



2021 Culture and Climate Survey Report

By:

Dr. Shannon Schmoll

Ms. Dayna Thompson

Ms. Dani LeBlanc

edi@ips-planetarium.org

IPS Equity, Diversity, and Inclusion Survey Subcommittee Members

Dr. Shannon Schmoll, Subcommittee Lead

Ms. Dani LeBlanc, Committee Co-Chair

Ms. Dayna Thompson, Committee Co-Chair

Dr. Keith W. Davis

Ms. Heather Fairweather

Mr. Toshi Komatsu

Ms. Tiffany Stone Wolbrecht

Contents

- OVERVIEW 4
- SHOULD THE IPS BE PROMOTING EQUITY, DIVERSITY, & INCLUSION? 7
- DEMOGRAPHICS QUESTIONS..... 8
 - Age..... 8
 - Gender 8
 - Sex & Gender Characteristics 8
 - Sexual Orientation 9
 - Race/Ethnicity..... 9
 - IPS Zone 10
 - Immigration..... 10
 - Religion..... 11
 - Disabilities 12
 - Highest Level of Education..... 13
 - Languages Spoken..... 13
 - Caregiver Status 14
- PLANETARIUM DEMOGRAPHICS 15
 - Primary Planetarium Positions..... 15
 - Work Environment 15
 - Time Working in Planetarium Field..... 16
- IPS MEMBERSHIP STATUS 16
 - Level of Involvement with IPS..... 17
- IPS CONFERENCE ATTENDANCE 18
 - Barriers to Conference Participation 19
- IPS QUALITIES..... 22
 - Ableist 23
 - Anti-Racist..... 24
 - Ageist..... 25
 - Discriminatory..... 26
 - Diverse..... 27
 - Homophobic 28
 - Inclusive 29
 - Open-Minded..... 30

Racist.....	31
Respectful	32
Sexist	33
Welcoming.....	34
Transphobic.....	35
Willing to Change.....	36
STATEMENTS ABOUT IPS.....	37
“I feel valued by the IPS community”	38
“I have considered leaving the planetarium field because I have felt isolated or unwelcome by the IPS community”	39
“I feel I belong in the IPS community”	40
“I have to work harder than others to be taken seriously in the IPS community”	41
“The IPS community has a strong commitment to equity, diversity, and inclusion”	42
“I am treated with respect by others in the IPS community”	43
“I feel others in the IPS community do not value my opinions”	44
FREQUENCY OF NEGATIVE EXPERIENCES	45
OPEN-ENDED QUESTIONS	47
On EDI Work.....	47
On Negative Experiences.....	47
On Representation.....	48
On Physical Accessibility.....	48
On Economic Accessibility	48
On the IPS Community	49
On How IPS Can Improve.....	49
On Roles in the Field.....	49
CONCLUSION	50

OVERVIEW

The International Planetarium Society (IPS) is guided by its mission to provide the planetarium community with professional development, science literacy and arts/humanities awareness, innovative ideas, and partnerships in order to enhance the world's appreciation and understanding of our universe. To help us with this mission, we remember to uphold the society's values: science as a way to understand the world; inclusivity of and respect for cultures; sharing knowledge; openness to discovery and new ideas; service excellence; and leadership in our field.

We know that these values and our mission alone do not promise progress. To make a meaningful impact, we have goals, objectives, milestones, and strategic imperatives to help guide us. Therefore, in December 2019, the IPS established the Equity, Diversity, and Inclusion (EDI) Standing Committee to ensure the IPS fully benefits from the talents of all its members and is inclusive and respectful of all cultures. The function for this new standing committee was originally developed by IPS Officers and Society members, and later revised by the EDI Committee co-chairs, Dani LeBlanc and Dayna Thompson. The [function of the EDI Standing Committee](#), as well as current information about the committee, can be read in full on the [IPS website](#).

Led by Dani and Dayna, the 20+ person committee finalized a strategic plan to move the IPS forward in its work towards “Inclusive Excellence,” or its commitment to “respect and embrace equity, diversity, and inclusion in people, ideas, and opinions.” The IPS Inclusive Excellence plan is structured around five goals:



- 1. Culture and Climate of Inclusion**
- 2. Inclusive Policies and Systems**
- 3. Inclusive Conferences and Events**
- 4. Recruitment and Retention for an Inclusive Organization**
- 5. Professional Development for Inclusive Excellence**

The full plan outlines objectives for each goal in an effort to recruit, support, and retain a diverse population of active and engaged IPS members, affiliates, and leaders, and to create and maintain a culture and climate where all are welcome and everyone feels valued within the professional community.

In order to achieve this vision, we look towards **Goal 1: Culture & Climate of Inclusion** of the IPS Inclusive Excellence plan for guidance on building the foundation of this work:

We strive to develop a culture and climate within the IPS, and throughout its activities, where all community members experience a sense of belonging and engagement—a place where each individual's professional well-being and contributions are valued and supported through respectful, authentic, and positive interactions with other members.

To develop an inclusive culture and climate, the first step is to establish where we are as a community, where we have work to do, and what barriers currently exist that prevent people from fully participating in the organization and its work. To that end, a Culture and Climate Survey was created and distributed to planetarium professionals, or “planetarians,” around the world in December 2020.

There exists much diversity in our planetarium community that extends beyond how a person appears to those around them. This diversity can never be truly understood or lived by an outside observer, but by learning about their unique experiences, ideas, and opinions through surveys like this one, we can begin to gain some insight into their lives.

Therefore, one major goal of the survey was to determine and address barriers that prevent people from becoming IPS members; therefore, the survey was open to all planetarians regardless of their IPS membership status (active member, inactive/lapsed membership, or nonmember). The survey was advertised via IPS email lists, the Facebook Group Dome Dialogues, the listserv Dome-L, and through other communication platforms. In an effort to ensure participants were comfortable with the information they provided, none of the questions were required for a person to participate in the survey. Additionally, respondents were allowed to give more than one answer for questions where appropriate (such as for questions regarding race, languages spoken, etc.).

With support from IPS members, the survey was translated into 8 languages for better dissemination to the global community. The survey remained open for approximately 6 weeks. During that time, 361 responses were collected through the survey platform, *Qualtrics*. From these, there were approximately 250 completed surveys, as 111 responses were duplicates or the result of someone opening the survey and not answering any questions. Below is a summary of the results from the survey, including a demographic breakdown of who took the survey, a summary of question responses from the community as a whole, and a summary of question responses separated by select demographic subgroups in an effort to highlight any differences within the community.

As mentioned previously, this survey was completed in an effort to establish where we are as a community, where we have work to do, and what barriers currently exist that stop people from fully participating in IPS and IPS-related projects and events. While the intent of this report is to show the results of the Culture and Climate Survey, and not to make recommendations of how to move forward or to offer interpretations of why we might see what we see, these results will

be used to guide the EDI Committee and IPS Board over the next few years. As the IPS Inclusive Excellence plan is vast in scope, with many objectives that need guidance and prioritization, this information is invaluable.

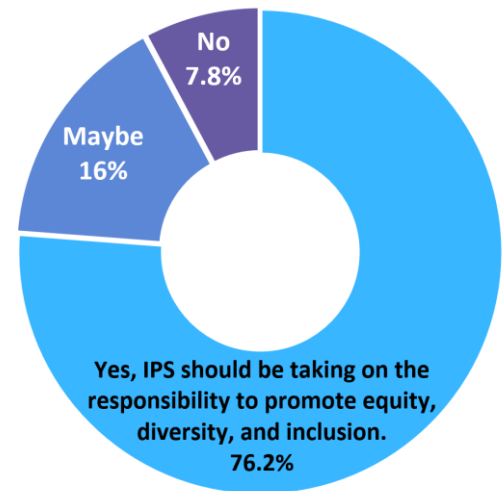
We encourage you to read through these responses thoroughly in order to learn more about the planetarium community. When doing so, we caution you to not simply take a glimpse at the results, but to sit with them and think about where there is room for growth in our communities, what sort of change you'd like to see in light of the results, and how you can do your part in seeing that change in our community.

While we strive to properly reflect all survey submissions and community voices in this work, please know that not every survey submission may be highlighted or reported on directly. Additionally, there may be nuances in the data that were not found and therefore not reported on here. If you have ideas, concerns, or observations please send them along to the EDI Committee at edi@ips-planetarium.org or feel free to submit an anonymous suggestion at www.ips-planetarium.org/suggestions.



SHOULD THE IPS BE PROMOTING EQUITY, DIVERSITY, & INCLUSION?

In the survey, respondents were asked the question “Do you think the IPS should be taking on the responsibility to promote equity, diversity, and inclusion?” in order to assess how members and potential members felt about the role IPS should be taking in equity, diversity, and inclusion work. Overall, a majority of respondents at 76.2% felt that “yes” IPS should be taking on this responsibility, while another 16% thought that “maybe” it is the responsibility of IPS to take this on. The remaining 7.8% of respondents did not think it was IPS’s responsibility to promote equity, diversity, and inclusion.



There were some notable differences between subgroups of respondents for this question. The most significant indicator of whether or not respondents thought IPS should be doing this work was the respondent’s age. Respondents ages 70 or older answered in a much larger percentage that IPS should not be taking on this responsibility at about 30%, while 24.1% responded with “maybe.” Therefore, less than half of respondents ages 70 or over thought it was IPS’s responsibility to promote equity, diversity, and inclusion at 45.9%.

For respondents under the age of 45, the responses skewed in the opposite direction. For this subgroup, 86% responded that “yes,” it is IPS’s responsibility to promote equity, diversity, and inclusion. Less than 5% thought “no,” it is not IPS’s responsibility. Less than 10% responded that “maybe” it is IPS’s responsibility.

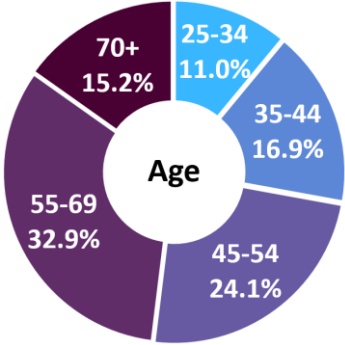
Also, a much larger fraction of those in the Lesbian, Gay, Bisexual, Transgender, Queer or Questioning, Intersex, or Asexual (LGBTQIA+) community feel it is our responsibility at almost 93%. The remaining 7% was evenly split between “no” and “maybe” responses. Additionally, women were more likely to respond with “yes,” IPS should be taking on the responsibility to promote equity, diversity, and inclusion at 82% than “no” (approximately 3%).

DEMOGRAPHICS QUESTIONS

In this section we break down the demographics of the approximately 250 respondents to get a better sense of who is represented in this data. This includes general information on age, race, gender, sex, and sexual orientation as well as information specific to planetariums such as type of dome, setting, and roles in the workforce.

