

*An equitable  
knowledge ecosystem  
must include the  
voices of women  
and men*

EXPLORING THE VOICES OF EARLY CAREER  
RESEARCHERS WITH A GENDER LENS

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This publication draws on data analysis conducted by Gary Dooley and Buna Bhandari.

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## ABBREVIATIONS

|              |                                                        |               |                                                                  |
|--------------|--------------------------------------------------------|---------------|------------------------------------------------------------------|
| <b>ECR</b>   | Early career researcher                                | <b>MOOC</b>   | Massive Open Online Course                                       |
| <b>EGLF</b>  | Ethiopian Gender Learning Forum                        | <b>OWSD</b>   | Organization for Women in Science for the Developing World       |
| <b>ESSA</b>  | Education Sub-Saharan Africa                           | <b>STEM</b>   | Science, technology, engineering, and mathematics                |
| <b>GERA</b>  | Gender Equity in Research Alliance                     | <b>TESCEA</b> | Transforming Employability for Social Change in East Africa      |
| <b>GPEKE</b> | Global Platforms for Equitable Knowledge Ecosystems    | <b>UDOM</b>   | University of Dodoma                                             |
| <b>INASP</b> | International Network for Advancing Science and Policy | <b>UNESCO</b> | United Nations Educational, Scientific and Cultural Organization |

# Executive summary

To get the most relevant research and the best ideas and solutions we need a research system that nurtures and advances the careers of all aspiring researchers, whatever their gender, wherever they are based, and whatever their socio-economic background.

This is a report about the experiences of early career researchers – women and men – and how these experiences are gendered. It is a “voices of” report, because it is designed to present what researchers themselves say about their hopes, concerns, successes, and difficulties.

## A NUANCED PICTURE

The picture revealed by this report is a nuanced one. In several aspects, the gap between women and men appears slight – men fare better, but only marginally so. But when we dig deeper, our data suggest that achieving similar results as men requires women to navigate more obstacles and cope with more day-to-day frustrations in environments that are less supportive of their careers.

## COMMON STARTING POINTS, AND SHARED AMBITIONS

Our survey reveals that:

- Men and women early career researchers have similar levels of qualifications: roughly even proportions hold PhDs, and in fact a higher percentage of women than men do
- Men and women have similar levels of job satisfaction and security
- Men and women have similar ambitions to do research that contributes to society and that supports the development of their nations and communities
- Both women and men want to collaborate beyond their institutions, and both feel prevented from doing so
- Both women and men feel that their careers are constrained by the resources and opportunities available to them, and by the support they receive from their institutions

## UNEVEN OPPORTUNITIES...

While there are common challenges, the voices presented here reveal several areas where women’s experiences of research demonstrate that they encounter more obstacles and experience more frustrations:

- Women are less likely than men to have published in the last year – and more men have achieved publication in an ‘international’ journal
- Fewer women have been involved in collaborative research
- Women are more than twice as likely to believe that women in research get fewer opportunities than men
- Women are more likely to experience ‘lack of time and resources’ as an obstacle to doing collaborative research
- In collaborative research, fewer women think that their expertise and contribution was sufficiently recognised

## ...AND UNEQUAL ENVIRONMENTS

- Women are more likely to experience constraints in their work and are more likely to find their experience as an early career researcher challenging and frustrating
- Women are 2.5 times more likely to experience gender-related discrimination in the workplace
- Women are less likely to feel that their work is recognised and rewarded within their institutions
- More men than women are positive about the organizational culture at their workplace

## IN SOME AREAS MEN REPORT THE GREATEST CHALLENGES

While most inequities reported through our survey are experienced by women, in some areas men are less positive:

- More men think that their location is a disadvantage to develop their research careers
- Fewer men believe that they receive sufficient funding for their research
- Men are more likely to report 'lack of funding' and 'lack of institutional support' as obstacles to doing collaborative research

## A FAILURE TO ENABLE BOTH WOMEN AND MEN WILL RESULT IN POORER RESEARCH AND WEAKER RESEARCH SYSTEMS

While both women and men experience difficulties, it is clear, overall, that women experience more constraints, challenges, and frustrations than men as they undertake research and build their careers. It is telling that for women the most significant obstacles are time and institutional support, and that more struggle with their work-life balance. In this we see the shadow of the wider responsibilities that women often bear in families.

There is much to be done to ensure that research systems are inclusive, that they enable both women and men to thrive, and that research studies are informed by women's and men's experiences and needs. The risks of not doing so are at worst harmful and at best limit the efficacy and value of new knowledge and technologies – from crop varieties that don't meet the needs of women farmers, data and algorithmic biases in artificial intelligence, to product designs that fail to protect women from injury.

It is also notable that, when discussing goals and impact, women placed greater emphasis on reaching more people with their research. This contrasted to men who were more likely to value scientific novelty and publication. Could this suggest that a research system that did more to include and enable more women might also be one that delivered more for society?

By digging below the common headlines, to understand the nuanced experiences of women and men, our hope is that this analysis helps us to respond more effectively. We hope others will find these insights useful too.

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# 1. Introduction

Research and knowledge play a key role in finding solutions to national and global challenges. But there are many inequities in our knowledge ecosystems today: inequities in who can create and produce new knowledge, whose knowledge ‘counts’, and how knowledge is shared, accessed, and used. It means the potential of research and knowledge to meet the many challenges of today’s world – both global and local – and to anticipate those of the future, cannot be fully realised. We need a knowledge system that includes every voice and fosters every talent, where decisions are informed by relevant and rigorous evidence, and where knowledge is created with the communities it is intended to serve. We call this an equitable knowledge ecosystem.<sup>1</sup>

Despite progress in narrowing the gender gap in research over recent decades, globally women make up only 33.3% of researchers (Bello et al., 2021). Further efforts are needed to ensure equal representation of women and men in the knowledge ecosystem. However, for research and knowledge to be truly equitable, we need to go beyond representation to understand the different experiences of women and men, and how these affect their career development.

Women tend to be promoted at a slower rate than men, are underrepresented in academic leadership positions, and earn less than their male counterparts (Kraemer-Mbula, 2020). In addition, academic cultures and environments have been defined by men; studies from Sub-Saharan Africa have characterised universities as male-dominated spaces (M. L. Liani et al., 2020). This can lead women researchers to feel further isolated and excluded (Kraemer-Mbula, 2020).

At INASP, we are committed to applying a gender equity lens to the work we do to support early career researchers (ECRs) and to address the inequities that this reveals. This includes offering targeted support to women researchers where this is needed. At the end of 2021, under the auspices of our Sida-funded Global Platforms for Equitable Knowledge Ecosystems (GPEKE) project,<sup>2</sup> we conducted a second iteration of our ‘Voices of Early Career Researchers’ survey among the researchers in the AuthorAID community (see box: ‘About AuthorAID’). This publication shares the key findings of our survey from a gender perspective, and aims to contribute to our understanding of the different experiences of women and men ECRs. Our survey, and thus this publication, specifically represents the experiences of researchers from the Global South, and predominantly researchers based in universities and research institutions. We hope that by understanding these experiences, we, and others, can respond more effectively in our collective efforts to make research and knowledge systems more equitable.

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1 [www.inasp.info/strategy](http://www.inasp.info/strategy)

2 [www.inasp.info/gpeke](http://www.inasp.info/gpeke)

## About AuthorAID

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**AuthorAID** is one of INASP's flagship initiatives. A global community, it provides support, mentoring, resources, and training for ECRs in low- and middle-income countries. AuthorAID supports over 13,000 researchers to publish and communicate their work. Over the last seven years, over 44,000 participants from 135 countries have taken part in our award-winning Massive Open Online Courses (MOOCs). 34% of the researchers signed up as members on the AuthorAID website are women, and 48% of MOOC participants have been women.

AuthorAID is managed by INASP, and is led and facilitated by an active community, with a team of Stewards based in universities and research institutions across Africa, Asia and Latin America, and a network of regular facilitators. It is kept free and open to all through partnerships with funders and sponsoring organisations.

AuthorAID offers:

- Online training on scientific writing, research communication, and grant writing
- A discussion group where researchers can benefit from advice and insights from members across the globe
- An online mentoring system, to access support from experienced researchers and editors
- Access to a range of documents, and resources on best practice in writing and publication
- A chance to network with or collaborate with other researchers
- Dedicated support to women researchers to enable them to progress their research careers, through partnerships with the Organisation for Women in Science for the Developing World (OWSD) and other organisations

Visit [www.authoraid.info](http://www.authoraid.info) to find out more.

ECRs have a challenging time across the world – building their first projects and securing their first publications, learning the trade and the craft of research, while also navigating the structures of their institutions and the biases of their research systems. These challenges are all the sharper where resources are scarce, facilities insufficient and where support – from formal training to the guidance of a trusted mentor – can be hard secure.

At INASP, we take an expansive view of an 'early career researcher'. While science systems in many high-income countries define an ECR as someone in their first five to 10 years following completion of their PhD, we take an ECR to include anyone who is considered to be a researcher by their institution, is undertaking research work of some form, and is in the early stages of their career – from postgraduates to lecturers. While active researchers in low- and middle-income countries are less likely to have a PhD than those in the Global North, they are often expected to run departments, undertake and publish research, and to lead research projects, alongside teaching. The AuthorAID community also includes many aspiring researchers, who have attained a bachelor's or master's degree, and who work in a variety of roles and organisations. The data from our survey suggest that the majority of respondents with 'only' a bachelor's or master's degree are nonetheless involved in activities equivalent to those of many with a PhD qualification, with evidence of publications, conference attendance and being assessed, by their institutions, on their research outputs.

## About the 'Voices of Early Career Researchers' survey

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The 'Voices of Early Career Researchers' survey was first carried out in 2020 to better understand early career researchers' (ECRs) perceptions of their work and their research environment. It revealed how researchers in the Global South were passionate about their research, hoped it could transform lives, and were optimistic and positive about their ability to do so. However, it also confirmed the challenges that researchers face, both at home and globally. These include gender inequities, inequities in research collaborations and access to funding, and an ongoing pressure to prioritise academic publications over social and economic impact (Dooley et al., 2021). At the end of 2021 we ran an updated version of the survey to find out how the research environment is changing for ECRs.



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# 2. Demographics of our survey respondents

7,972 individuals responded to our 2021 survey (Dooley, 2023). Respondents came from 141 countries, with the majority (70%) being based in Sub-Saharan Africa. The majority of respondents (60%) are researchers or research students who predominantly work in formal research institutions (either a university, a research institute) or scientific bodies (such as science academies or learned or professional societies). The remainder work either in hospitals, government agencies, NGOs or did not specify.

Because of the large numbers of respondents, relatively small overall differences in proportions can be statistically significant (Dooley, 2023).

## 2.1 What proportion of our community are women?

### ROUGHLY FOUR IN TEN EARLY-CAREER MEMBERS OF THE AUTHORAID COMMUNITY ARE WOMEN

Women made up 42% of the respondents in our survey. This percentage is broadly reflective of the percentage of women within the AuthorAID community (see the 'About AuthorAID' box in the Introduction). Men made up 57% of respondents, and less than 1% identified as 'other' or preferred not to specify their gender.<sup>3</sup>

**TABLE 1:** Gender breakdown of respondents

|                   |        |
|-------------------|--------|
| WOMEN             | 42.10% |
| MEN               | 57.44% |
| OTHER             | 0.18%  |
| PREFER NOT TO SAY | 0.29%  |

According to data from the UNESCO Institute for Statistics, women make up 33.3% of researchers globally (Bello et al., 2021). The higher proportion of early career women researchers in our survey reflects our broad definition of what constitutes an ECR, along with our efforts to leverage digital platforms and learning to reach and meet the needs of both women and men. According to data from Coursera, globally, women turned to online learning at higher rates during the pandemic than they did pre-pandemic (with the proportion of women newly registering on the platform peaking at 54% in 2020, up from 45% in 2019, before dropping to 50% in 2021) (Coursera, 2021). At INASP, we have long recognised the potential of online learning as an effective way to reach women (Wild & Nzegwu, 2023). Many women participants in our MOOCs have reported that the flexibility of an online course offers them a professional learning opportunity that they might not otherwise have been able to schedule around other responsibilities. 46% of the learners who participated in AuthorAID MOOCs targeting ECRs and run between 2015 and 2021 were women; this compares favourably to Coursera, where women make up 42% of university campus learners (Coursera, 2021).

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<sup>3</sup> Due to the low number of respondents who identified as 'other' or preferred not to specify their gender, the gender analysis in this publication only considers women and men. A brief demographic description of the respondents who identified as 'other' or preferred not to specify their gender can be found in 'Voices of Early Career Researchers' Data Report (Dooley, 2023).

