



# AMS

American  
Meteorological  
Society

2023 Equity  
Assessment  
Report



# How to Use This Report Deck

The following slide deck is intended to accompany the attached executive summary document. This deck provides a deeper dive into the Equity Assessment process, recommendations, and results.

Section	Description	Slide Numbers
Executive Summary	Concise overview of key findings and recommendations.	Attached Document
Overview	Assessment vision, philosophy, methodology, and high-level recommendations.	3-12
Findings	Findings Part 1: The AMS Community Values Equity, Inclusion, and Justice	13-14
	Findings Part 2: AMS Experiences Vary Among Groups Belonging   Bias   Equity	15-46
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# Section 1: Equity Assessment Overview



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# AMS Equity Assessment Vision

This Equity Assessment process gathers information about people's experiences with AMS. It strengthens awareness of challenges and opportunities for the Society to become the diverse, inclusive, and respectful community that is essential for our science. The assessment process itself builds on our history of equity, inclusion, and justice (EIJ) work and develops the foundation for strategic, coordinated action.



# Equity Assessment Philosophy

We believe **historical and cultural context** drive this work.

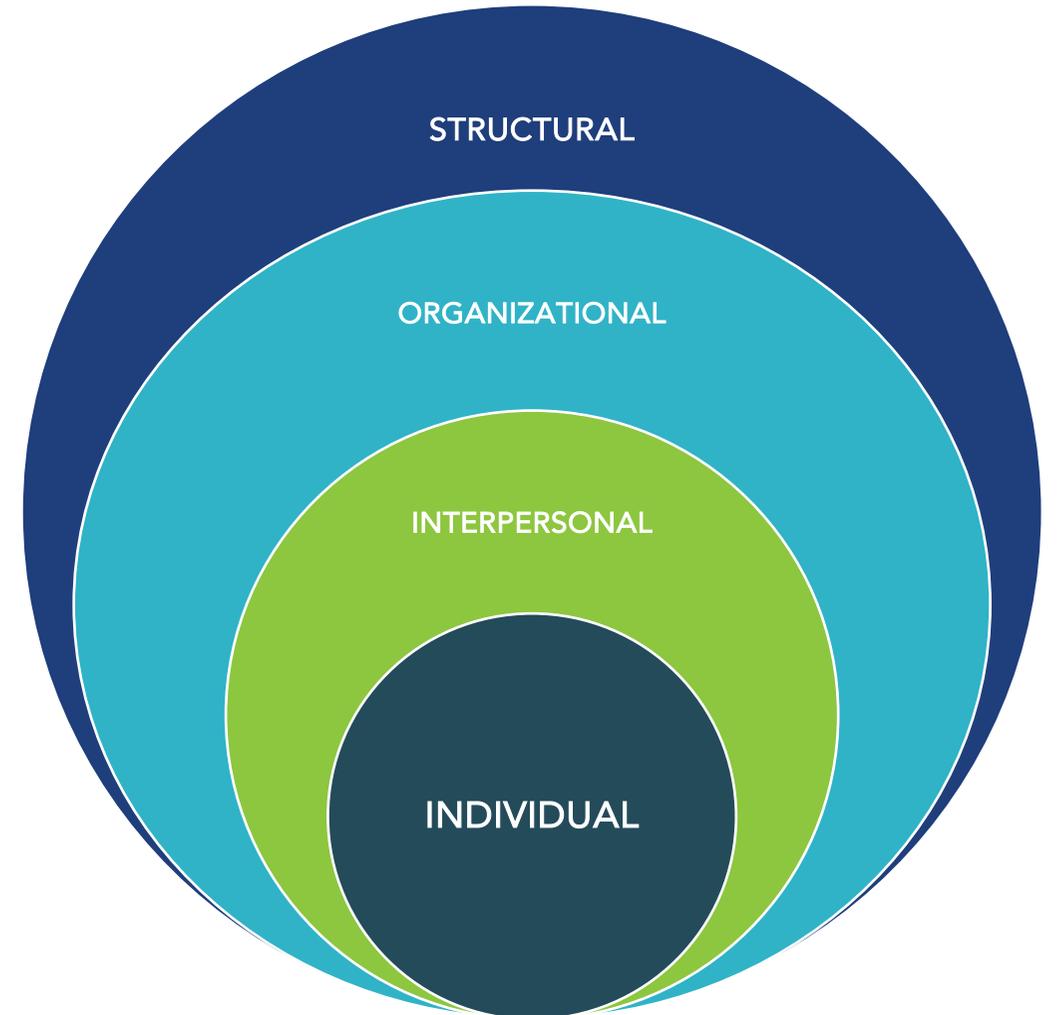
We create multiple **opportunities for engagement** in the process.

We facilitate **transparent, multi-directional communication**.

We **attend to all voices**, especially elevating those who have historically had less power as we collect and analyze data.

We make findings **accessible and actionable**.

We support **change** at multiple levels (individual, interpersonal, organizational, structural etc.).



# What is an Equity Assessment?

1. Assess the current culture: review policies, practices, interview stakeholders

2. Design and implement Culture Survey

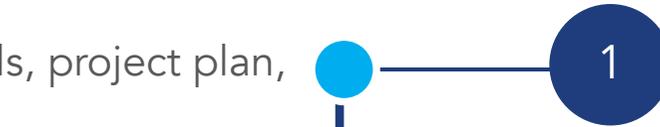


3. Develop DEI Strategic Plan: goals, benchmarks, strategies, metrics

4. Repeat process every several years to track improvements and continued areas of need

# Project Timeline

**January-March 2023** Establish goals, project plan, and develop communications plan.



**April-June 2023** Begin to gather data (focus groups) to inform outcomes and larger assessment. Build leadership and stakeholder engagement.



**July and August 2023** Clarify assessment focus, design the culture survey instrument, and strategy.



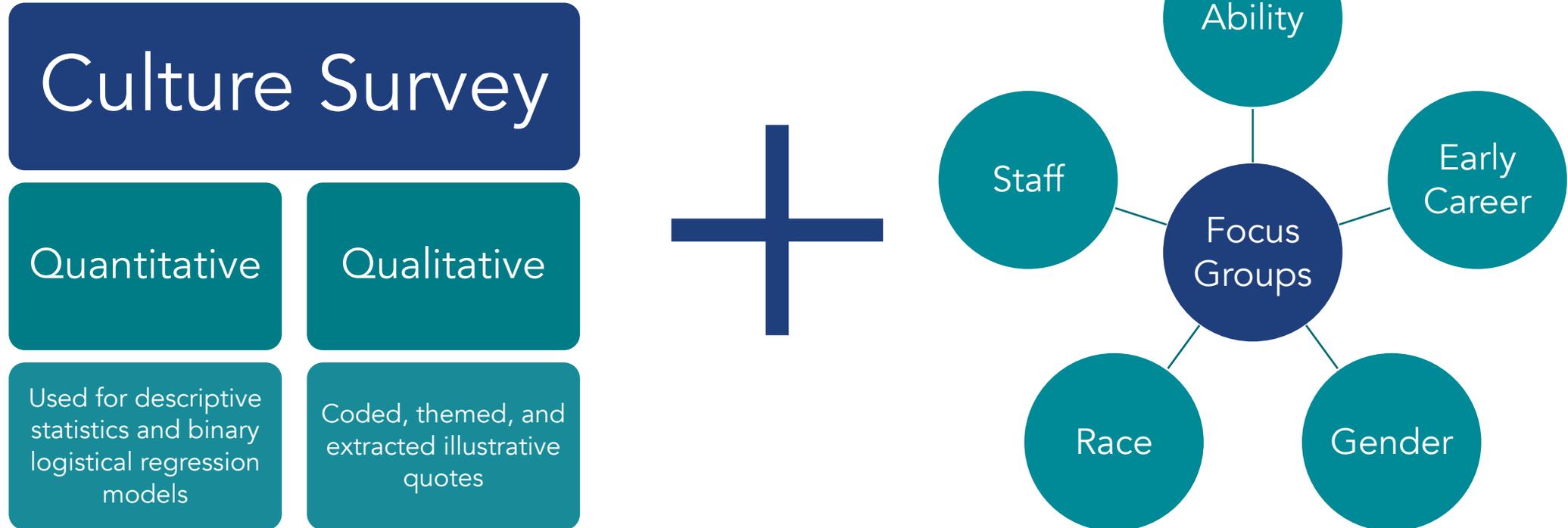
**September and October 2023** Used for the bulk of data collection (culture survey, post-survey focus groups/interviews).

**November and December 2023** Data cleaning analysis, recommendations, and reporting.



**January-March 2024** Share the assessment outcomes and recommendations.

# Mixed Methods Approach



\*No Institutional Review Board (IRB) approval was solicited because this data was collected for the purpose of assessment and strategic planning, not publishing or drawing generalized conclusions.

# A Note On The Sample

The survey was widely disseminated to all AMS members and staff, as well as publicly on social media channels. We also made an intentional effort to gather input from marginalized groups.

Like any voluntary survey with optional demographic questions, this sample is not guaranteed to be representative of the larger AMS community.

- Demographic questions were optional to allow for personal discretion, choice, and level of comfort.

However, this demographic information is still valuable as:

- An estimate of the demographics of the larger AMS community
- Evidence that there is already much diversity within AMS
- A comparison point with other surveys (e.g. membership survey)
- Input for regression analysis to look for differences between groups



We set out to answer these

# Core Questions.

The insights that emerged  
are presented in the  
"findings" section.

1

**What** experiences are people  
having as participants of the AMS?  
Belonging | Bias | Equity | Access

2

**Who** is having these experiences?  
Belonging | Bias | Equity | Access

3

**How** are those experiences impacting  
people's perceptions of the AMS?

# Recommendations

These recommendations reflect both direct feedback from the AMS community and consultant insights. They are summarized here and supplemented with more detail below. Future action planning and prioritization should consider factors such as feasibility, timing, impact evaluation, and accountability.

**The seven opportunities outlined below represent powerful first steps AMS can take.** Greater detail can be found on p. 73.

- 1 Enhance Connection:** Develop programs tailored to the unique needs of historically marginalized groups.
- 2 Promote Communication:** Consistently reinforce the importance of EIJ within AMS and spotlight successes.
- 3 Improve Reporting:** Revamp the bias reporting system to ensure follow-up and to build trust.
- 4 Advance Education:** Provide comprehensive training to support broad adoption of EIJ principles.
- 5 Foster Pathways to Leadership:** Promote inclusive pathways to leadership and recognition.
- 6 Optimize Accessibility:** Develop comprehensive tools and an accountability framework to ensure greater accessibility.
- 7 Expand Financial Support:** Offer more flexible financial assistance to support broader participation.

# Recommendations Are Cross-Cutting

	Belonging	Bias	Equity	Access
Enhance Connection	✓		✓	
Promote Communication	✓	✓	✓	✓
Improve Reporting		✓		
Advance Education	✓	✓		
Foster Pathways to Leadership	✓		✓	✓
Optimize Accessibility	✓	✓	✓	✓
Expand Financial Flexibility			✓	✓

# Section 2: Findings

## The AMS Community Values EIJ



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# EIJ Matters to the AMS Community

87%

of survey respondents agreed with these statements

"Equity, inclusion, and justice are important for the future of the weather, water, and climate community."

&

"AMS should have an equity, inclusion, and justice strategy that informs its activities."

# Section 3: Findings

## AMS Experiences Vary Among Groups



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# BELONGING



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# Why we asked about belonging at AMS

Belonging is fundamental to equity, inclusion, and justice because it is the outcome of a **welcoming, respectful culture that values and celebrates differences** in background and perspective.

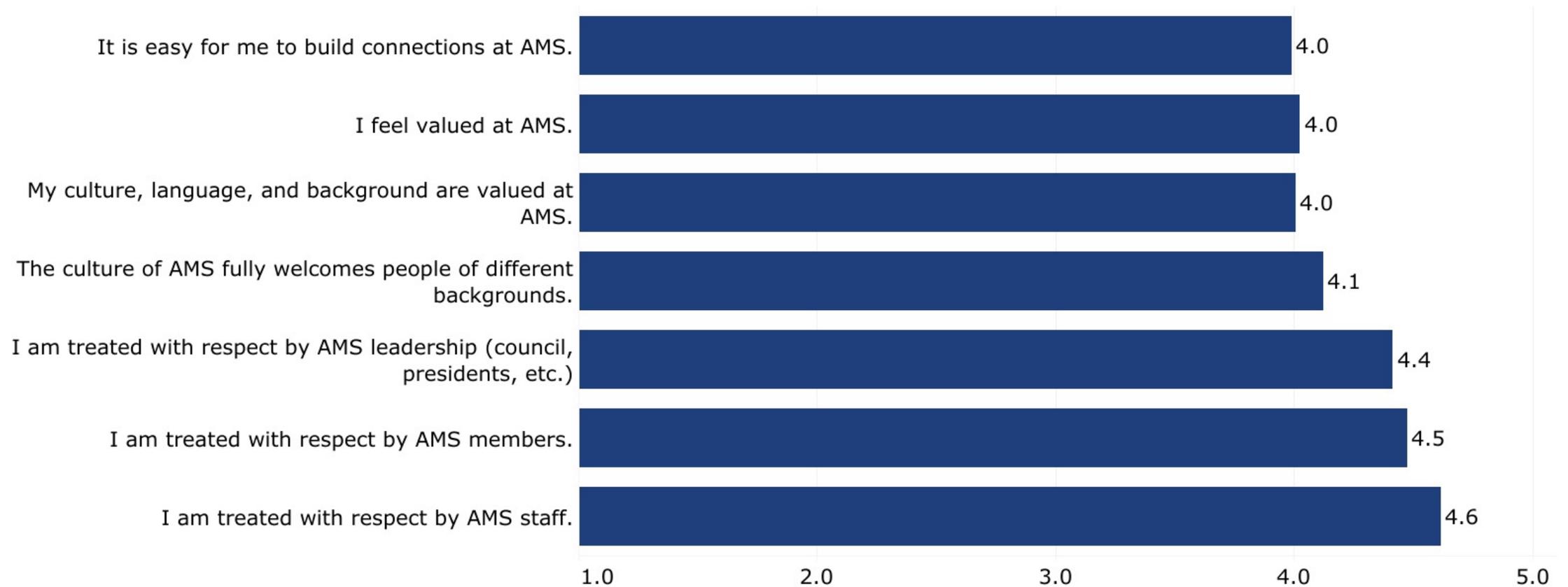
At its core, AMS is a network of people who do more impactful weather, water, and climate work together than they would alone. Belonging at AMS isn't just about who shows up. **Belonging at AMS is about the depth and quality of the connections** between every person in the AMS community. As an organization, AMS can foster a culture of belonging to create an experience of belonging for anyone who touches this network.

# How we learned about belonging at AMS

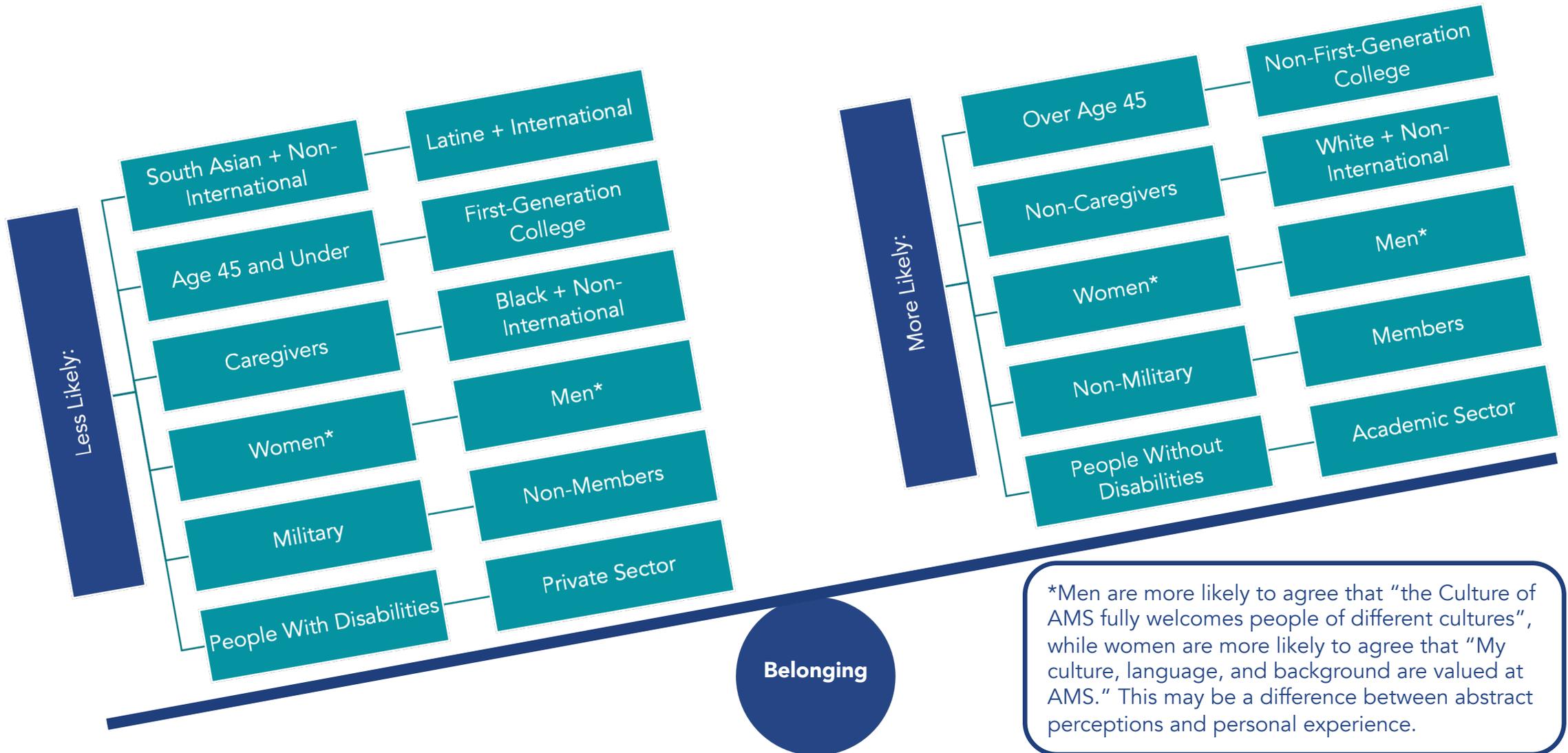
To understand **how people have experienced belonging** at AMS, we asked questions about the following areas:

- At an **interpersonal level**, do people feel valued, respected, and welcomed at AMS?
- At an **organizational level**, are people participating in EIJ growth, learning, and community-building through AMS?

# Experiences Of Belonging

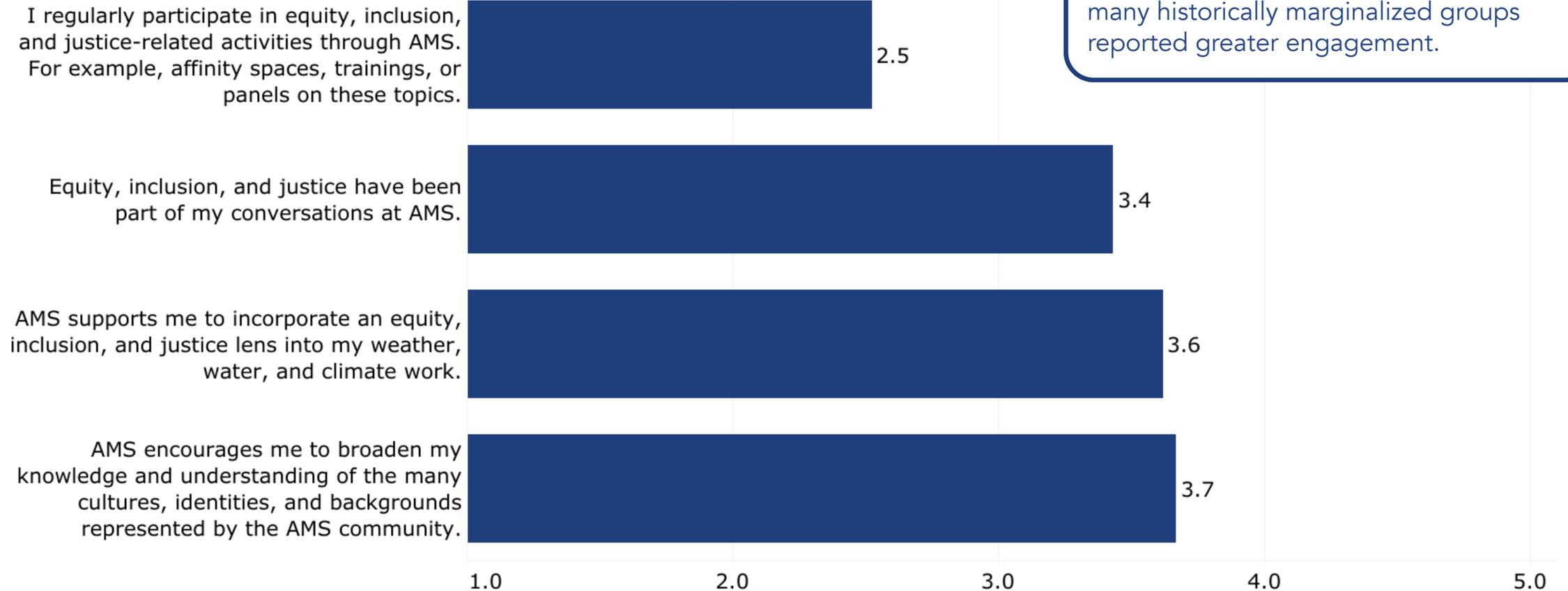


# Who Feels Like They Belong at AMS?



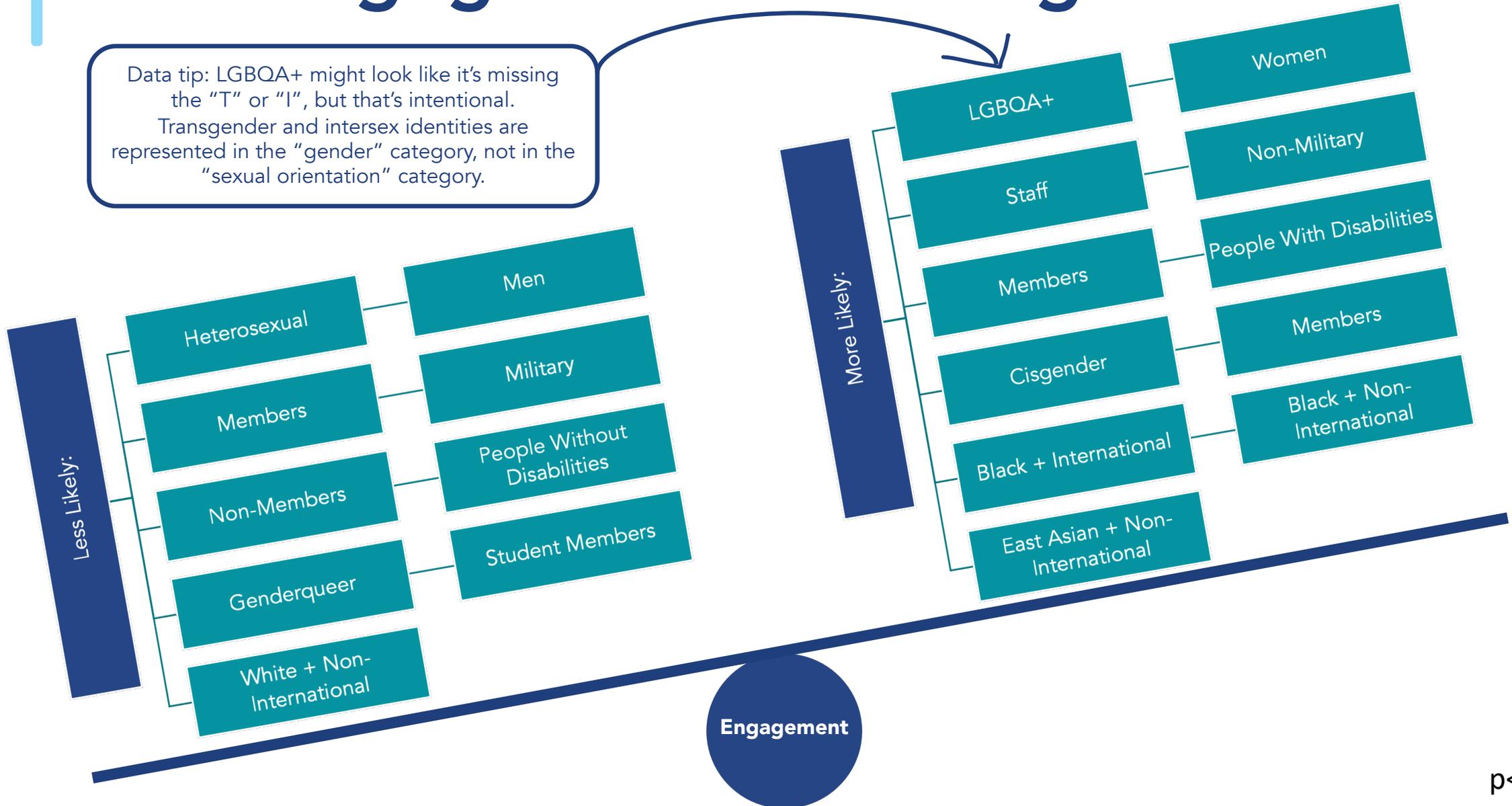
# Engagement in EIJ at AMS

Reports of engagement with EIJ through AMS were lower on average, although many historically marginalized groups reported greater engagement.