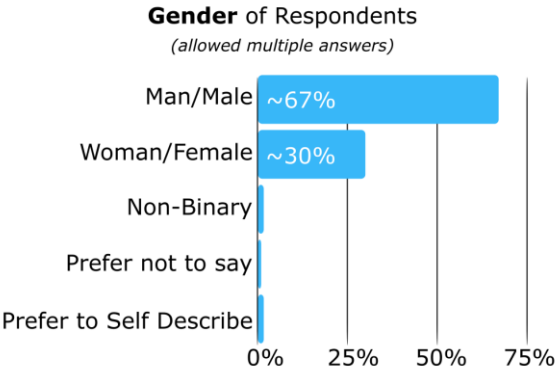
Age

The largest age group represented is 55–69-year-olds at 32.9%. The smallest group represented are those aged 25–34 years at 11.0%. We did not have any respondents that were under 25 years old. Additionally, 24.1% of respondents are ages 45–54, 16.9% are ages 35–44, and 15.2% are over the age of 70.



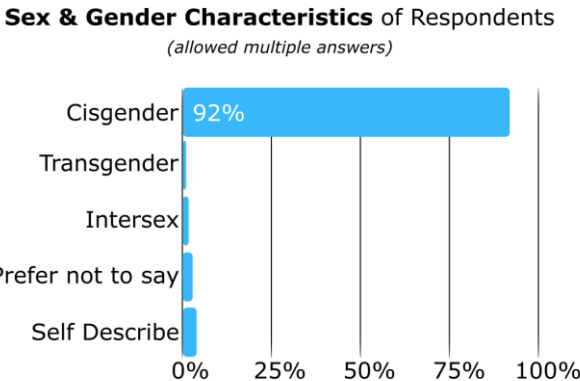
Gender

The majority of respondents are men at nearly 67% while almost 30% are women. The remaining 3% of respondents are either non-binary, preferred to self-describe, or preferred not to say.



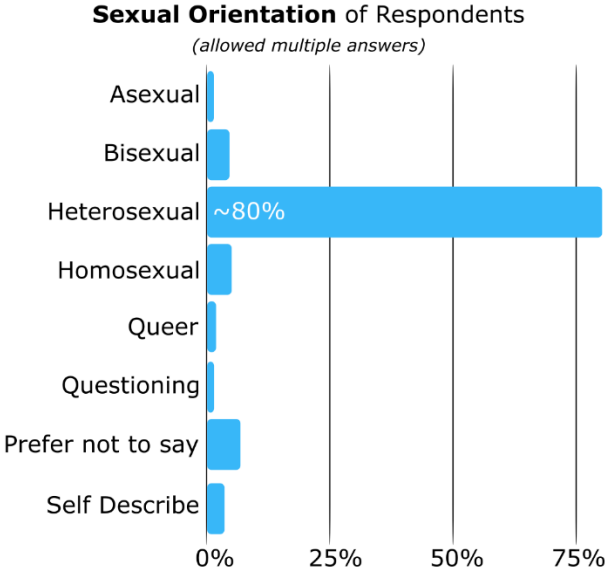
Sex & Gender Characteristics

Note that cisgender refers to individuals who are the gender that they were assigned at birth, whereas transgender are individuals who are not the same gender they were assigned at birth. Intersex are individuals who were born with sex characteristics that do not fit into the binary definitions of sex. A vast majority of the respondents are cisgender at 92%, while there is representation of individuals who are intersex and transgender.



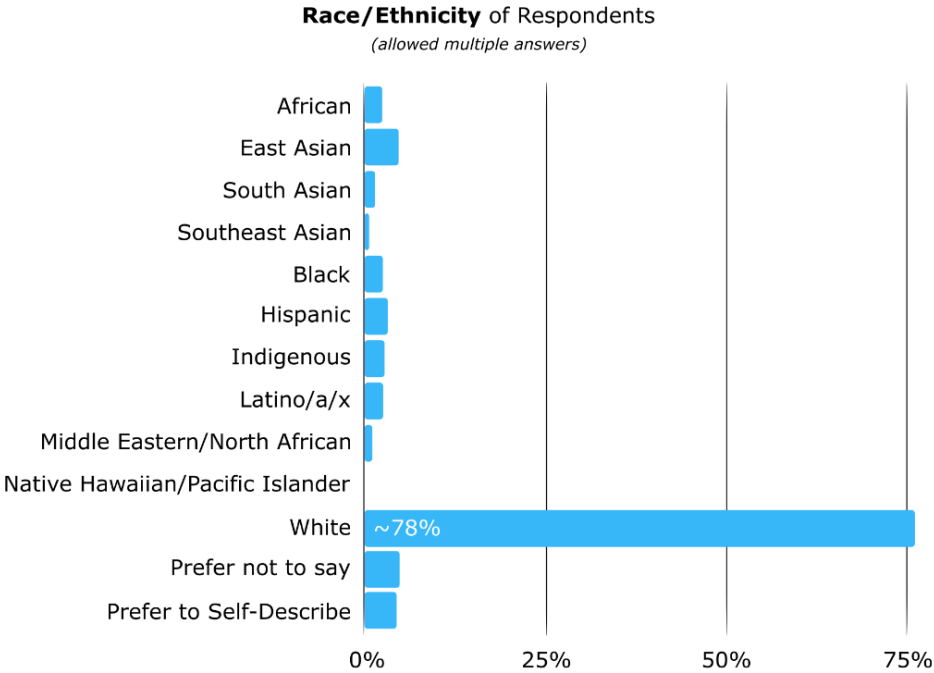
Sexual Orientation

A majority of respondents identify as heterosexual at nearly 80%. About 5% of respondents are homosexual and another 4.5% are bisexual. Additionally, 5% of respondents are relatively evenly split between those who identify as asexual, queer, or questioning.



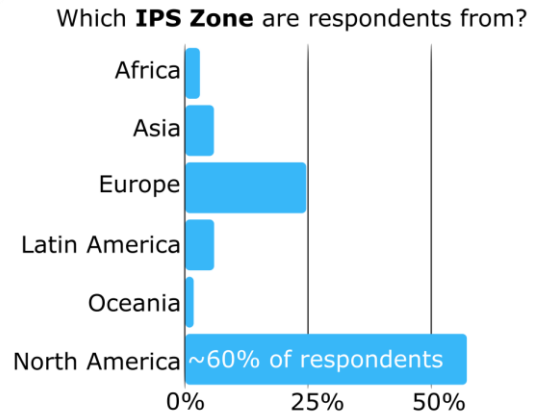
Race/Ethnicity

An overwhelmingly large percentage of our respondents identify as White at nearly 78%. The next largest groups were those who preferred not to say (4.6%), preferred to self-describe (4.2%), and those who identified as East Asian (4.6%). All other answers were represented by less than 4% of respondents.



IPS Zone

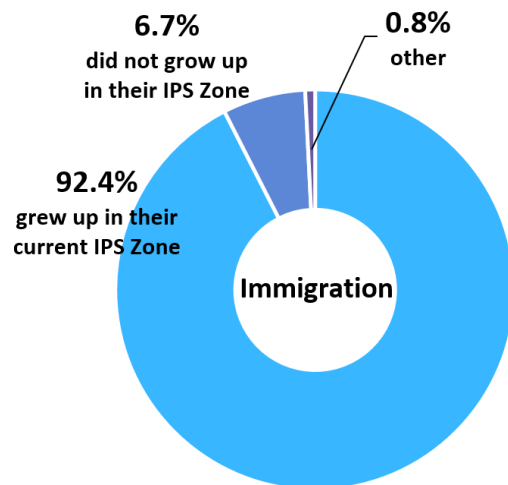
The IPS consists of six geographical regions: Africa, Asia, Europe (including Russia), Latin America, Oceania, and North America, which help complete the [IPS governance structure](#). The majority of respondents are from the North America Zone at nearly 60%. Europe is the next largest represented at close to 25%. Africa and Oceania are the least represented in our sample at 2.9% and 1.9%, respectively. Asia and Latin America are just slightly higher at 5.8% and 6.6%, respectively.



For reference, in May 2020, prior to the dissemination of the 2021 Culture and Climate survey, there were 533 active IPS members: 335 or 62.8% from the North American Zone, 17 or 3.2% from Latin America, 120 or 22.5% from Europe, 7 or 1.3% from Africa, 42 or 7.9% from Asia, and 12 or 2.2% from Oceania.

Immigration

Being an immigrant can bring its own set of challenges and barriers when working and living in different countries or regions of the world. Also, the concept of immigration may look different depending on where you are in the world. For instance, members of the European Union may more easily move between nearby countries compared to those living in North America. To capture a sense of how often a respondent lives and works in an environment different from where they grew up, we asked “Did you grow up in your IPS Zone?” Over 92% of respondents work in the same region they grew up in. Under 7% of respondents did not grow up in their IPS Zone. The 0.8% who answered “other” either desired to be back to where they grew up or their childhood was split between multiple zones.



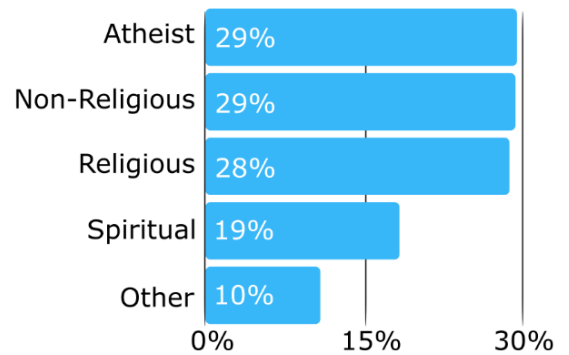
Religion

The majority of respondents consider themselves either atheist, religious, or non-religious at about 30% each. Another 19% see themselves as spiritual. We offered these different options as people can identify in many ways. For instance, a person may believe in a higher being but not belong to a religion or they may follow a spiritual or philosophical belief but not believe in a higher power, etc. Ultimately, respondents were allowed to choose the answer that made the most sense to them. Out of the 10% who answered “other,” many wrote that they are agnostic and others provided either a specific religion, their religious past, what they find spirituality in, or a philosophy they adhere to.

Respondents also gave the religion(s) or spiritual group(s) they belong to, if applicable, in a write-in response question. There were 81 people who answered stating their religion. Of those 81, Christian religions were the most represented at about 65.0%. “Other” was the next largest category at 16.0% and these responses were related to more general philosophies (e.g. science) or some form of non-denominational practice. Other religions or spiritual groups reported were: Judaism (4.9%), Pagan (4.9%), Islam (2.4%), Hindu (2.4%), and Buddhism (1.2%).