## SUB-SAHARAN AFRICA HAS THE LOWEST PROPORTIONAL REPRESENTATION OF WOMEN IN THE SURVEY, BUT REGIONAL DATA MASK SIGNIFICANT DIFFERENCES WITHIN AND BETWEEN COUNTRIES

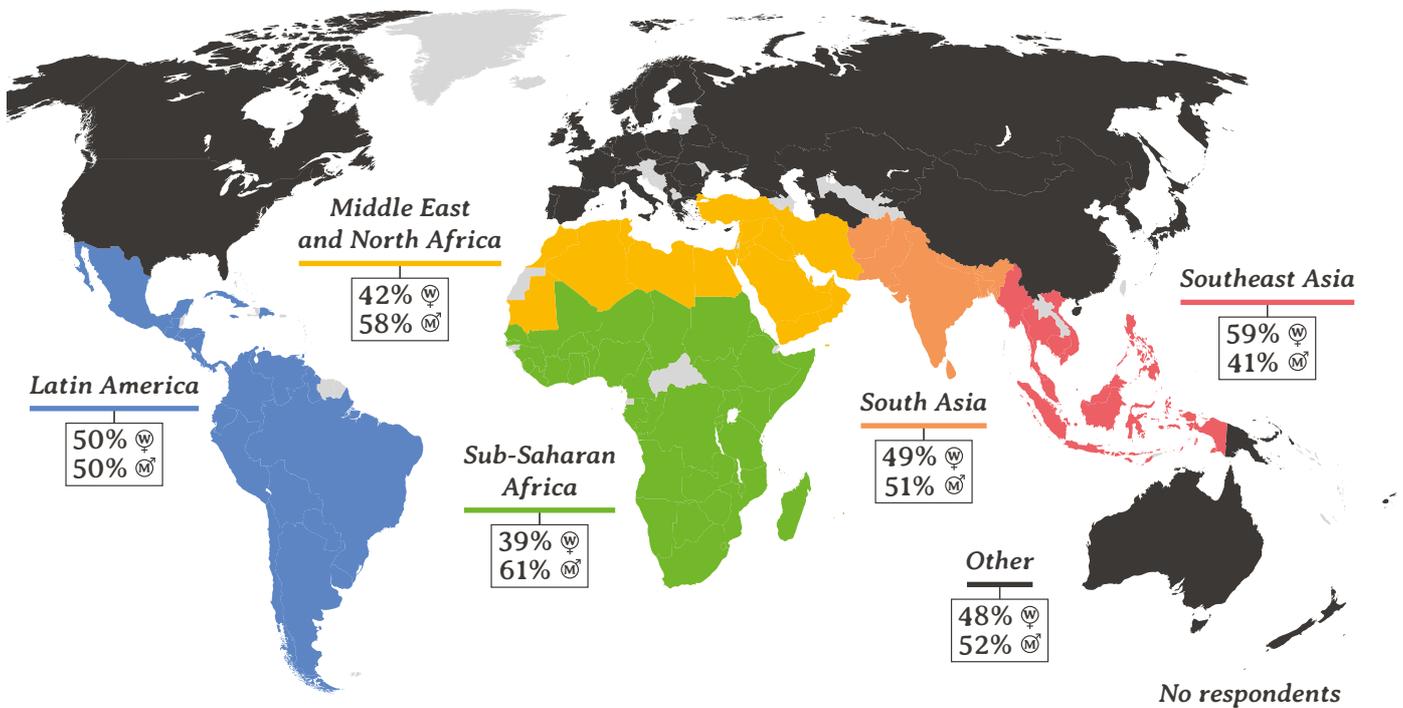
When looking at the percentage breakdown of women and men respondents with a regional lens,<sup>4</sup> the largest gender imbalance in our survey is in Sub-Saharan Africa.<sup>5</sup> Here just under four out of every 10 respondents were women. This is followed by the Middle East and North Africa where just over four out of every 10 respondents were women.

In Latin America there is gender parity among the survey respondents. South Asia is also close to gender parity, with only two-percentage points difference between the proportion of women and men. The only region that had a larger proportion of women responding to the survey than men was Southeast Asia, with close to six out of every 10 respondents being women.

The regional proportions of women and men researchers in our survey are broadly in line with UNESCO figures (Bello et al., 2021). There is a slightly higher proportion of women respondents from Sub-Saharan Africa. This is likely to be reflective of the broad definition of ‘early-career researcher’ within the AuthorAID community.

The global and regional data mask even larger gender imbalances within and between countries. Looking at the largest countries in our sample (represented by more than 100 women and men respondents), the country with the lowest percentage of women respondents is Ethiopia (17%) and the country with the highest percentage of women respondents is Sri Lanka (73%).

**FIGURE 1:** Gender breakdown across regions



**Notes:** The regional analysis of the data from our survey is reflective of where respondents live and work, and not necessarily where they are originally from. Thus, a Ghanaian researcher working in the US would be counted under ‘other’.

The ‘other’ category makes up 5% (395 individuals) of the total number of respondents to our survey.

Percentages in all tables and figures – except Table 1: ‘Gender breakdown of respondents’ – have been rounded up and quoted as whole numbers.

4 See Table 28: ‘Countries included under each regional category’ in the annex.

5 Our regional categorisations follow common conventions, to enable us to relate our findings to other datasets – so Africa is split between Sub-Saharan Africa and the Middle East and North Africa, for example. Nevertheless, we acknowledge that these divisions are to some extent arbitrary and unhelpful, and do not reflect social and economic realities. While the majority of respondents were from Sub-Saharan Africa, at least 3% of the total respondents were from each of the other regional categories. This gives us sufficient numbers for meaningful statistical analysis (Dooley, 2023).

## Establishing national platforms for addressing gender inequity in research

Over the last four years, INASP has collaborated with the Ethiopian Academy of Sciences and the Uganda National Council for Science and Technology to establish national gender forums or alliances.

The [Ethiopian Gender Learning Forum](#) (EGLF) and the [Gender Equity in Research Alliance](#) (GERA) in Uganda bring together researchers, lecturers and higher education and research institutions from across each country with the aim of raising awareness of gender gaps that exist in their respective research systems, and to work together to address these (see section 6.3 'National gender forums and alliances' for more information).

Of the fifteen countries that had more than 100 women and men respondents, eleven have a gender imbalance skewed towards men and four have a gender imbalance skewed towards women. Nine of the eleven countries with a higher percentage of men respondents are in Sub-Saharan Africa. Of the four countries with a gender imbalance skewed towards women, two are in South Asia (Pakistan and Sri Lanka), one in Southeast Asia (Vietnam) and one in Sub-Saharan Africa (Sudan). This could in part be reflective of a growing number of countries in South and Southeast Asia (including Sri Lanka) having achieved gender parity (Bello et al., 2021).

Kenya is the country that comes closest to gender parity with a difference of only two percentage points between the number of men and women respondents.

The differences in the proportions of women and men ECR respondents (and in research more generally) at global, regional, and country levels, is a reminder of the importance of applying a gender lens when analysing research and knowledge systems, and in efforts to strengthen these.

**TABLE 2:** Gender breakdown of countries with more than 100 women and men respondents

| COUNTRY                     | WOMEN | MEN |
|-----------------------------|-------|-----|
| Ethiopia                    | 17%   | 83% |
| Rwanda                      | 23%   | 77% |
| Uganda                      | 38%   | 62% |
| Ghana                       | 39%   | 61% |
| Nigeria                     | 40%   | 60% |
| United Republic of Tanzania | 41%   | 59% |
| India                       | 42%   | 58% |
| Zimbabwe                    | 42%   | 58% |
| Nepal                       | 43%   | 57% |
| Zambia                      | 44%   | 56% |
| Kenya                       | 49%   | 51% |
| Pakistan                    | 53%   | 47% |
| Vietnam                     | 63%   | 37% |
| Sudan                       | 64%   | 36% |
| Sri Lanka                   | 73%   | 27% |

## 2.2 Qualifications and profession

### A HIGHER PROPORTION OF WOMEN HAVE A PHD OR EQUIVALENT

24% of all respondents to our survey had a PhD or equivalent, and 46% of those that have a PhD were women. Interestingly, this is in line with women accounting for 46% of all PhD-level students globally in 2019 (Bothwell et al., 2022). When looking at women and men respondents separately, a higher proportion of women have a PhD (namely 26% of women compared to 23% of men) and the difference is also statistically significant.

**TABLE 3:** Gender breakdown across qualification levels

|                                 | WOMEN | MEN |
|---------------------------------|-------|-----|
| PhD/Doctorate or equivalent     | 45%   | 55% |
| Master's degree or equivalent   | 41%   | 59% |
| Bachelor's degree or equivalent | 42%   | 58% |
| No academic degree              | 46%   | 54% |

**TABLE 4:** Qualification levels for women and men respectively

|                                   | WOMEN | MEN |
|-----------------------------------|-------|-----|
| Bachelor's degree or equivalent   | 25%   | 26% |
| Master's degree or equivalent     | 47%   | 50% |
| No academic degree                | 2%    | 2%  |
| PhD/doctoral degree or equivalent | 26%   | 23% |

### WOMEN ARE UNDERREPRESENTED IN ALL WORK CONTEXTS

Nearly half of the respondents to our survey work primarily in a university setting. In all types of work context there was a higher proportion of men than women. The workplaces where women are most significantly underrepresented are NGOs, scientific academies and learned/professional societies, and government.

There was a better representation of women in research institutes and hospitals and in our 'other' category. Of the respondents who primarily work at a university, 58% were men and 42% were women. This is broadly in line with women accounting for four out of 10 academics worldwide (Bello et al., 2021).

**TABLE 5:** Gender breakdown across work context

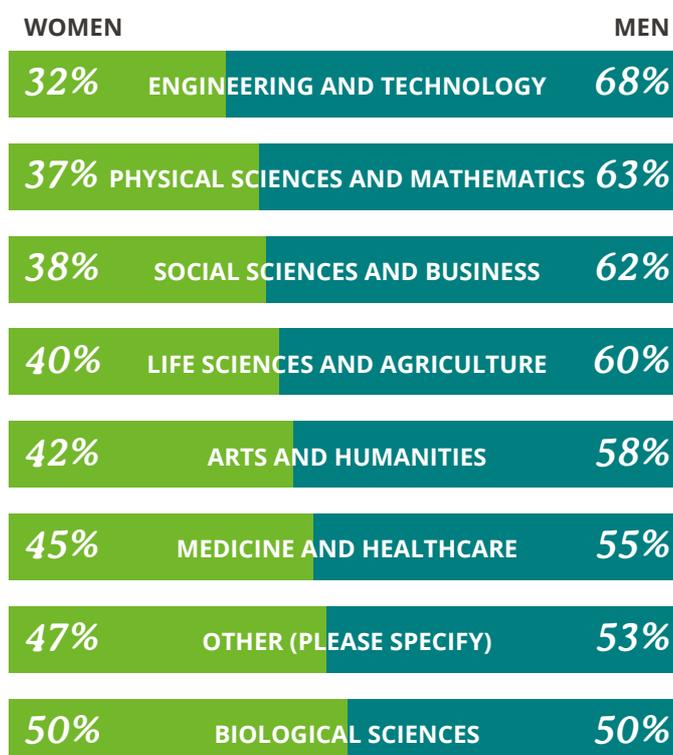
|                     | WOMEN | MEN |
|---------------------|-------|-----|
| NGO                 | 38%   | 62% |
| Scientific academy+ | 39%   | 61% |
| Government          | 40%   | 60% |
| University          | 42%   | 58% |
| Research Institute  | 44%   | 56% |
| Hospital            | 44%   | 56% |
| Other               | 45%   | 55% |
| (blank)             | 52%   | 48% |

**Note:** Academy+ = Scientific academy or Learned/Professional society.

### WOMEN'S PERSPECTIVES ARE SIGNIFICANTLY UNDERREPRESENTED IN STEM FIELDS – EXCEPT BIOLOGICAL SCIENCES

Men were overrepresented in all areas of research in our survey except for 'biological sciences' which had a 50:50 gender split. The largest gender gap in our survey was in 'engineering and technology', followed by 'physical sciences and mathematics' and 'social sciences and business.' The smallest gender gaps were in our 'other' category and 'medicine and healthcare'.

**FIGURE 2:** Gender breakdown across disciplines



The 2021 UNESCO Science Report states that, while in many countries women are overrepresented in medical and health sciences, humanities, social sciences and arts, only a handful of countries have achieved gender parity among researchers in engineering and technology (Bello et al., 2021).

A lack of women in science, technology, engineering and mathematics (STEM) has a significant impact on the technologies and products that are developed, and how these are designed (Criado-Perez, 2019a). Women are more likely to consider the experiences of women in their research and design, and technologies, and products that fail to take gender and the experiences of women into consideration can ultimately be less safe and effective for women (Bert, 2018), as has proven to be the case from the design of cars to personal protective equipment (PPE) (Criado-Perez, 2019b). In an increasingly data-driven world, it is imperative that women's voices and perspectives are also represented in emerging fields, such as artificial intelligence, to ensure that new data-driven technologies are responsive to the needs of both women and men and that in-built biases do not perpetuate existing gender inequalities and stereotypes. Google's speech recognition software, for example, has been shown to be 70% more likely to recognize male speech than female speech (Bello et al., 2021).

Part of the explanation for why women are underrepresented in STEM fields could be the barriers they encounter. A 2020/21 survey with over 400 female faculty, students, and early career graduates by Education Sub-Saharan Africa (ESSA) found that the greatest barriers to women's leadership in STEM fields were social-cultural barriers (29%), followed by limited access to mentorship (27%), gender stereotypes (21%), and limited access to networking opportunities (20%) (Education Sub Saharan Africa, 2021).

A woman responding to our survey from Nigeria stressed the importance of "Investing more in women in sciences, engineering and technology-based research, provision of [a] support system and mentorship for early career researchers from financially disadvantaged countries and households that is, gender sensitive both at international, national and institutional level."

Agriculture offers another good example of the importance of considering the experiences of women when conducting research and developing new products and technologies. Many women across the Global South are working in agriculture, whether formally or informally. According to data from UN Women, in 2015, agriculture continued to account for 71% of women's employment in South Asia (compared to 47% for men). In Sub-Saharan Africa it accounted for around 59% of women's employment (compared to around 56% for men) (Kabeer, 2021). However, women researchers are underrepresented in agricultural research, where new farming practices and new seed and crop varieties are investigated. When agricultural researchers fail to consider the needs of women farmers when breeding new varieties to improve yields or nutrition, it can result in lower uptake by women farmers, whose needs and preferences for crop characteristics often differ from men (Demont & Polar, 2022).

# 3. Knowledge production

## 3.1 How conducting research is viewed

### BOTH WOMEN AND MEN WANT TO MAKE A DIFFERENCE TO NATIONAL DEVELOPMENT, BUT WOMEN EMPHASISE REACHING A WIDER AUDIENCE WHILE MEN EMPHASISE NOVELTY AND PUBLICATION

Overall, women and men rated the same factors highly when asked what they considered to be most important for their research, but there were some subtle differences.

There was alignment on social and development contributions, with the most important factors for both women and men being to ‘make a contribution to the nation’s scientific development’ and ‘to make a difference to society’.<sup>6</sup> Similarly, the least important factor for both women and men was ‘to be frequently cited in the literature’.