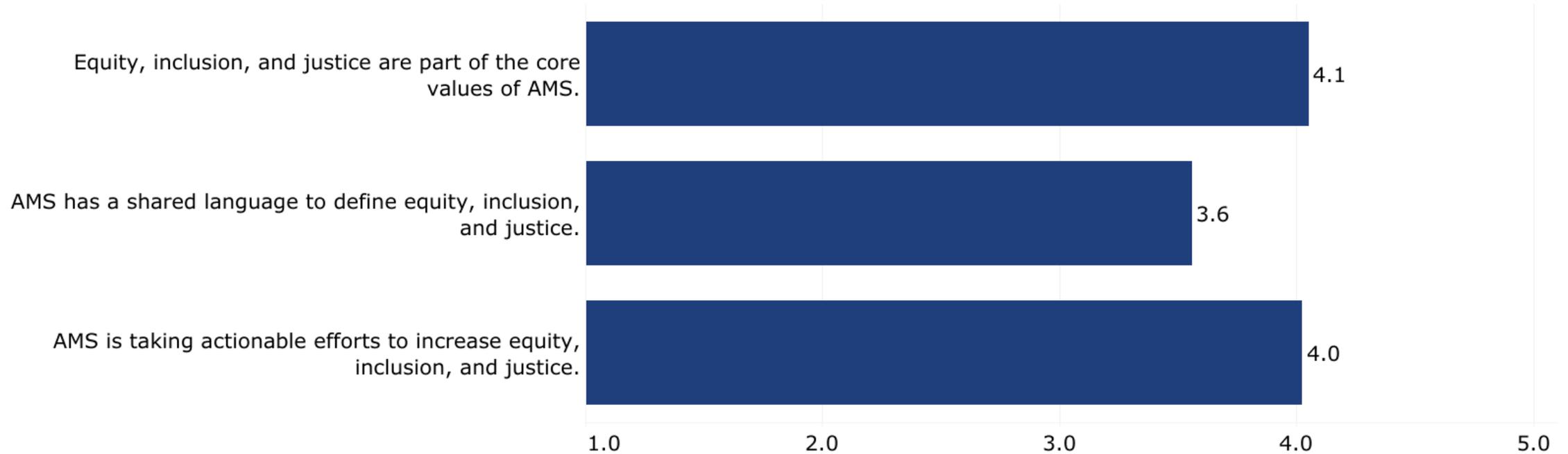


# Who Engages In EIJ Through AMS?

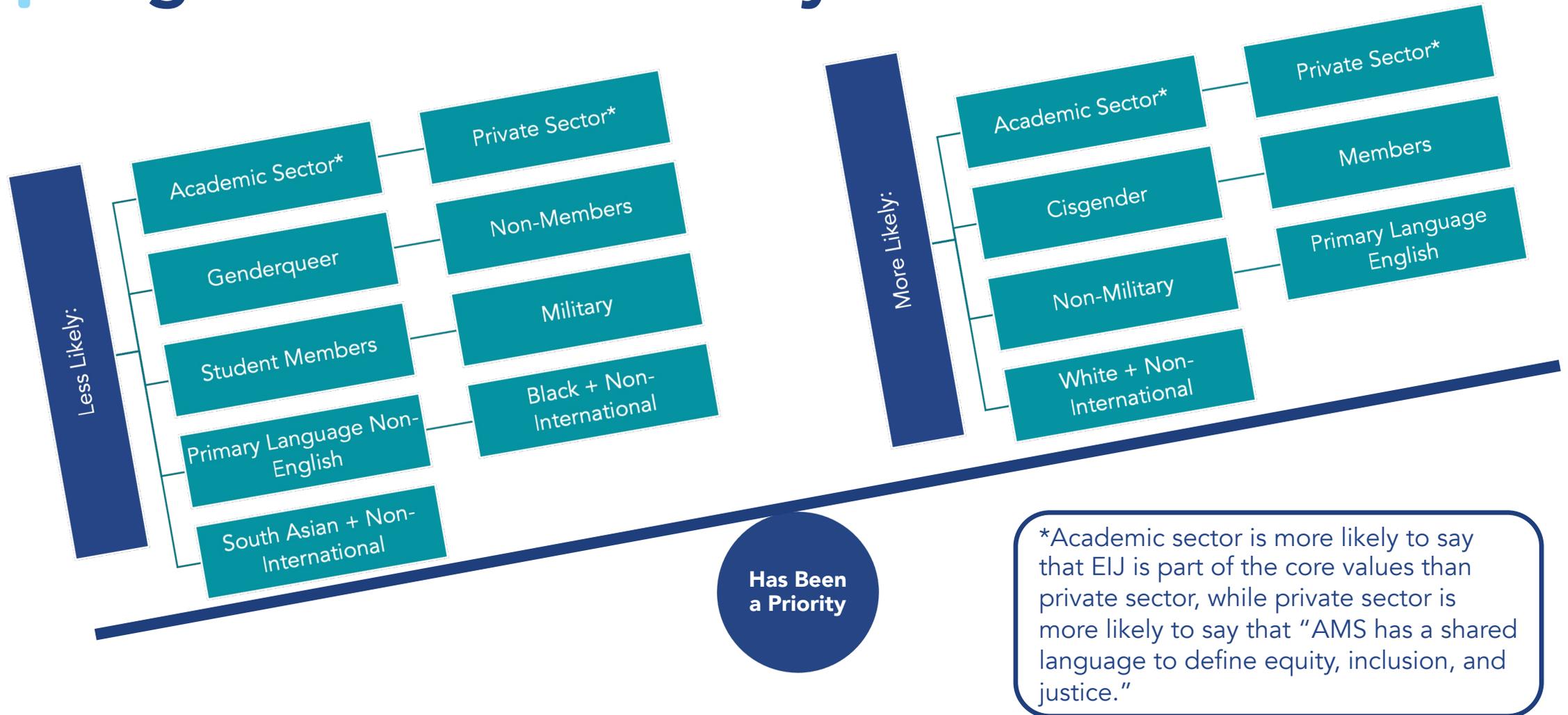
Data tip: LGBTQA+ might look like it's missing the "T" or "I", but that's intentional. Transgender and intersex identities are represented in the "gender" category, not in the "sexual orientation" category.



# Perceptions of EIJ as a Priority



# Who Thinks EIJ Has Been An Organizational Priority?



\*Academic sector is more likely to say that EIJ is part of the core values than private sector, while private sector is more likely to say that "AMS has a shared language to define equity, inclusion, and justice."

# What we heard about belonging at AMS

Just celebrating queerness and making myself and my fellow queer colleagues feel welcome and seen is always a big help, especially in a time when our identities are constantly under attack and in the spotlight.

We're still climbing an uphill battle on inclusive pronouns. There's a large and probably majority contingent who's fully supportive, but there's at least some small contingent that's still hesitant... AMS can't control how everybody feels about it, but they can control the spaces that they maintain, and they can do their best to optimize the safety of people who are attending the meetings.

There is a general feeling that the Latin-x and Black meteorologist gatherings at the annual meetings are a way for AMS to tokenize our existence. There are many who abstain from attending these gatherings because they don't want to be the next photo plastered on the website. There needs to be year-round support of our members of color, and more than just a single gathering at the AMS meetings.

While great improvements have been made in recent years in having professional broadcasters read the lists of award recipients at Annual Meetings, there is still a noticeable struggle for them to pronounce some names smoothly. I hope AMS holds itself to a higher standard in this area than it has yet to meet.

There should be more representation of Black people in leadership roles and just as members. More accomplished Black atmospheric scientists need to be highlighted. There needs to be a no-nonsense policy about microaggressions, and Black scientists should feel more comfortable wearing their hair in styles that they choose.



# BIAS



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# Why we asked about bias at AMS

Bias is the opposite of equity, inclusion, and justice because it **creates harm and discourages participation**. It can lead to (re)exclusion, (re)marginalization, and (re)traumatization.

Bias **weakens the fabric of our AMS network and impedes progress on our weather, water, and climate goals**. It is essential to recognize any disparities between AMS's EIJ ideals and people's realities. As an organization, AMS can assist the community in both preventing and addressing instances of bias when they arise.

# How we learned about bias at AMS

To understand **how people have experienced bias** at AMS, we asked questions about the following areas:

- At an **interpersonal level**, are people experiencing with bias, discrimination, and harassment at AMS? Who experiences these incidents, and what experiences are they having?
- At an **organizational level**, do people know how to report bias? To what extent does AMS take these reports seriously?

# What we learned about bias at AMS

## 1 in every 13 respondents

(7.8%) reported encountering bias at AMS-sponsored events.

- 60% experienced it themselves
- 48% witnessed it
- 32% heard about it
- 31% reported more than one way of experiencing bias



# What Kinds of Bias Are People Experiencing at AMS?

**Gender Bias:** People reported condescending and dismissive treatment of women at AMS events and conferences. There were instances of unsafe, unwanted advances.

**Racial Bias:** People from minority racial backgrounds reported disrespectful and discriminatory behaviors in person, as well as instances of racial harassment online.

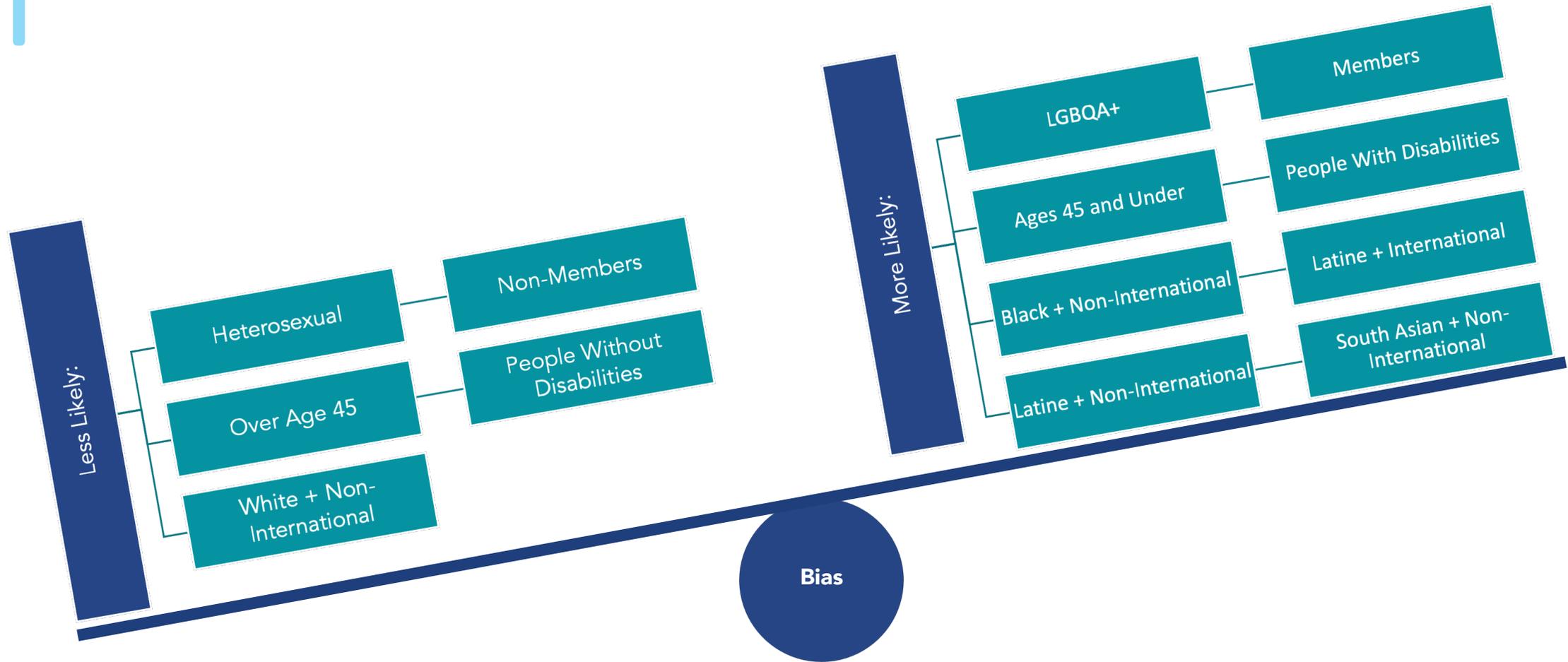
**Ability Bias:** People shared that barriers to access make it challenging for many people with disabilities to engage fully.

**Age Bias:** People reported belittling or disparaging remarks made by senior members about younger professionals, as well as instances where younger professionals were not taken seriously or were assumed to be less capable.

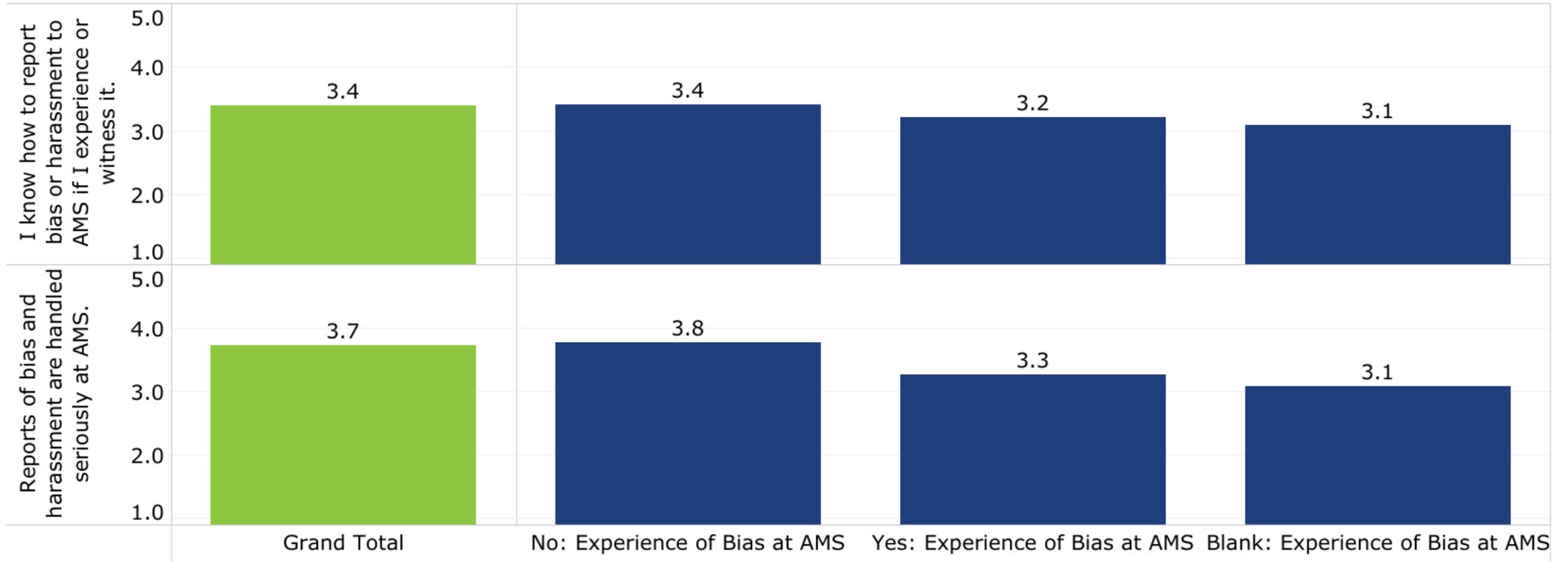
**Political Affiliation Bias:** There is a perception that AMS leans heavily towards liberal worldviews (e.g. climate change is real), causing those with conservative viewpoints to feel undervalued or dismissed within AMS.



# Who Encounters Bias at AMS?



# Reporting Bias

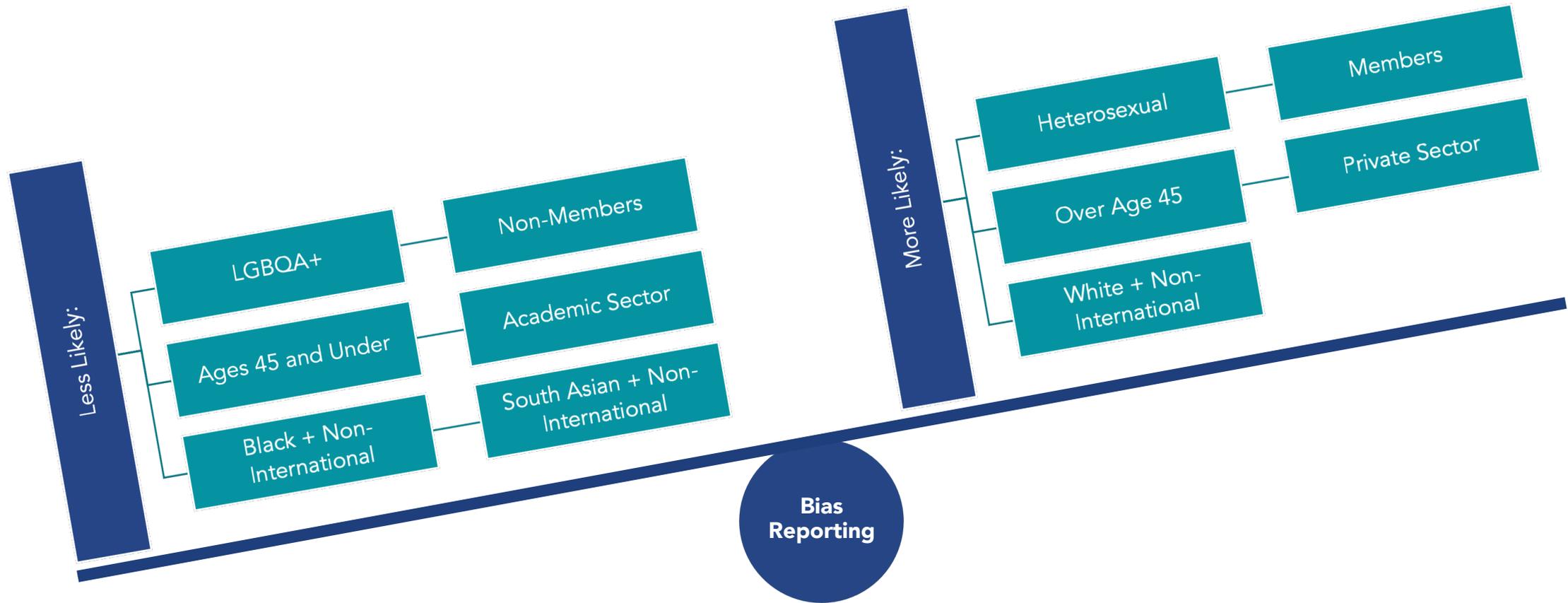


On average, people are unsure if they know how to report bias (3.4/5), but slightly more confident that AMS takes reports seriously (3.7/5). However, people who have encountered bias are less confident in their knowledge of how to report bias (3.2/5) and less confident that AMS takes reports seriously (3.3/5).

# What Contributes to The Perception that AMS Does Not Handle Incidents of Bias Seriously?

1. **Lack of Definitions:** Confusion about AMS' definitions and policies regarding bias and harassment.
2. **Unclear Reporting Procedures:** Uncertainty regarding how and where to report incidents.
3. **Lack of Consequences:** Perceptions of bias or harassment incidents often go unaddressed, suggesting inadequate consequences for such behavior.
4. **Lack of Communication:** Feelings of being unheard and disconnected from resolution processes due to inadequate communication and follow-up after reporting.
5. **Lack of Awareness:** Many individuals are unaware of the bias reporting procedures at AMS.

# Who Knows How to Report Bias and Believes It Will Be Handled Seriously?



# What we heard about bias at AMS

Bias frequently happens in panels, sessions, and other scientific activities that include only white men. While not perhaps intentional, there is a bias in public meetings to include a dominant view of science & society.

I've often observed male questioners at conferences ask patronizing questions of female presenters, sometimes even quoting the presenters' own results to them as though they were not familiar with their own work!