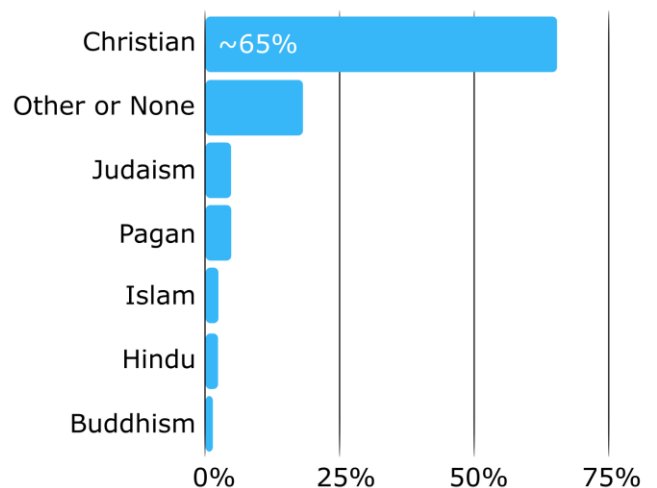
Religion of Respondents

(allowed multiple answers)



Religion or Spiritual Group of Respondents

(allowed multiple answers)



Disabilities

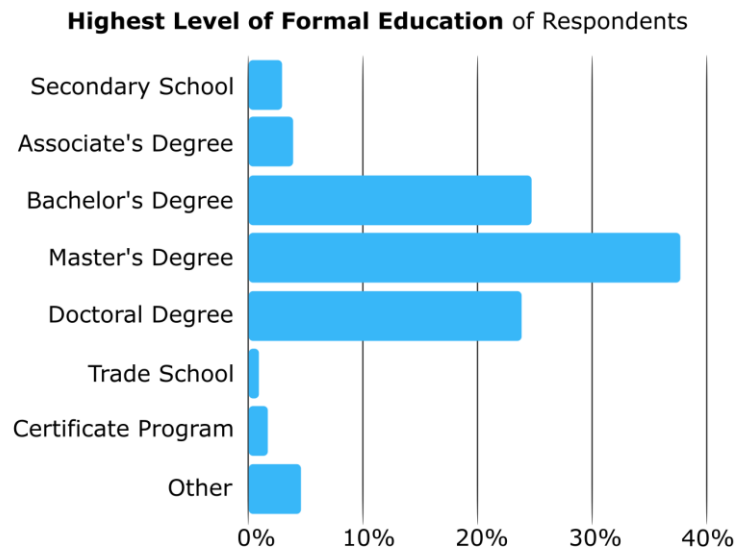
When discussing inclusion, it is important to consider any disabilities people have and what accommodations should be made to eliminate barriers and support participation for everyone. When asked if respondents had a disability, or disabilities, approximately 59% said they do not have any disability. Therefore, approximately 40% of the respondents have some form of disability or multiple disabilities. This table represents the types of disabilities represented.

Disability Reported	Percentage
Chronic Illness/Medical Condition	26.7%
Mental Health/Psychological Condition	25.3%
Physical or Mobility condition: does affect walking/does not affect walking	21.1%: 11.2% / 9.8%
Deaf/Hard of Hearing	11.3%
Cognitive or Learning Disability	9.8%
Blind/Low Vision	8.4%
Disability, but prefer not to say	7.0%
Color Blindness	5.6%
Autism Spectrum Disorder/Asperger's	5.6%
Speech/Communication Condition	2.8%
Acquired/Traumatic Brain Injury	1.4%
Other	12.6%

We also asked if people had ever asked for accommodations for themselves at IPS conferences and events because of their disability, or disabilities. There were 9 individuals who reported that they had requested accommodations. Of those 9, 7 indicated they were “extremely satisfied” with their accommodations and 1 was “satisfied” with their accommodations, while the remaining individual did not answer with their level of accommodation satisfaction. While this is a positive result, some members may not be aware that they can ask for accommodations at IPS conferences and events given the number of requested accommodations compared to the percentage of disabilities reported. Others may have not have felt comfortable asking conference hosts for accommodations, as this was suggested from the longer-form responses that state many conference venues are not accessible due to stairs, terrain, etc.

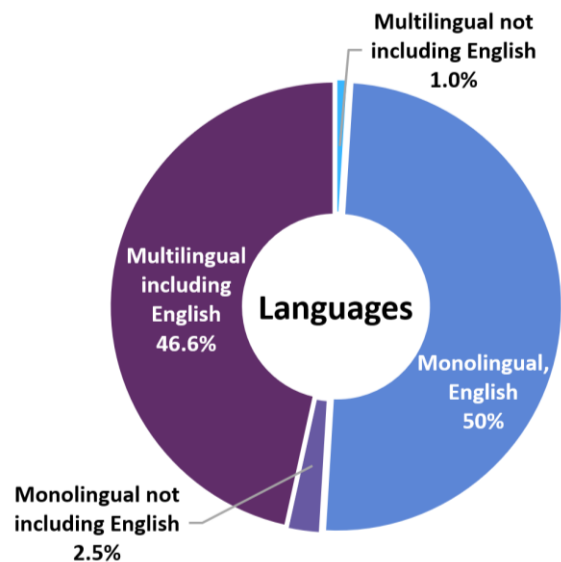
Highest Level of Education

Here, we asked for the respondent's highest level of education. The largest represented highest level of education from respondents was a Master's Degree at nearly 40%, while people with Bachelor's and Doctoral degrees were well represented at approximately 25% each. Those who answered "other" stated that they were generally close to receiving another degree (such as a Master's or Doctoral degree) or received a degree and then took additional credits.



Languages Spoken

Although it conducts business in English, IPS is an international organization and therefore many languages are represented by our respondents. Respondents, who self-reported the languages they speak, were compiled in a chart to show how many speak only English (50.0%), while others speak only another language besides English (2.5%). There were also respondents who are multilingual including English (46.6%), and those who are multilingual but did not speak English (1.0%). Overall, almost 97.0% of respondents speak English. Some respondents did note that they could only speak a little bit of a language or that they were not proficient or fluent in a language. Those responses are not reported here.

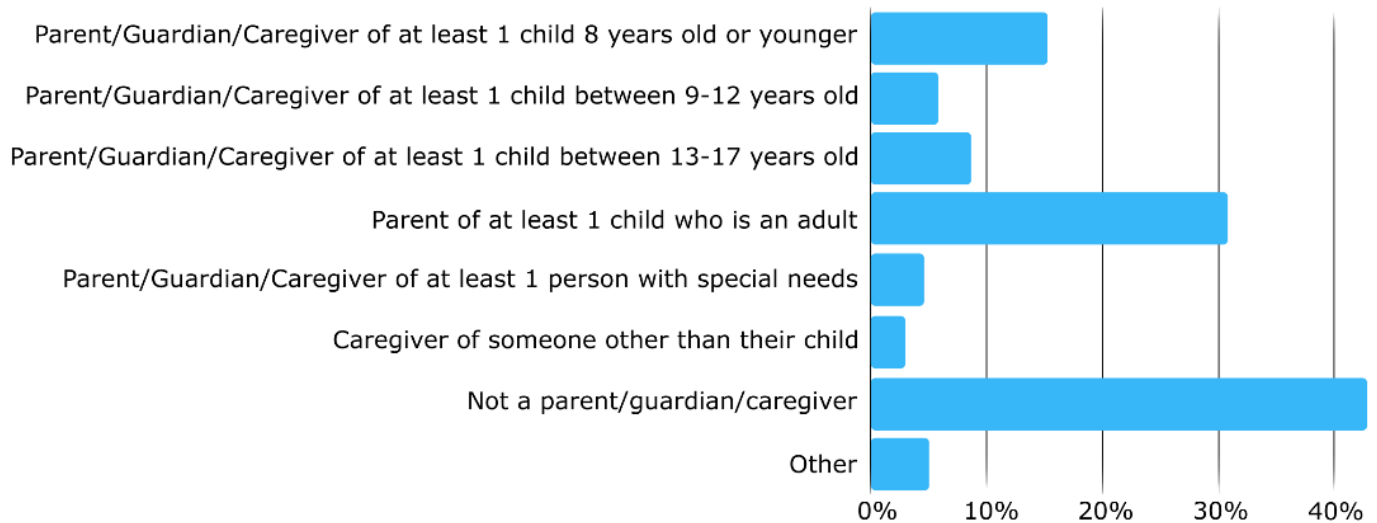


We can also look at the variety of languages spoken by respondents to get a sense of how often other languages aside from English are spoken: German (17.1%), French (12.6%), Spanish (9.3%), Portuguese (6.8%), Russian (2.9%), Japanese (2.4%), Swedish (2.0%), Dutch (1.5%), Italian (1.5%), Arabic (1.5%), Greek (1.5%), Chinese (1.0%), Finnish (1.0%), Korean (1.0%), Afrikaans (1.0%), Hindi (1.0%), as well as a small percentage of people who speak American Sign Language, Ukrainian, Tamil, Latin, Farsi, Mongolian, Creole, Nepali, Telugu, Norwegian,

Danish, and Cantonese. Here, Chinese is listed as that is what respondents stated and it was unclear as to which dialect of Chinese they speak. When specific dialects were reported (i.e. Cantonese) it was listed separately. Note that these percentages are based on how many people said they spoke the language from the 205 people who answered this question.

Because of the nature of IPS being an English-speaking organization, with its membership primarily in North America and Europe, the languages represented by those regions are expected to be the most represented.

Respondent's **Caregiver Status**
(allowed multiple answers)



Caregiver Status

Oftentimes, when an individual is a caregiver for others, it can be a barrier to participation. Therefore, the survey asked about the respondent's caregiver status.

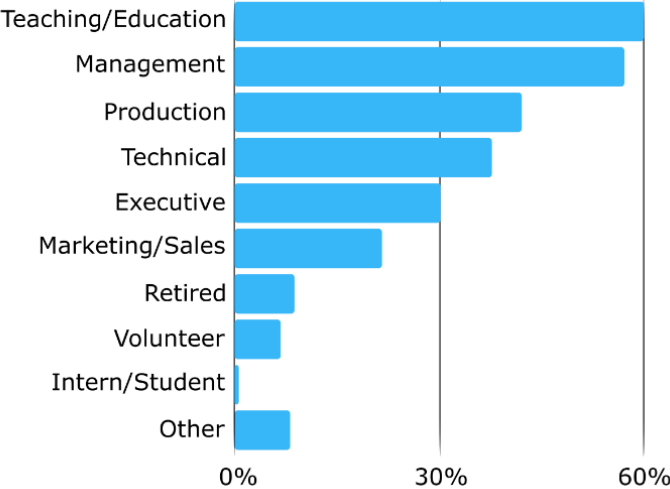
The most represented caregiver status is that they are not a caregiver (approximately 43%). A significant number of respondents are parents/guardians/caregivers of at least one minor (person under the age of 18) at approximately 33% combined. Another 31% of respondents are a parent to at least 1 child who is an adult (age 18+). The "other" category included responses that indicated the respondent was a grandparent, a person who is the caregiver of a special needs animal, or a person who cares for their parents.

