, and their actions spanned four domains: building organisational GEI infrastructure; reshaping norms, practices, and power relations that perpetuate gender inequality; implementing targeted measures to address women’s unequal access to resources and research opportunities; and promoting collective ownership of efforts to advance GEI in the research and innovation ecosystem.

Significance:

- Achieving gender transformation in research and innovation hinges on addressing two intertwined challenges: structural gender inequality in higher education and research institutions, and a lack of gender integration in research content and design.
- Grant-makers influence decisions about who conducts and participates in research, the types of research approaches and topics prioritised, and the populations that benefit from research findings. Adopting a GEI lens in these decisions enhances research quality and promotes equity.
- Our findings pinpoint entry points for leveraging grant-making practices to advance gender transformation and underscore the importance of rooting such interventions in context.

Gender disparities in education and research systems

Progress toward gender equality in Africa is slow and limited in scale.¹ Socio-cultural barriers, including increased household responsibilities for girls, gender-based violence in schools, a lack of support for school-age pregnancy, and child marriage, all contribute to widening gender disparities in education systems.^{2,3} Once in research careers, gender disparities persist, with women comprising only 30% of researchers on the continent and with gender parity notably lacking in leadership and decision-making roles.⁴⁻⁶ Overwhelmingly, social norms assigning disproportionate caregiving responsibilities to women remain the most common structural barrier to women’s career progression.⁷⁻⁹ Other factors hindering women’s advancement include workplace sexual harassment, gender-based pay disparities, and precarious job security for young women scientists often employed on contract terms.^{7,10,11}

The gender dimension in research content and design

The lack of attention to gender considerations in research and innovation extends beyond the workforce. Research methods and content still lack adequate integration of a gender lens, leading to incomplete or inaccurate findings.¹² For example, a review of 1.6 million publications on the Sustainable Development Goals (SDGs) found that, despite consensus on the cross-cutting relevance of gender to all SDGs, a gender dimension in research related to these goals is visibly absent.¹³ Only 21% of publications include sex and gender keywords. Of these, research on only six SDGs is gender-sensitive, with the remaining categorised as ‘gender-sparse’ or ‘gender-blind’. Knowledge production and research funding are inextricably interwoven, and the grant-making cycle offers opportunities to promote gender and equity considerations in research teams, content and design. While funding agencies’ engagement with gender is growing, these efforts remain predominantly concentrated in the Global North.¹⁴ Additionally, attention to intersecting marginalised identities beyond gender is limited.¹⁵ These gaps and the strategic role of public funding agencies in national innovation systems motivated the development of the Science Granting Councils Initiative (SGCI) Gender Equality and Inclusivity (GEI) Project.

A participatory action learning approach

The SGCI GEI Project provided action learning opportunities for science granting councils to strengthen their capacity to address women’s and other underrepresented groups’ participation in research, transform inequitable institutional cultures, and stimulate gender integration in research and innovation. The project was nested in the SGCI, an initiative focused on supporting the development of research and evidence-based policies that contribute to socio-economic development. Councils in 13 countries participated: Botswana, Burkina Faso, Côte d’Ivoire, Ghana, Kenya, Malawi, Mozambique, Namibia, Senegal, Tanzania, Uganda, Zambia, and Zimbabwe. The three-year project (2020–2023) involved participatory action learning principles and encouraged experimentation, reflection,

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and peer learning. Councils formed GEI change teams and participated in virtual and in-person activities to conceptualise and implement tailored action plans. Councils could opt into one of two parallel streams based on their capacity and interest. The Gender Action Learning stream was a peer-learning methodology that co-created strategies for individual and structural change.¹⁶ The Targeted Technical Assistance stream offered strategic support to enhance GEI integration in councils' existing initiatives. The project received ethical clearance from the Human Sciences Research Council Research Ethics Committee (REC 2/25/11/20) and followed the principles of the Declaration of Helsinki, including obtaining informed consent from participants.