Non-native English speakers have a high barrier to surpass before being able to publish their work in AMS journals. That is not related to their ability to do science, but to communicate in another language. This has hampered the participation of these individuals more broadly and deeply in the scientific advancements in all fields, including atmospheric sciences. It is a very challenging task, but AMS needs to start thinking how to address this bias.

A student of mine reported to me an incident that occurred at AMS. I guided the student through the proper channels, but in the end her identity was compromised and nothing much, if anything, was done.

I really have no idea what AMS does to stem bias and harassment. For that matter, I don't know what AMS's definition of bias and harassment are.



# EQUITY



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# Why we asked about equity at AMS

Equity determines how well **long-term positive impact is distributed** to all, especially those who have been historically excluded from it. It isn't just about getting to show up and participate, it's about benefitting from opportunities and resources.

At AMS, equity is vital because it **facilitates long-term growth and leadership opportunities** for everyone. It enables full participation and contribution from anyone interested in AMS while ensuring that all members benefit equally from the community's advantages.

# How we learned about equity at AMS

To understand **how people have experienced equity** at AMS, we asked questions about the following areas:

- At an **individual level**, does everyone get long-term opportunities to grow and connect at AMS?
- At an **organizational level**, is there diversity in leadership roles? Does AMS make sufficient effort to recruit and retain diverse staff and members?

# What we heard about equity at AMS

I'd love more opportunities for networking and mentorship at the mid-career stage. I'm finding that I have different challenges at mid-career stage for which I'd appreciate advice and guidance from others.

There is a lack of transparency around decision-making. Decisions often seem to be made behind closed doors with little to no consideration about who should be a part of the conversation for an equitable and inclusive outcome. And there is no communication about how or why decisions were made, so people feel further excluded.

The underrepresentation of Black professionals within the WWCE causes a pervasive sense of isolation... it is rare to encounter individuals with shared cultural experiences. Our unique perspectives are often valued in professional settings and endeavors.

It is unfortunate our education, matriculation, recruitment, retention, and incentive structures are inept at leveraging the rich pool of talent. Weather impacts everyone.

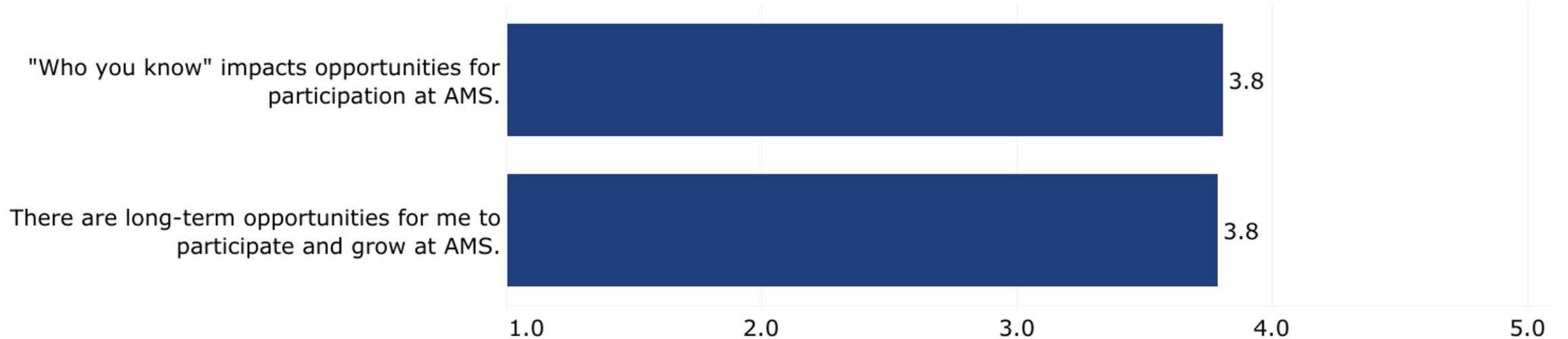
There is no structure for advancement at the AMS. There are little opportunities for mid-career individuals... there is no sense of responsibility for mentoring early/mid-career peers.

I was well into my career before I realized that the way that many of my colleagues, most of whom were white males, got awards was they turned to a trusted colleague and said, "I'd like you to nominate me for this award."

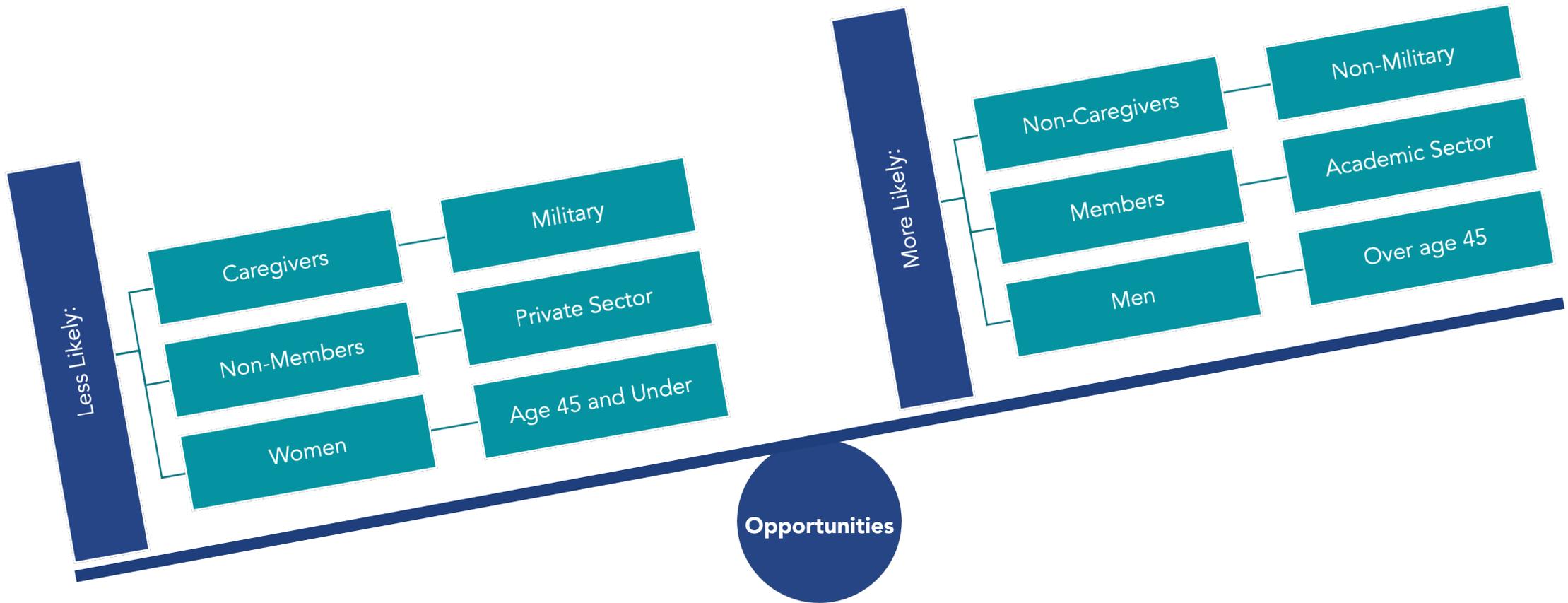
I don't think people who have not been conditioned in their whole life to value their work or feel that they have the power to direct their awards and recognitions even think of saying, "I'm deserving of that award!"



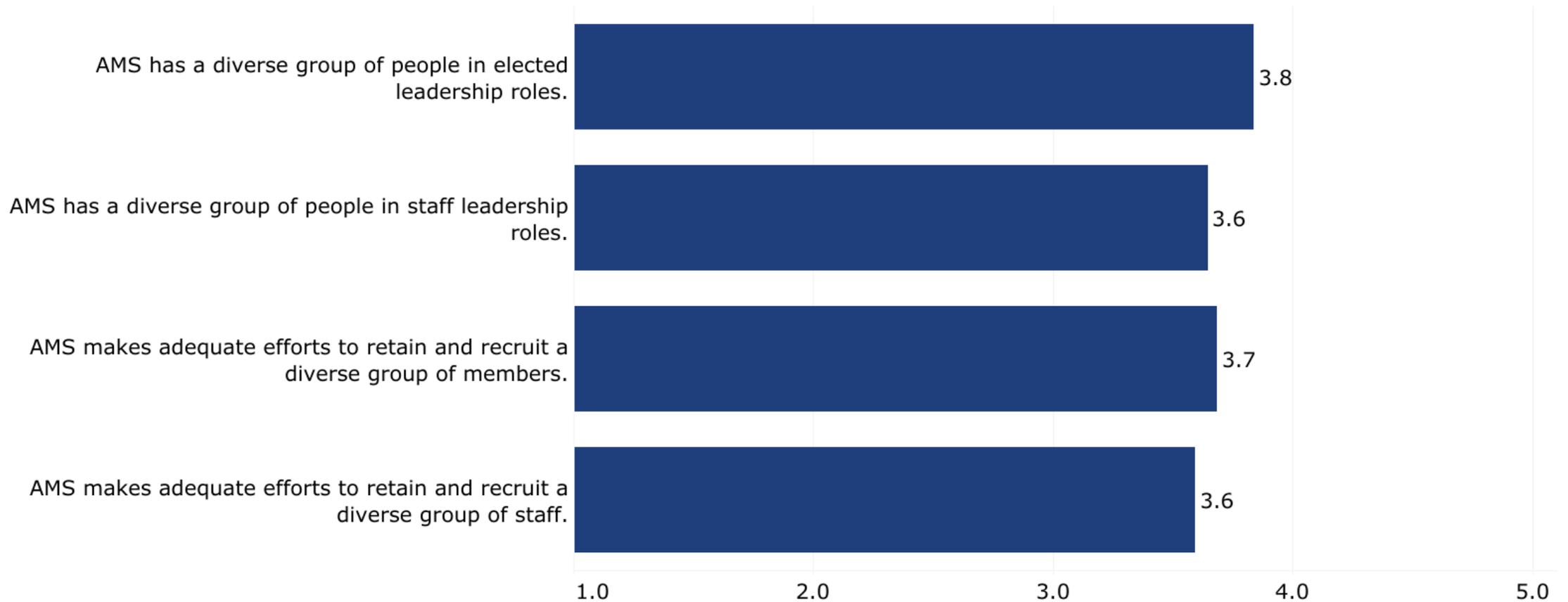
# Perceptions of Opportunity at AMS



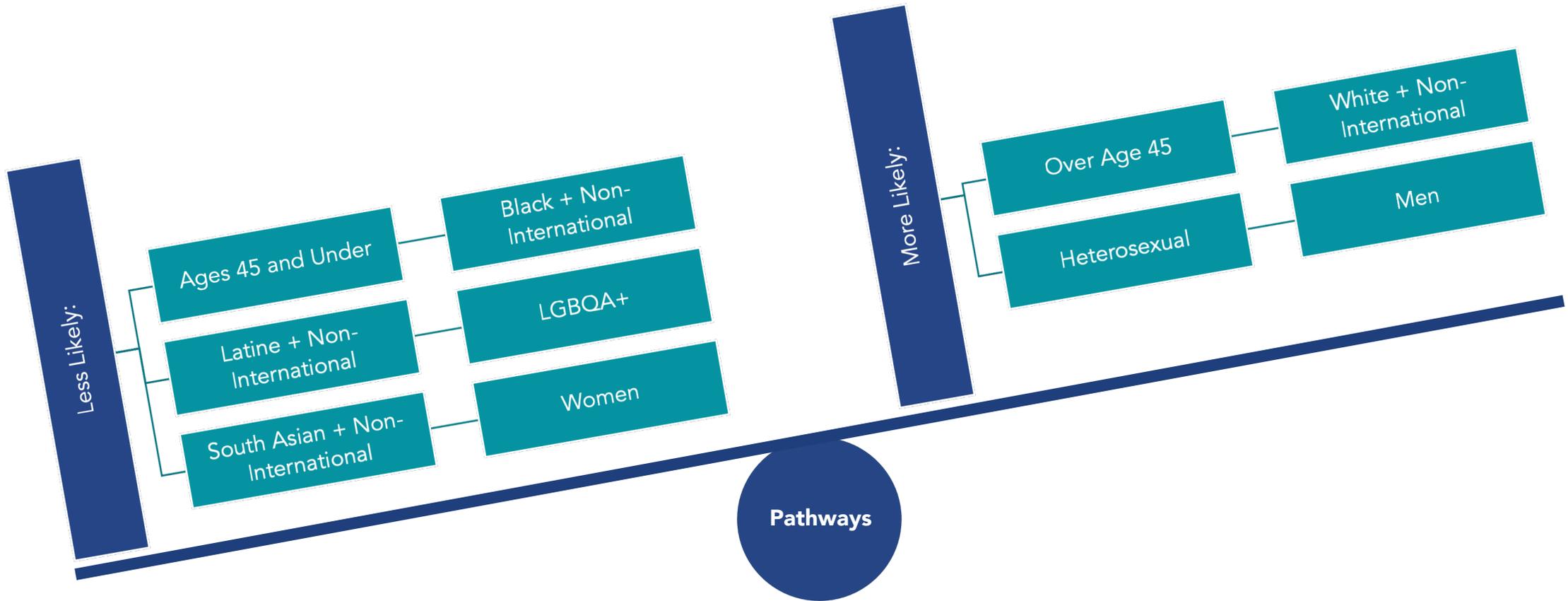
# Who Feels Opportunities are Available at AMS?



# Perceptions of Pathways to Leadership

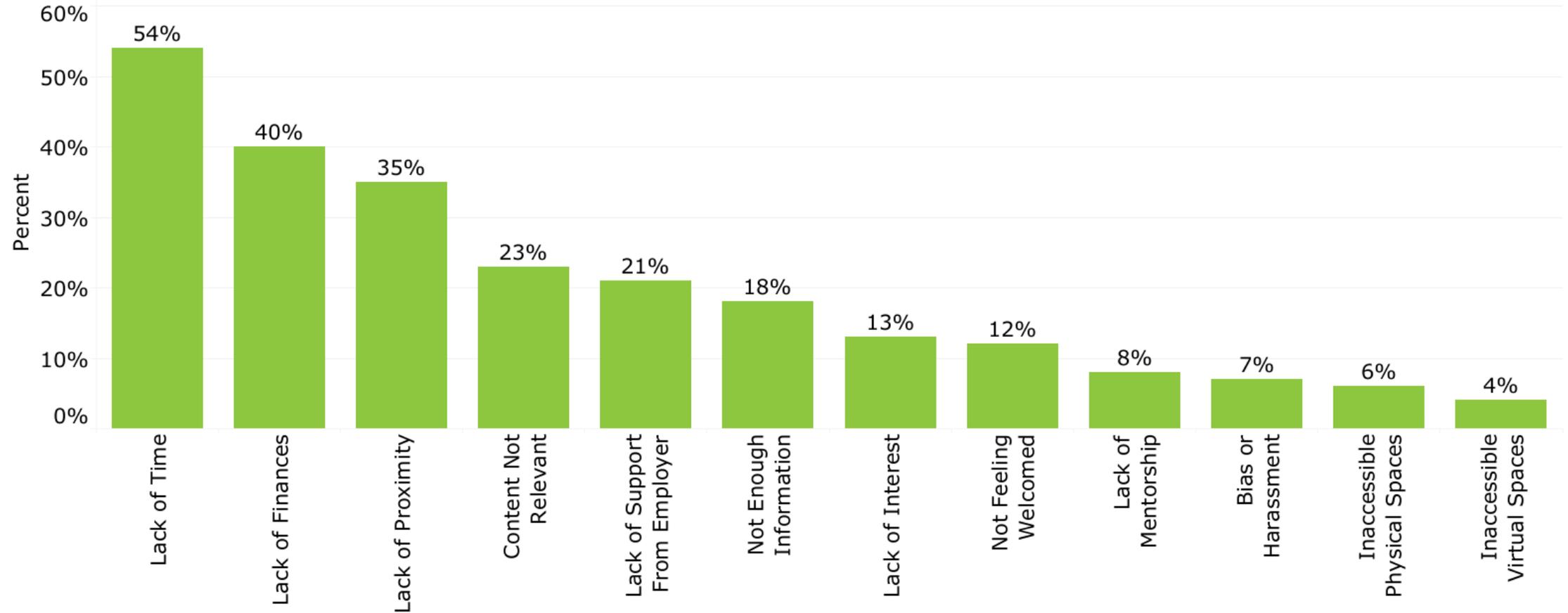


# Who Feels There Are Pathways to Leadership?

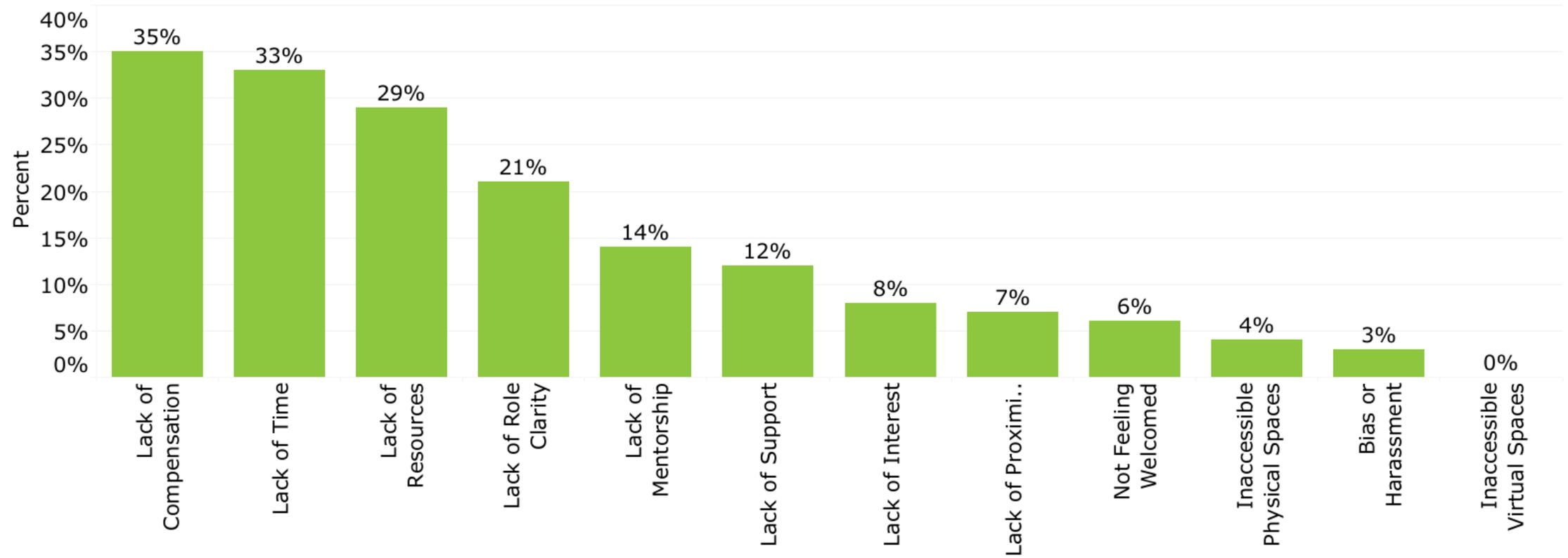


What's getting in the way of **greater participation?**

# What Barriers Are Preventing Non-Staff from Participating in More AMS Activities?



# What Barriers Are Preventing Staff from Investing More in Their Roles at AMS?



# Section 4:

## The Community is Eager to Engage and Seeks Greater Access



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# ACCESS



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# Why we asked about access at AMS

Access is critical for equity, inclusion, and justice, because it determines who gets to participate, contribute, and benefit. We all have different access needs at different points in our lives.

Access matters at AMS because it means that everyone can fully participate in AMS offerings and get connected through the AMS network. When we take responsibility for making an accessible network, we take the burden off individuals and hold it collectively.

# How we learned about access at AMS

To understand how people have experienced access at AMS, we asked questions about the following areas:

- At an **organizational level** what could AMS do to better meet people's needs? What gets in the way of greater participation?

# What we heard about access at AMS

I am in a better spot now thanks to my employer supplementing most of the costs, but attending the AMS conferences can get expensive. I wish there were ways to better accommodate [people], maybe with a sliding scale on pricing like the AMS membership dues.

Adding closed captioning for speakers and making sure everyone is speaking into a microphone during questions would be helpful. Encouraging folks to make figures that are clear and legible would also be great.

You only get accessibility if you request it. We should make sure that everything is accessible for everyone, especially when a lot of the AMS members do not know how to contact an AMS staff to request accommodations.

Virtual participation in meetings is limited, and many meeting organizers think "I get much less value from virtual participation and therefore it is not worth the effort." But there have always been, and will always be, many in the AMS community who for very valid reasons cannot attend meetings in person.

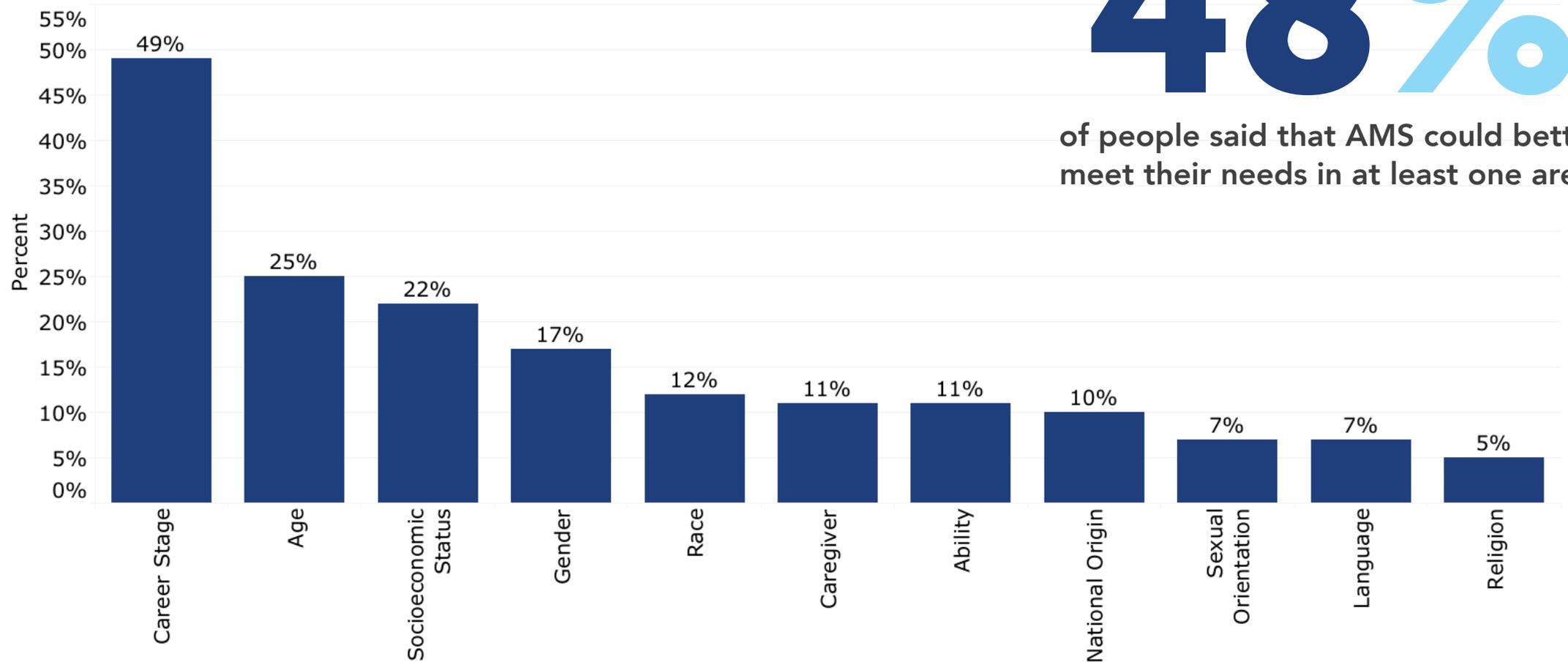
Considering state laws with respect to health and reproductive rights in choosing where to hold meetings, ensuring availability of and access to all-gender restrooms, continuing to expand support for parents at AMS-sponsored events (lactation rooms, childcare, etc.)