The importance of societal impact was also mentioned by some respondents when asked how they would improve the research system in their country:

*“The research finding contributed and impact to society that is the most significant thing [that] could be done to improve recognition of research produced in my country.”*

Woman, Vietnam

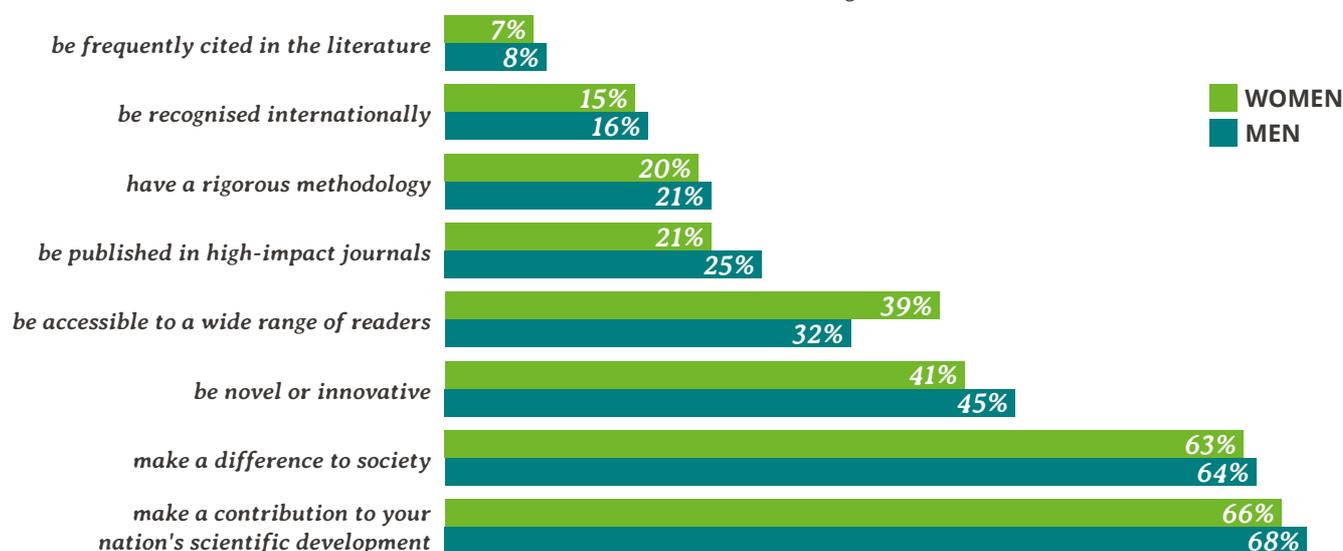
A higher proportion of women are more motivated by the prospect of reaching a wider audience with their research, whereas a higher proportion of men are motivated by doing novel or innovative research and getting published.

A woman respondent explained what quality research means to her:

*“Ensure that adequate fund is made available for research and that emphasis is not on quantity of output but quality based on impact and achievement of national goals for development, putting into consideration diversity, inclusivity and equity.”*

Woman, Nigeria

**FIGURE 3:** Gender breakdown of important research factors



6 See Figure 3: Gender breakdown of important research factors

## BOTH WOMEN AND MEN ARE MORE POSITIVE ABOUT THE STATUS OF RESEARCH IN THEIR DISCIPLINE INTERNATIONALLY THAN THEY ARE ABOUT ITS STATUS LOCALLY

When asked to describe the ‘status of’ research in different spaces – i.e., within their department, within their institution, within their discipline in their country, and within their discipline internationally – respondents rated the status of research locally (department, institution, and country) remarkably similarly. When looking at the top ratings, an average of 7% rated it as ‘thriving’ while 33-34% of respondents gave an ‘at least good’ (good or thriving) rating for the three aspects (Dooley, 2023, Table 60).

There were some statistically significant differences when comparing ‘poor’ or ‘in crisis’ ratings with ‘moderate’, ‘good’ and ‘thriving’ ratings: a higher proportion of men than women believed that both research across

disciplines within their institution and research in their discipline in their country was ‘poor’ or ‘in crisis’.

Respondents’ view of the status of research in their discipline internationally was much more positive, with an average of 29% (32% women and 27% men) rating it as ‘thriving’ and 69% of women and 68% of men giving it a rating of ‘at least good’ (good or thriving). Both women and men were therefore more than twice as likely to rate the status of research internationally as ‘at least good’, in contrast to the status of research within their department, institution or country; and they were more than three times as likely to view research in their discipline internationally as ‘thriving’.

## 3.2 Participating in knowledge production

### FEWER WOMEN THAN MEN HAVE PUBLISHED THEIR RESEARCH IN THE LAST YEAR

A higher proportion of men had accomplished nine out of eleven specified research activities in the last year. The activity with the largest proportional gender difference was ‘published in an international journal’. Looking across all publishing activities (i.e. having published either in an international journal, local journal, or a book chapter), a higher proportion of men than women published their research in the last year. All of these differences are statistically significant (Dooley, 2023).

This is consistent with other studies showing that men on average publish more papers than women. Studies have also found that women are less likely to publish in high impact journals and that papers authored by women are often cited less frequently than papers authored by men (Kraemer-Mbula, 2020).

While more men than women presented their research at a national conference, a slightly higher proportion of women presented their research at an international conference. A slightly higher proportion of women had also presented their research to colleagues at their institution.

However, there was no statistically significant difference for these two activities (Dooley, 2023).

Just as more men had accomplished a larger number of research activities in the previous year, a higher proportion of men than women believed that they have sufficient opportunities to present and promote their work; this difference is statistically significant (Dooley, 2023).

**TABLE 6:** Gender breakdown of publishing activity (international journal / local journal / book chapter)

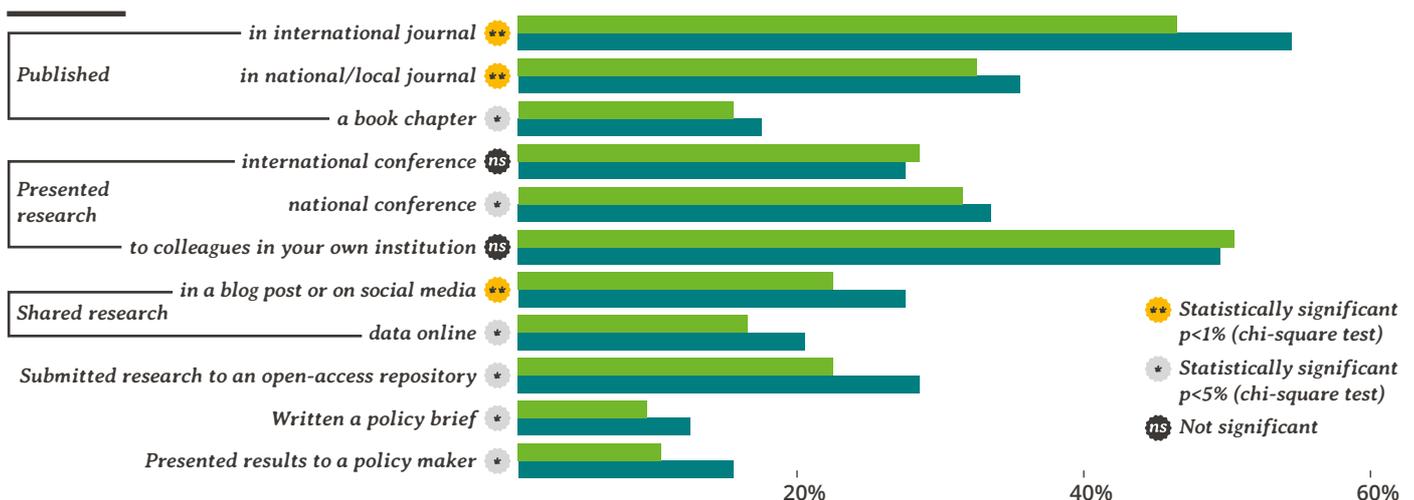
|           | WOMEN | MEN |
|-----------|-------|-----|
| Published | 62%   | 67% |

**TABLE 7:** Gender breakdown of having sufficient opportunities to present and promote research

*Do you feel you have sufficient opportunities to present and promote your research work?*

|     | WOMEN | MEN |
|-----|-------|-----|
| Yes | 50%   | 53% |
| No  | 50%   | 47% |

**FIGURE 4:** Gender breakdown of research activities



## FEWER WOMEN HAVE CONDUCTED COLLABORATIVE RESEARCH BOTH WITHIN THEIR OWN COUNTRY AND INTERNATIONALLY

A large majority of both women and men consider it important to do collaborative research with researchers outside their own institution. At the same time, more than half did not feel that they have sufficient opportunities to do collaborative research. However, more women than men indicated this to be a problem.

**TABLE 8:** Gender breakdown of importance of collaboration

*How important is it to you to do collaborative research with other researchers outside your own institution?*

|                      | WOMEN | MEN |
|----------------------|-------|-----|
| Very important       | 88%   | 92% |
| Moderately important | 11%   | 8%  |
| Not at all important | 1%    | 1%  |

**TABLE 9:** Gender breakdown of opportunities for collaboration

*Do you feel that you have sufficient opportunities for collaboration?*

|     | WOMEN | MEN |
|-----|-------|-----|
| Yes | 32%   | 39% |
| No  | 68%   | 61% |

More men than women had collaborated within their own country and internationally during their research career. This gender difference was observed in all regions except Latin America, where an almost equal proportion of women and men had collaborated within their own country (73% of women and 72% of men), and more women than men had collaborated internationally (60% of women vs. 57% of men).<sup>7</sup> The largest regional gender difference for in-country collaboration was in the Middle East and North Africa (76% of men vs 62% of women). For international collaboration the largest gender difference was in South Asia (43% of men vs. 31% of women). 99% of all respondents said that they would like to do more collaborative research if they had the opportunity to do so (Dooley, 2023, Table 42).

**TABLE 10:** Gender breakdown of collaboration within country

*Have you ever carried out any collaborative research with anyone in another institution in your own country?*

|     | WOMEN | MEN |
|-----|-------|-----|
| Yes | 58%   | 63% |
| No  | 42%   | 37% |

**TABLE 11:** Gender breakdown of international collaboration

*Have you ever carried out any collaborative research with anyone in another country?*

|     | WOMEN | MEN |
|-----|-------|-----|
| Yes | 39%   | 42% |
| No  | 61%   | 59% |

While the majority of men and women thought that their expertise and contribution was sufficiently recognised in their last international collaboration, more men thought that they had received sufficient recognition; this difference was statistically significant.

**TABLE 12:** Gender breakdown of recognition in latest international collaboration

*In your last international collaboration, do you think your expertise and contribution to the project was sufficiently recognised?*

|                             | WOMEN | MEN |
|-----------------------------|-------|-----|
| Yes                         | 77%   | 81% |
| No                          | 7%    | 5%  |
| Not applicable / don't know | 16%   | 14% |

7 See Table 29: 'Regional breakdown of collaboration within country' and Table 30: 'Regional breakdown of international collaboration' in the annex.



## WOMEN AND MEN EXPERIENCE DIFFERENT OBSTACLES TO COLLABORATIVE RESEARCH

When asked to indicate the extent to which four specific obstacles affected their ability to do collaborative research, 'lack of funding opportunities' was noted most frequently ('to a moderate extent' or greater by 89% of women and 90% of men). This was followed by 'lack of access to collaborators' (70% of women and 69% of men); 'lack of institutional support' (69% of women and 72% of men); and 'lack of time and resources' (66% of women and 58% of men).<sup>8</sup>

Although the figures are close, the differences are statistically significant, and indicate that men were more likely to experience 'lack of funding' and 'lack of institutional support' as being obstacles to collaboration while women were more likely to experience 'lack of time and resources' (Dooley, 2023).

Women were also less likely than men to believe that their job allows them to maintain a good work-life balance.<sup>9</sup> Women across the world spend more time on unpaid care work than men (Charmes, 2019). This often leads to women being relatively disadvantaged in the amount of time they can dedicate to their professional

life. This disadvantage is particularly acute for time-intensive careers such as research, where long working hours are a common requirement (M. Liani et al., 2021).

A 2019 study of career challenges of African scientists cites data showing that most African women scientists experience difficulties trying to balance a career in research with family demands (Kraemer-Mbula, 2020). Another study of the experiences of trainees and research fellows taking part in the 'Developing Excellence in Leadership, Training and Science in Africa' (DELTA Africa) programme found that "time pressure particularly disadvantages women in career progression" as the unequal gendered division of labour within the family renders women – regardless of their marital status – 'time poor' (M. Liani et al., 2021). Results of a feedback survey conducted amongst participants in INASP MOOCs have also identified 'time management/ other work' as the main constraint to completing courses. This is again a constraint experienced more by women than men: 52% of women compared with only 44% of men who completed an INASP MOOC in 2022 reported this as a constraint.

## FEWER MEN THAN WOMEN BELIEVE THAT THEY RECEIVE SUFFICIENT FUNDING FOR THEIR RESEARCH

Around 50% of all respondents had received funding from international research grants or institutions, national funding bodies and/or local or institutional research funds. While more men than women had applied for national and/or local funding, a higher proportion of women than men had been successful when applying for international and/or national funding (Dooley, 2023).

While the majority of respondents – both women and men – indicated insufficient funding for carrying out their research (82% of women and 87% of men respectively), more women believed that they *did* receive sufficient funding (9% of women vs. 6% of men), again a statistically significant difference (Dooley, 2023, Table 93). This is consistent with men more frequently experiencing 'lack of funding' as an obstacle to collaborative research. However, studies have found that women tend to receive lower absolute amounts of research funding than men (Kraemer-Mbula, 2020), suggesting that there may be further inequalities hidden by our 'perception' data.

To ensure that the research produced is responsive to the needs of women as well as men, it is important that women can participate in knowledge production, including collaborating with peers, and publishing their research, on an equal footing with men. We also need to ensure that women and men have equal opportunities to present and promote their research so that it can be taken up and used by other researchers, policy makers, and communities.

The fact that women and men experience different obstacles to participating in research is a reminder that we cannot take a one-size-fits-all approach when working to reduce the barriers experienced by ECRs and must design initiatives in a responsive way.

<sup>8</sup> See Table 31: 'Gender breakdown of obstacles to doing collaborative research' in the annex.

<sup>9</sup> See section 4.1 'Experience as an early career researcher'

# 4. Experiences of research careers

## 4.1 Experience as an early career researcher

### WOMEN ARE MORE LIKELY TO FIND THEIR EXPERIENCE AS AN ECR CHALLENGING AND FRUSTRATING

When asked to indicate to what extent they would describe their experience as an ECR as ‘challenging’, ‘frustrating’, and ‘exciting’, more than 50% of both women and men said that their experience had been either ‘extremely’ or ‘very’ challenging and/or exciting.

**TABLE 13:** Gender breakdown of experience as an early career researcher<sup>10</sup>

|                    | WOMEN | MEN |
|--------------------|-------|-----|
| <b>CHALLENGING</b> |       |     |
| Extremely          | 15%   | 11% |
| Very               | 44%   | 42% |
| Moderately         | 32%   | 35% |
| <b>FRUSTRATING</b> |       |     |
| Extremely          | 9%    | 5%  |
| Very               | 22%   | 18% |
| Moderately         | 34%   | 36% |
| <b>EXCITING</b>    |       |     |
| Extremely          | 18%   | 18% |
| Very               | 39%   | 38% |
| Moderately         | 28%   | 28% |

Women were more likely than men to describe their experience as ‘challenging’ (91% of women vs. 88% of men) and as ‘frustrating’ (65% of women vs. 59% of men). There was no significant difference between men and women in the tendency to describe their research experience as exciting (85% of women vs. 84% of men).