PLANETARIUM DEMOGRAPHICS

Primary Planetarium Positions

Here we see the roles people hold in the planetarium field. “Teaching and education” is the best represented, and accounts for 60% of respondents. Other common roles were: management (57%), production (42%), technical (37%), as well as executive roles (20%). The “other” category accounted for 8% of respondents and included write-in answers such as librarian, archivist, and board member as well as submissions from people who clarified their multifaceted roles.

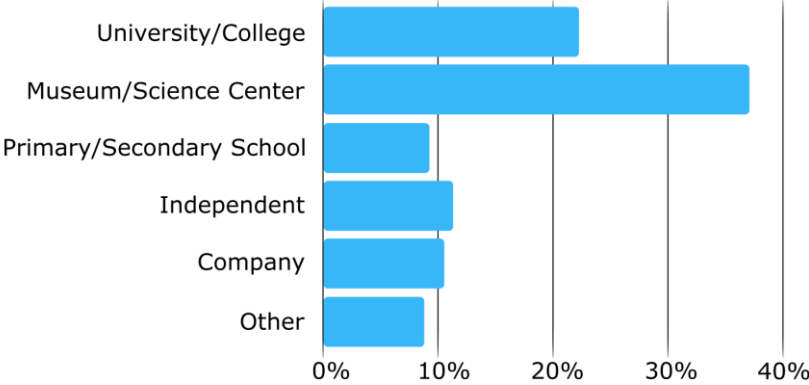
Primary Planetarium Positions Held by Respondents
(allowed multiple answers)



Work Environment

Similarly, we can see that the most common place for respondents to work is in a museum or science center (37.3%) followed by university or college (22.5%). The remaining categories (primary/secondary school, independent, company, and other) were around 10% each. The “other” category (8.9%) included responses from those who work in portable planetariums, at government or municipal facilities, or at observatories.

Work Environment of Respondents

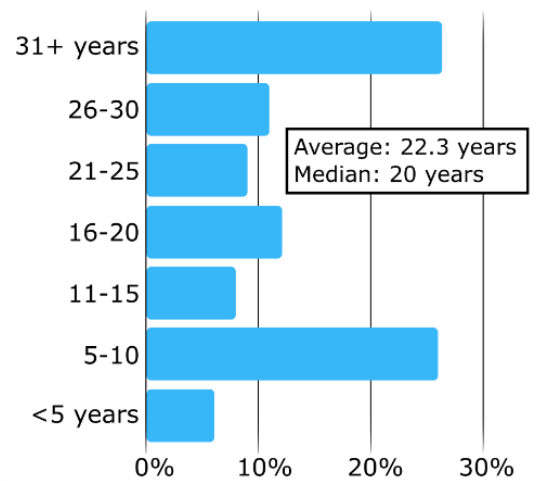


Time Working in Planetarium Field

We also asked how long people have been in the planetarium field. This was a write-in response question. Some respondents estimated their time in the field (e.g. 30+ years or <1 year). In these cases, responses were rounded to the closest approximate number. For instance, if a person answered 30+ years, their response was processed as 31 years. If they answered <1 year, this was estimated at 1 year in the field. The results are as follows:

When broken down by ranges, we see the most representative groups are those who have been in the field for 31 years or longer at 26.3%, followed closely by those who are relatively new to the field (5–10 years) at 25.9%. The average number of years in the field for respondents was 22.3 years and the median were 20 years.

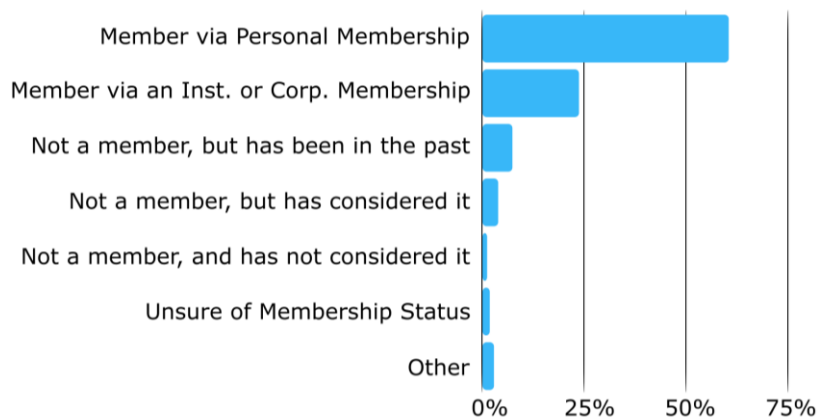
How long have the respondents **been in the Planetarium field?**



IPS MEMBERSHIP STATUS

Approximately 84% of respondents were IPS members, through either personal membership or corporate membership. This does likely bias the data toward IPS members. Considering this is an IPS driven survey, IPS members likely got more exposure to the survey and reminders to take it; therefore, it is not surprising that respondents skew toward being IPS members. The “other” category included write-in clarifications, including those who were retired and those who worked with IPS members but were not a member themselves.

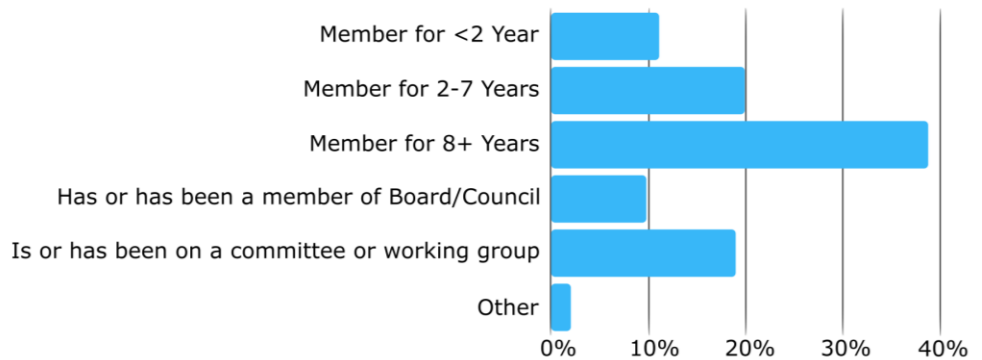
IPS Membership Status of Respondents
(allowed multiple answers)

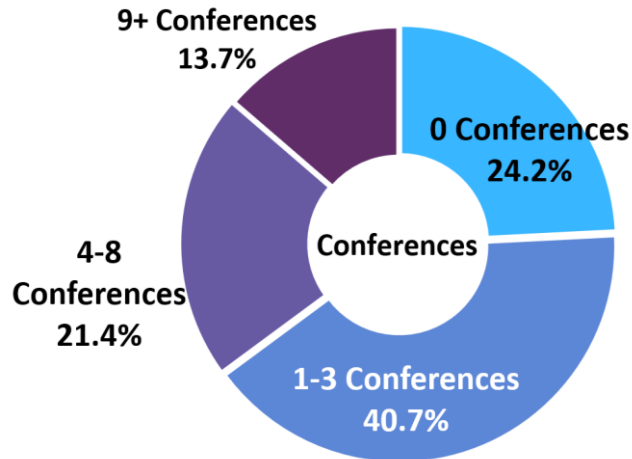


Level of Involvement with IPS

Of those who were IPS members, the best represented were those who were long-term members at nearly 40%. Newer IPS members, who have been members for less than 8 years, are at approximately 31% combined. Considering newer members by definition do not remain that way, it makes sense that longer-term members are largely represented. This also suggests some level of IPS member retention. Nearly 20% of respondents provided some level of service to IPS through work on committees and working groups. Another 10% have held leadership positions on the IPS Board (formerly the IPS Council). The “other” category included clarifications on length of membership and types of IPS-related leadership roles people have held.

Respondent's **Level of Involvement with IPS**
(allowed multiple answers)





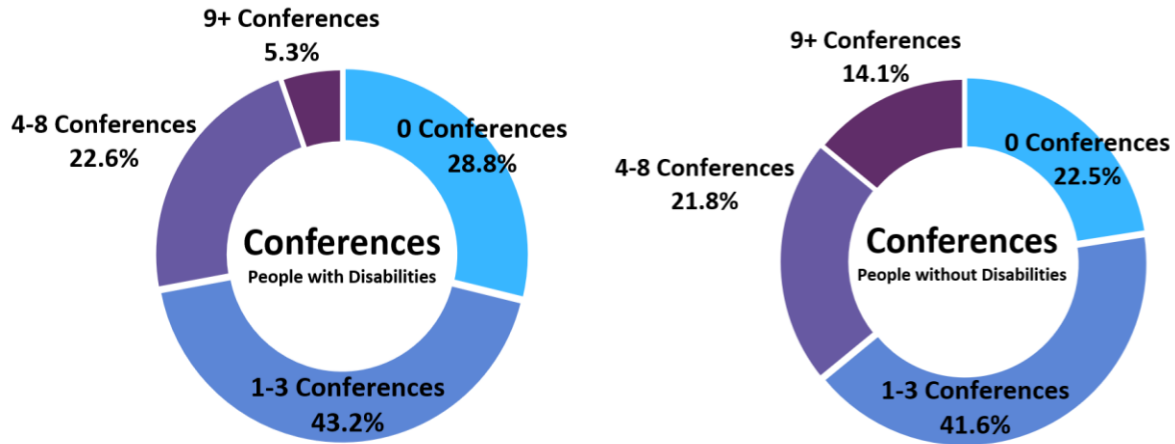
IPS CONFERENCE ATTENDANCE

Here, we gathered information on the number of IPS conferences people have attended. Note that we did not specify whether the attended conference was in-person or virtual (as would have been the case for the virtual IPS conference in 2020). As virtual components are becoming more prevalent, we will want to specify virtual vs. in-person attendance in future surveys.

The majority of people who filled out the survey have attended 1–3 IPS conferences (40.7% of respondents). The next largest amount was for those who have attended no IPS conferences (24.2%). After that, 21.4% of respondents attended 4–8 conferences, and 13.7% attended 9 or more conferences.

When compared, men are more likely to attend more conferences than women. From other responses, we see that women have been working in the planetarium field for less time than men, on average. The average length of time in the field for women is 19 years, with a median of 16 years. This is compared to men at an average of 23.7 years, with a median of 23 years. This could explain the difference in conference attendance seen between men and women. We are not able to compare non-binary respondents here as we did not collect a statistically significant amount of non-binary responses with which to make a comparison.

White respondents are more likely to attend more conferences than respondents who are Black, Indigenous, or People of Color (BIPOC). While 15% of White respondents reported attending 9 or more IPS conferences, only 4.9% of BIPOC respondents reported attending 9 or more IPS conferences. We see from survey data that members who are BIPOC have been in the field for a slightly less amount of time than White members. Members who are BIPOC have an average amount of time in the field reported at 19.4 years, with a median of 18 years. This is compared to members who are White who have an average of 23.4 years and a median of 21 years.