# In What Areas Could AMS Better Accommodate Your Needs?

48%

of people said that AMS could better meet their needs in at least one area.



# Online Accessibility Requests

## Virtual Meetings or Webinars

- Improve communication with early marketing and accessible reminders.
- Opt for user-friendly platforms and perform tech checks ahead of time for better usability.
- Promote interactive engagement methods.
- Schedule meetings and webinars accommodating global time zones for wider access.
- Provide diverse content beyond US-centric topics.
- Offer downloadable summaries for key points.

## Website Improvements

- Address frequent glitches, failures, and outages, and broken links.
- Enhance readability and design by avoiding light-colored text on similarly colored backgrounds for better visibility, using sans-serif fonts, and ensuring compatibility with zoom-in features.
- Simplify webpage organization to ease navigation and information retrieval; Resolve search function issues and minimize repetitive or buried information for better accessibility.

## Online Journals

- Consider transitioning to open access. Provide easier access to notifications without conditional restrictions or membership fees.
- Simplify the system for user-friendliness and introduce a more efficient search feature.
- Consider lower-cost publication options and waive fees, particularly for non-R1 Institutions.
- Offer guidance and specific strategies for a successful publishing experience within the AMS community to support newcomers.



# The Accessibility Gallery

The slides below highlight a wide range of responses to the question “How can AMS better meet your needs?”

Try practicing empathy as you read through the following quotes. Even if you have not had the same experience as someone else, you can **try to understand** their perspective.

The quotes below highlight a variety of insights. **Not everyone agrees** on every point, and that’s part of the importance of listening deeply to each other.

# 49% of People Who Shared Said AMS Could Better Meet Their Needs Around Career Stage

What about mid-career...how to be a better manager, evolve as a professional, raise up those below you...I still need mentoring!

As an early career professional, I would consider participating and volunteering but have received only limited information about how to do this. Given that I don't know many people currently in leadership to reach out to personally, I feel a bit lost how to proceed.

As I approach retirement, it's less and less clear how I will spend my time in retirement. I am not aware of initiatives that put retirees in mentorship positions with younger members.

I am nearly the end of a career but want to contribute more and am looking for ways to be and stay involved. Even being mentored still is applicable.

There is no structure for advancement at the AMS. There are little opportunities for mid-career individuals... there is no sense of responsibility for mentoring early/mid-career peers.



# 25% of People Who Shared Said AMS Could Better Meet Their Needs Around Age

Much lower meeting and publications prices for retiree members on fixed incomes.

Recognize, respect and accommodate the physical limitations of senior members past a certain age who choose to continue their participation.

AMS should strive to engage members of all age groups actively. This can involve creating programs, events, and resources that cater to the specific interests and needs of different age demographics within their membership. For instance, they can have programs aimed at mentoring younger members and providing opportunities for experienced professionals to share their knowledge.

I know there is the Early Career Leadership Academy, but hardly anyone else in my age bracket knows about it. I think this resource needs to be better advertised, and more involved during the AMS Annual Meeting.

Encouraging participation by professionally retired members in mentorship of younger early career members.



# 22% of People Who Shared Said AMS Could Better Meet Their Needs Around Socioeconomic Status

More funds to support those members without the funding of R1 institutions. Support tribal colleges and universities, HBCU's, and community/smaller college students and faculty.

Meetings are expensive and cities/venues can be cost-prohibitive. Why aren't more affordable cities included in the rotation?

Centering other ways of knowing: indigenous (globally), partnering with long-term residents of all economic strata on climate in various neighborhoods, investing in community outcomes.

Membership of AMS are from diverse socioeconomic backgrounds; this information can be solicited from applicants before admission, and could serve as useful information in planning, programming and communication

Tiered membership dues has helped. Lifetime memberships would also help over the long term. Conference registration is way too expensive.



# 17% of People Who Shared Said AMS Could Better Meet Their Needs Around Gender

I am a BIPOC woman. For the most part the atmosphere is great, and people are welcoming. At times, there can still be a stigma about women in science among peers. I see a lot of groups of friends, often white, who organize presenters and parts of the conference. A welcoming feeling to join is not present.

Consider local safety of meeting locations. as a woman I need to feel safe walking between meeting events and my hotel. Perhaps have a system for members to request safe rides or a buddy to escort/walk with members who may feel uncomfortable in a big city downtown area after dark?

Considering state laws with respect to health and reproductive rights in choosing where to hold meetings, ensuring availability of and access to all-gender restrooms, continuing to expand support for parents at AMS-sponsored events (lactation rooms, childcare, etc.)

...I know other women have been harassed or talked down to during AMS meetings. Continued support for reporting harassment and perhaps bystander intervention training could be helpful. Particularly empowering students, who feel they must put up with bias, harassment, and disrespectful behavior from more established scientists or else risk their future careers.

Many of the sessions seem heavily male dominated. AMS could encourage session conveners to choose abstracts for presentations that include more gender diversity.



# 12% of People Who Shared Said AMS Could Better Meet Their Needs Around Race

There is a general feeling that the Latin-x and Black meteorologist gatherings at the annual meetings are a way for AMS to tokenize our existence. There are many who abstain from attending these gatherings because they don't want to be the next photo plastered on the website. There needs to be year-round support of our members of color, and more than just a single gathering at the AMS meetings.

There should be more representation of Black people in leadership roles and just as members....There needs to be a no-nonsense policy about microaggressions and black scientists should feel more comfortable wearing their hair in styles that they choose.

Making a stronger effort to connect with HBCU and MSI communities through engagement and recruitment efforts. Also, creating space for minoritized groups to have speaking roles in meetings and ensuring diversity of speakers.

AMS could provide session chairs with explicit training, including how to address racist/biased comments or questions during or after any of the AMS sessions.... Session chairs should be required to confirm name pronunciations with all speakers beforehand.

I often don't know how to be an effective ally for women and minorities in STEM. I am an old white guy who wants to help. When to speak up? When to shut up? When to help out and when to get out of the way.



# 11% of People Who Shared Said AMS Could Better Meet Their Needs Around their Caregiver Status

Advocate for funding agencies to allow funding for caregiving to be written into grants.

If I want to attend an event in person lack of childcare is an issue. Attending virtually has been a good alternative but doesn't afford the networking opportunities.

AMS could be more accommodating to parents by providing childcare at conferences. Similar organizations like AGU provide onsite childcare, allowing professional parents to be as fully present as possible at meetings.

Virtual participation in meetings is limited, and many meeting organizers think "I get much less value from virtual participation, therefore it is not worth the effort." But there have always been, and will always be, many in the AMS community who for very valid reasons cannot attend meetings in person.



# 11% of People Who Shared Said AMS Could Better Meet Their Needs Around Ability

The snack choices do not cover allergies well at all. I bring my own, but it would be nice to not always have to do that.

Adding closed captioning for speakers and making sure everyone is speaking into a microphone during questions would be helpful. Encouraging folks to make figures that are clear and legible would also be great.

There could be more sessions on topics like avoiding burnout or resources for people struggling within the AMS community or our area of study.

You only get accessibility if you request it. We should make sure that everything is accessible for everyone, especially when a lot of the AMS members do not know how to contact an AMS staff to request accommodations.

The quiet, dark meditation room at AMS this year was a good start - I found it very useful for recovering at least partially.

AMS activities tend to be in spaces that are spread far apart and are not always close to hotel accommodations. Walking long distances is difficult and there aren't many resources to help with that.



# 10% of People Who Shared Said AMS Could Better Meet Their Needs Around National Origin

The AMS serves and has membership from a global community of scientists, students, and other stakeholders. Most/all in-person AMS activities are located in the USA, which makes full participation more difficult for those of us located in other countries.

Developing more opportunities for indigenous and island-based scientists to highlight their unique perspectives of weather and climate observations and research

For Latin American countries, AMS is expensive. I assume that this is also valid for other developing countries. It would be nice to consider this and have special fees for publications, registration fees and other activities

I didn't attend graduate school in the U.S. and I didn't grow up in the U.S. At the AMS annual meeting, there is the famous 'alumni night'. While I have been living and working in the US for almost a decade now, that 'alumni night' still makes me feel very left out at AMS annual meetings.



# 7% of People Who Shared Said AMS Could Better Meet Their Needs Around Sexual Orientation

While the culture has improved around LGBTQ+ identities, there is still some hostility among some members. I know that AMS can't force all members to think one way, but I do think that having more open dialogue about those with opposing views might help bridge some gaps.

AMS could continue to expand its DEI initiatives, opportunities for the LGBT+ community, and continue to promote a more welcoming and diverse culture. This is going to take a long time. There are decades of history to be overcome.

Please stop holding meetings in places that aren't safe for queer and trans people. Please think about how to create greater community for queer folks. Please find a way for leadership to vocally support us - it's really rough out here as a community right now.

I wish AMS as an organization was more vocal for their support of LGBTQ+ scientists, especially in a time where the discrimination/violence against parts of this community have been increasing.

Include more welcoming language and marketing on a welcoming environment for all.



# 7% of People Who Shared Said AMS Could Better Meet Their Needs Around Language

Provide interpreters/translators for those who have difficulty with English as a second language.

Minority linguistics and inclusive multilingualism should be taken more seriously during conferences and for publication purposes. This would include live translations during conferences and meetings, the possibility of access to resources in other languages, and promotion of abstracts in the language of the professional, among others.

The meeting room and exhibit hall signs need to be printed in more than one language. It would also be helpful if participants knew where they could find someone who speaks their language and could assist them.

Non-native English speakers have a high barrier to surpass before being able to publish their work in AMS journals. That is not related to their ability to do science, but to communicate in another language. This has hampered the participation of these individuals more broadly and deeply in the scientific advancements in all fields, including atmospheric sciences. It is a very challenging task, but AMS needs to start thinking how to address this bias.



# 5% of People Who Shared Said AMS Could Better Meet Their Needs Around Religion

I've always been able to get time off for religious holidays, but I'd ask for more time off if I didn't have to use my vacation time for it.

More engagement between spiritual/faith-based communities and the AMS. More acceptance and tolerance and openness in the AMS environment for conversations on engaging with these communities and feeling comfortable in meeting one's religious needs during AMS meetings and events.

Many in our audience view their political affiliation as a protected class. This fact needs to be well incorporated into discussions around climate change and any other highly politicized subject in the weather enterprise.

As a Christian, I sometimes feel that I have need to hide that identity from others in AMS to avoid negative judgement.

I still notice a general vibe around the office for example at the holidays that feels like everyone assumes Christmas decor is neutral.



# PERCEPTION



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# Why we asked about perceptions of AMS

When well tended, greater equity, inclusion, and justice in the present beget greater equity, inclusion, and justice in the future. The opposite is also true. People's perception of a community are a good clue about that community's future and what can be done to tend it.

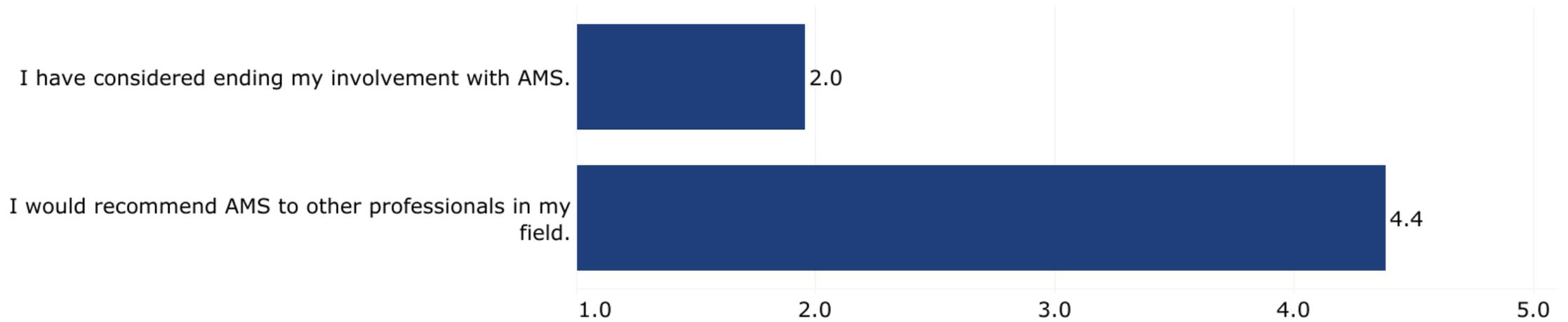
To have a thriving AMS community in the future, weather, water, and climate professionals from all walks of life need to want to participate. People's perceptions of, and satisfaction with AMS matter to our future as a Society and our collective impact in the weather, water, and climate world.

# How we learned about perceptions of AMS

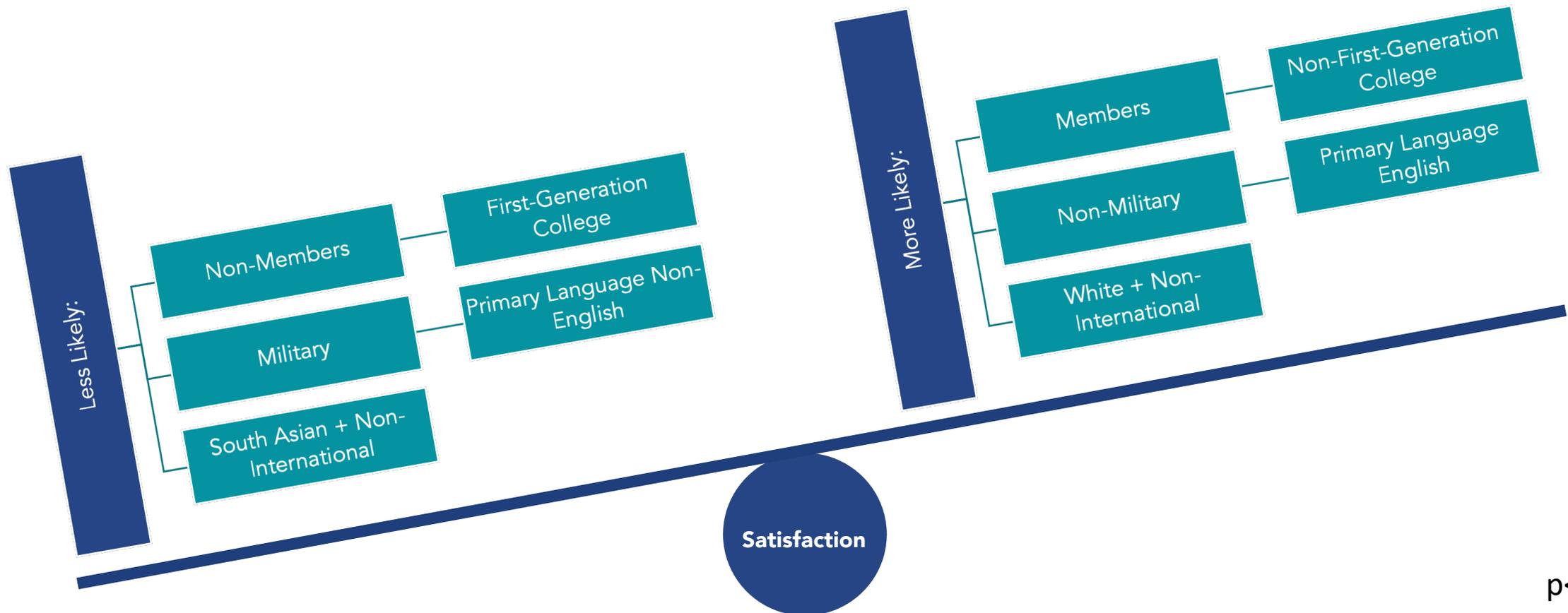
To understand people's perceptions of EIJ and their participation with AMS, we asked questions about the following areas:

- At an **interpersonal level**, are people satisfied with AMS?

# Satisfaction with AMS



# Who Is Satisfied With AMS?



# Those Who Considered Leaving

Reasons behind this sentiment varied widely, including instances of exclusion and discrimination, such as being passed over for leadership despite extensive volunteering, facing unfair evaluations, feeling unwelcome at events, and experiencing harassment without intervention.

Some people expressed dissatisfaction with the handling of their EIJ concerns, feeling that specific issues were overlooked. Some people felt that AMS's EIJ efforts emphasize buzzwords and committees without substantial action or transparency in decision-making. Others felt that AMS has gone "too far" regarding EIJ initiatives.

There was a perceived lack of inclusive leadership, with the concern that women and people of color might not find welcome avenues into AMS leadership roles.

**20%** of people have considered ending their involvement with AMS

**18%** of members have considered leaving

**32%** of staff have considered leaving

**29%** of people who considered leaving said EIJ was a reason.

# What we heard about perceptions of EIJ at AMS

No interest from top leadership in supporting DEI with only a small dedicated staff and volunteers (who are outstanding but overstretched and underfunded).

If AMS is really serious about these EIJ efforts, then providing more support (funding and people) for BRAID and its sub-groups would be a great first step. Currently, it is very hard to engage BRAID in efforts to work on EIJ. Some sub-groups, like Coriolis, are very good about engaging when contacted to work on these efforts. Expanding BRAID's support will likely help with this (volunteers will be less overwhelmed).

The committees that control the decision-making in the AMS remain staunchly non-diverse, exclusive, and (at best) agnostic, if not hostile to decisive implementation measures that would accelerate EIJ in the society and reduce barriers to equitable inclusion at all levels. The focus appears to be on inclusion at the membership level. Meanwhile, the diversity of the award winners and indicators of power-sharing remain unchanged.

I think organizations like AMS are facing a generational and demographic turning point, where they have to simultaneously address changing demands to address climate change and evolving to a more inclusive and fair organizational culture.



# Detailed Recommendations



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# Recommendations

These recommendations reflect both direct feedback from the AMS community and consultant insights. They are summarized here and supplemented with more detail below. Future action planning and prioritization should consider factors such as feasibility, timing, impact evaluation, and accountability.

**The seven opportunities outlined below represent powerful first steps AMS can take.**

- 1 Enhance Connection:** Develop programs tailored to the unique needs of historically marginalized groups.
- 2 Promote Communication:** Consistently reinforce the importance of EIJ within AMS and spotlight successes.
- 3 Improve Reporting:** Revamp the bias reporting system to ensure follow-up and to build trust.
- 4 Advance Education:** Provide comprehensive training to support broad adoption of EIJ principles.
- 5 Foster Pathways to Leadership:** Promote inclusive pathways to leadership and recognition.
- 6 Optimize Accessibility:** Develop comprehensive tools and an accountability framework to ensure greater accessibility.
- 7 Expand Financial Support:** Offer more flexible financial assistance to support broader participation.

# Recommendations Are Cross-Cutting

	Belonging	Bias	Equity	Access
Enhance Connection	✓		✓	
Promote Communication	✓	✓	✓	✓
Improve Reporting		✓		
Advance Education	✓	✓		
Foster Pathways to Leadership	✓		✓	✓
Optimize Accessibility	✓	✓	✓	✓
Expand Financial Flexibility			✓	✓

# Recommendation 1: Enhance Connection

Develop programs tailored to the unique needs of historically marginalized groups.

**Why it matters:** Enhancing connection leads to a stronger sense of community, encourages active participation, and builds membership longevity, leading to a stronger and more cohesive community.

## Strategy 1: Increase recruitment efforts with historically underrepresented groups

- Boost engagement in communities of color, especially at historically Black colleges and universities (HBCUs) and minority serving institutions (MSIs). Support AMS chapters at these institutions.
- Promote recruitment partnerships to connect with diverse talent pools.



# Recommendation 1: Enhance Connection

## Strategy 2: Foster structured mentorship programs to support technical and leadership development

- Broaden mentorship programs across meteorology career paths, linking academia and industry.
- Enhance diverse mentorship for underrepresented groups at AMS.
- Empower staff through expanded mentorship beyond formal evaluations.

## Strategy 3: Prioritize Retention Through Intentional Networking Opportunities

- Promote inclusive opportunities for engagement, leadership, and research.
- Facilitate structured and one-on-one networking to accommodate diverse needs and preferences. Provide event format details in advance for better preparation.
- Arrange **cross-generational** networking events for knowledge sharing.
- Advertise identity-based gatherings, focusing on connection without tokenization, especially for minoritized **racial/ethnic groups**.
- Celebrate cultural diversity in events, ensuring representation across diverse backgrounds without a U.S.-centric focus.
- Enhance **LGBTQIA+** support during and between meetings, acknowledging progress like the Coriolis reception.
- Establish support or resource groups for individuals of various **national origins**.
- Conduct community conversations to aid **older individuals** in transitioning to retirement.

# Recommendation 2: Promote Communication

Consistently communicate the resources AMS already has, reinforce the importance of EIJ within AMS, and spotlight successes.

**Why it matters:** Strong communication will help AMS demonstrate its commitment to EIJ by aligning values, actions and words. It sets the tone for an AMS culture that is intentional and inclusive.

## Strategy 1: Establish Clear Communication Channels

- Create EIJ-focused communication channels easily accessible to the AMS community.
- Share impactful EIJ success stories and case studies, using storytelling to highlight the tangible benefits of fostering inclusivity and justice.
- Strengthen the AMS website to contain user-friendly EIJ resources for people in the weather, water, and climate world.
- Use diverse and stereotype-free language, visuals, and examples in communications to ensure inclusive representation.