GEI actions implemented by science granting councils

The GEI actions developed and implemented by councils spanned four domains:

1. **Building organisational GEI infrastructure:** This domain included establishing gender committees or units, remedying gender disparities in decision-making spaces such as grant review panels and executive boards, and developing gender policies. This domain was essential to lending institutional legitimacy to gender equality concerns and supporting the adequate resourcing of GEI initiatives.
2. **Reshaping informal organisational norms, practices and power dynamics that perpetuate gender inequality:** Actions in this realm, although demanding, were essential to the adoption, effectiveness and sustainability of formal GEI infrastructure.¹⁷ Further, by addressing bias and unequal practices within their organisations, councils were better equipped to promote similar changes through their grant-making policies and practices. This sphere included actions such as identifying gender champions to advocate for transforming organisational norms and providing GEI training to all organisational staff. GEI training included workplace protections, such as maternity and childcare programmes, gender bias and stereotyping, and inclusive decision-making processes.
3. **Addressing disparities in access to research opportunities and resources through targeted measures:** Actions in this domain included developing guidelines that address gender inequalities in grant-making processes, issuing funding calls that prioritise female principal investigators, and implementing capacity development and mentorship programmes for emerging researchers. Some actions addressed intersections between gender and location, such as establishing regional gender committees to tackle the marginalisation of female researchers outside urban areas.
4. **Promoting collective ownership of the need to advance gender transformation in broader research and innovation ecosystems:** Councils' actions included awareness-raising, advocacy and stakeholder mobilisation in support of regional GEI initiatives and partnership building among strategic actors (the private sector; industry; higher education; government ministries, departments and agencies). Over time, these actions pave the way for meaningful and lasting change by going beyond 'symptoms' of gender inequality to address underlying root causes.¹⁷

Recommendations

Insights from the SGCI GEI Project offer five recommendations for using grant-making to catalyse gender transformation in research and innovation. First, councils' efforts to advance GEI highlight the importance of a dual approach that includes specific measures aimed at reversing historical inequalities and actions aimed at transforming the structures, norms and power relations that create and perpetuate exclusion. This approach aligns with a multiple-track gender mainstreaming strategy that combines gender-targeted interventions that increase access to resources and opportunities for specific groups with gender-integrated interventions that mainstream a gender perspective across institutional policies, programmes and practices.¹

Second, the project illustrates the value of strategic partnerships in advancing GEI in resource-limited settings. Success of GEI actions depends on well-resourced organisational gender infrastructure, backed by expertise.¹⁸ Yet, many public funding agencies face resource constraints. Several councils leveraged existing partnerships or forged new ones to address internal capacity gaps and amplify the impact and sustainability of actions. Collaborators ranged from national academies of science to university gender departments and national gender ministries.

Third, while limited in scale, the project offers an example of how an intersectional focus on social stratifiers overlapping with gender can be incorporated into GEI actions. An intersectional lens illuminates mutually compounding forms of marginalisation, yielding a more complete understanding of how diverse factors, including but not limited to gender, overlap to create distinct experiences of disadvantage.¹⁹ There is, however, little practical guidance on integrating such a lens in grant-making.²⁰ Participating councils adopted a 'bottom-up' approach to identifying salient social stratifiers relevant to their functions and country settings – notably intersections between gender, rurality, age and career level. Future interventions can include developing tailored, contextually embedded intersectionality resources for grant-makers.

Fourth, the project underscores the need to establish monitoring and evaluation plans to assess the impact of GEI actions (including unintended negative consequences). Few councils implemented such plans – a global oversight in public funding agencies' GEI efforts.¹⁴ An essential first step is ensuring that research and innovation data are disaggregated according to gender identity and other intersecting factors. Alongside quantitative measures, innovative qualitative methodologies can capture valuable insights into the complex processes that facilitate or impede gender transformation.

Finally, the gender dimension in research remained under-explored in councils' actions. Science granting councils can leverage their influence to improve research accuracy, social relevance and rigour by developing clear guidelines for applicants and reviewers on best practices in integrating gender and equity considerations in research content and design.

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Data availability

The data supporting the results of this study are available upon request to the corresponding author.

Declaration of AI use

We did not use AI in the preparation of this paper.

Authors' contributions

I.L.: Conceptualisation, analysis, writing – the initial draft. L.E.M.: Analysis, writing – revisions. L.F.: Analysis, writing – revisions. N.I.: Analysis, writing – revisions. R.E.: Analysis, writing – revisions. H.v.R.: Writing – revisions, project leadership. All authors read and approved the final manuscript.



Competing interests

We have no competing interests to declare.

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