When looking across regions, the largest gender differences are in South Asia and Sub-Saharan Africa. In both regions, a higher proportion of women would describe their experience as ‘challenging’ (91% of women vs. 84% of men in South Asia, and 90% of women vs. 87% of men in Sub-Saharan Africa). In Latin America, Southeast Asia and our ‘other’ category, an equal proportion of women and men would describe their experience as ‘challenging’. In the Middle East and North Africa, a slightly higher proportion of men would describe their experience as ‘challenging’ (88% of men vs. 86% of women).

Similarly, the largest gender differences in describing the experience as ‘frustrating’ are in South Asia and Sub-Saharan Africa (62% of women vs. 53% of men in South Asia, and 64% of women vs. 59% of men in Sub-Saharan Africa). In Southeast Asia a higher proportion of women would also describe their experience as ‘frustrating’ (76% of women vs. 73% of men). In Latin America, the Middle East and North Africa and our ‘other’ region, equal proportions of women and men would describe their experience as ‘frustrating’.

<sup>10</sup> The table here includes ‘extremely’, ‘very’ and ‘moderately’ categories only. For tables with full list of categories see Dooley (2023).

When it comes to describing the experience of being an ECR as ‘exciting’ an equal proportion of women and men in Sub-Saharan Africa and the Middle East and North Africa would use this descriptor. In South Asia, Southeast Asia and our ‘other’ region, a higher proportion of women would describe their experience as ‘exciting’ (90% of women vs. 86% of men in South Asia, 92% of women vs. 86% of men in Southeast Asia, and 90% of women vs. 87% of men in our ‘other’ region). In Latin America, a higher proportion of men would describe their experience as ‘exciting’ (97% of men vs. 92% of women).<sup>11</sup>

When asked whether they thought that their location was a disadvantage to developing a research career more men than women agreed (45% of men vs. 38% of women) – and this difference was statistically significant (Dooley, 2023, Table 80).

## THE MAJORITY OF WOMEN AND MEN ARE SATISFIED WITH THEIR JOB

When looking at job satisfaction and job security no significant gender differences occur. Around 70% of both women and men said that they were satisfied with their job and just below 50% of women and men agreed that their contract provides them with the job security they need. While more than 60% of both women and men agreed that their job allows them to maintain a good balance between their work and life, as reported earlier, there was a statistically significant difference here, with more men than women believing this.

**TABLE 14:** Gender breakdown of job satisfaction<sup>12</sup>

*I am satisfied with my job*

|       | WOMEN | MEN |
|-------|-------|-----|
| Agree | 69%   | 71% |

**TABLE 15:** Gender breakdown of job security

*My contract provides me with the job security I need*

|       | WOMEN | MEN |
|-------|-------|-----|
| Agree | 47%   | 49% |

**TABLE 16:** Gender breakdown of work/life balance

*My job allows me to maintain a good balance between my work and my life*

|       | WOMEN | MEN |
|-------|-------|-----|
| Agree | 63%   | 65% |

## BOTH WOMEN AND MEN AGREE THAT MORE SUPPORT WOULD BE HELPFUL, BUT WOMEN HAVE FEWER ROLE MODELS OF THEIR OWN GENDER

An overwhelming majority of both women and men agreed either completely or somewhat that more training and support would enable them to progress in the work that they do. Just under 50% of both women and men agreed that they have access to mentoring support, while around a third disagreed either completely or somewhat.

**TABLE 17:** Gender breakdown of training and capacity strengthening<sup>13</sup>

*More training and capacity building would enable me to progress in the work I do*

|                            | WOMEN | MEN |
|----------------------------|-------|-----|
| Agree                      | 90%   | 89% |
| Neither agree nor disagree | 6%    | 7%  |
| Disagree                   | 3%    | 4%  |

- 11 See Table 32: ‘Regional breakdown of experience as an early career researcher - challenging’; Table 33: ‘Regional breakdown of experience as an early career researcher - frustrating’; Table 34: ‘Regional breakdown of experience as an early career researcher - exciting’; and Table 35: Gender breakdown of experience as an early career researcher across regions - combined ‘extremely’, ‘very’ and ‘moderately’ responses only in the annex.
- 12 The following three tables include combined agree categories only. For tables with full list of categories see Dooley (2023).
- 13 The following two tables include combined (i.e. ‘completely’ AND ‘somewhat’) data for agree and disagree categories. For tables with full list of categories see Dooley (2023).

**TABLE 18:** Gender breakdown of access to mentoring support

*I have access to mentoring support for research and career development*

|                            | WOMEN | MEN |
|----------------------------|-------|-----|
| Agree                      | 47%   | 46% |
| Neither agree nor disagree | 19%   | 20% |
| Disagree                   | 33%   | 34% |

More women than men in our survey gave specific examples of a lack of mentoring opportunities being a barrier for them:

*“As I am not a well-experienced researcher, I need someone who can not only cooperate but also can guide me.”*

Woman, Myanmar

*“Being a young researcher, and working in a young university, at times you don’t have mentorship into [the] research world and spend a lot of time finding your path in research.”*

Woman, Kenya

ESSA’s survey with over 400 women faculty, students and early career graduates found that the most effective forms of mentoring relationships experienced by their respondents were those where women mentored other women (Education Sub Saharan Africa, 2021). However, the relatively low number of women in senior academic positions can make it particularly difficult for early career women researchers to find role models and mentors who have had similar experiences to their own trying to establish a career in a male dominated research system (M. L. Liani et al., 2020). ESSA’s survey also found that 91% of the women surveyed thought that more women role models should be encouraged and 96% thought there was a need to hear more success stories. This latter figure rose to 98% for women in STEM specifically (Education Sub Saharan Africa, 2021).

## FEWER WOMEN THAN MEN LIKE THE ORGANIZATIONAL CULTURE AT THEIR WORKPLACE

Just under half of all respondents indicated that they either did not like the organizational culture at their workplace or that they were neutral with regards to this. However, there was a clear gender difference with more men than women saying that they like the organizational culture at their workplace.

**TABLE 19:** Gender breakdown of organizational workplace culture<sup>14</sup>

*I like the organizational culture at my workplace*

|                            | WOMEN | MEN |
|----------------------------|-------|-----|
| Agree                      | 50%   | 56% |
| Neither agree nor disagree | 22%   | 20% |
| Disagree                   | 28%   | 24% |

## WOMEN ARE 2.5 TIMES MORE LIKELY TO HAVE EXPERIENCED DISCRIMINATION IN THE WORKPLACE BECAUSE OF THEIR GENDER

Overall, 14% of respondents to our survey reported having experienced discrimination in their job because of their gender. However, when looking at the gender of respondents a noticeable difference emerges: 22% of women report having experienced discrimination because of their gender compared with only 7% of men. By contrast, a higher proportion of men than women reported having experienced discrimination at work because of their ethnicity, although the difference between men and women here is much smaller than for gender discrimination – namely 17% of men vs. 15% of women.

**TABLE 20:** Gender breakdown of discrimination because of gender<sup>15</sup>

*I have experienced discrimination in my job because of my gender*

|                            | WOMEN | MEN |
|----------------------------|-------|-----|
| Agree                      | 22%   | 7%  |
| Neither agree nor disagree | 13%   | 10% |
| Disagree                   | 66%   | 82% |

14 This table includes combined (i.e. ‘completely’ AND ‘somewhat’) data for agree and disagree categories. For table with full list of categories see Dooley (2023).

15 The following two tables include combined (i.e. ‘completely’ AND ‘somewhat’) data for agree and disagree categories. For tables with full list of categories see Dooley (2023).

**TABLE 21:** Gender breakdown of discrimination because of ethnicity

*I have experienced discrimination in my job because of my ethnicity*

|                            | WOMEN | MEN |
|----------------------------|-------|-----|
| Agree                      | 15%   | 17% |
| Neither agree nor disagree | 13%   | 14% |
| Disagree                   | 72%   | 68% |

Women in all regions were more likely to have experienced discrimination in their job because of their gender than men. However, there were some marked differences:<sup>16</sup>

The highest level of reported gender-based discrimination for both women and men was in Latin America (22% overall). This is also the region with the highest proportion of women having experienced discrimination because of their gender (31%). Women in Latin America were 1.5 times more likely to have experienced discrimination because of their gender than women in the Middle East and North Africa, Southeast Asia and Sub-Saharan Africa. The highest proportion of men to have experienced discrimination because of their gender was in the Middle East and North Africa (17% of men). By contrast, only 6% of men in Sub-Saharan Africa reported having experienced discrimination because of their gender.

However, relative to men from the same region, women in Sub-Saharan Africa were more than three times as likely to have experienced discrimination because of their gender. In Latin America and South Asia women were more than twice as likely as men in their region to have experienced discrimination because of gender. In the Middle East and North Africa women were only marginally more likely than men to have experienced discrimination because of their gender.

Studies have reported various ways in which women working in educational organizations in Sub-Saharan Africa experience 'everyday' hostility and bullying, including scheduling of important decision-making meetings outside of core working hours (which makes it more difficult for women with family and domestic responsibilities to participate), male intrusion in their areas of responsibility, and interruption of meetings run by women managers (M. L. Liani et al., 2020).

Although the majority of both women and men in our survey are satisfied with their job, the data on organizational workplace culture and discrimination based on gender suggests that research and related organizations need to do more to ensure that their workplace culture is inclusive and enabling for women as well as for men. As a respondent from Nigeria said:

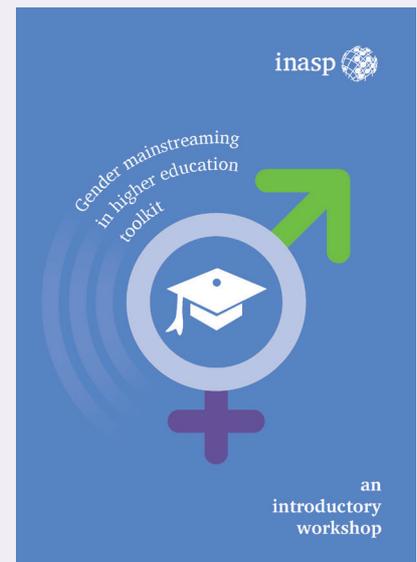
*I would [also] create an enabling environment for young researchers like myself to train and do collaborative research irrespective of gender, ethnicity or affiliations.*

Woman, Nigeria



## Creating an enabling environment for women researchers and academics

INASP's Gender mainstreaming in higher education toolkit has been designed to support universities, higher education institutions and research organizations to identify and address institutional gender gaps and create lasting transformative change (see section 6.2 'Institutional gender mainstreaming' for more information).



<sup>16</sup> See Table 36: 'Regional breakdown of gender-based discrimination' in the annex.

## 4.2 Opportunities, reward, and recognition

### WOMEN ARE MORE THAN TWICE AS LIKELY TO BELIEVE THAT THEY GET FEWER OPPORTUNITIES THAN MEN

More than a quarter of all respondents agreed that women in research get fewer opportunities than men in similar positions. Perhaps unsurprisingly – given that women are responding from their own experience – there is a noticeable gender difference, with 43% of women agreeing compared with only 19% of men. Similarly, 45% of men disagreed compared with only 28% of women.

**TABLE 22:** Gender breakdown of opportunities for women in research

*Women in research get fewer opportunities than men in similar positions*

|                              | WOMEN | MEN |
|------------------------------|-------|-----|
| Agree                        | 43%   | 19% |
| Disagree                     | 28%   | 45% |
| Don't Know or Not Applicable | 29%   | 35% |

In all regions, women are more likely than men to agree that women in research get fewer opportunities than men.<sup>17</sup> More than half of all respondents in Latin America (57%) and two-thirds of women (66%) believe that there is a gender-based difference in opportunities. In Southeast Asia which is the region where the lowest number of respondents believe that there is a gender-based difference, more than a fifth of all respondents (22%) still perceive a difference. In the Middle East and North Africa, South Asia and Sub-Saharan Africa women are more than twice as likely as men to believe that there is a gender-based difference.

Studies of women's experiences in research institutions in South Africa and Kenya have found that women tend to have weaker social capital and networks than men and that this can lead to women being excluded from informal discussions which can impact on career progression (M. L. Liani et al., 2020). And beyond career development, exclusion from influential mentorship and networks, often found in 'old-boy' networks, can also affect women's leadership prospects (M. L. Liani et al., 2020).

The fact that relatively fewer men believe that women receive fewer opportunities highlights how important it is that both men and women are part of efforts to surface and address gender gaps in research and knowledge systems. Through our Global Platforms for Equitable Knowledge Ecosystems (GPEKE) project,<sup>18</sup> in partnership with Sida, INASP has supported the establishment of national research and gender platforms in Ethiopia and Uganda. A deliberate decision was made early on to ensure that both women and men would be included and actively involved in efforts to ensure gender equity in research (see more in section 6.3 'National gender forums and alliances').

In our survey, a woman from Ghana stressed the need to have more women involved in research:

*"I could also improve research system by calling out for more women who are into research to always have them in the integral process of the research, as women are usually not considered so much when it comes to research in my country. This would also aid the women to feel seen and they would [strive] to always make research systems work."*

Woman, Ghana

### WOMEN ARE LESS LIKELY TO FEEL THAT THEIR WORK IS RECOGNISED AND REWARDED

Overall, 66% of our respondents agreed that the quality of their research was recognized at their institution and 44% said that it was rewarded. However, there was a distinct (and statistically significant) gender difference with more men than women believing that the quality of their research was recognized and rewarded.

**TABLE 23:** Gender breakdown of institutional recognition

*I feel that the quality of my research is recognised at my institution*

|                              | WOMEN | MEN |
|------------------------------|-------|-----|
| Agree                        | 61%   | 70% |
| Disagree                     | 13%   | 11% |
| Don't Know or Not Applicable | 26%   | 19% |

17 See Table 37: 'Regional breakdown of opportunities for women in research' and Table 38: 'Regional breakdown of opportunities for women in research - 'agreement' data only' in the annex.

18 [www.inasp.info/gpeke](http://www.inasp.info/gpeke)

**TABLE 24:** Gender breakdown of institutional reward*I feel that the quality of my research is rewarded at my institution*

|                              | WOMEN | MEN |
|------------------------------|-------|-----|
| Agree                        | 38%   | 48% |
| Disagree                     | 26%   | 23% |
| Don't Know or Not Applicable | 36%   | 29% |

When it comes to co-workers there was also a gender difference, with more men than women reporting that they feel their work is being appropriately recognised by their colleagues, and a higher proportion of women offering a neutral response.