## Strategy 2: Encourage Leadership Advocacy and Messaging

- Encourage AMS leaders to regularly promote EIJ in their communications and engagements.
- Host EIJ-focused events, webinars, or panels with experts to raise community awareness and understanding of EIJ principles through dialogue and discussions.



# Recommendation 3: Improve Reporting

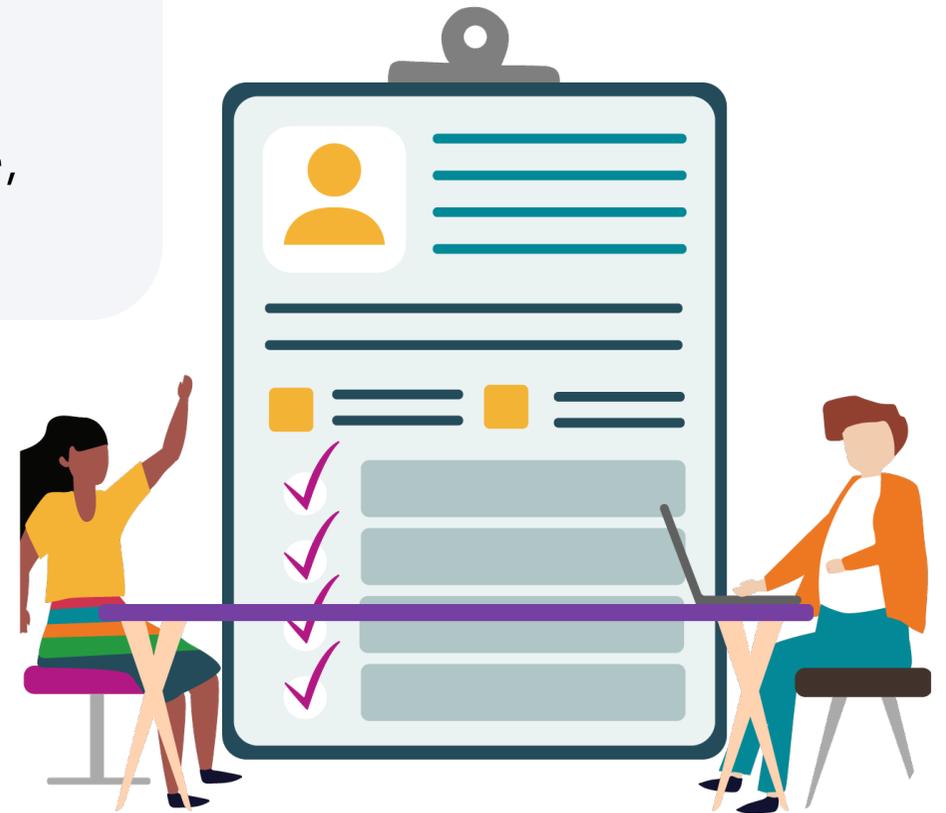
IN PROGRESS

Revamp the bias reporting system to ensure follow-up and build trust.

**Why it matters:** A strong bias reporting system not only allows for handling of specific incidents, but it also contributes to the continuous improvement of the AMS's culture, policies, and practices to create a more equitable, inclusive environment that people can trust.

## Strategy 1: Clarify Definitions

- Define reportable bias incidents by developing specific definitions and provide illustrative examples to guide individuals in recognizing and reporting bias.



# Recommendation 3: Improve Reporting

IN PROGRESS

## Strategy 2: Update Reporting Procedures

- Clarify process and timeline by streamlining the reporting steps and make them easily accessible to all members, ensuring a straightforward and user-friendly reporting system.
- Increase visibility by promoting the reporting process widely across AMS platforms and communications, making it visible and understandable for everyone involved.

## Strategy 3: Implement Comprehensive Follow-Up

- Address all reported incidents: Ensure that every reported bias incident undergoes thorough investigation and resolution.
- Communicate transparently by sharing the outcomes and actions taken in response to reported incidents openly.
- Share aggregate trends in bias reporting and response with the AMS community, while maintaining confidentiality.
- Ensure a feedback loop between bias trends and policy and education efforts.

# Recommendation 4: Advance Education

Provide opportunities for the community to build EIJ awareness and move to action.

**Why it Matters:** Helping people build awareness promotes a shared understanding of EIJ issues, supports skill-development, and fosters a culture where people understand, advocate for, and actively contribute to equity, inclusion, and justice for all.

**Strategy 1: Develop a training and education program** addressing bias, cultural awareness, and the historical and current landscape of EIJ within the weather, water, and climate world.

- Curate and disseminate existing high-quality training and education resources for staff, volunteer leaders, and members, leveraging partnerships with other scientific organizations when possible. Develop in-house resources when needed, especially focusing on education uniquely tailored to the weather, water, and climate enterprise. Starting topics recommended by the AMS community include:
  - ✓ Age: Promote intergenerational understanding and community across age and career stage
  - ✓ Race: Target racial biases, microaggressions, and inappropriate behaviors, highlight indigenous perspectives on weather, water, and climate topics, and educate on the impact of racism on weather-related hazards.
  - ✓ Gender: Address explicit bias and subtle bias, provide bystander intervention training
  - ✓ Sexual Orientation: Addressing Foster understanding, particularly in areas of lingering hostility toward LGBTQ+ identities.
  - ✓ National Origin: Combat biases against non-American members, highlight global impacts of meteorology, international research, and opportunities to encourage linguistic inclusivity
  - ✓ Mental Health: Topics such as avoiding burnout and providing resources for individuals facing mental health challenges within the scientific community.
- Train moderators to identify and interrupt biases during events
- Create platforms for open feedback, actively addressing suggestions for improvement.

# Recommendation 5: Foster Pathways to Leadership

Promote inclusive pathways to leadership and recognition.

**Why it matters:** Inclusive pathways to leadership enable full participation and contribution from anyone interested in AMS while ensuring that all members benefit equally from the community's advantages.

## Strategy 1: Promote Leadership and Advancement Opportunities

- For staff: Create clear pathways for career advancement within the organization. Promoting leadership roles and provide more visibility for staff members' achievements.
- For members: Promote and encourage young and mid-career members to take on leadership roles within the association. Create clear pathways for involvement, such as committee memberships or project leadership.
- Intentionally recognize people across the life span: Work towards greater representation of BIPOC individuals, women, and marginalized genders across AMS committees, awards, and events.



# Recommendation 5: Foster Pathways to Leadership

## Strategy 2: Cultivate diversity in leadership roles and decision-making positions

- Implement transparent reporting to track and enhance diversity metrics among staff and volunteer leaders.
- Enhance speaking opportunities for minoritized groups and ensure diverse representation in AMS leadership, panels, and sessions.
- Support and acknowledge BIPOC contributions toward fostering inclusivity in AMS.
- Promote visible involvement of disabled individuals in leadership, conferences, and speaking roles.
- Include LGBTQ+ individuals in leadership roles and amplify support, visibility, and opportunities within AMS to affirm their validity and care.

## Strategy 3: Offer career stage-specific support

- Promote and invest in early career programs, enhancing communication about participation opportunities.
- Tailor programs for mid-career professionals, focusing on transitions, skill enhancement, and advancement.
- Facilitate forums for late-career professionals to share expertise and strengthen communication about participation opportunities like mentoring and volunteering. Encourage their active engagement.
- Establish networking spaces for retirees to connect and contribute.
- Highlight diverse career stories in meteorology, providing resources for transitions and re-entry across career stages and sectors.

# Recommendation 6: Optimize Accessibility

Develop comprehensive tools and an accountability framework to ensure greater accessibility.

**Why it matters:** Access is critical because means that everyone can fully participate in AMS offerings and get connected through the AMS network. When we take responsibility for making an accessible network, we take the burden off individuals and hold it collectively.

## Strategy 1: Develop User-Centric Accessibility Tools

- Define and establish clear accessibility standards for in-person and online events and roles.
- Continuously gather and incorporate feedback on tools to improve them.
- Publish, promote, and train people on tools and standards widely.

## Strategy 2: Implement an Accountability Framework

- Develop measurable accountability metrics to track progress toward goals.
- Track metrics over time, compiling information on compliance, improvements, and challenges.
- Support improvement in areas of weakness.



# Equity Considerations for Optimizing Accessibility

## 1. Hosting Events

- Choose safe and welcoming event locations, avoiding areas with discrimination or limitations on healthcare rights.
- Select venues with nearby accommodations and transport options.
- Strengthen hybrid participation for diverse needs, including immunocompromised individuals, caregivers, and people for whom traveling poses a challenge or burden.
- Offer detailed logistical information and colorblind-friendly guidance well ahead of time.

## 2. Ability and Health

- **Improve mobility practices:** Ensure wheelchair access with space to maneuver and ample seating, including in poster presentation spaces. Ensure all venues are equipped with ramps, elevators, escalators, clear signage, and adjustable podiums and microphones. Allocate more time to get from one conference space to another. Offer golf carts for mobility assistance.
- **Improve Auditory Practices:** Always provide captioning and assistive devices, encourage consistent microphone use, and advertise dedicated quiet spaces for individuals sensitive to noise. Plan quieter networking events with less excess noise to avoid sensory overload.
- **Improve Visual practices:** Encourage presenters to make presentations and paper figures that are clear and legible. Provide copies of slides decks to follow along with if needed, and more activities where screens are not required. Consider brightness and fluorescence of venue lighting.
- **Address Food and Allergy Concerns:** Collect dietary preferences and restrictions in advance. Clearly label allergens in all food items.
- **For Staff:** Increase access to and awareness of medical accommodations and flexible work options.

# Equity Considerations for Optimizing Accessibility

- 3. Age:** Offer training digital orientation programs and resources to enhance digital access to AMS materials, especially catering to older members. Cover topics such as password management, portal access, and effective use of digital communication tools.
- 4. Caregivers:** Create family-friendly environments by considering after-hours activities that cater to participants with children. Establish lactation rooms and support services for nursing parents during conferences. Organize meetings during school breaks or consider family-friendly scheduling to accommodate caregivers with school-aged children.
- 5. Primary Language:** Ensure clear communication guidelines for speakers to accommodate varying English language proficiency levels. Offer live interpretation/translation services during conferences and webinars, trainings, and other key events. Provide access to conference resources and materials, including signage, in multiple languages. Consider having a “hub” where participants know they can find someone who speaks their language and could assist them. There are many phone and internet-based translation services available for this type of service. Widen the linguistic accessibility of the website and publications by providing translated content, abstracts and tools, and allowing publication in languages other than English to accommodate diverse contributors. Offer language correction services for non-native English speakers submitting papers.
- 6. Gender:** Promote pronoun inclusion and awareness, encourage leadership to model mentioning their pronouns in public remarks. Prioritize meeting locations with clear protections for LGBTQ+ individuals and ensure accessibility for all genders in facilities.

# Recommendation 7: Expand Financial Support

Offer more flexible financial assistance to support broader participation.

**Why it matters:** Financial accessibility ensures equal and inclusive participation, fosters diversity, community engagement, and long-term sustainability.

## Strategy 1: Consider Cost-Reducing Measures for Those Who Need It

- Offer tiered or sliding scale memberships, conference fees and travel expenses, educational or workshop fees, abstract fees, publication fees, and certification fees based on income and *access to institutional support*.
- Consider holding conferences in more affordable cities and venues, while exploring increased virtual options for those with budget constraints.
- Promote discussions and research on the disproportionate impact of climate change on individuals living in poverty.



# Equity Considerations for Financial Support

- 1. Racial Equity:** Consider recruiting and financially supporting underrepresented groups focus on recruiting and supporting underrepresented groups, such as indigenous people and students from Historically Black Colleges and Universities (HBCUs).
- 2. Career Stage and Age:** Provide grants and funding support for early- to mid-career members and job-seekers, Create opportunities for late-career professionals to sponsor attendance for earlier-career peers.
- 3. Gender:** Advocate for pay equity within AMS and in the Weather, Water, and Climate world, using pay equity audits and eliminating disparities. Develop and curate resources and sector analyses to encourage pay equity in the weather, water, and climate world.
- 4. Caregivers:** Provide on-site childcare, partnerships with local caregivers, or financial assistance to help cover childcare costs for caregivers attending AMS events.
- 5. National Origin:** Lower fees or offer subsidies for attendees from low-income countries. Virtual meetings can also help with financial accessibility and visa issues.

# Survey Demographics

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# Who took the Culture Survey

2,421

People took the culture survey

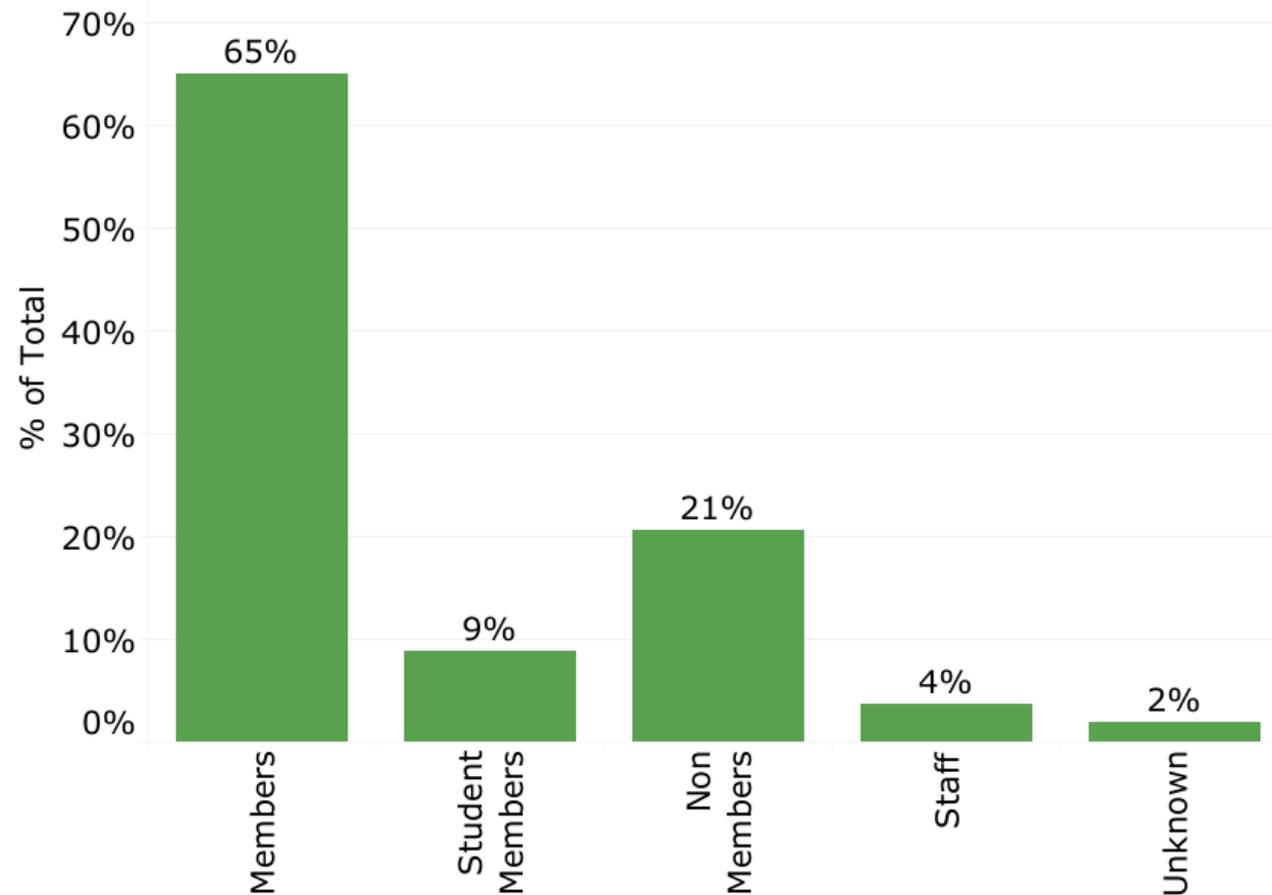
- 2,931 people opened it
- 74% of those who started it made it to the end.
- We still used the partial responses for analysis. So, you might see some variation in (the size of the sample that responded to any given question).



It took people about 11 minutes to fill out the Culture Survey

# Membership of Participants

Membership Affiliation  
n = 2421



**Members:** Current members, corporate members, and Weather Band members

**Student Members:** Student members

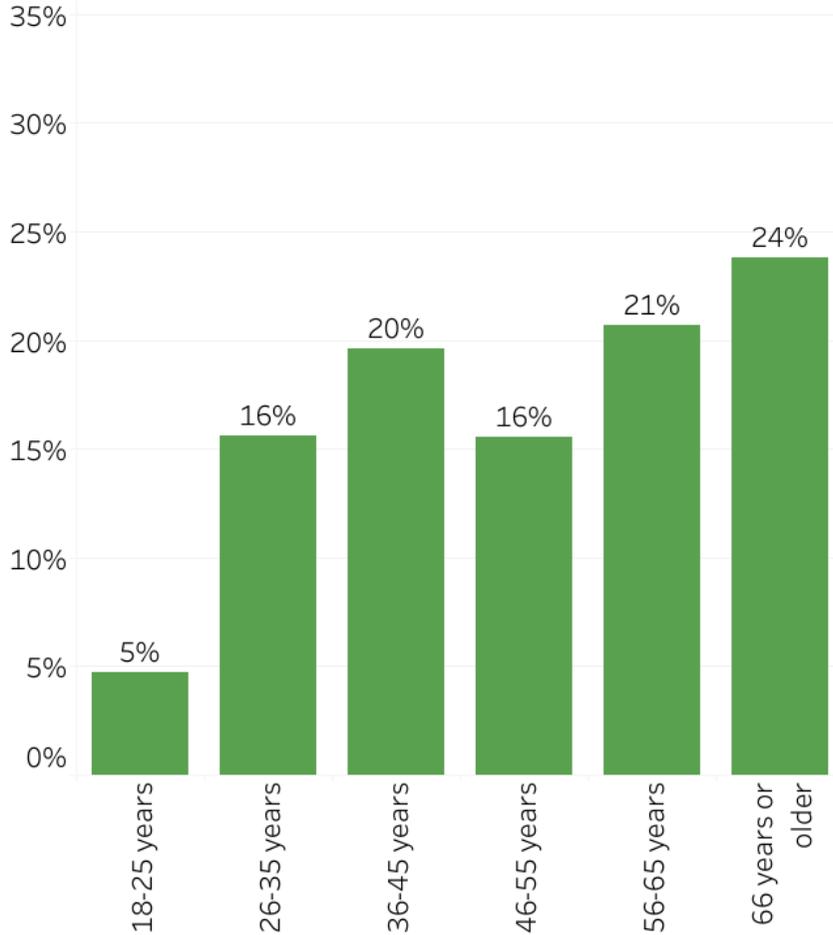
**Non-Members:** Non-members and former members