Barriers to Conference Participation

From the responses, we see that people with disabilities are less likely to attend conferences. The average length of time that people with disabilities have been in the field is 22.5 years while the median amount of time was 20 years, which is on par with the average for the whole group. The age for this group is also on par with the whole set of respondents.

What stops respondents from coming to more IPS conferences?

(allowed multiple answers)



The largest factors reported for why people do not attend IPS conferences is that the travel costs and conference fees are too expensive at 18.5% and 39% respectively. Other responses of note are “I feel unwelcome or uncomfortable at some conference cities/countries” (3.9%), “I do not think it is worthwhile for me to attend” (3.6%) and “I do not feel comfortable communicating in English” (1.6%), which may identify areas of potential growth for the organization. The “other” category for barriers to conference participation includes responses

that fall into existing groups such as financial or limited employer support, current status in the field such as someone who is very new or who is retired, COVID-19 preventing travel, health concerns, or a personal preference.

We also do see some differences between sub-groups of respondents that show that barriers are more prevalent for some groups over others. The table below lists out the percentages for each group, which can be compared to other groups as well as the entire sample.

	Everyone	Ages 45+	Women	LGBTQIA+	BIPOC	Persons with at least one Disability
Conference fees are too expensive	18.5%	25.0%	37.5%	14.3%	34.1%	28.7%
Travel fees are too expensive	39.0%	52.6%	65.2%	26.8%	60.9%	52.1%
Employer does not support me	18.0%	25.0%	36.0%	12.5%	29.2%	28.7%
Professional obligations prevent me	15.5%	20.5%	23.6%	12.5%	39.0%	24.7%
Personal obligations prevent me	9.0%	10.5%	19.0%	7.1%	9.8%	17.8%
Do not feel comfortable communicating in English	1.6%	2.3%	1.4%	1.8%	7.3%	2.7%
I feel unwelcome or uncomfortable in the IPS community	0.8%	1.2%	0.0%	1.8%	0.0%	1.4%
I feel unwelcome or uncomfortable in host cities/countries	3.9%	4.7%	4.1%	8.9%	2.4%	5.5%
Not worthwhile	3.6%	5.8%	2.8%	1.8%	0.0%	4.1%
I make it to all	11.1%	16.4%	11.1%	8.9%	14.6%	12.3%
Other	10.8%	17.0%	15.3%	3.6%	12.1%	23.2%

People who are either older, women, BIPOC, or with at least one disability were more likely to respond saying the conference fees and travel fees are too expensive. Additionally, these same subgroups are more likely to say that their employers do not support them or they have professional obligations that prevent them from attending. For context, these subgroups have been historically excluded from education and professional environments. This historical exclusion has had some long-lasting effects, which may contribute to what we see here.

Women and people with disabilities are also more likely to say that personal obligations prevent them from attending IPS conferences. People who are in the BIPOC subgroup are more likely to say that they are not comfortable communicating in English at conferences. Those who feel unwelcome and uncomfortable in the IPS community are all either over 45 years old, members of the LGBTQIA+ community, or have at least one disability. While these are not highly represented feelings, they are still present in our community. LGBTQIA+ respondents are also more likely to feel unwelcome or uncomfortable with a conference host city.

The “other” category, regarding barriers to conference participation, included many write-in responses that were variations of the multiple-choice answers offered in the survey. However, a common write-in response was that some have not had a chance to attend a conference because they are new to the field. Other respondents stated that they have had to choose between attending other conferences and attending an IPS conference, as well as having to navigate certain government laws against traveling to places with discriminatory laws.

To gain a better idea of the financial barriers to conference participation, we asked respondents to answer how they paid for conference-related expenses. Most respondents who attended IPS conferences stated that they use personal funds to attend the conferences (46.3%). After this, 38.8% of respondents said they receive funding from their employer. A small number of respondents said they receive an equal amount of support from different sources (7%) and an additional small fraction (3%) of respondents said they receive support from external sources (e.g., grants). “Other” answers included only participating online in the free version or someone who has not participated because they would have to use either personal funding or from planetarium revenue, changes in status due to retirement, and specifically from their planetarium’s revenue. When looking at responses by subgroup, one notable difference is that those who are retired rely more on personal funding, at 81% compared to the 46.3% reported by everyone.

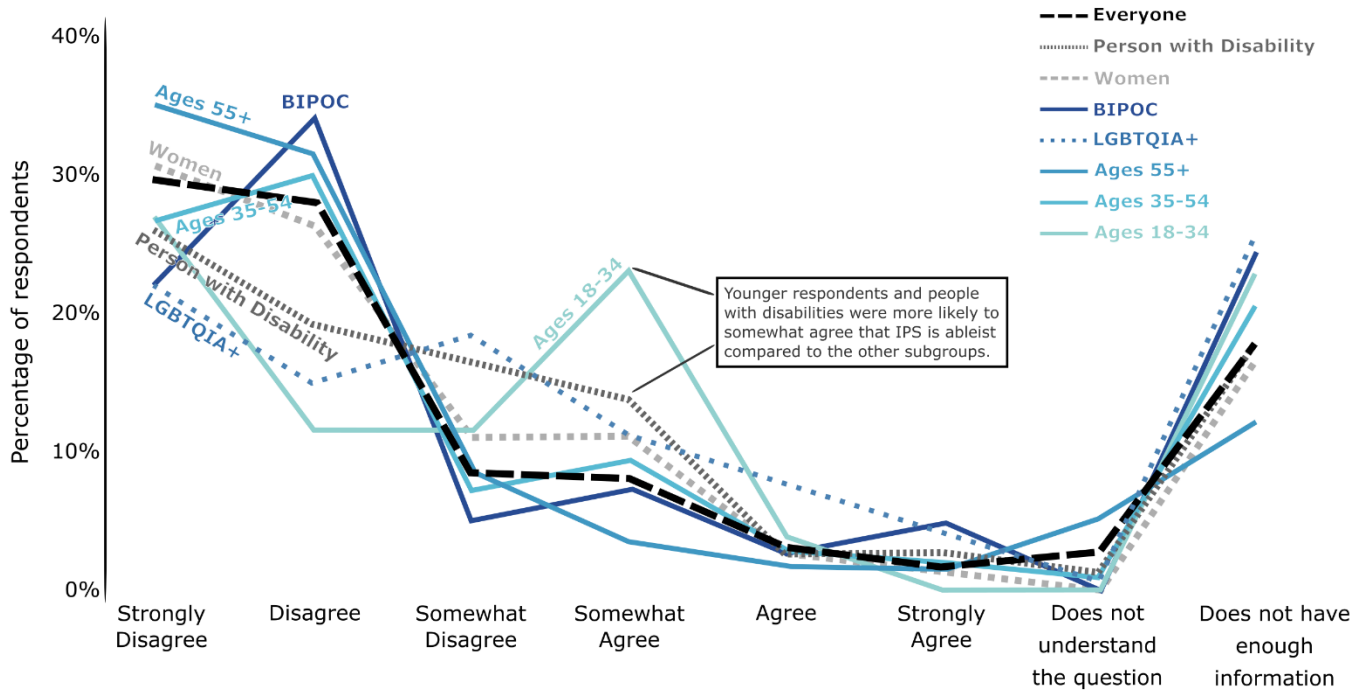


IPS QUALITIES

Within the survey, we asked respondents to rate how much they agreed or disagreed that IPS possesses certain qualities. Respondents could also say that they did not understand the question, or that they did not have enough information to make a judgment. Below are the responses for each of those qualities. Responses are shown for the entire sample of respondents, as well as different subgroups to pinpoint any differences across the community. The subgroups that are shown include three age groups (18–34, 35–54, and 55+ years old), LGBTQIA+, women, BIPOC, and people who have at least one disability. Note that some respondents fit into more than one subgroup.

The data is presented here in a way that shows the overall trend of responses. All subgroups are overlaid on top of each other in an effort to show variations in the trends. Since some subgroups are smaller than others, numbers are presented as percentages for a fair comparison.

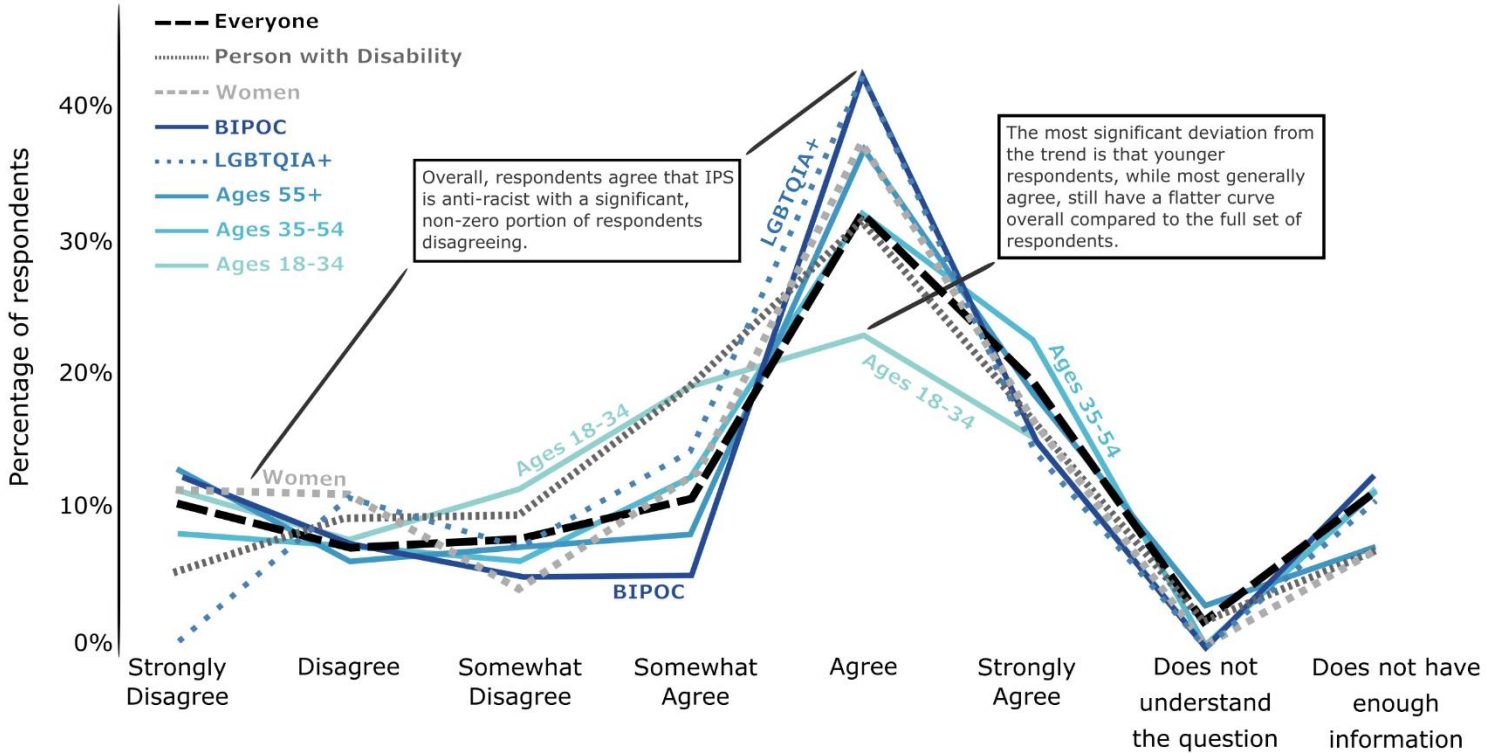
How much does a person agree or disagree that IPS is **ableist**?