### 4.3 Research as a future career

#### THE MAJORITY OF BOTH WOMEN AND MEN THINK THAT RESEARCH IS A GOOD CAREER CHOICE

90% of men and 88% of women thought that research is a good career choice. Only 3% of men and 4% of women disagreed.

**TABLE 26:** Gender breakdown of research as a career choice*Research is a good career choice*

|                              | WOMEN | MEN |
|------------------------------|-------|-----|
| Agree                        | 88%   | 90% |
| Disagree                     | 4%    | 3%  |
| Don't Know or Not Applicable | 9%    | 7%  |

19 This table includes combined (i.e. 'completely' AND 'somewhat') data for agree and disagree categories. For table with full list of categories see Dooley (2023).

20 See Table 39: 'Regional breakdown of research as a good career choice' in the annex.

**TABLE 25:** Gender breakdown of recognition by colleagues<sup>19</sup>*I feel like the work I do is being appropriately recognised by my colleagues*

|                            | WOMEN | MEN |
|----------------------------|-------|-----|
| Agree                      | 56%   | 63% |
| Neither agree nor disagree | 27%   | 22% |
| Disagree                   | 16%   | 15% |

Studies have found that despite greater and faster rates of improvement throughout their career (in terms of writing standards and contributions to research), women in research are often underestimated (Bello et al., 2021). For institutions to be able to attract and retain talented researchers, it is important to ensure that both women and men employees feel that their work and research is being recognized and rewarded. Similarly, women and men researchers who feel that their work is being recognized and rewarded by their institution and colleagues are more likely to want to remain and build a career in research.

Men in Latin America, Sub-Saharan Africa and our 'other' category are more likely to think that research is a good career choice than women in those regions. In the Middle East and North Africa, South Asia and Southeast Asia, women are more likely to think that research is a good career choice. In the two regions with the biggest gender difference (Latin America and 'other'), men are more likely than women to think that research is a good career choice.<sup>20</sup>

#### MEN ARE MORE POSITIVE ABOUT THEIR PERSONAL EXPERIENCE IN RESEARCH THAN WOMEN

Our research positivity index (see box on next page) shows us that there is no difference in the overall positivity score of women and men in our survey. However, when performing a regression analysis of the two subscales in our positivity index (personal positivity and context positivity), gender becomes a significant predictor, with men being significantly more positive than women about their personal experience of a research career and women being significantly more positive about the surrounding research context than men.

## About the ‘research positivity’ index

In the first iteration of our Voices of Early Career Researchers survey (2020), we piloted an index for ‘research positivity’ to help us understand the factors contributing to researchers’ personal experience of a research career and perspectives on the context of their research (Dooley et al., 2021).

This research positivity index combines the responses from twenty individual questions in our survey. In addition to using the research positivity index to look at overall researcher positivity, we have also divided the index into two subscales. The first subscale is related to researchers’ personal experience of a research career – whether it is a good career choice and offers opportunities for progression and development (we refer to this as ‘personal positivity’). The personal positivity subscale consists of twelve contributing questions. The second subscale is related to researchers’ perception of the research context – including institutional, national and international infrastructure (we refer to this as ‘context positivity’). The context positivity subscale consists of eight contributing questions.<sup>21</sup> Higher overall numbers indicate higher levels of positivity.

Read more – [www.inasp.info/voice-ECRs-2020](http://www.inasp.info/voice-ECRs-2020)

The gendered differences in positivity in relation to personal experience in research and the surrounding research context are replicated across all regions – except for Southeast Asia where women are more positive about their personal experience in research than men, and in our ‘other’ region where men are more positive about the surrounding research context than women.<sup>22</sup> Women and men ECRs from Latin America have the lowest positivity score in our index. Consistent with this, they are also the least positive about both their personal experience in research and the surrounding research context when compared with women and men from other regions.

### WOMEN ARE SLIGHTLY LESS LIKELY TO SEE THEMSELVES IN ACADEMIC RESEARCH IN 5 YEARS’ TIME

The majority of both women and men thought that they would still be working in research – whether academic or other forms – in five years’ time (92% of women and 94% of men). A slightly higher proportion of women did not know whether they would be still be in research, and a higher proportion of men indicated that they expected to be working in *academic* research in five years’ time. By contrast a higher proportion of women indicated that they expected to be working in research in a non-academic setting. These patterns, which are observed for all respondents to our survey regardless of work context, become even more pronounced when looking only at respondents who already work primarily in a university setting (Dooley, 2023, Table 70).

**TABLE 27:** Gender breakdown across all respondents of expectation to still be working in research in 5 years’ time

*Do you think you will still be working with research in five years’ time?*

|                                      | WOMEN | MEN |
|--------------------------------------|-------|-----|
| Yes – in academic research           | 69%   | 75% |
| Yes – but not in an academic setting | 23%   | 19% |
| No                                   | 1%    | 1%  |
| Don’t know                           | 7%    | 5%  |

A qualitative study of the experiences of trainees/ research fellows taking part in the ‘Developing Excellence in Leadership, Training and Science in Africa’ (DELTAS Africa) programme found that “Overall, most women, especially at junior and early career stages, regardless of their marital and parental status, viewed an academic scientific research career as ‘a huge battle’”. And that “This seemed unappealing in view of the ‘sacrifices’ they felt they would need to make for these careers.” As a consequence, some were already considering alternative career pathways (M. Liani et al., 2021).

If we want to create equitable research and knowledge systems, we need to ensure that women as well as men are able and want to stay in research. It is important that both men and women feel positive about their personal experience in research, as well as about the surrounding research context; and that they are able to see themselves working in research in both academic and non-academic settings. Institutions employing researchers, along with intermediate organizations who support them, play a vital role in creating an enabling environment for truly equitable research and knowledge systems.

21 See Table 40: Questions included in the research positivity index’ in the annex.

22 See Table 41: Regional breakdown of research positivityof positivity’ in the annex.



# 5. Conclusion

In order to fully realise the potential of research and knowledge to help solve global and local challenges we need to be able to draw on the talents, backgrounds, and experiences of a diverse group of researchers. Globally women make up only one third of researchers: if women's voices and priorities are missing, the ideas, solutions, products, and technologies developed through research are less likely to be responsive to the needs and concerns of half of the world's population.

As this survey shows, there are multiple inequities across research systems:

## **PARTICIPATION IN KNOWLEDGE PRODUCTION**

- Fewer women than men have published their research
- Fewer women than men have conducted collaborative research
- Women are more likely to experience 'lack of time and resources' as an obstacle to doing collaborative research
- Fewer women than men think that their expertise and contribution was sufficiently recognised
- Fewer women than men believe that they have sufficient opportunities to do collaborative research, present and promote their work

## **EXPERIENCE OF BEING IN THE RESEARCH AND KNOWLEDGE SYSTEM**

- Women are 2.5 times more likely to have experienced discrimination at their job because of their gender
- Women are more than twice as likely to believe that women in research get fewer opportunities than men
- Women are less likely to feel that their work is recognised and rewarded
- Fewer women than men like the organizational culture at their workplace
- Women are more likely to find their experience as an ECR challenging and frustrating

While the majority of gender inequities revealed in our survey are experienced by women, men also experience some inequities:

- More men than women think that their location is a disadvantage to develop their research career
- Fewer men than women believe that they receive sufficient funding for their research
- Men are more likely to experience 'lack of funding' and 'lack of institutional support' as obstacles to doing collaborative research
- More men than women experience discrimination at their job because of their ethnicity

## **DISCRIMINATION BECAUSE OF GENDER**

In all regions, more women than men have experienced discrimination at their job because of their gender. However, there are some marked differences:

- Women in Latin America are 1.5 times more likely to have experienced discrimination because of their gender than women in the Middle East and North Africa, Southeast Asia and Sub-Saharan Africa
- Relative to men from the same region, women in Sub-Saharan Africa are more than 3 times as likely to have experienced discrimination because of their gender

## **EXPERIENCE AS AN ECR**

- The regions with the largest gender differences when it comes to describing the experience of being an ECR as 'challenging' and/or 'frustrating' are In South Asia and Sub-Saharan Africa. a higher proportion of women than men describe their experience of being an ECR as 'challenging' and/or 'frustrating'
- The only region where more men than women would use one of the above descriptors is the Middle East and North Africa

The knowledge ecosystem can only be truly equitable if it includes the voices, experiences and priorities of both women and men. In order for this to be the case, both women and men researchers must be enabled to contribute to and thrive in research.

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# 6. *Four ways in which INASP is addressing gender gaps in the research and knowledge sector*

As an organisation seeking to strengthen research systems, for INASP it is important not only to investigate the problems, but to develop practical solutions with partners. INASP is only one of several intermediary organizations working to support ECRs. In order to maximize our impact, we work in collaboration with other organizations who share our values and vision of creating a more equitable knowledge ecosystem. This includes organizations such as Organization for Women in Science for the Developing World (OWSD)<sup>23</sup> and the Mawazo Institute<sup>24</sup> who work specifically with women ECRs, and particularly in East Africa.

In addition to supporting individual ECRs to publish and communicate their work, we also work with universities and research institutions and with national research bodies to ensure that all researchers can thrive. In order to specifically address gender gaps in research and knowledge, we work to raise awareness of and integrate a gender lens across institutional structures, process, and teaching and learning; as well as to establish national gender forums and alliances.

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23 [www.owsd.net](http://www.owsd.net)

24 [www.mawazoinstitute.org](http://www.mawazoinstitute.org)

## 6.1 Supporting women researchers through AuthorAID

Through our global AuthorAID community,<sup>25</sup> we provide training, mentoring, and networking opportunities for women as well as men ECRs.

Since 2015, more than 20,000 women ECRs have participated in our free MOOCs on research writing, and proposal and grant writing, with a 44% completion rate.<sup>26</sup> Data collected from the MOOCs shows us that while women participants tend to enter our online courses with lower confidence in their skills than men, they complete the courses with a higher increase in confidence. We have partnered with organizations working to empower women globally, such as OWSD, to sponsor specific cohorts of women early career researchers to get additional specialised support during our MOOCs.

*“I just want to say a big thank you to the organizer of this training for giving me the opportunity to participate. The knowledge I acquire from this training has removed all the fear I do have about writing proposal and papers. Before I participated in the course I always [saw] writing papers as herculean task, but all the fear is gone. It has also opened my understanding to know how to target the right journal outfit to send my papers and I know this will reduce the rate of rejection I received from journal editors.”*

Woman MOOC participant, Nigeria

The development of the AuthorAID community is overseen by a team of international Stewards who, in collaboration with the team at INASP, guide its strategic direction and content development and manage the networks’ initiatives. Seven of the current eleven members of the AuthorAID Steward team are experienced women researchers and academics. AuthorAID recently provided seed funding to an initiative headed by one of these Stewards to establish a mentorship scheme for women researchers in Nepal.

Effective support and mentoring for women ECRs can assist them to participate in knowledge production alongside men and enable them to grow in their research careers. This in turn will contribute to ensuring that research is more responsive to the needs of women. We are also actively working to enhance the gender responsiveness of AuthorAID’s learning programme, including the MOOCs and mentorship platform, so that all researchers are encouraged to consider the gendered nature of research and its results.

## 6.2 Institutional gender mainstreaming

Using our Gender mainstreaming in higher education toolkit (Gollifer & Gorman, 2018) we have worked in partnership with universities and research institutes to help them identify and address institutional gender gaps.

Institutions that have partnered with INASP to begin a process of gender mainstreaming have gone on to develop gender policies and establish gender units or desks as well as continuing to facilitate gender awareness among their staff and management.

INASP’s gender mainstreaming toolkit was co-developed in 2016 with the University of Dodoma (UDOM) in Tanzania and updated in 2018. It draws on UDOM’s experiences of undertaking a gender awareness workshop and subsequent work to mainstream gender at the institution. The toolkit provides the materials and resources to run a workshop with the ultimate aim of

*“The establishment of the gender unit has been a great step for Gulu University to have an autonomous office for handling gender related issues. Before, gender mainstreaming was considered a small unit under the academic registrar and was mainly concerned with admission issues. However, with the TESCEA [Transforming Employability for Social Change in East Africa] project, the university has realized that gender encompasses more than admission and requires special attention. Gulu University is now in the process of appointing an officer to take full responsibility of this.”*

Christine Oryema, TESCEA project gender lead, Gulu University  
(Skovgaard et al., 2021)

25 [www.authoraid.info](http://www.authoraid.info)

26 [www.authoraid.info/en/e-learning/](http://www.authoraid.info/en/e-learning/)

developing an action plan and strategies to address the identified gaps. The toolkit consists of six modules, covering topics such as defining gender concepts, exploring gender mainstreaming, and understanding the current context of gender in higher education globally and nationally.

INASP has implemented the toolkit with partners in Ghana, Uganda, Ethiopia, Tanzania and Sri Lanka. The toolkit has been used both as a standalone institutional gender mainstreaming resource as well as an integrated part of our work with partners to establish national gender forums and alliances and to make teaching and learning more gender responsive (see sections 6.3 and 6.4).

Institutional gender mainstreaming is essential for addressing some of the barriers experienced by women in research. This includes barriers related to experiences of organizational workplace culture, such as gender-based discrimination, institutional reward and recognition, and opportunities and leadership progression; along with barriers related to finding time to conduct, publish and promote research.



## 6.3 National gender forums and alliances

INASP has partnered with the Ethiopian Academy of Sciences and Uganda National Council for Science and Technology to establish a national gender forum or alliance in each country (Nzegwu, 2021).

The Ethiopian Gender Learning Forum (EGLF)<sup>27</sup> and the Gender Equity in Research Alliance (GERA)<sup>28</sup> in Uganda bring together researchers and higher education and research institutions from across each country to raise awareness of the gender gaps that exists in the national research and knowledge ecosystem and to work together to address these gaps.