**Staff:** Current staff and former staff

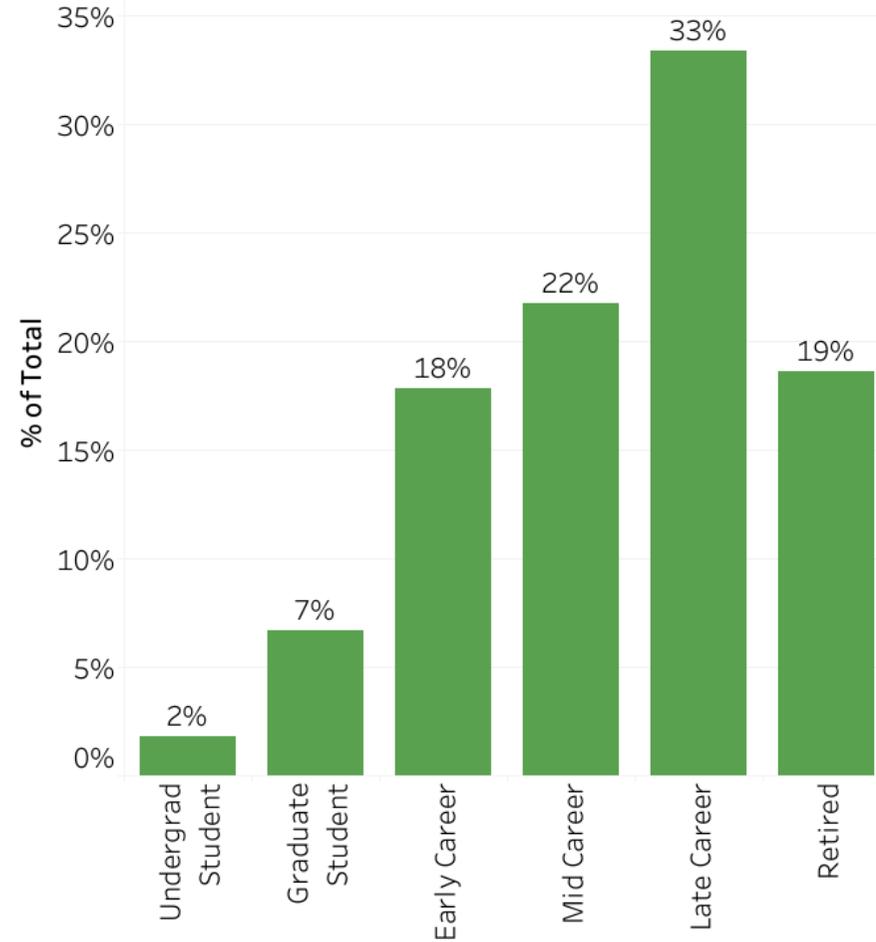
**Unknown:** Could not be classified

# Age and Career Stage

**Age of Survey Respondents**  
n = 1723

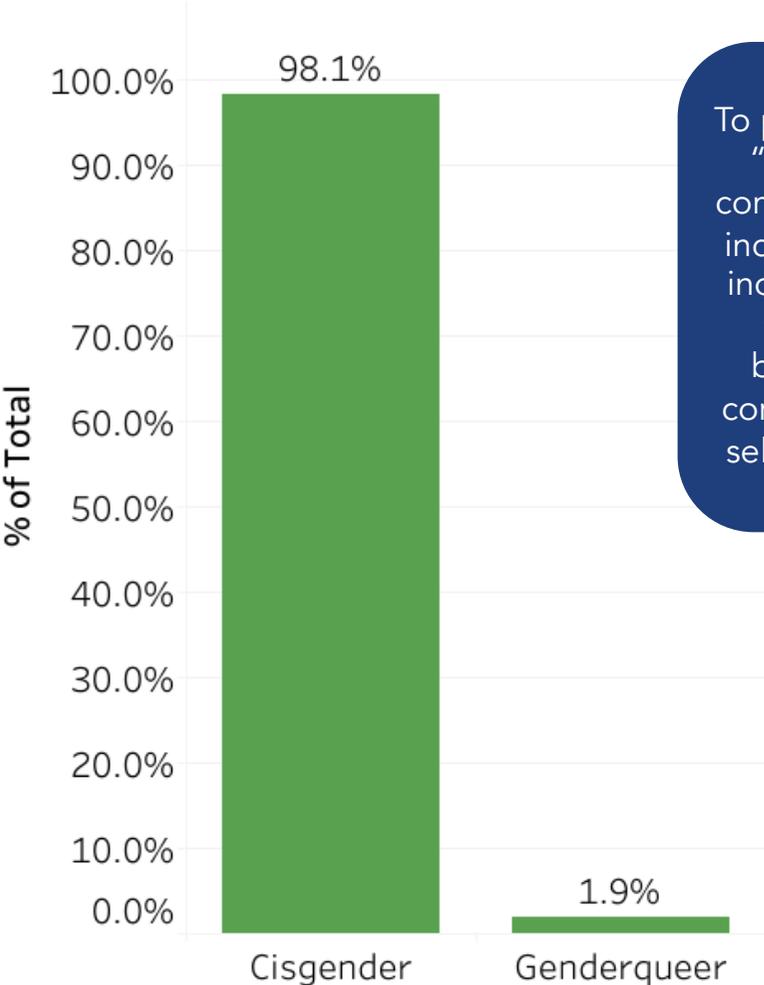


**Career Stage of Survey Respondents**  
n = 1772



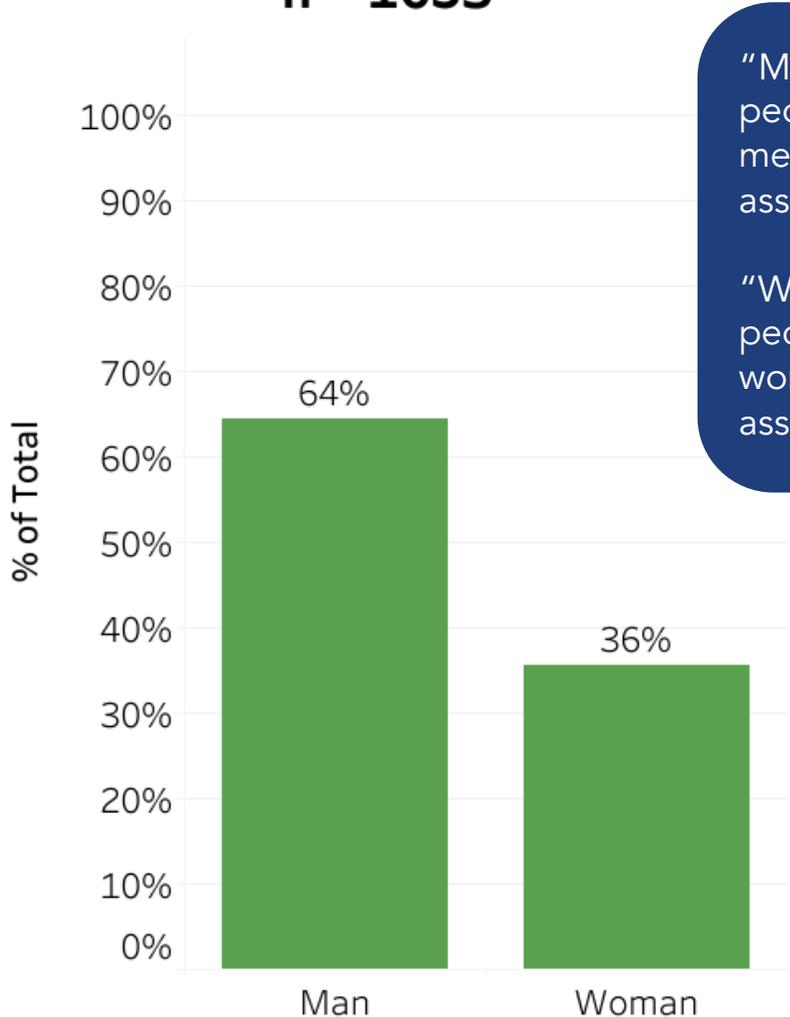
# Gender

## Gender of Survey Respondents n = 1675



To protect small groups, "Genderqueer" is a combined category that includes everyone who indicated that they are transgender, non-binary/gender non-conforming, or another self-described identity.

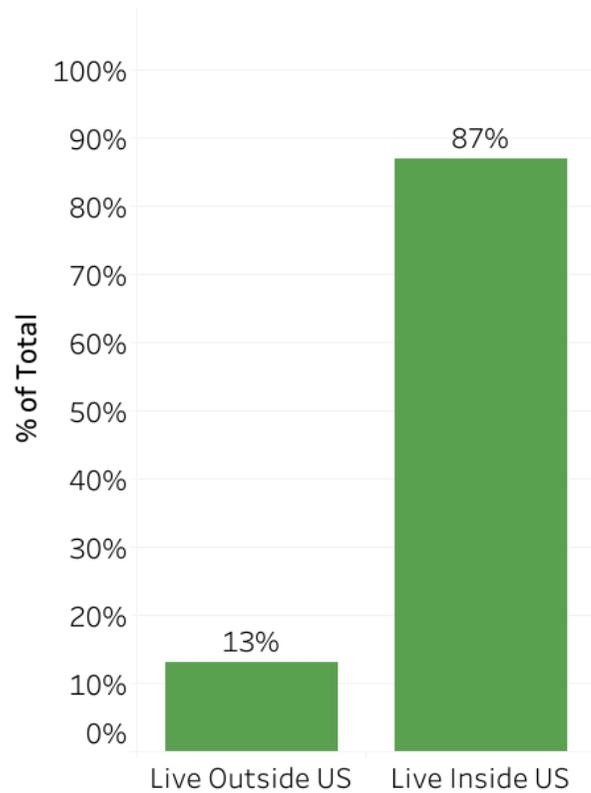
## Gender of Survey Respondents n = 1653



"Man" includes people who identify as men regardless of assigned sex at birth.  
  
"Woman" includes people who identify as women regardless of assigned sex at birth.

# Global Participation

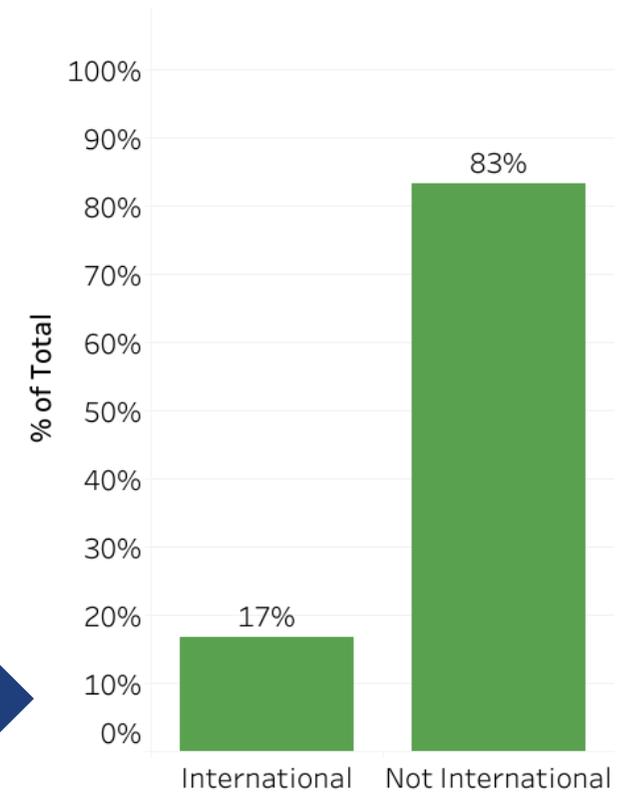
**Country of Residence of Survey Respondents**  
n = 1530



This category is about where people currently live

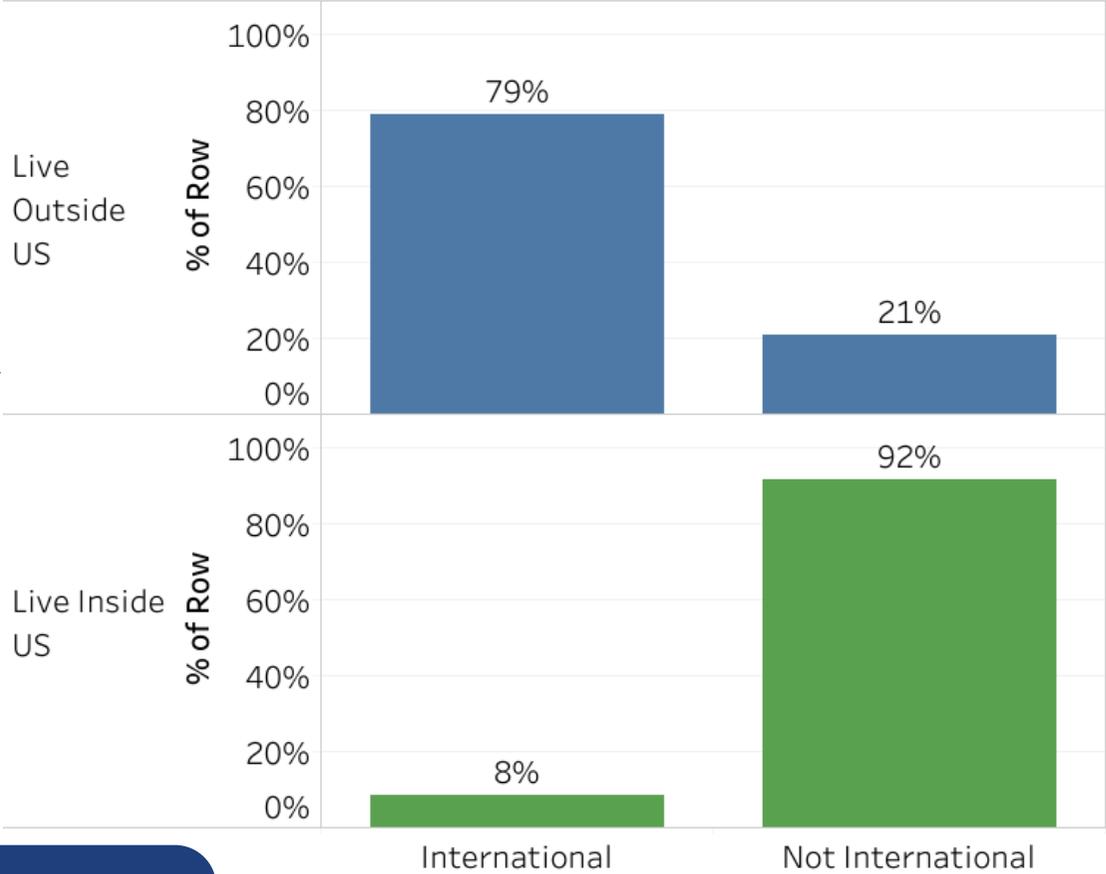
This category is about whether people identify as an international member of the AMS community, (regardless of immigration status).  
This category was used in conjunction with racial identity in analyses

**International Identity of Survey Respondents**  
n = 1700



# Global Participation

n = 1491

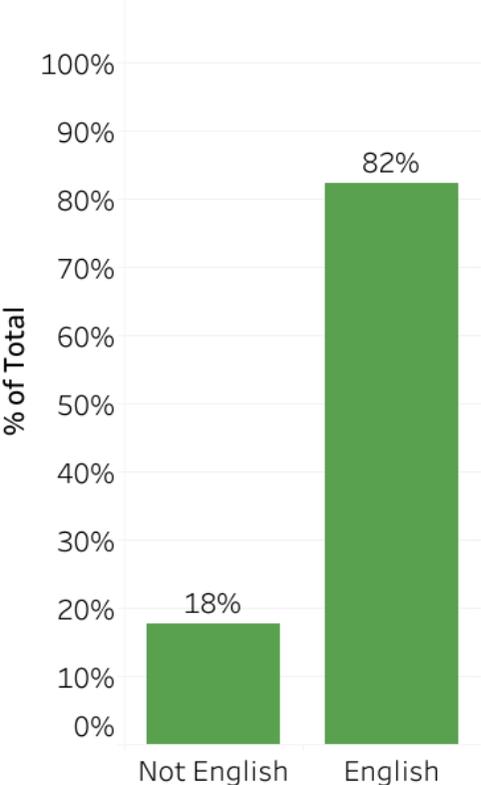


Country of residence: currently live in a country other than the United States.

International identity: Identify as an international member of the AMS community (regardless of immigration status) .

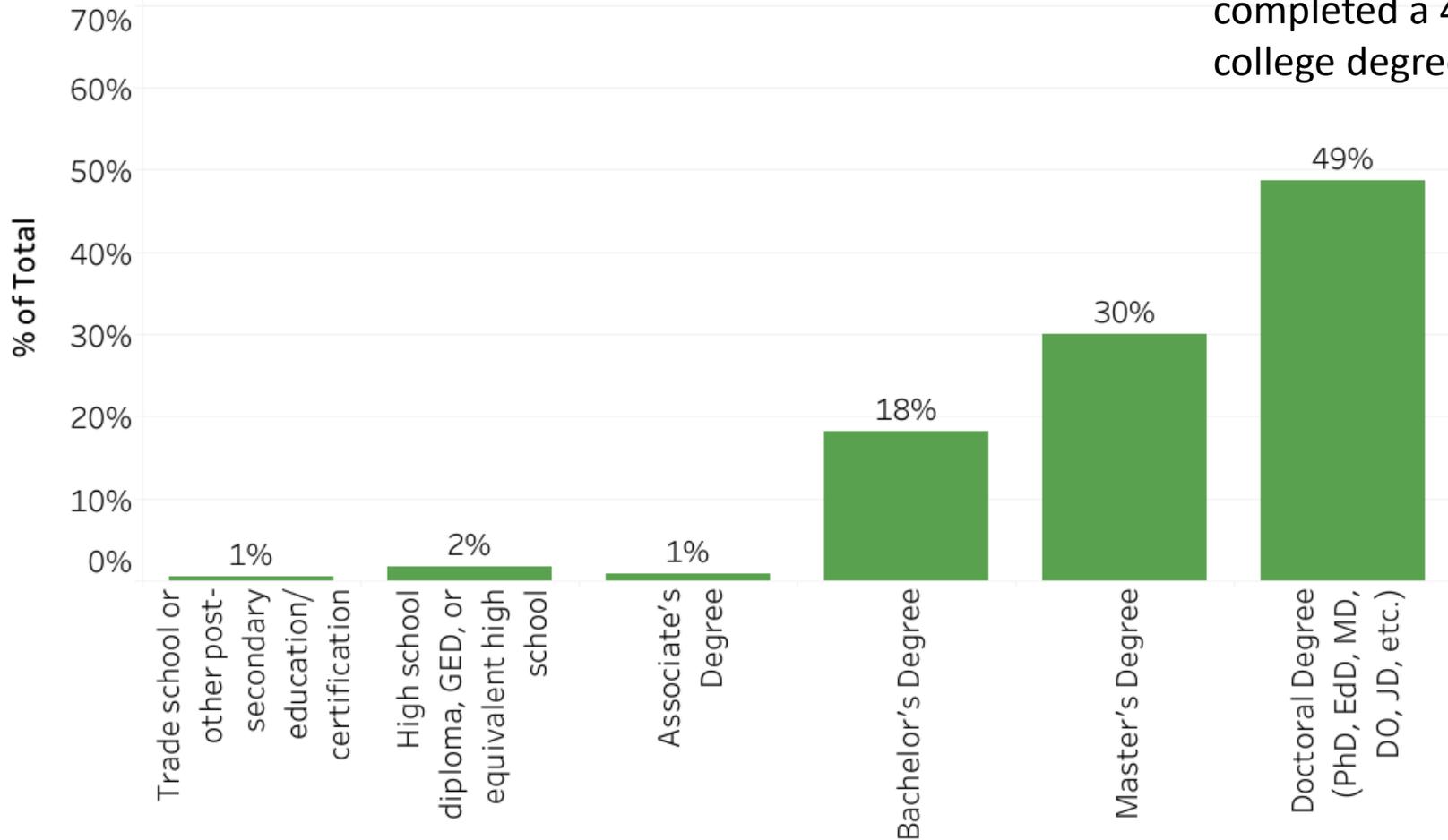
# Global Participation

**Primary Language  
of Survey Respondents  
n = 1507**



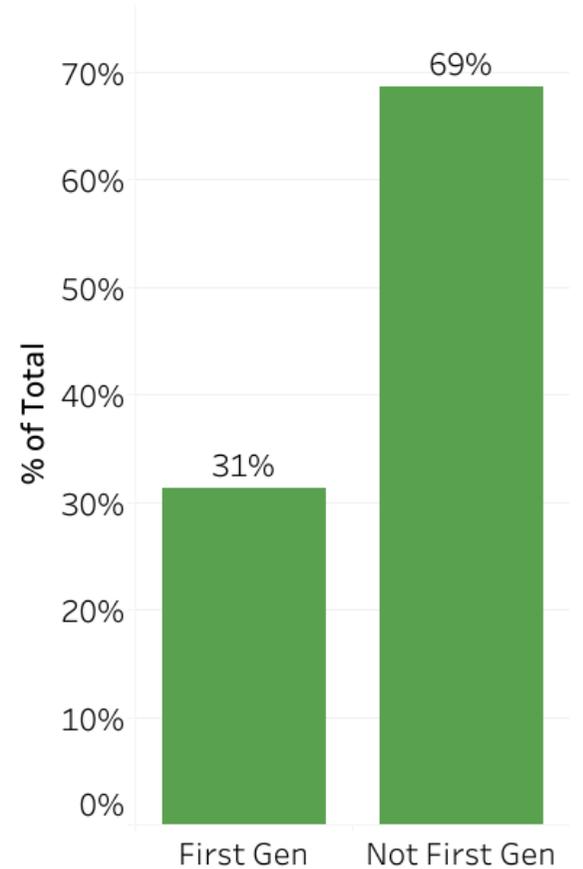
# Education

**Highest Education Level  
of Survey Respondents**  
n = 1720



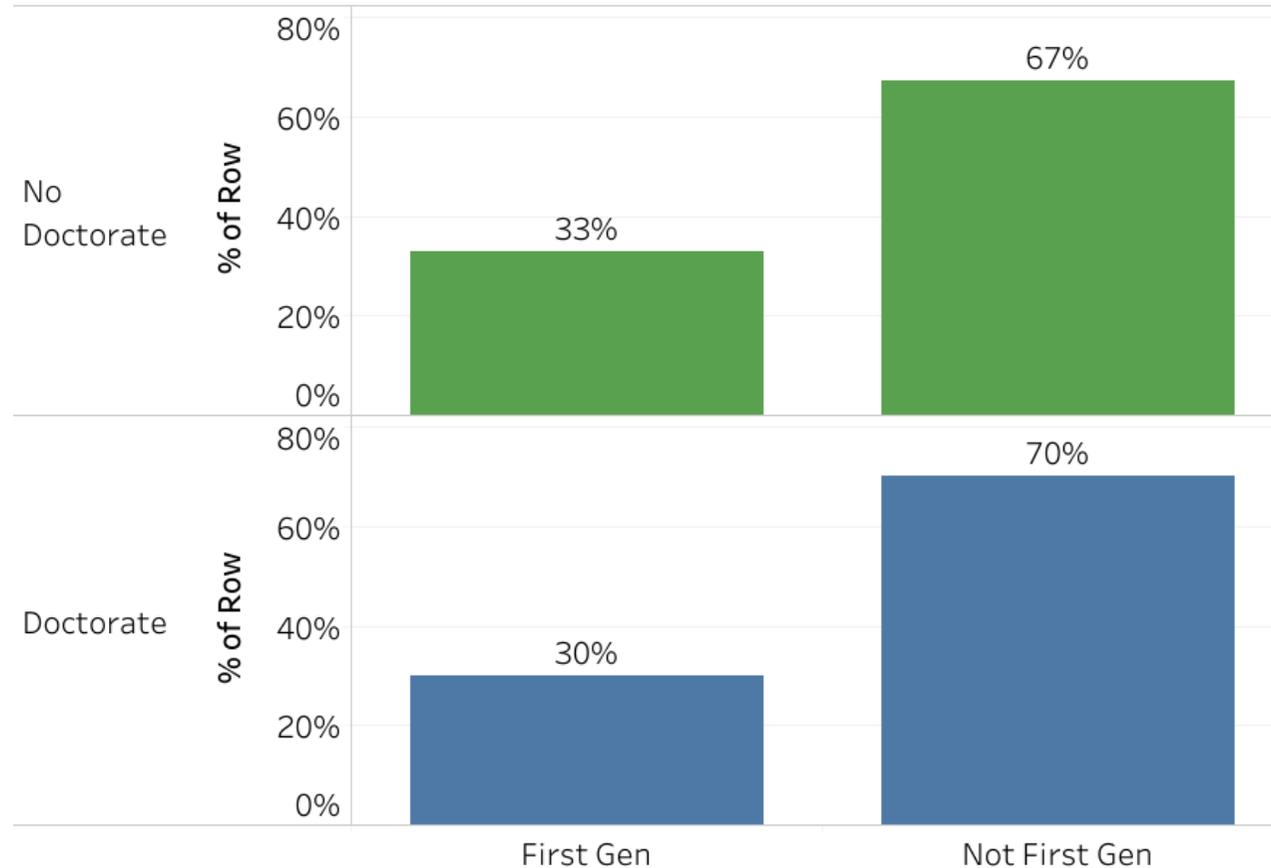
People self-identified as “first generation college student” if neither parent completed a 4-year college degree.