Ableist

Ableism is unjust treatment and social prejudice against people with disabilities or people who are perceived to be disabled. Overall, the trend suggests that respondents “disagree” that IPS is ableist, though there are significant numbers who did agree to some degree that IPS is ableist or who felt they did not have enough information to respond. Overall, respondents ages 18-34 and people with disabilities were more likely to “somewhat agree” compared to the other subgroups that IPS is ableist, though the larger deviation was for ages 18-34. BIPOC were also more likely to “disagree” than “strongly disagree” that IPS is ableist compared to all respondents and compared to all other subgroups.

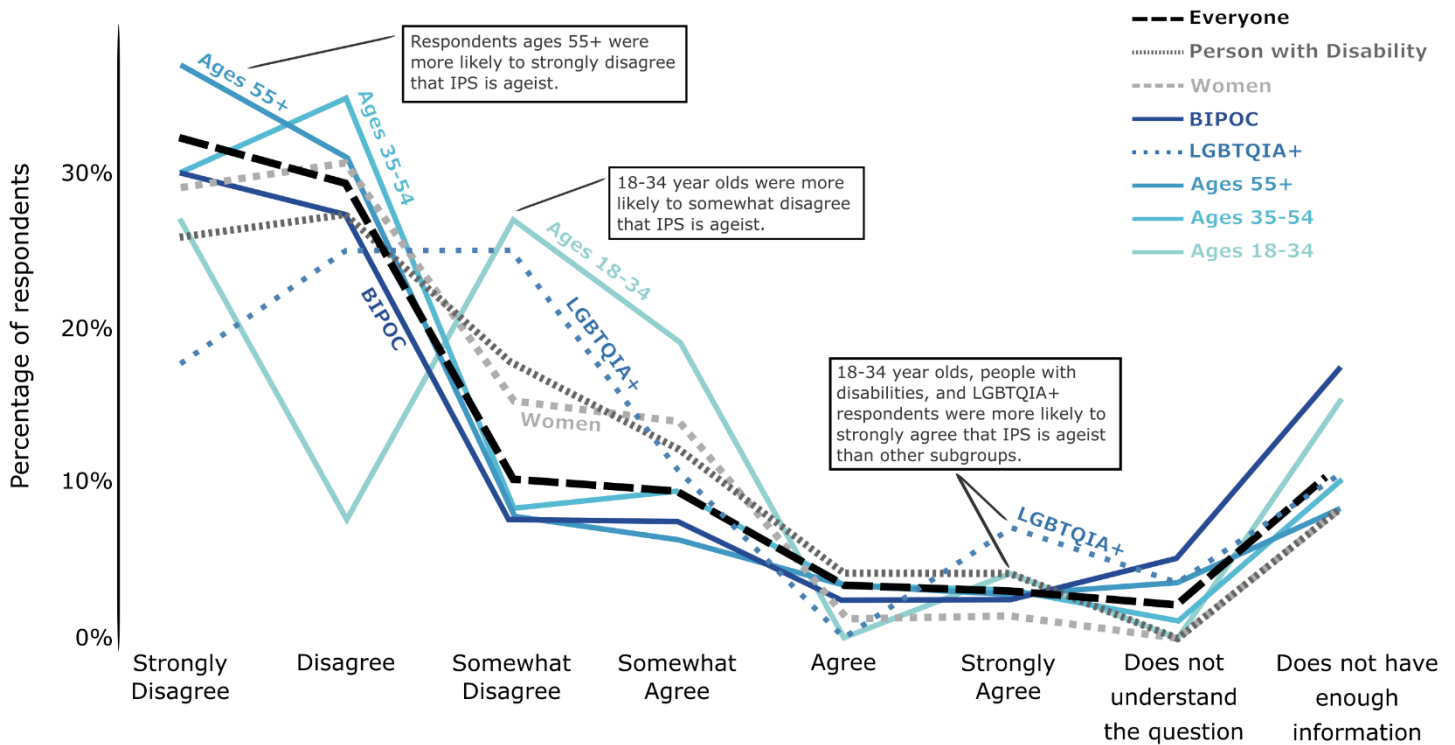
How much does a person agree or disagree that IPS is **anti-racist**?



Anti-Racist

Anti-racism is the practice of actively opposing and dismantling racism and systemic bias. This is a more active form of identifying and removing systems in place that are racist, both in overt and subtle fashions. This behavior goes beyond simply not being racist as being non-racist is passive and therefore complicit in more systemic forms of oppression. Overall, respondents “agree” that IPS is anti-racist with a significant, non-zero portion of respondents disagreeing at some level. The most significant deviation from the trend is with respondents in the 18–34 age group. While most generally agree at some level that IPS is anti-racist, they have a flatter curve overall compared to the full set of respondents, meaning that there was a wider spread in responses among this group.

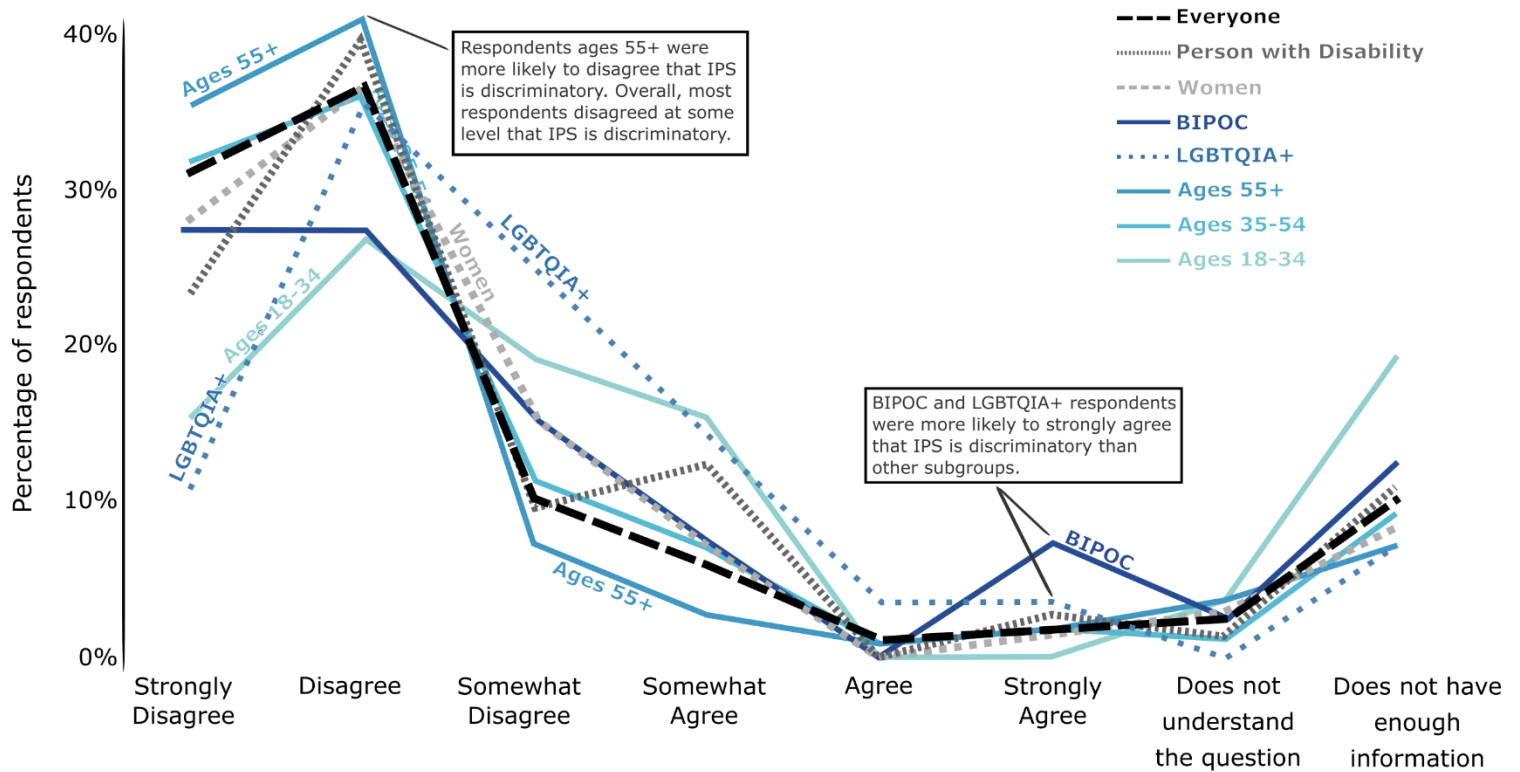
How much does a person agree or disagree that IPS is **ageist**?



Ageist

Ageism is the discrimination against someone based on their age. This can go in either direction; as in, being ageist toward someone who is older, or ageist toward someone who is younger. Overall, the trend here is toward respondents disagreeing on some level that IPS is ageist, with “strongly disagreeing” being the most represented with the full set of respondents. We do see some significant deviations from this trend however. Respondents ages 55+ were more likely to “strongly disagree” than “disagree” that IPS is ageist. Respondents in the 18–34 age group were more likely to “somewhat disagree” and were also more likely to “strongly agree” that IPS is ageist than other age groups. We also see respondents in the 35–54 age group being more likely to “agree” rather than “strongly agree” that IPS is ageist. LGBTQIA+ respondents were also more likely to “strongly agree” than other subgroups here.