While the EGLF and GERA were both established in recent years, their members are already starting to see shifts in mindsets and practices:

*“After the establishment of EGLF, I observed two significant changes in our research practices. First, the senior female researchers have shown high willingness and commitment to challenge the research system in the country... the second is mid-career women academics’ strong motivation to get engaged in research practices.”*

Woman, Ethiopia (Young, 2023)

*“The Efforts of Global Platforms for Equitable Knowledge Ecosystems (GPEKE)<sup>29</sup> programme in Eastern region of Uganda cannot not be ignored. By my personal assessment, it made some significant changes out of which I mention two of them; in my life as an individual; and in at least four universities in Eastern region Uganda in skills development and awareness on Gender and research.”*

Woman, Uganda (Young, 2023)

27 [www.eas-et.org/gender-forum-2/](http://www.eas-et.org/gender-forum-2/)

28 [www.gera.ug](http://www.gera.ug)

29 The EGLF and GERA were both established as part of the GPEKE project.

Both the EGLF and GERA have grown out of a series of regional ‘gender champion’ workshops across Ethiopia and Uganda. A deliberate decision was made to encourage the involvement of both women and men in these workshops and to ensure that the focus was on promoting gender equity – looking at ways in which both women’s and men’s opportunities and experiences in higher education and research differ – rather than focusing solely women. As a result of this, both women and men are now involved in GERA and are working together to make the research and knowledge ecosystem in Uganda more gender equitable. The coordinators for two of the four regional chapters that GERA consists of are men. In Ethiopia, it has proven slightly more difficult to attract men to the gender learning forum. The importance of engaging men is therefore integrated into the 2023-2027 strategic plan that the forum has developed.

*“I think the word ‘gender’ has not been packaged well. In Uganda the term gender means women and the men will not come for anything around gender. When you talk about women’s issues, the men tend to stay away. However, gender is not women. For us to have gender equity, men need to be on board, they need to be with and for us. But I am so glad that in the GERA we have male team members who embrace gender in an unapologetic way.”*

Sarah Nabachwa, Mbarara University of Science and Technology, Regional Coordinator GERA Western Region (INASP, 2021)

National gender forums and alliances create a shared platform for working to address gender gaps and exchange knowledge and experience. The people that make up these national platforms are now also able to support institutions in their country to undertake a gender mainstreaming process.

*“There are so many benefits to a forum like this! The main one is that we share our experiences, and we support each other in various ways. We share materials, we share information, and we support each other on how to better ourselves.”*

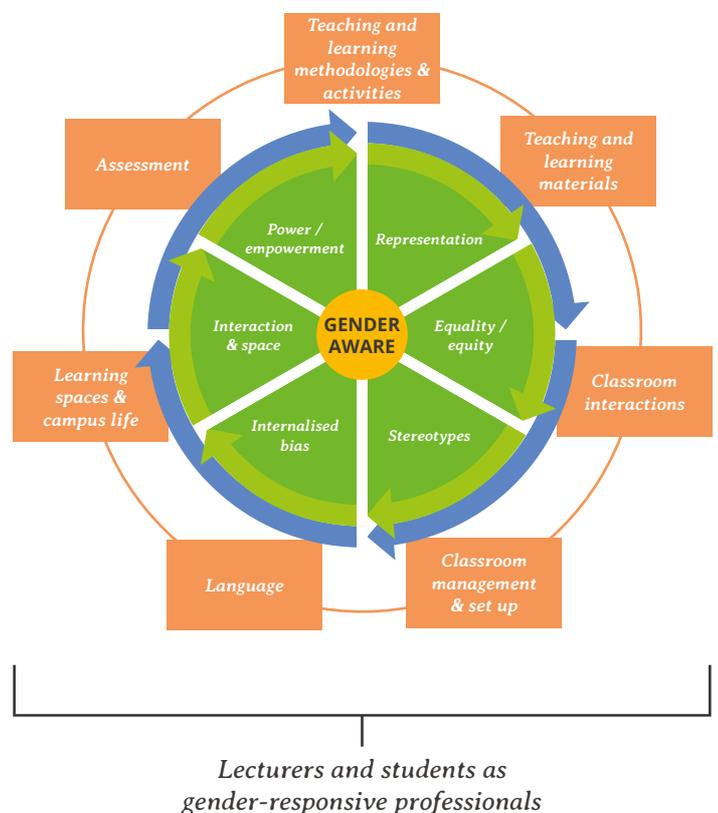
Haregewoin Fantahun, Addis Ababa University, EGLF facilitator (INASP, 2022)

## 6.4 Gender responsive pedagogy in higher education

Using our framework for gender responsive pedagogy in higher education (Chapin & Warne, 2020) we have supported university lecturers in Ghana, Nigeria, Tanzania and Uganda to ensure that their women and men students will benefit equally from the teaching and learning process. The framework and approach to gender responsive pedagogy was developed by INASP and partners as part of the Transforming Employability for Social Change in East Africa (TESCEA) project.<sup>30</sup>

TESCEA, which ran from 2018-2021, supported universities, industries, communities and government in Tanzania and Uganda to work together to create an improved learning experience for students focusing on teaching for critical thinking and problem-solving. Gender responsive pedagogy was integrated into each element of the project’s ‘redesign learning journey’.

The evaluation of the TESCEA project found that gender responsive pedagogical approaches were becoming an integral part of both lesson planning and how academic staff prepare group work and classroom set up. Furthermore the “gender-related perceptions, attitudes and teaching practices” of the academic staff that were trained during the project had shifted towards “greater consciousness and practice of gender equity” (Skovgaard et al., 2021). The evaluation also found



<sup>30</sup> [www.transformhe.org](http://www.transformhe.org)

that the gender-responsive design of the project had contributed to “positive shifts in students’ behaviours and attitudes”. The students had become more active learners, “not intimidated to interact with their fellow students, or their teachers” and assume more confident roles in class (Skovgaard et al., 2021).

*“I now have a new life experience in academics. As a female student, I did not play any leadership role in my class. I was taught to respect and obey what my teacher taught me whether correct or wrong. I now have learned how to say no, discuss, disagree and to compromise on issues that affect society in general. I think I have gained some form of personal freedom and the willingness to lead.”*

Student, woman, University of Dodoma

*“I consider gender issues from the first levels of lesson preparation, class implementations, assessment, class examples, classroom sitting plan, and even representativeness.”*

Lecturer, man, Mzumbe University

## Collaborate with us to create a more equitable knowledge ecosystem

Get in touch with us if you share our vision of creating a knowledge ecosystem where women and men are able to participate and contribute equitably- we are actively seeking new partnerships to take our gender work further.

Mai Skovgaard – Programme Specialist, Gender:  
[mskovgaard@inasp.info](mailto:mskovgaard@inasp.info)

Gender is central to pedagogy in order to ensure that gender inequalities are not reproduced in the teaching and learning process: “When gender becomes a pivotal lens within pedagogy, it supports more inclusive and interactive teaching and learning practices that balance both women’s and men’s participation” (Chapin & Warne, 2020). In addition to ensuring that women and men students benefit equally from teaching and learning processes, gender responsive pedagogy also plays a key role in addressing gender gaps in subject choice, retention, and the future careers of women and men students. When, for example, STEM subjects are taught in a gender responsive manner this helps to ensure that both women and men can see themselves represented and reflected in these professions and understand the important contributions that women have made and should continue to make to these fields. Gender responsive pedagogy in higher education also highlights the importance of ensuring that the needs and experiences of both women and men are considered in research and product development. This can ultimately help to ensure that the next generation of researchers will undertake gender responsive research that will be of equal benefit to women and men.

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# ANNEX: ADDITIONAL DATA TABLES

## REGIONS

**TABLE 28:** Countries included under each regional category

| LATIN AMERICA                    |             |                                    |
|----------------------------------|-------------|------------------------------------|
| Argentina                        | Ecuador     | Panama                             |
| Bolivia (Plurinational State of) | El Salvador | Paraguay                           |
| Brazil                           | Guatemala   | Peru                               |
| Chile                            | Guyana      | Saint Kitts and Nevis              |
| Colombia                         | Honduras    | Trinidad and Tobago                |
| Costa Rica                       | Jamaica     | Uruguay                            |
| Cuba                             | Mexico      | Venezuela (Bolivarian Republic of) |
| Dominican Republic               | Nicaragua   |                                    |

| MIDDLE EAST AND NORTH AFRICA |            |                      |
|------------------------------|------------|----------------------|
| Algeria                      | Lebanon    | Saudi Arabia         |
| Egypt                        | Libya      | Syrian Arab Republic |
| Iran (Islamic Republic of)   | Mauritania | Tunisia              |
| Iraq                         | Morocco    | Türkiye              |
| Israel                       | Oman       | United Arab Emirates |
| Jordan                       | Qatar      | Yemen                |
| Kuwait                       |            |                      |

| SOUTH ASIA  |          |           |
|-------------|----------|-----------|
| Afghanistan | India    | Pakistan  |
| Bangladesh  | Maldives | Sri Lanka |
| Bhutan      | Nepal    |           |

| SOUTHEAST ASIA    |             |           |
|-------------------|-------------|-----------|
| Brunei Darussalam | Malaysia    | Singapore |
| Cambodia          | Myanmar     | Thailand  |
| Indonesia         | Philippines | Vietnam   |

| SUB-SAHARAN AFRICA               |            |                             |
|----------------------------------|------------|-----------------------------|
| Angola                           | Gabon      | Nigeria                     |
| Benin                            | Gambia     | Rwanda                      |
| Botswana                         | Ghana      | Senegal                     |
| Burkina Faso                     | Guinea     | Sierra Leone                |
| Burundi                          | Kenya      | Somalia                     |
| Cabo Verde                       | Lesotho    | South Africa                |
| Cameroon                         | Liberia    | South Sudan                 |
| Chad                             | Madagascar | Sudan                       |
| Comoros                          | Malawi     | Eswatini                    |
| Congo                            | Mali       | Togo                        |
| Côte D'Ivoire                    | Mauritius  | Uganda                      |
| Democratic Republic of the Congo | Mozambique | United Republic of Tanzania |
| Eritrea                          | Namibia    | Zambia                      |
| Ethiopia                         | Niger      | Zimbabwe                    |

|                                       |                  |                                                      |
|---------------------------------------|------------------|------------------------------------------------------|
| <b>OTHER</b>                          |                  |                                                      |
| Albania                               | Georgia          | Poland                                               |
| Andorra                               | Germany          | Portugal                                             |
| Australia                             | Greece           | Republic of Korea                                    |
| Belarus                               | Hungary          | Romania                                              |
| Belgium                               | Ireland          | Russian Federation                                   |
| Bulgaria                              | Italy            | Serbia                                               |
| Canada                                | Japan            | Slovakia                                             |
| China                                 | Kazakhstan       | Spain                                                |
| Cyprus                                | Kyrgyzstan       | Sweden                                               |
| Czech Republic                        | Mongolia         | Switzerland                                          |
| Democratic People's Republic of Korea | Montenegro       | Turkmenistan                                         |
| Denmark                               | Netherlands      | Ukraine                                              |
| Fiji                                  | New Zealand      | United Kingdom of Great Britain and Northern Ireland |
| Finland                               | Norway           |                                                      |
| France                                | Papua New Guinea | United States of America                             |

## COLLABORATION

**TABLE 29:** Regional breakdown of collaboration within country

*Have you ever carried out any collaborative research with anyone in another institution in your own country?*

|                    | COUNT WOMEN | % WOMEN     | COUNT MEN   | % MEN       | COUNT TOTAL | % TOTAL     |
|--------------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <b>LA</b>          | <b>131</b>  | <b>5%</b>   | <b>128</b>  | <b>3%</b>   | <b>259</b>  | <b>4.0%</b> |
| Yes                | 95          | 73%         | 92          | 72%         | 187         | 72%         |
| No                 | 36          | 27%         | 36          | 28%         | 72          | 28%         |
| <b>MENA</b>        | <b>74</b>   | <b>3%</b>   | <b>106</b>  | <b>3%</b>   | <b>180</b>  | <b>3%</b>   |
| Yes                | 46          | 62%         | 81          | 76%         | 127         | 71%         |
| No                 | 28          | 38%         | 25          | 24%         | 53          | 29%         |
| <b>SA</b>          | <b>441</b>  | <b>17%</b>  | <b>522</b>  | <b>14%</b>  | <b>963</b>  | <b>15%</b>  |
| Yes                | 247         | 56%         | 322         | 62%         | 569         | 59%         |
| No                 | 194         | 44%         | 200         | 38%         | 394         | 41%         |
| <b>SEA</b>         | <b>157</b>  | <b>6%</b>   | <b>107</b>  | <b>3%</b>   | <b>264</b>  | <b>4%</b>   |
| Yes                | 97          | 62%         | 70          | 65%         | 167         | 63%         |
| No                 | 60          | 38%         | 37          | 35%         | 97          | 37%         |
| <b>SSA</b>         | <b>1705</b> | <b>64%</b>  | <b>2729</b> | <b>73%</b>  | <b>4434</b> | <b>69%</b>  |
| Yes                | 975         | 57%         | 1689        | 62%         | 2664        | 60%         |
| No                 | 730         | 43%         | 1040        | 38%         | 1770        | 40%         |
| <b>OTHER</b>       | <b>141</b>  | <b>5%</b>   | <b>167</b>  | <b>4%</b>   | <b>308</b>  | <b>5%</b>   |
| Yes                | 89          | 63%         | 119         | 71%         | 208         | 68%         |
| No                 | 52          | 37%         | 48          | 29%         | 100         | 32%         |
| <b>GRAND TOTAL</b> | <b>2649</b> | <b>100%</b> | <b>3759</b> | <b>100%</b> | <b>6408</b> | <b>100%</b> |

**TABLE 30:** Regional breakdown of international collaboration

*Have you ever carried out any collaborative research with anyone in another country?*

|                    | COUNT WOMEN | % WOMEN     | COUNT MEN   | % MEN       | COUNT TOTAL | % TOTAL     |
|--------------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <b>LA</b>          | <b>131</b>  | <b>5%</b>   | <b>128</b>  | <b>3%</b>   | <b>259</b>  | <b>4%</b>   |
| Yes                | 79          | 60%         | 73          | 57%         | 152         | 59%         |
| No                 | 52          | 40%         | 55          | 43%         | 107         | 41%         |
| <b>MENA</b>        | <b>74</b>   | <b>3%</b>   | <b>106</b>  | <b>3%</b>   | <b>180</b>  | <b>3%</b>   |
| Yes                | 38          | 51%         | 64          | 60%         | 102         | 57%         |
| No                 | 36          | 49%         | 42          | 40%         | 78          | 43%         |
| <b>SA</b>          | <b>441</b>  | <b>17%</b>  | <b>522</b>  | <b>14%</b>  | <b>963</b>  | <b>15%</b>  |
| Yes                | 136         | 31%         | 222         | 43%         | 358         | 37%         |
| No                 | 305         | 69%         | 300         | 57%         | 605         | 63%         |
| <b>SEA</b>         | <b>157</b>  | <b>6%</b>   | <b>107</b>  | <b>3%</b>   | <b>264</b>  | <b>4%</b>   |
| Yes                | 74          | 47%         | 56          | 52%         | 130         | 49%         |
| No                 | 83          | 53%         | 51          | 48%         | 134         | 51%         |
| <b>SSA</b>         | <b>1705</b> | <b>64%</b>  | <b>2729</b> | <b>73%</b>  | <b>4434</b> | <b>69%</b>  |
| Yes                | 624         | 37%         | 1041        | 38%         | 1665        | 38%         |
| No                 | 1081        | 63%         | 1688        | 62%         | 2769        | 62%         |
| <b>OTHER</b>       | <b>141</b>  | <b>5%</b>   | <b>167</b>  | <b>4%</b>   | <b>308</b>  | <b>5%</b>   |
| Yes                | 80          | 57%         | 104         | 62%         | 184         | 60%         |
| No                 | 61          | 43%         | 63          | 38%         | 124         | 40%         |
| <b>GRAND TOTAL</b> | <b>2649</b> | <b>100%</b> | <b>3759</b> | <b>100%</b> | <b>6408</b> | <b>100%</b> |