**First Generation Identity  
of Survey Respondents**  
n = 1532



# Education

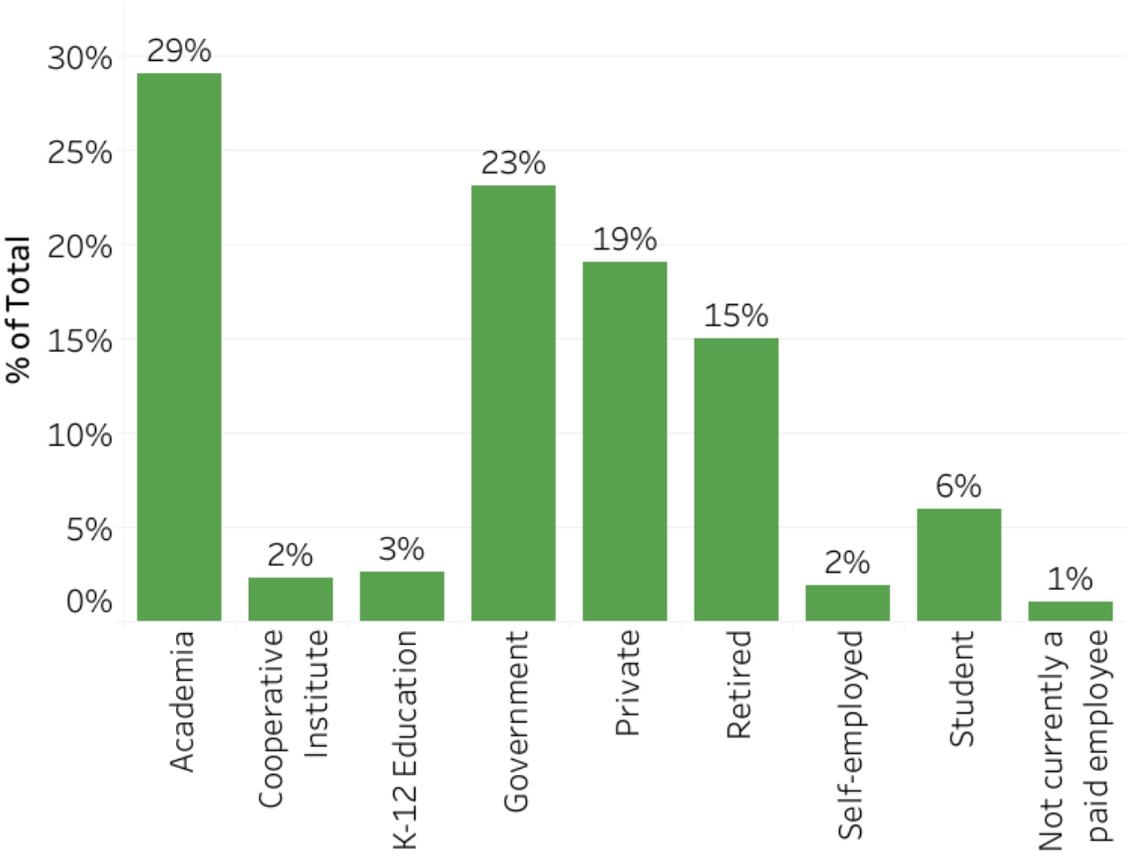
## Doctorate Attainment and First Generation Identity of Survey Respondents n = 1510



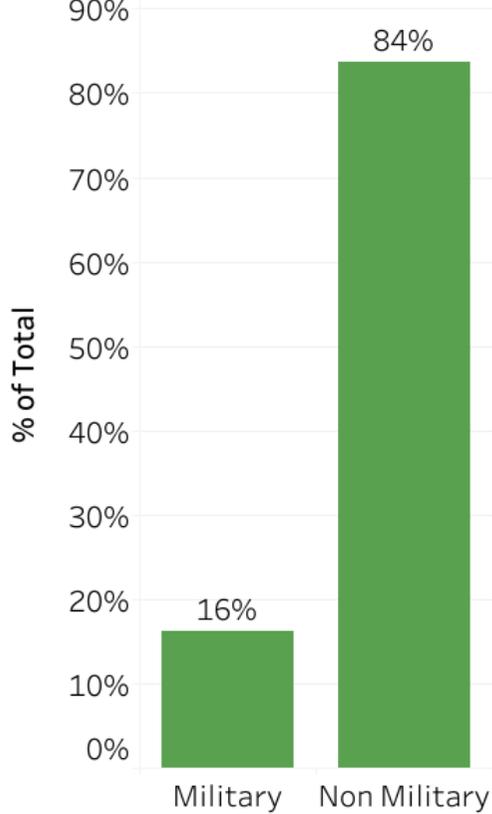
People self-identified as “first generation college student” if neither parent completed a 4-year college degree.

# Workforce Affiliation

**Workforce Affiliation  
of Survey Respondents  
n = 1663**

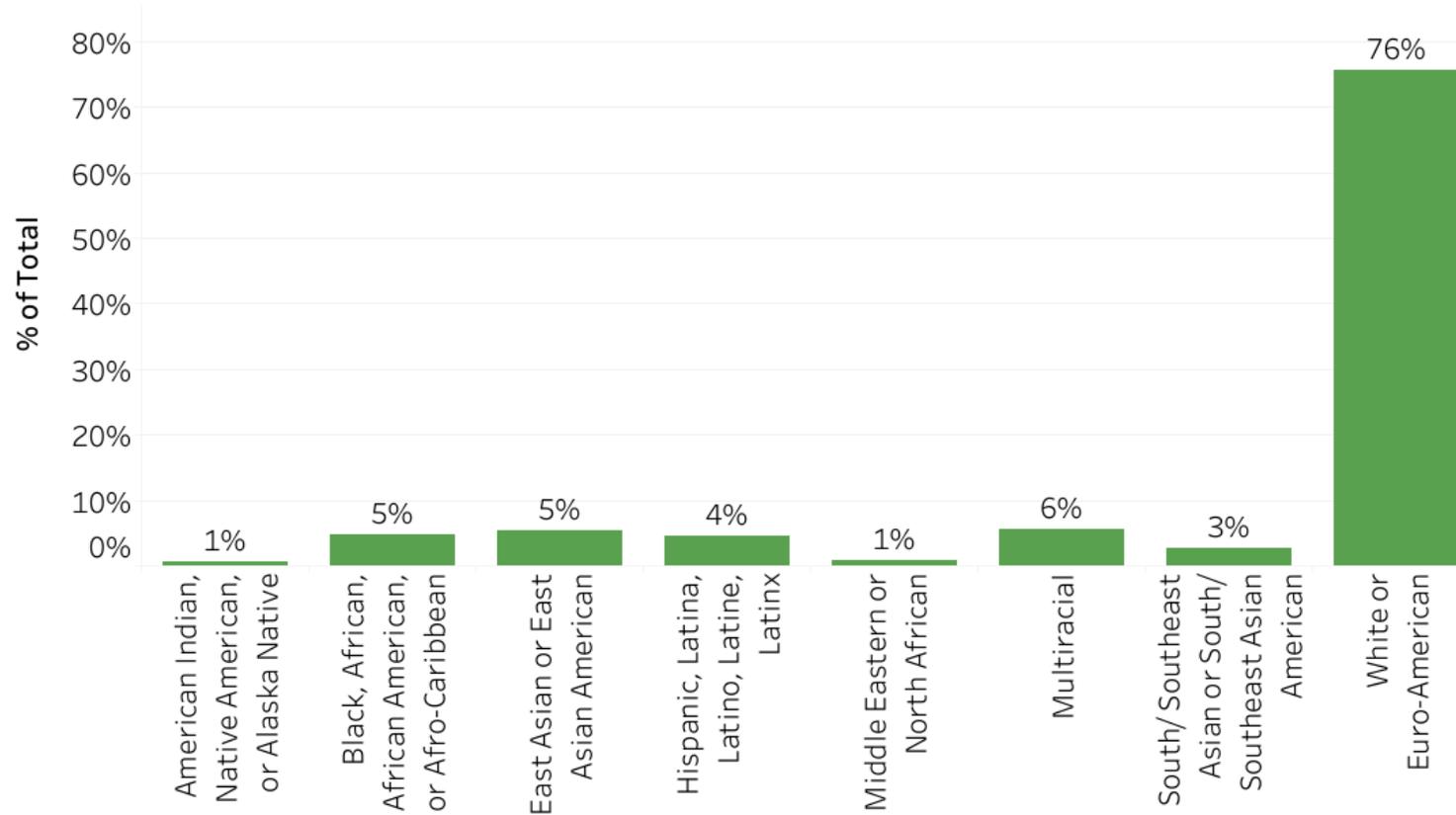


**Military Affiliation  
of Survey Respondents  
n = 1508**



# Racial Identity

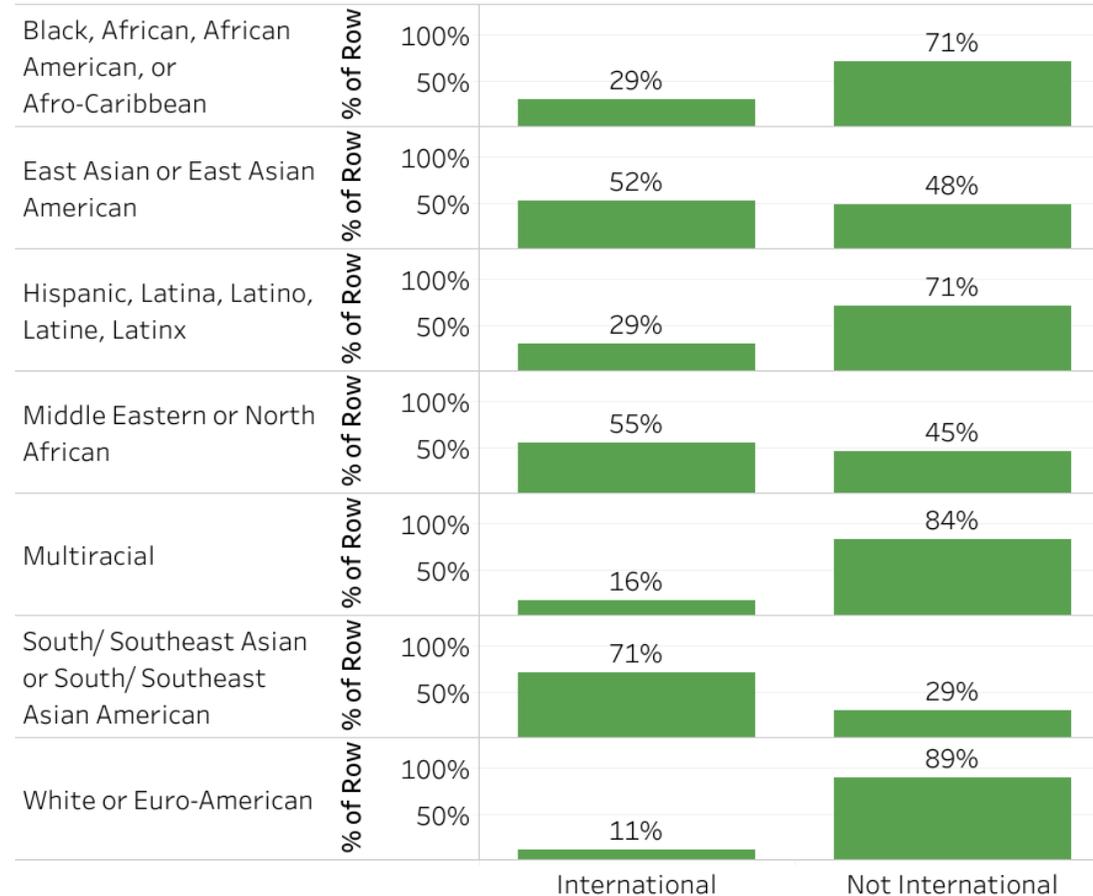
Racial Identity  
of Survey Respondents  
n = 1593



\*Groups of <5 not shown for privacy reasons.

# Racial and International Identity

**Racial and International Identities  
of Survey Respondents  
n = 1646**

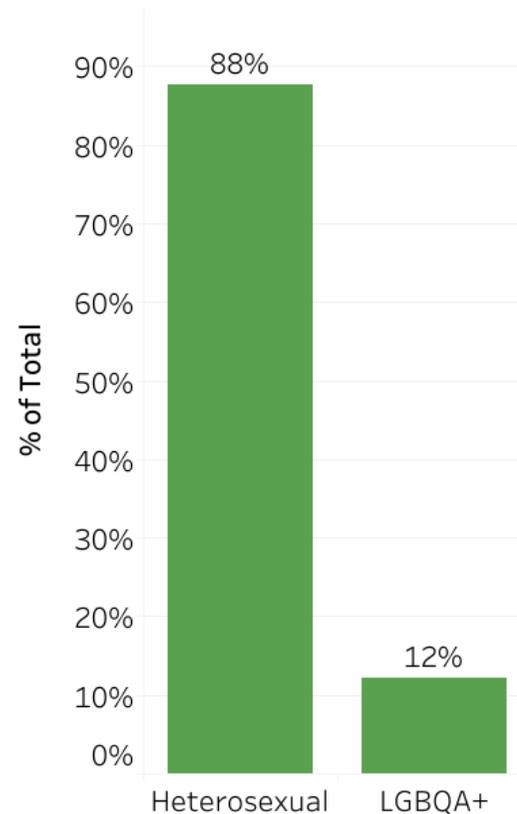


These breakdowns were used in regression analysis

\*Groups of <5 not shown for privacy reasons.

# Sexual Orientation

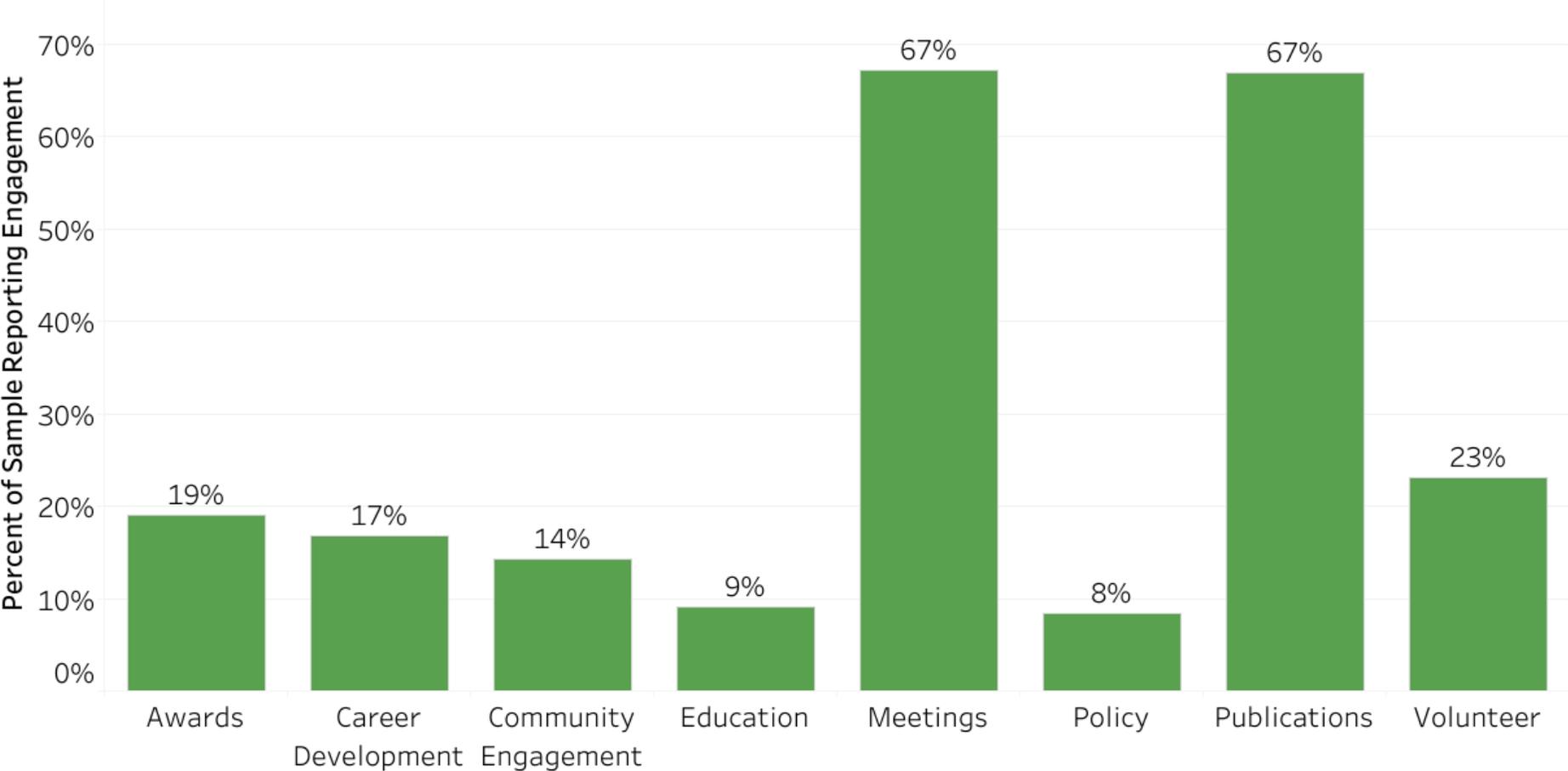
**Sexual Orientation of  
Survey Respondents  
n = 1445**



LGBQA+ is a category about sexual orientation. Transgender identity is represented in the "gender" categories.

# Engagement with AMS

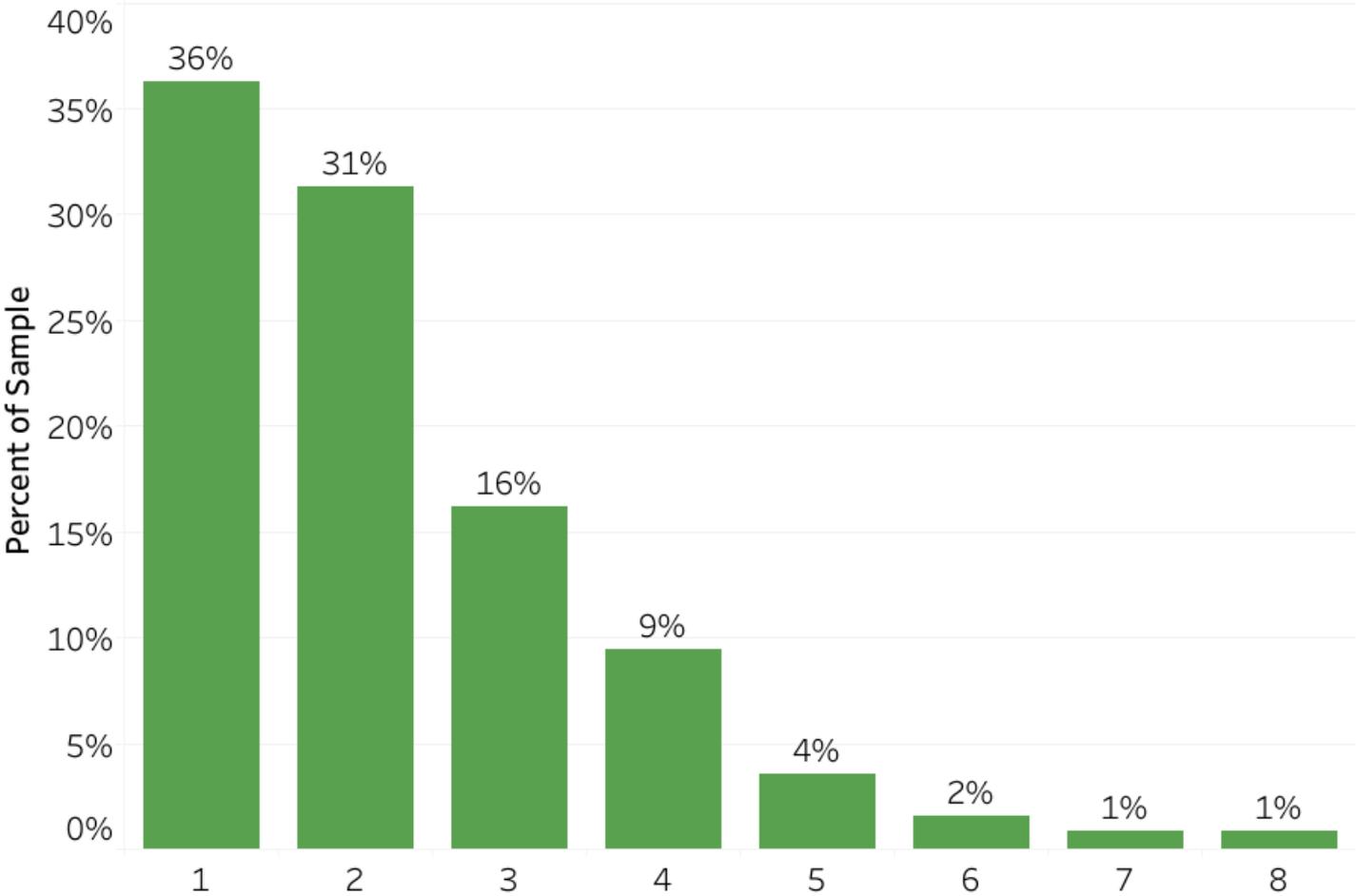
AMS Touchpoints  
n = 2132



Note:  
People  
selected all  
the ways  
they had  
engaged  
with AMS in  
the last 2  
years

# Engagement with AMS

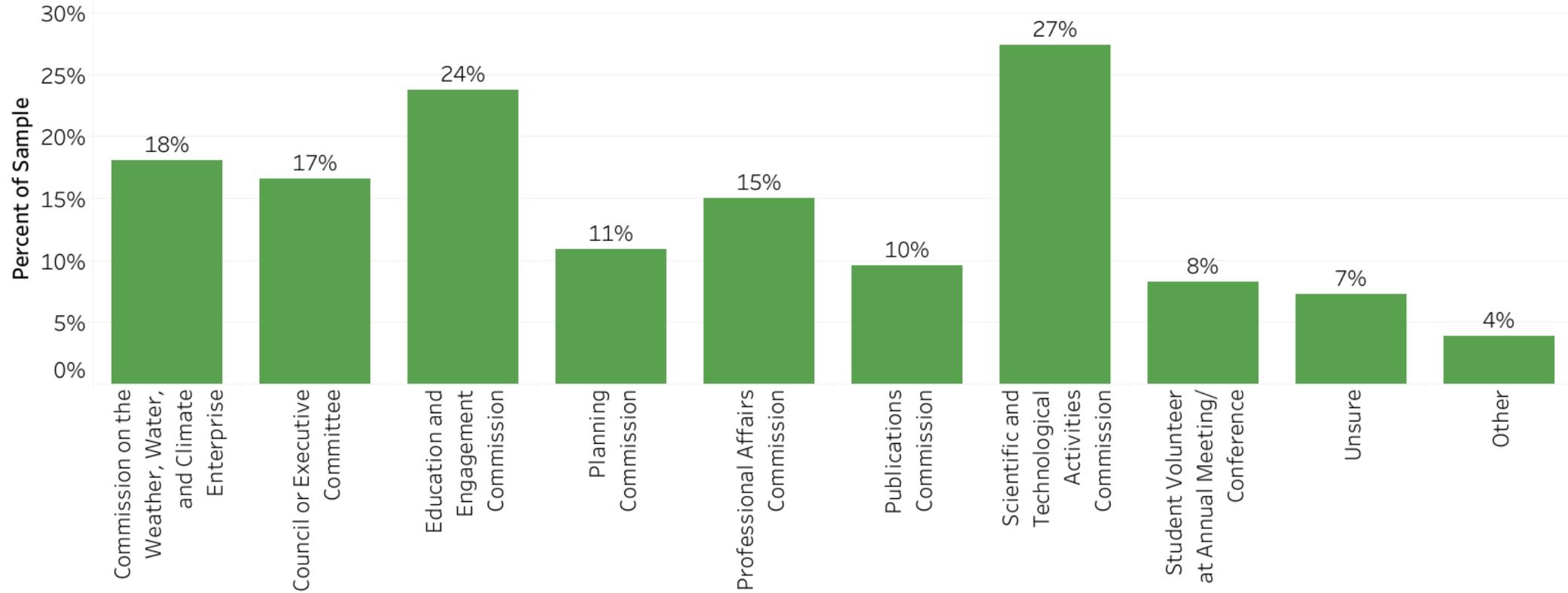
Number of Touchpoints Reported  
n = 2132