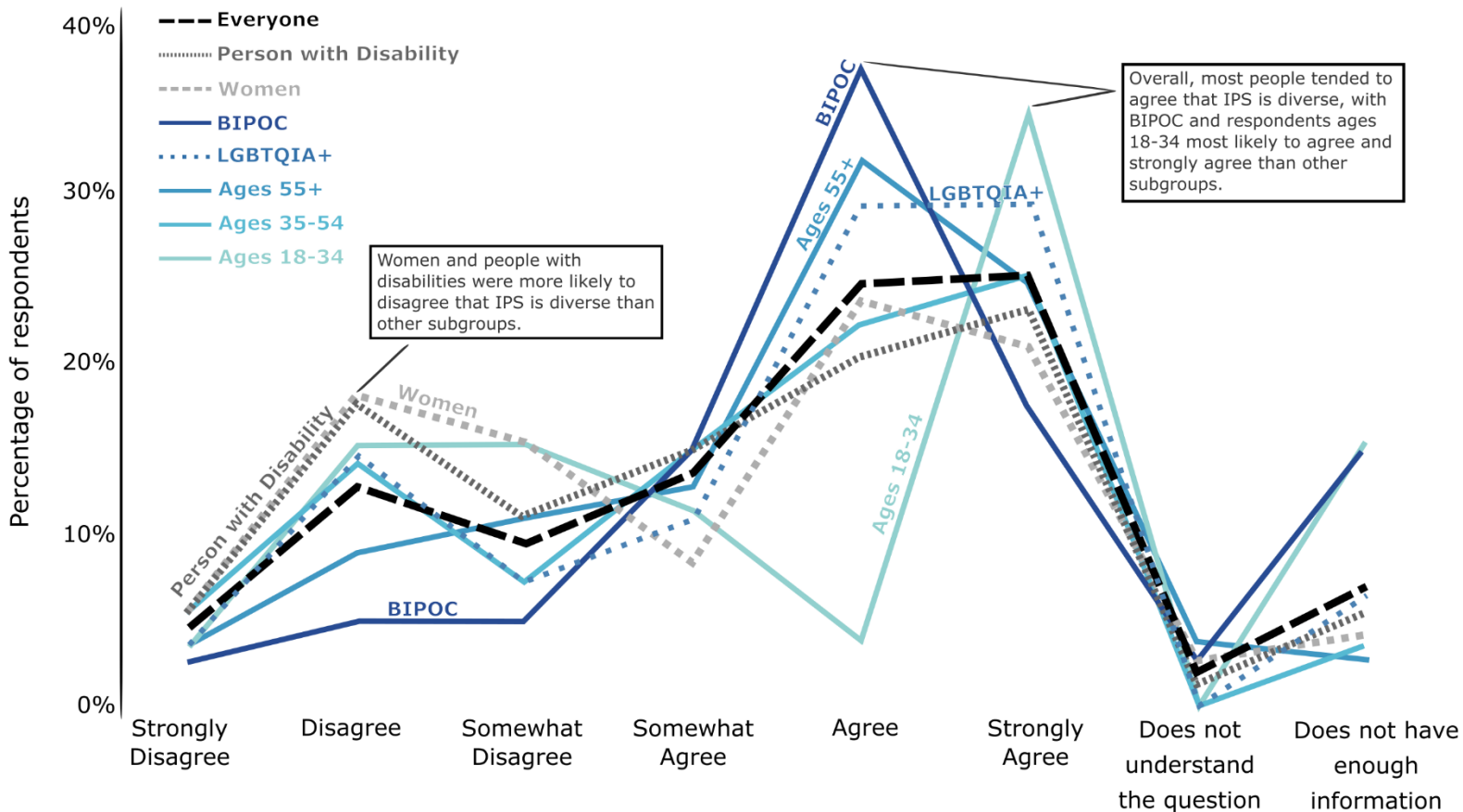
How much does a person agree or disagree that IPS is **discriminatory**?



Discriminatory

This question addressed an overarching characteristic of whether or not IPS is discriminatory rather than discrimination based on a particular factor. On the whole, the answers leaned toward “disagree” from the full set of respondents. However, there were a significant number of respondents who agreed to some extent that IPS is discriminatory. It is also important to note that BIPOC and LGBTQIA+ respondents were more likely to respond that they “strongly agreed” that IPS is discriminatory over other subgroups. Respondents ages 55+ were more likely to “strongly disagree” and “disagree” that IPS is discriminatory.

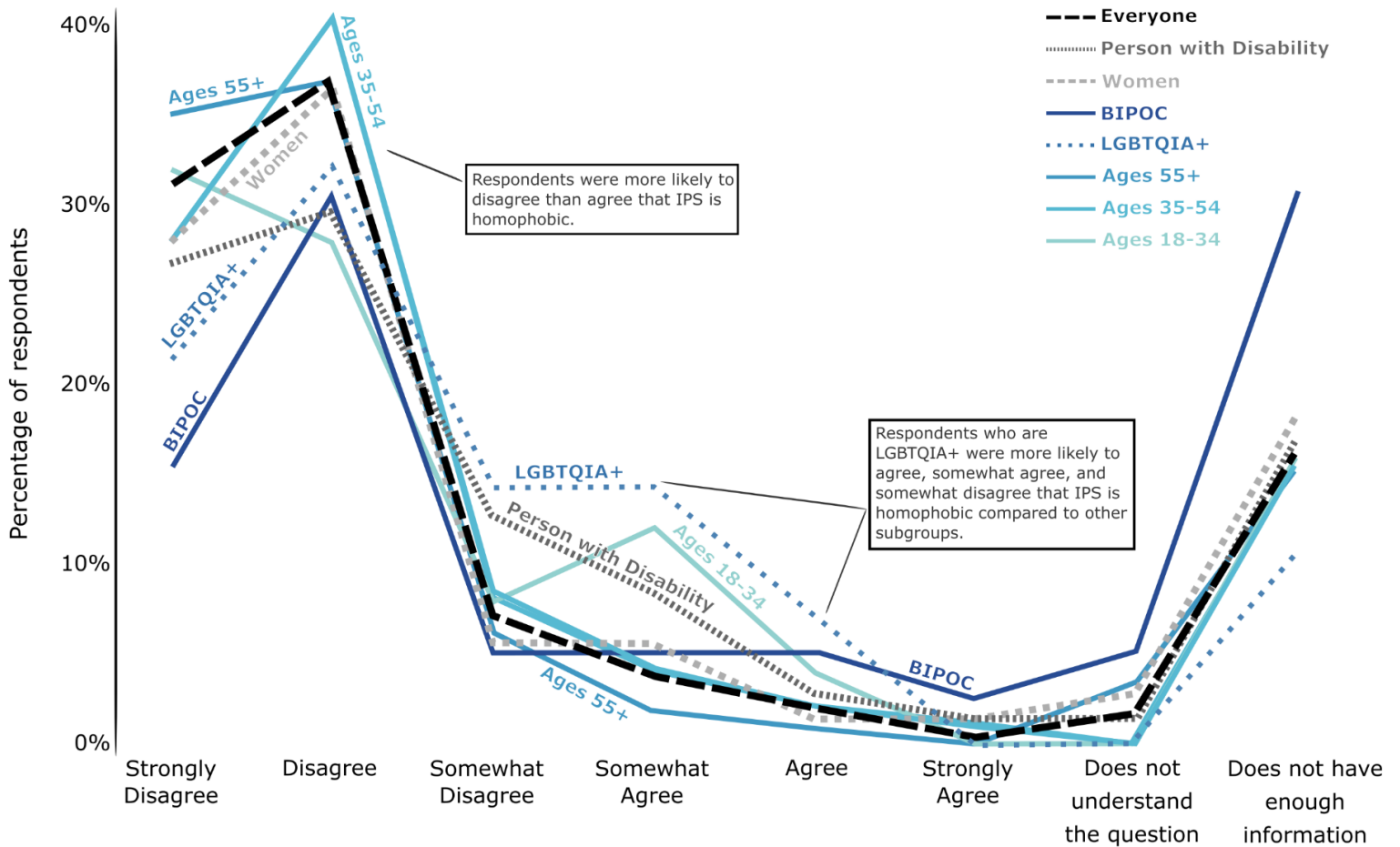
How much does a person agree or disagree that IPS is **diverse**?



Diverse

This section addresses the overarching question of whether or not IPS is diverse. In the survey, it was left to the respondent to decide what was meant by “diverse” as diversity can mean many different things to an individual. The overall trend was toward agreeing to some extent that IPS is diverse; however, the curve is rather flat with a higher percentage of respondents still disagreeing that IPS is diverse to some extent. BIPOC respondents were more likely to “agree” than “strongly agree” and less likely to disagree on some level compared to other subgroups. Respondents ages 18–34 were more likely to “strongly agree” that IPS is diverse than other subgroups. Women and people with disabilities were more likely to “disagree” that IPS is diverse compared to other subgroups.

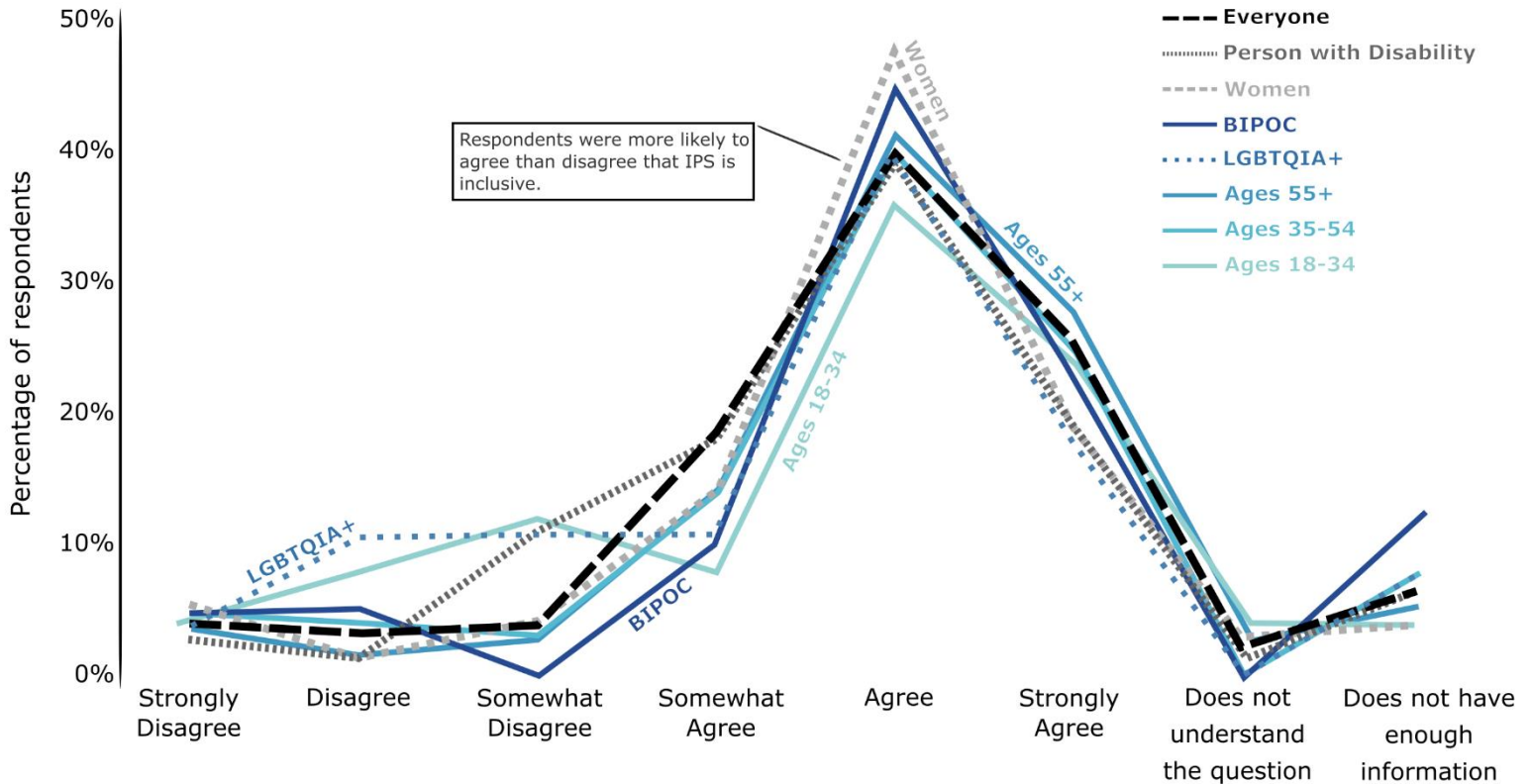
How much does a person agree or disagree that IPS is **homophobic**?