**TABLE 31: Gender breakdown of obstacles to doing collaborative research***To what extent do the following affect your ability to do collaborative research:*

|                                      | <b>% WOMEN</b> | <b>% MEN</b> | <b>% TOTAL</b> |
|--------------------------------------|----------------|--------------|----------------|
| <b>LACK OF FUNDING OPPORTUNITIES</b> |                |              |                |
| To a great extent                    | 70%            | 75%          | 73%            |
| To a moderate extent                 | 19%            | 15%          | 17%            |
| To a small extent                    | 8%             | 6%           | 7%             |
| Not a problem / does not affect me   | 3%             | 4%           | 4%             |

|                                      |     |     |     |
|--------------------------------------|-----|-----|-----|
| <b>LACK OF INSTITUTIONAL SUPPORT</b> |     |     |     |
| To a great extent                    | 36% | 39% | 38% |
| To a moderate extent                 | 33% | 33% | 33% |
| To a small extent                    | 19% | 18% | 18% |
| Not a problem / does not affect me   | 12% | 11% | 12% |

|                                     |     |     |     |
|-------------------------------------|-----|-----|-----|
| <b>LACK OF TIME &amp; RESOURCES</b> |     |     |     |
| To a great extent                   | 32% | 28% | 29% |
| To a moderate extent                | 35% | 31% | 32% |
| To a small extent                   | 21% | 26% | 24% |
| Not a problem / does not affect me  | 13% | 16% | 16% |

|                                        |     |     |     |
|----------------------------------------|-----|-----|-----|
| <b>LACK OF ACCESS TO COLLABORATORS</b> |     |     |     |
| To a great extent                      | 40% | 39% | 39% |
| To a moderate extent                   | 30% | 30% | 30% |
| To a small extent                      | 21% | 22% | 21% |
| Not a problem / does not affect me     | 9%  | 10% | 9%  |

## EXPERIENCE AS AN ECR

**TABLE 32:** Regional breakdown of experience as an ECR - challenging

|                    | COUNT WOMEN | % WOMEN     | COUNT MEN   | % MEN       | COUNT TOTAL | % TOTAL     |
|--------------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <b>LA</b>          | <b>120</b>  | <b>5%</b>   | <b>113</b>  | <b>3%</b>   | <b>233</b>  | <b>4%</b>   |
| Extremely          | 22          | 18%         | 13          | 12%         | 35          | 15%         |
| Very               | 58          | 48%         | 53          | 47%         | 111         | 48%         |
| Moderately         | 34          | 28%         | 41          | 36%         | 75          | 32%         |
| Slightly           | 4           | 3%          | 5           | 4%          | 9           | 4%          |
| not at all         | 2           | 2%          | 1           | 1%          | 3           | 1%          |
| <b>MENA</b>        | <b>69</b>   | <b>3%</b>   | <b>94</b>   | <b>3%</b>   | <b>163</b>  | <b>3%</b>   |
| Extremely          | 11          | 16%         | 17          | 18%         | 28          | 17%         |
| Very               | 30          | 43%         | 30          | 32%         | 60          | 37%         |
| Moderately         | 18          | 26%         | 36          | 38%         | 54          | 33%         |
| Slightly           | 9           | 13%         | 9           | 10%         | 18          | 11%         |
| not at all         | 1           | 1%          | 2           | 2%          | 3           | 2%          |
| <b>SA</b>          | <b>380</b>  | <b>16%</b>  | <b>473</b>  | <b>14%</b>  | <b>853</b>  | <b>15%</b>  |
| Extremely          | 86          | 23%         | 76          | 16%         | 162         | 19%         |
| Very               | 151         | 40%         | 179         | 38%         | 330         | 39%         |
| Moderately         | 107         | 28%         | 143         | 30%         | 250         | 29%         |
| Slightly           | 27          | 7%          | 60          | 13%         | 87          | 10%         |
| not at all         | 9           | 2%          | 15          | 3%          | 24          | 3%          |
| <b>SEA</b>         | <b>144</b>  | <b>6%</b>   | <b>98</b>   | <b>3%</b>   | <b>242</b>  | <b>4%</b>   |
| Extremely          | 19          | 13%         | 13          | 13%         | 32          | 13%         |
| Very               | 84          | 58%         | 51          | 52%         | 135         | 56%         |
| Moderately         | 31          | 22%         | 28          | 29%         | 59          | 24%         |
| Slightly           | 7           | 5%          | 6           | 6%          | 13          | 5%          |
| not at all         | 3           | 2%          | 0           | 0%          | 3           | 1%          |
| <b>SSA</b>         | <b>1516</b> | <b>64%</b>  | <b>2463</b> | <b>73%</b>  | <b>3979</b> | <b>69%</b>  |
| Extremely          | 192         | 13%         | 230         | 9%          | 422         | 11%         |
| Very               | 646         | 43%         | 1028        | 42%         | 1674        | 42%         |
| Moderately         | 522         | 34%         | 890         | 36%         | 1412        | 35%         |
| Slightly           | 138         | 9%          | 261         | 11%         | 399         | 10%         |
| not at all         | 18          | 1%          | 54          | 2%          | 72          | 2%          |
| <b>OTHER</b>       | <b>123</b>  | <b>5%</b>   | <b>146</b>  | <b>4%</b>   | <b>269</b>  | <b>5%</b>   |
| Extremely          | 25          | 20%         | 14          | 10%         | 39          | 15%         |
| Very               | 56          | 46%         | 66          | 45%         | 122         | 45%         |
| Moderately         | 31          | 25%         | 52          | 36%         | 83          | 31%         |
| Slightly           | 11          | 9%          | 10          | 7%          | 21          | 8%          |
| not at all         | 0           | 0%          | 4           | 3%          | 4           | 1%          |
| <b>GRAND TOTAL</b> | <b>2352</b> | <b>100%</b> | <b>3387</b> | <b>100%</b> | <b>5739</b> | <b>100%</b> |

**TABLE 33: Regional breakdown of experience as an ECR - frustrating**

|                    | COUNT WOMEN | % WOMEN     | COUNT MEN   | % MEN       | COUNT TOTAL | % TOTAL     |
|--------------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <b>LA</b>          | <b>119</b>  | <b>5%</b>   | <b>113</b>  | <b>3%</b>   | <b>232</b>  | <b>4%</b>   |
| Extremely          | 19          | 16%         | 7           | 6%          | 26          | 11%         |
| Very               | 30          | 25%         | 24          | 21%         | 54          | 23%         |
| Moderately         | 38          | 32%         | 50          | 44%         | 88          | 38%         |
| Slightly           | 24          | 20%         | 20          | 18%         | 44          | 19%         |
| not at all         | 8           | 7%          | 12          | 11%         | 20          | 9%          |
| <b>MENA</b>        | <b>68</b>   | <b>3%</b>   | <b>93</b>   | <b>3%</b>   | <b>161</b>  | <b>3%</b>   |
| Extremely          | 11          | 16%         | 13          | 14%         | 24          | 15%         |
| Very               | 14          | 21%         | 17          | 18%         | 31          | 19%         |
| Moderately         | 23          | 34%         | 36          | 39%         | 59          | 37%         |
| Slightly           | 14          | 21%         | 19          | 20%         | 33          | 21%         |
| not at all         | 6           | 9%          | 8           | 9%          | 14          | 9%          |
| <b>SA</b>          | <b>380</b>  | <b>16%</b>  | <b>469</b>  | <b>14%</b>  | <b>849</b>  | <b>15%</b>  |
| Extremely          | 44          | 12%         | 27          | 6%          | 71          | 8%          |
| Very               | 76          | 20%         | 66          | 14%         | 142         | 17%         |
| Moderately         | 115         | 30%         | 154         | 33%         | 269         | 32%         |
| Slightly           | 102         | 27%         | 145         | 31%         | 247         | 29%         |
| not at all         | 43          | 11%         | 77          | 16%         | 120         | 14%         |
| <b>SEA</b>         | <b>143</b>  | <b>6%</b>   | <b>98</b>   | <b>3%</b>   | <b>241</b>  | <b>4%</b>   |
| Extremely          | 9           | 6%          | 5           | 5%          | 14          | 6%          |
| Very               | 33          | 23%         | 27          | 28%         | 60          | 25%         |
| Moderately         | 66          | 46%         | 40          | 41%         | 106         | 44%         |
| Slightly           | 25          | 17%         | 21          | 21%         | 46          | 19%         |
| not at all         | 10          | 7%          | 5           | 5%          | 15          | 6%          |
| <b>SSA</b>         | <b>1512</b> | <b>65%</b>  | <b>2457</b> | <b>73%</b>  | <b>3969</b> | <b>69%</b>  |
| Extremely          | 114         | 8%          | 114         | 5%          | 228         | 6%          |
| Very               | 332         | 22%         | 449         | 18%         | 781         | 20%         |
| Moderately         | 520         | 34%         | 879         | 36%         | 1399        | 35%         |
| Slightly           | 403         | 27%         | 711         | 29%         | 1114        | 28%         |
| not at all         | 143         | 9%          | 304         | 12%         | 447         | 11%         |
| <b>OTHER</b>       | <b>122</b>  | <b>5%</b>   | <b>145</b>  | <b>4%</b>   | <b>267</b>  | <b>5%</b>   |
| Extremely          | 7           | 6%          | 17          | 12%         | 24          | 9%          |
| Very               | 34          | 28%         | 27          | 19%         | 61          | 23%         |
| Moderately         | 42          | 34%         | 55          | 38%         | 97          | 36%         |
| Slightly           | 28          | 23%         | 30          | 21%         | 58          | 22%         |
| not at all         | 11          | 9%          | 16          | 11%         | 27          | 10%         |
| <b>GRAND TOTAL</b> | <b>2344</b> | <b>100%</b> | <b>3375</b> | <b>100%</b> | <b>5719</b> | <b>100%</b> |

**TABLE 34: Regional breakdown of experience as an ECR- exciting**

|                    | COUNT WOMEN | % WOMEN     | COUNT MEN   | % MEN       | COUNT TOTAL | % TOTAL     |
|--------------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <b>LA</b>          | <b>120</b>  | <b>5%</b>   | <b>114</b>  | <b>3%</b>   | <b>234</b>  | <b>4%</b>   |
| Extremely          | 36          | 30%         | 26          | 23%         | 62          | 27%         |
| Very               | 47          | 39%         | 53          | 46%         | 100         | 43%         |
| Moderately         | 27          | 23%         | 31          | 27%         | 58          | 25%         |
| Slightly           | 8           | 7%          | 3           | 3%          | 11          | 5%          |
| not at all         | 2           | 2%          | 1           | 1%          | 3           | 1%          |
| <b>MENA</b>        | <b>68</b>   | <b>3%</b>   | <b>94</b>   | <b>3%</b>   | <b>162</b>  | <b>3%</b>   |
| Extremely          | 15          | 22%         | 24          | 26%         | 39          | 24%         |
| Very               | 29          | 43%         | 32          | 34%         | 61          | 38%         |
| Moderately         | 15          | 22%         | 26          | 28%         | 41          | 25%         |
| Slightly           | 8           | 12%         | 10          | 11%         | 18          | 11%         |
| not at all         | 1           | 1%          | 2           | 2%          | 3           | 2%          |
| <b>SA</b>          | <b>380</b>  | <b>16%</b>  | <b>472</b>  | <b>14%</b>  | <b>852</b>  | <b>15%</b>  |
| Extremely          | 93          | 24%         | 127         | 27%         | 220         | 26%         |
| Very               | 156         | 41%         | 176         | 37%         | 332         | 39%         |
| Moderately         | 94          | 25%         | 105         | 22%         | 199         | 23%         |
| Slightly           | 30          | 8%          | 48          | 10%         | 78          | 9%          |
| not at all         | 7           | 2%          | 16          | 3%          | 23          | 3%          |
| <b>SEA</b>         | <b>143</b>  | <b>6%</b>   | <b>98</b>   | <b>3%</b>   | <b>241</b>  | <b>4%</b>   |
| Extremely          | 21          | 15%         | 16          | 16%         | 37          | 15%         |
| Very               | 70          | 49%         | 45          | 46%         | 115         | 48%         |
| Moderately         | 41          | 29%         | 24          | 24%         | 65          | 27%         |
| Slightly           | 11          | 8%          | 11          | 11%         | 22          | 9%          |
| not at all         | 0           | 0%          | 2           | 2%          | 2           | 1%          |
| <b>SSA</b>         | <b>1506</b> | <b>64%</b>  | <b>2453</b> | <b>73%</b>  | <b>3959</b> | <b>70%</b>  |
| Extremely          | 236         | 16%         | 402         | 16%         | 638         | 16%         |
| Very               | 546         | 36%         | 924         | 38%         | 1470        | 37%         |
| Moderately         | 452         | 30%         | 707         | 29%         | 1159        | 29%         |
| Slightly           | 227         | 15%         | 342         | 14%         | 569         | 14%         |
| not at all         | 45          | 3%          | 78          | 3%          | 123         | 3%          |
| <b>OTHER</b>       | <b>122</b>  | <b>5%</b>   | <b>146</b>  | <b>4%</b>   | <b>268</b>  | <b>5%</b>   |
| Extremely          | 23          | 19%         | 27          | 18%         | 50          | 19%         |
| Very               | 56          | 46%         | 53          | 36%         | 109         | 41%         |
| Moderately         | 31          | 25%         | 47          | 32%         | 78          | 29%         |
| Slightly           | 11          | 9%          | 14          | 10%         | 25          | 9%          |
| not at all         | 1           | 1%          | 5           | 3%          | 6           | 2%          |
| <b>GRAND TOTAL</b> | <b>2339</b> | <b>100%</b> | <b>3377</b> | <b>100%</b> | <b>5716</b> | <b>100%</b> |