# Volunteering

**Volunteer Areas**  
**n = 358**

Note: People selected all the ways they had volunteered with AMS in the last 2 years



# Appendix A:

## Member, Student Member, and Staff Comparisons

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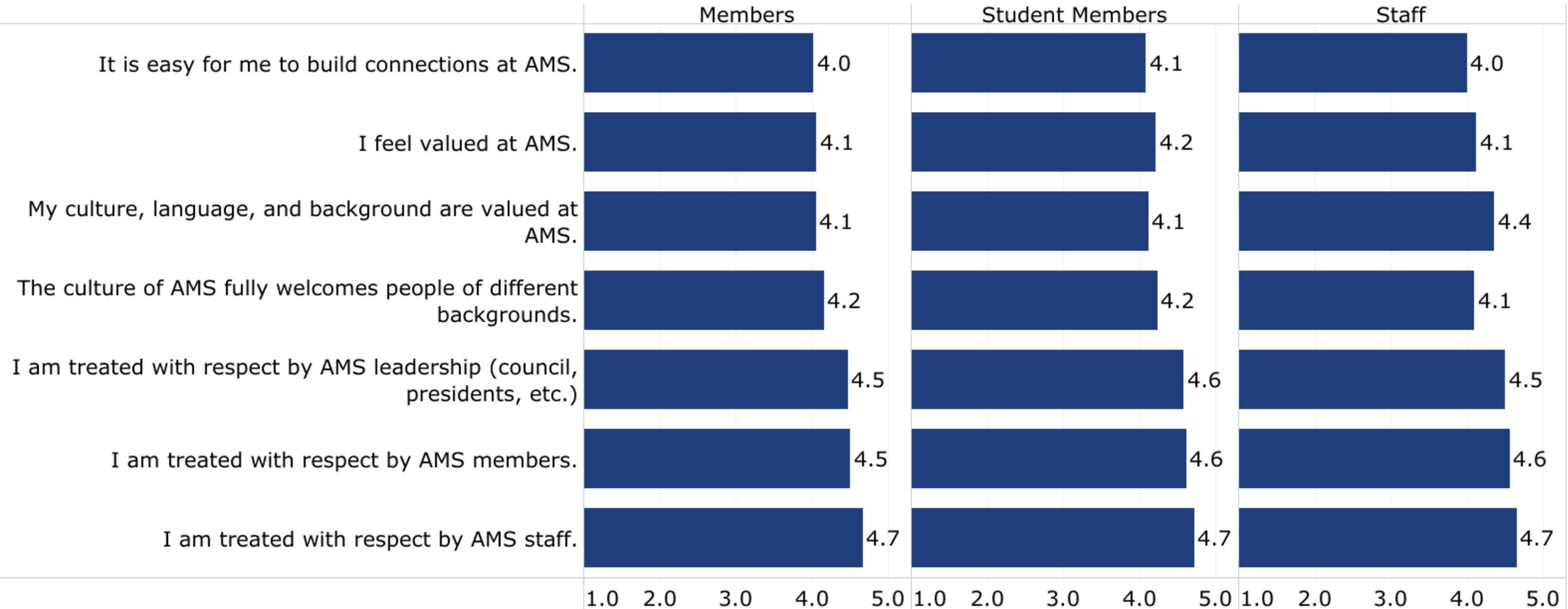
Recommendations

Demographic Data

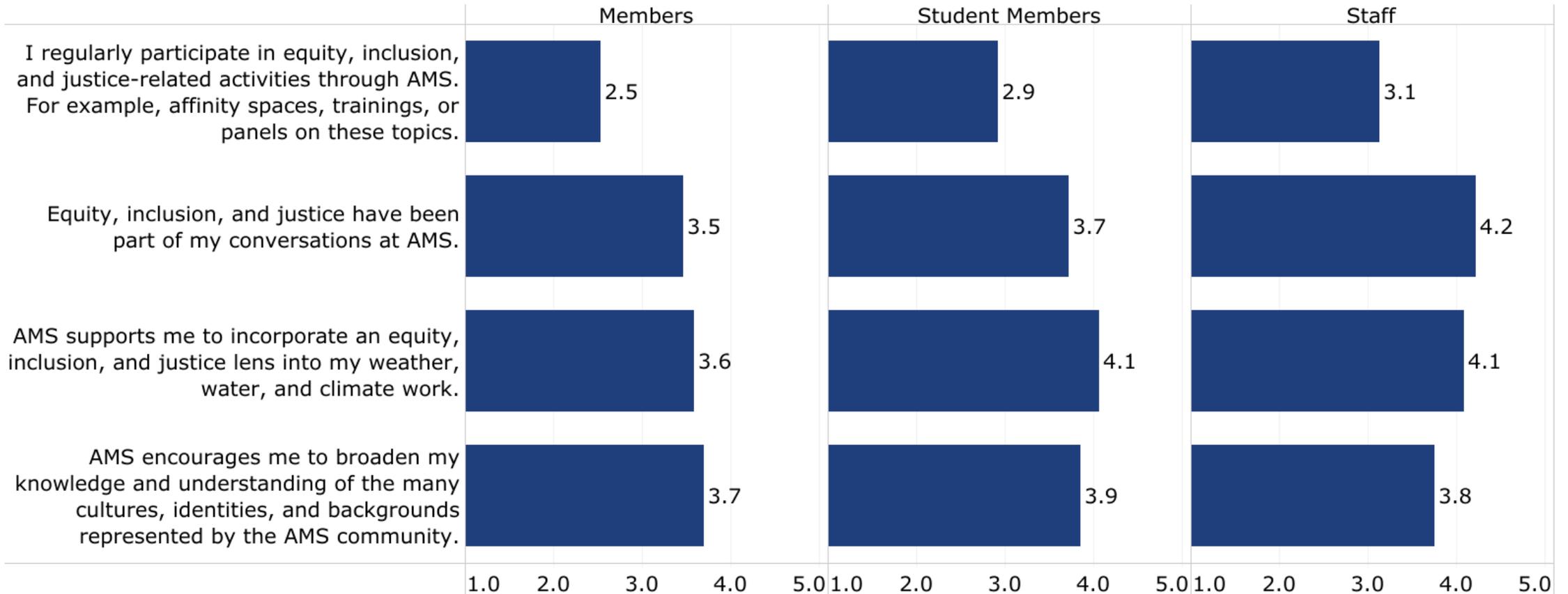
Appendices



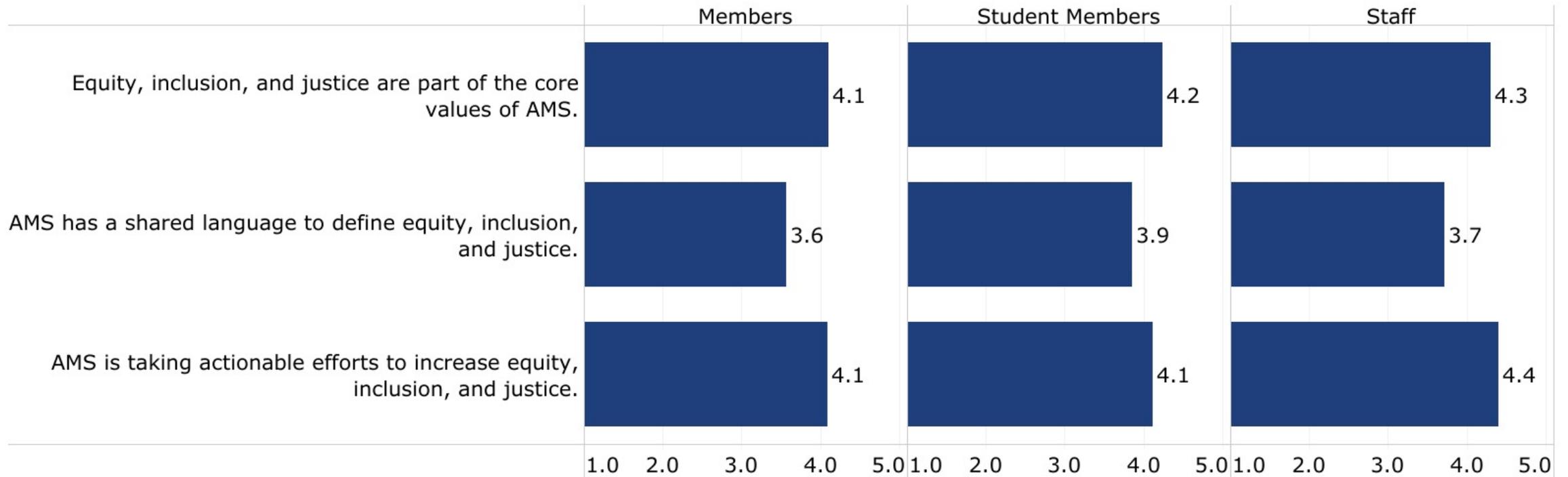
# Experiences of Belonging



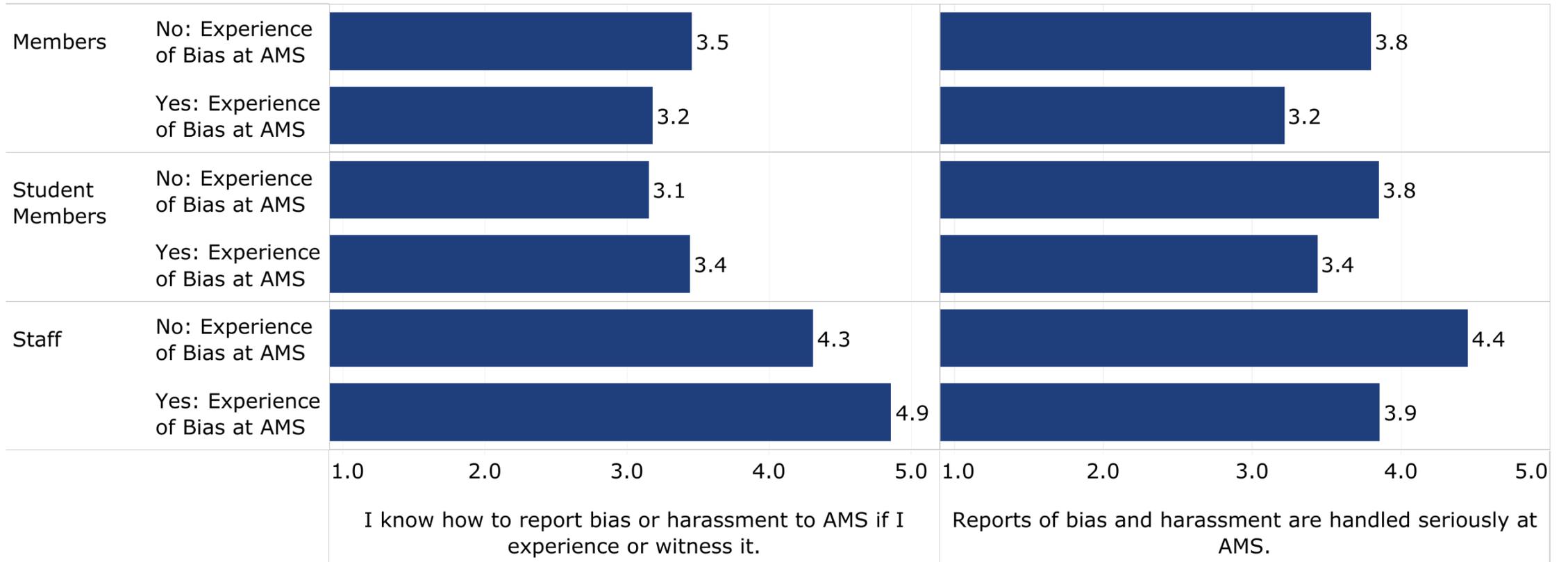
# Engagement in EIJ at AMS



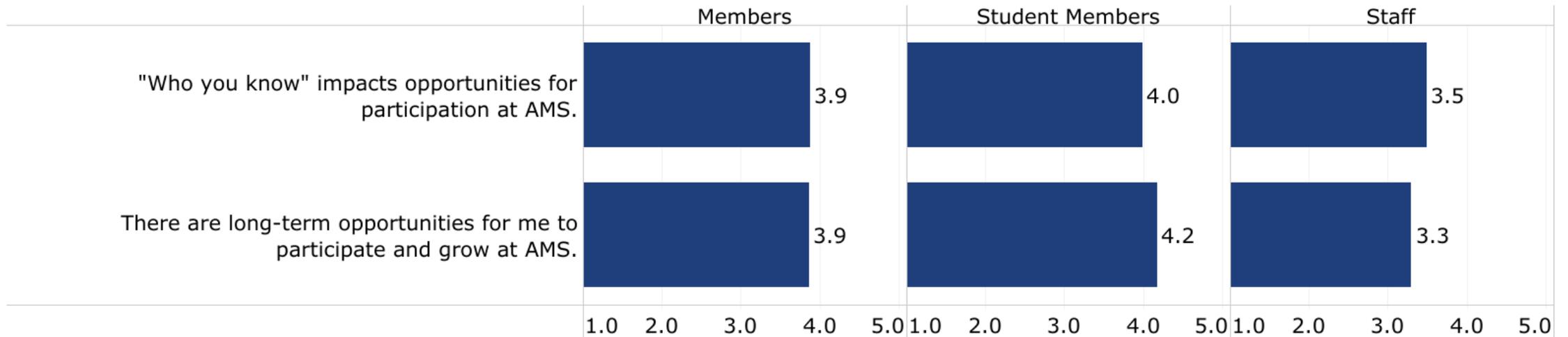
# EIJ as an Organizational Priority



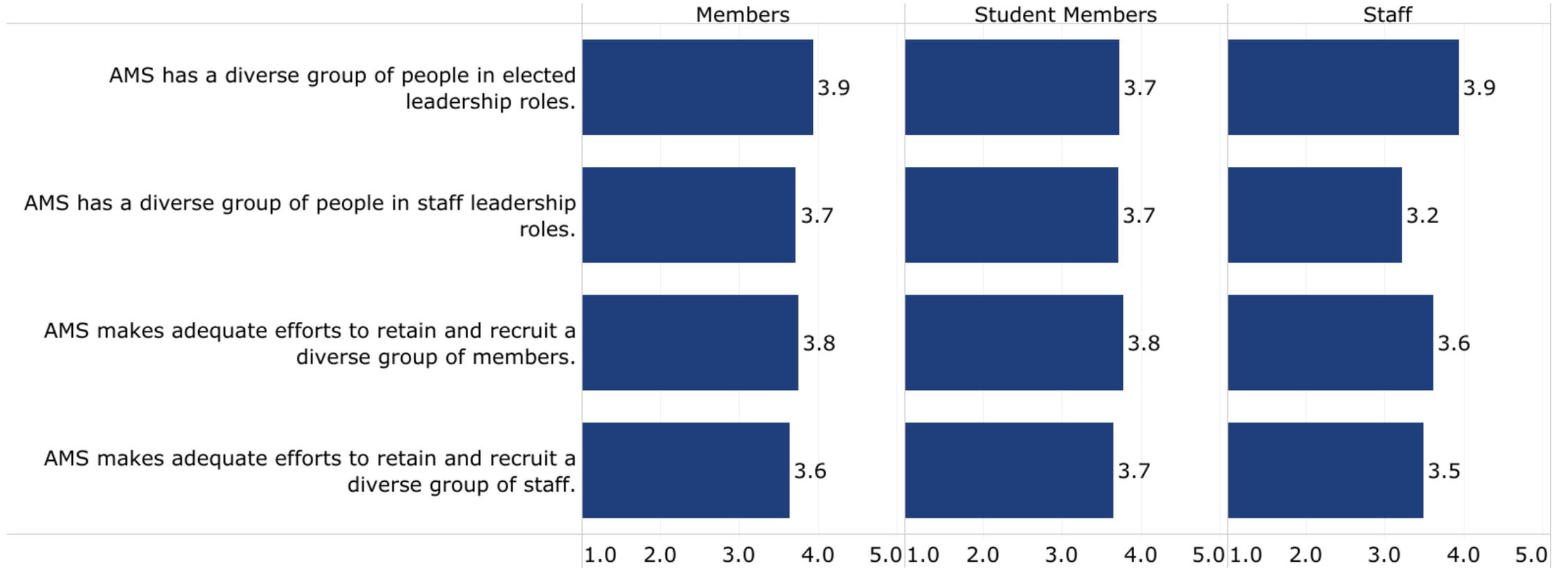
# Reporting Bias



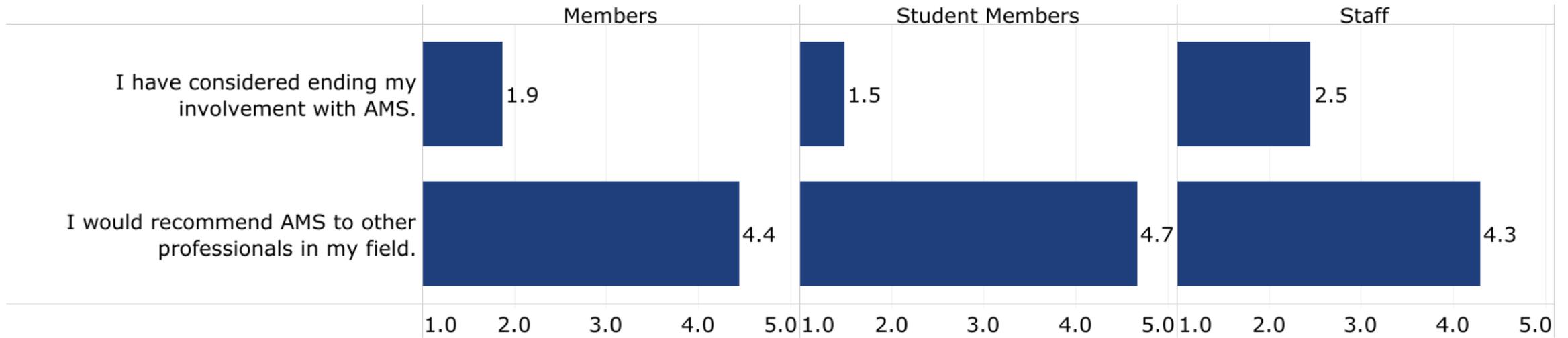
# Opportunities at AMS



# Pathways to Leadership



# Satisfaction with AMS



# Appendix B: Touchpoints

Overview

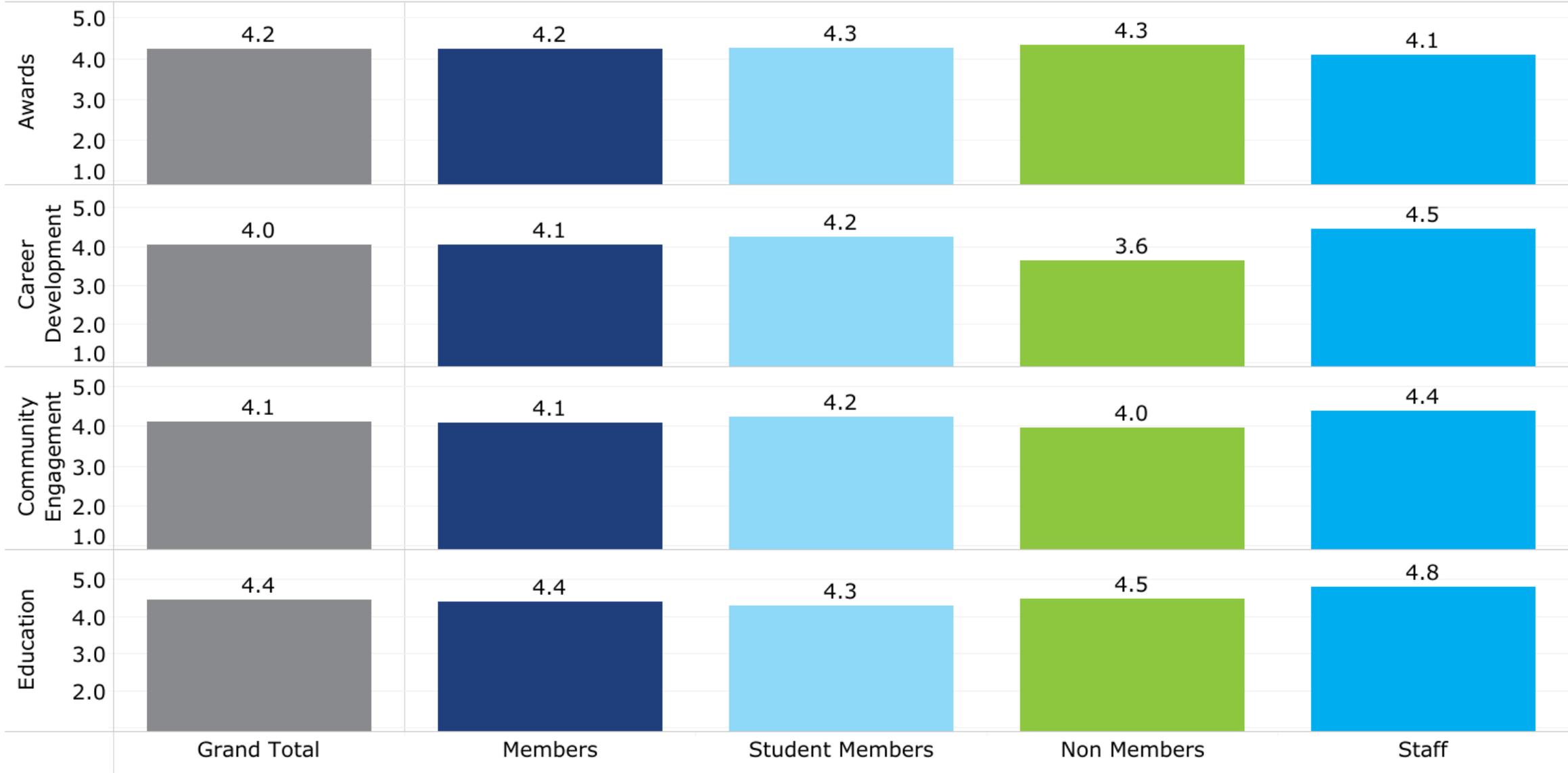
Findings

Recommendations

Demographic Data



Average Agreement on a Scale of 1-5:  
I feel valued in \_\_\_\_\_ activities at AMS.



Average Agreement on a Scale of 1-5:  
I feel valued in \_\_\_\_\_ activities at AMS.