**TABLE 35: Gender breakdown of experience as an ECR across regions - combined 'extremely', 'very' and 'moderately' responses only**

|       | CHALLENGING |     | FRUSTRATING |     | EXCITING |     |
|-------|-------------|-----|-------------|-----|----------|-----|
|       | WOMEN       | MEN | WOMEN       | MEN | WOMEN    | MEN |
| LA    | 95%         | 95% | 73%         | 72% | 92%      | 97% |
| MENA  | 86%         | 88% | 71%         | 71% | 87%      | 87% |
| SA    | 91%         | 84% | 62%         | 53% | 90%      | 86% |
| SEA   | 93%         | 94% | 76%         | 73% | 92%      | 86% |
| SSA   | 90%         | 87% | 64%         | 59% | 82%      | 83% |
| OTHER | 91%         | 90% | 68%         | 68% | 90%      | 87% |

## DISCRIMINATION AND OPPORTUNITIES

**TABLE 36: Regional breakdown of gender-based discrimination**

|                            | COUNT WOMEN | % WOMEN     | COUNT MEN   | % MEN       | COUNT TOTAL | % TOTAL     |
|----------------------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <b>LA</b>                  | <b>120</b>  | <b>5%</b>   | <b>114</b>  | <b>3%</b>   | <b>234</b>  | <b>4%</b>   |
| Agree                      | 37          | 31%         | 15          | 13%         | 52          | 22%         |
| Neither agree nor disagree | 17          | 14%         | 12          | 11%         | 29          | 12%         |
| Disagree                   | 66          | 55%         | 87          | 76%         | 152         | 65%         |
| <b>MENA</b>                | <b>69</b>   | <b>3%</b>   | <b>94</b>   | <b>3%</b>   | <b>163</b>  | <b>3%</b>   |
| Agree                      | 13          | 19%         | 16          | 17%         | 29          | 18%         |
| Neither agree nor disagree | 7           | 10%         | 18          | 19%         | 25          | 15%         |
| Disagree                   | 49          | 71%         | 60          | 64%         | 109         | 67%         |
| <b>SA</b>                  | <b>382</b>  | <b>16%</b>  | <b>473</b>  | <b>14%</b>  | <b>855</b>  | <b>15%</b>  |
| Agree                      | 96          | 25%         | 46          | 10%         | 142         | 17%         |
| Neither agree nor disagree | 51          | 13%         | 58          | 12%         | 109         | 13%         |
| Disagree                   | 235         | 62%         | 369         | 78%         | 604         | 71%         |
| <b>SEA</b>                 | <b>144</b>  | <b>6%</b>   | <b>98</b>   | <b>3%</b>   | <b>242</b>  | <b>4%</b>   |
| Agree                      | 27          | 19%         | 10          | 10%         | 37          | 15%         |
| Neither agree nor disagree | 25          | 17%         | 18          | 18%         | 43          | 18%         |
| Disagree                   | 92          | 64%         | 70          | 71%         | 162         | 67%         |
| <b>SSA</b>                 | <b>1521</b> | <b>64%</b>  | <b>2476</b> | <b>73%</b>  | <b>3997</b> | <b>69%</b>  |
| Agree                      | 309         | 20%         | 158         | 6%          | 467         | 12%         |
| Neither agree nor disagree | 178         | 12%         | 211         | 9%          | 389         | 10%         |
| Disagree                   | 1034        | 68%         | 2107        | 85%         | 3141        | 79%         |
| <b>OTHER</b>               | <b>124</b>  | <b>5%</b>   | <b>146</b>  | <b>4%</b>   | <b>270</b>  | <b>5%</b>   |
| Agree                      | 25          | 20%         | 18          | 12%         | 43          | 16%         |
| Neither agree nor disagree | 30          | 24%         | 24          | 16%         | 54          | 20%         |
| Disagree                   | 69          | 56%         | 104         | 71%         | 173         | 64%         |
| <b>GRAND TOTAL</b>         | <b>2360</b> | <b>100%</b> | <b>3401</b> | <b>100%</b> | <b>5761</b> | <b>100%</b> |



**TABLE 37: Regional breakdown of opportunities for women in research**

|                    | COUNT WOMEN | % WOMEN     | COUNT MEN   | % MEN       | COUNT TOTAL | % TOTAL     |
|--------------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <b>LA</b>          | <b>119</b>  | <b>5%</b>   | <b>114</b>  | <b>3%</b>   | <b>233</b>  | <b>4%</b>   |
| Agree              | 79          | 66%         | 53          | 46%         | 132         | 57%         |
| Don't Know or N/A  | 24          | 20%         | 27          | 24%         | 51          | 22%         |
| Disagree           | 16          | 13%         | 34          | 30%         | 50          | 21%         |
| <b>MENA</b>        | <b>69</b>   | <b>3%</b>   | <b>94</b>   | <b>3%</b>   | <b>163</b>  | <b>3%</b>   |
| Agree              | 32          | 46%         | 19          | 20%         | 51          | 31%         |
| Don't Know or N/A  | 22          | 32%         | 34          | 36%         | 56          | 34%         |
| Disagree           | 15          | 22%         | 41          | 44%         | 56          | 34%         |
| <b>SA</b>          | <b>380</b>  | <b>16%</b>  | <b>473</b>  | <b>14%</b>  | <b>853</b>  | <b>15%</b>  |
| Agree              | 167         | 44%         | 91          | 19%         | 258         | 30%         |
| Don't Know or N/A  | 108         | 28%         | 166         | 35%         | 274         | 32%         |
| Disagree           | 105         | 28%         | 216         | 46%         | 321         | 38%         |
| <b>SEA</b>         | <b>144</b>  | <b>6%</b>   | <b>97</b>   | <b>3%</b>   | <b>241</b>  | <b>4%</b>   |
| Agree              | 39          | 27%         | 14          | 14%         | 53          | 22%         |
| Don't Know or N/A  | 50          | 35%         | 31          | 32%         | 81          | 34%         |
| Disagree           | 55          | 38%         | 52          | 54%         | 107         | 44%         |
| <b>SSA</b>         | <b>1516</b> | <b>64%</b>  | <b>2466</b> | <b>73%</b>  | <b>3982</b> | <b>69%</b>  |
| Agree              | 629         | 41%         | 441         | 18%         | 1070        | 27%         |
| Don't Know or N/A  | 448         | 30%         | 883         | 36%         | 1331        | 33%         |
| Disagree           | 439         | 29%         | 1142        | 46%         | 1581        | 40%         |
| <b>OTHER</b>       | <b>124</b>  | <b>5%</b>   | <b>146</b>  | <b>4%</b>   | <b>270</b>  | <b>5%</b>   |
| Agree              | 56          | 45%         | 34          | 23%         | 90          | 33%         |
| Don't Know or N/A  | 41          | 33%         | 58          | 40%         | 99          | 37%         |
| Disagree           | 27          | 22%         | 54          | 37%         | 81          | 30%         |
| <b>GRAND TOTAL</b> | <b>2352</b> | <b>100%</b> | <b>3390</b> | <b>100%</b> | <b>5742</b> | <b>100%</b> |

**TABLE 38: Regional breakdown of opportunities for women in research - 'agreement' data only**

|              | WOMEN | MEN | % TOTAL |
|--------------|-------|-----|---------|
| <b>LA</b>    | 66%   | 46% | 57%     |
| <b>MENA</b>  | 46%   | 20% | 31%     |
| <b>SA</b>    | 44%   | 19% | 30%     |
| <b>SEA</b>   | 27%   | 14% | 22%     |
| <b>SSA</b>   | 41%   | 18% | 27%     |
| <b>OTHER</b> | 45%   | 23% | 39%     |

## RESEARCH AS A CAREER CHOICE

**TABLE 39:** Regional breakdown of research as a good career choice

|                    | COUNT WOMEN | % WOMEN     | COUNT MEN   | % MEN       | COUNT TOTAL | % TOTAL     |
|--------------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <b>LA</b>          | <b>120</b>  | <b>5%</b>   | <b>114</b>  | <b>3%</b>   | <b>234</b>  | <b>4%</b>   |
| Agree              | 76          | 63%         | 81          | 71%         | 157         | 67%         |
| Don't Know or N/A  | 24          | 20%         | 23          | 20%         | 47          | 20%         |
| Disagree           | 20          | 17%         | 10          | 9%          | 30          | 13%         |
| <b>MENA</b>        | <b>68</b>   | <b>3%</b>   | <b>93</b>   | <b>3%</b>   | <b>161</b>  | <b>3%</b>   |
| Agree              | 56          | 82%         | 73          | 78%         | 129         | 80%         |
| Don't Know or N/A  | 6           | 9%          | 11          | 12%         | 17          | 11%         |
| Disagree           | 6           | 9%          | 9           | 10%         | 15          | 9%          |
| <b>SA</b>          | <b>376</b>  | <b>16%</b>  | <b>469</b>  | <b>14%</b>  | <b>845</b>  | <b>15%</b>  |
| Agree              | 320         | 85%         | 381         | 81%         | 701         | 83%         |
| Don't Know or N/A  | 38          | 10%         | 62          | 13%         | 100         | 12%         |
| Disagree           | 18          | 5%          | 26          | 6%          | 44          | 5%          |
| <b>SEA</b>         | <b>142</b>  | <b>6%</b>   | <b>98</b>   | <b>3%</b>   | <b>240</b>  | <b>4%</b>   |
| Agree              | 102         | 72%         | 68          | 69%         | 170         | 71%         |
| Don't Know or N/A  | 29          | 20%         | 20          | 20%         | 49          | 20%         |
| Disagree           | 11          | 8%          | 10          | 10%         | 21          | 9%          |
| <b>SSA</b>         | <b>1497</b> | <b>64%</b>  | <b>2439</b> | <b>73%</b>  | <b>3936</b> | <b>69%</b>  |
| Agree              | 1397        | 93%         | 2309        | 95%         | 3706        | 94%         |
| Don't Know or N/A  | 72          | 5%          | 85          | 3%          | 157         | 4%          |
| Disagree           | 28          | 2%          | 45          | 2%          | 73          | 2%          |
| <b>OTHER</b>       | <b>124</b>  | <b>5%</b>   | <b>143</b>  | <b>4%</b>   | <b>267</b>  | <b>5%</b>   |
| Agree              | 86          | 69%         | 110         | 77%         | 196         | 73%         |
| Don't Know or N/A  | 31          | 25%         | 24          | 17%         | 55          | 21%         |
| Disagree           | 7           | 6%          | 9           | 6%          | 16          | 6%          |
| <b>GRAND TOTAL</b> | <b>2327</b> | <b>100%</b> | <b>3356</b> | <b>100%</b> | <b>5683</b> | <b>100%</b> |

## RESEARCH POSITIVITY

**TABLE 40:** Questions included in the research positivity index

The research positivity index consists of twenty components/questions. Twelve contributing to personal positivity and eight contributing to context positivity.

| QUESTIONS INCLUDED IN THE POSITIVITY INDEX                                                                                   | PERSONAL POSITIVITY | CONTEXT POSITIVITY |
|------------------------------------------------------------------------------------------------------------------------------|---------------------|--------------------|
| Q22.1 I feel that the quality of my research is recognised at my institution                                                 | X                   |                    |
| Q22.2 I feel that the quality of my research is rewarded at my institution                                                   | X                   |                    |
| Q26 – Do you have sufficient opportunities to do collaborative research?                                                     | X                   |                    |
| Q31.1 – to what extent does lack of funding affect ability to do collaborative research?                                     | X                   |                    |
| Q31.2 – to what extent does lack of institutional support affect ability to do collaborative research?                       | X                   |                    |
| Q31.3 – to what extent do lack of time and resources for collaborative research affect ability to do collaborative research? | X                   |                    |
| Q34.1 – how much recognition does work produced in your country receive NATIONALLY                                           |                     | X                  |
| Q34.2 – how much recognition does work produced in your country receive INTERNATIONALLY                                      |                     | X                  |
| Q36.1 – Rate the status of DEPARTMENTAL RESEARCH                                                                             |                     | X                  |
| Q36.2 – Rate the status of INSTITUTIONAL RESEARCH                                                                            |                     | X                  |
| Q36.3 – Rate the status of NATIONAL RESEARCH                                                                                 |                     | X                  |
| Q36.4 – Rate the status of INTERNATIONAL RESEARCH                                                                            |                     | X                  |
| Q37.2 – Is research FRUSTRATING?                                                                                             | X                   |                    |
| Q37.3 – Is research EXCITING?                                                                                                | X                   |                    |
| Q43.1 - my location is a disadvantage to developing a research career                                                        |                     | X                  |
| Q43.2 – Research is a good career choice.                                                                                    | X                   |                    |
| Q43.5 - Researchers can make an impact on development in their country                                                       |                     | X                  |
| Q43.6 – If I could go back, I would still choose research career.                                                            | X                   |                    |
| Q45 – Do you have sufficient opportunity to promote and present your research?                                               | X                   |                    |
| Q46 – Do you have sufficient funding?                                                                                        | X                   |                    |

**TABLE 41:** Regional breakdown of research positivity

|                    | WOMEN       |            |            |            | MEN         |            |            |            |
|--------------------|-------------|------------|------------|------------|-------------|------------|------------|------------|
|                    | COUNT       | PERSONAL   | CONTEXT    | OVERALL    | COUNT       | PERSONAL   | CONTEXT    | OVERALL    |
| LA                 | 93          | 46%        | 51%        | 48%        | 95          | 48%        | 48%        | 48%        |
| MENA               | 51          | 46%        | 53%        | 50%        | 80          | 51%        | 51%        | 51%        |
| SA                 | 294         | 50%        | 55%        | 53%        | 403         | 53%        | 53%        | 53%        |
| SEA                | 105         | 55%        | 54%        | 54%        | 76          | 53%        | 53%        | 53%        |
| SSA                | 1180        | 49%        | 58%        | 54%        | 2083        | 52%        | 57%        | 54%        |
| OTHER              | 88          | 52%        | 62%        | 57%        | 102         | 56%        | 64%        | 60%        |
| <b>GRAND TOTAL</b> | <b>1811</b> | <b>50%</b> | <b>57%</b> | <b>53%</b> | <b>2839</b> | <b>52%</b> | <b>56%</b> | <b>54%</b> |



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