Homophobic

Homophobia is the dislike of and discrimination against people who are homosexual (people who love and have sexual relationships with people of the same gender). The overarching trend saw respondents “disagree” to “strongly disagree” that IPS is homophobic. Respondents who are LGBTQIA+ were more likely to “somewhat disagree,” “somewhat agree,” or “agree” that IPS is homophobic compared to other subgroups. Respondents ages 18-34 show a slightly different trend with “strongly disagree” being the most represented response within this subgroup, but also were more likely to “somewhat agree” that IPS is homophobic when compared to the full set of respondents.

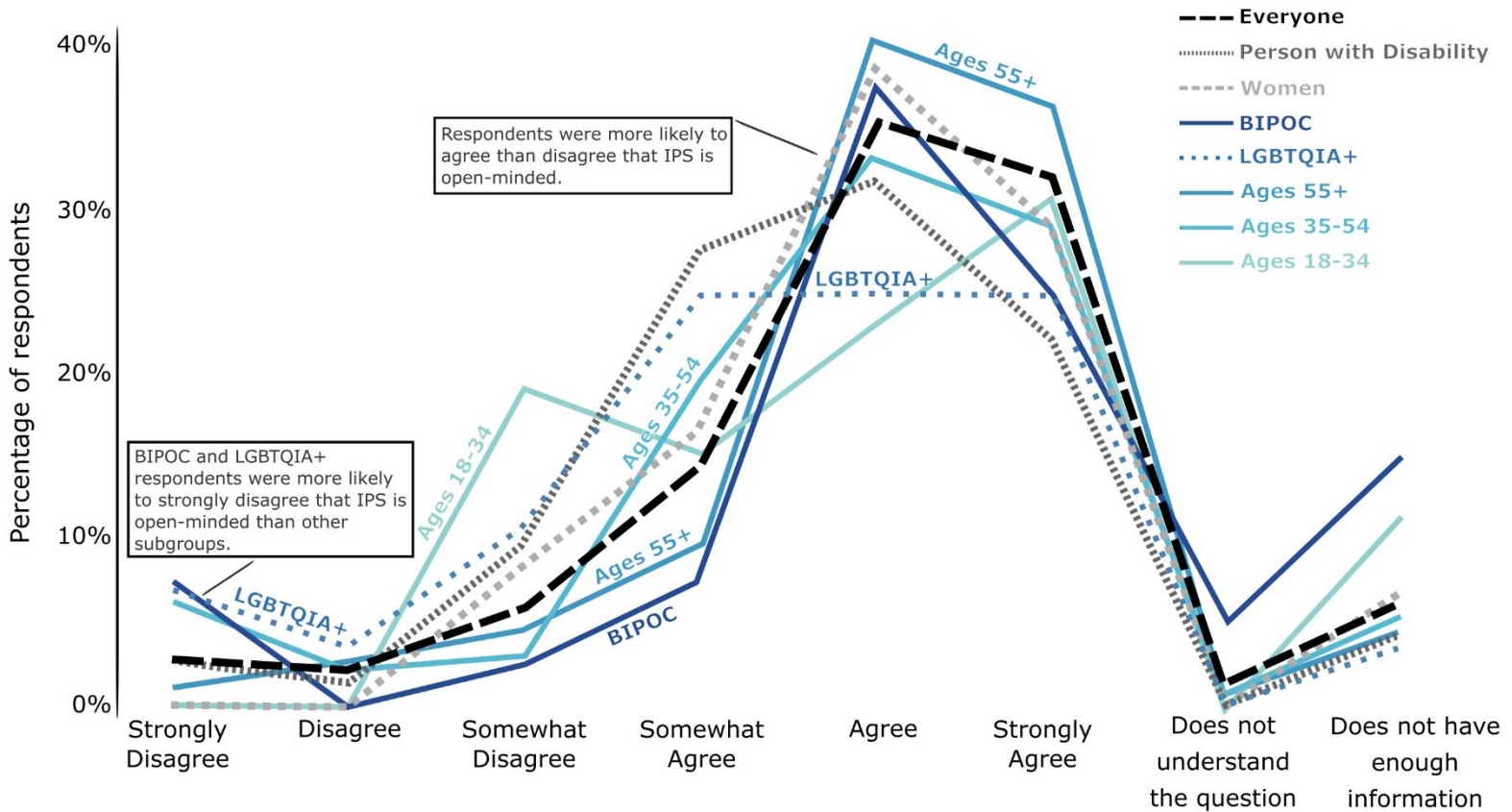
How much does a person agree or disagree that IPS is **inclusive**?



Inclusive

Being inclusive refers to whether or not IPS is able to include people of diverse backgrounds in all activities. On the whole, respondents agreed on some level that IPS is inclusive. “Strongly agree” was well represented among respondents but it was significantly lower compared to “agree.” Respondents ages 18–34 years old, LGBTQIA+ respondents, and respondents with disabilities were slightly more likely to “somewhat disagree” that IPS is inclusive compared to other subgroups.

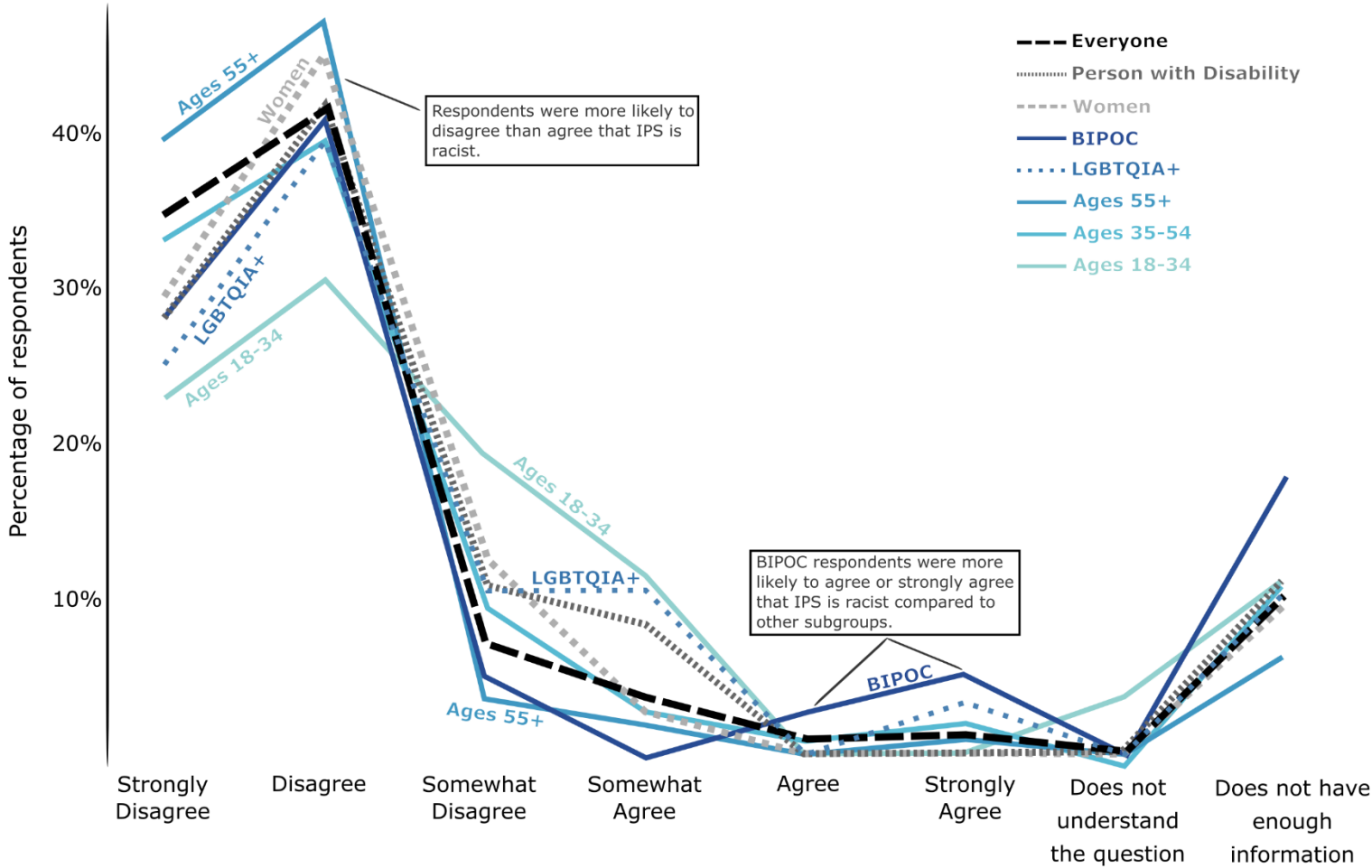
How much does a person agree or disagree that IPS is **open-minded**?



Open-Minded

The general trend here is that respondents “agree” to “strongly agree” that IPS is open-minded. However, there is significant variation between subgroups of respondents. Notably, while people with disabilities were mostly likely to “agree” that IPS is open-minded, they were more likely to “somewhat agree” compared to “strongly agree” within that subgroup. Respondents ages 18-34 were more likely to “strongly agree” than “agree” or “somewhat agree” within that subgroup. This subgroup was also more likely to “somewhat disagree” that IPS is open-minded compared to the full set of respondents.

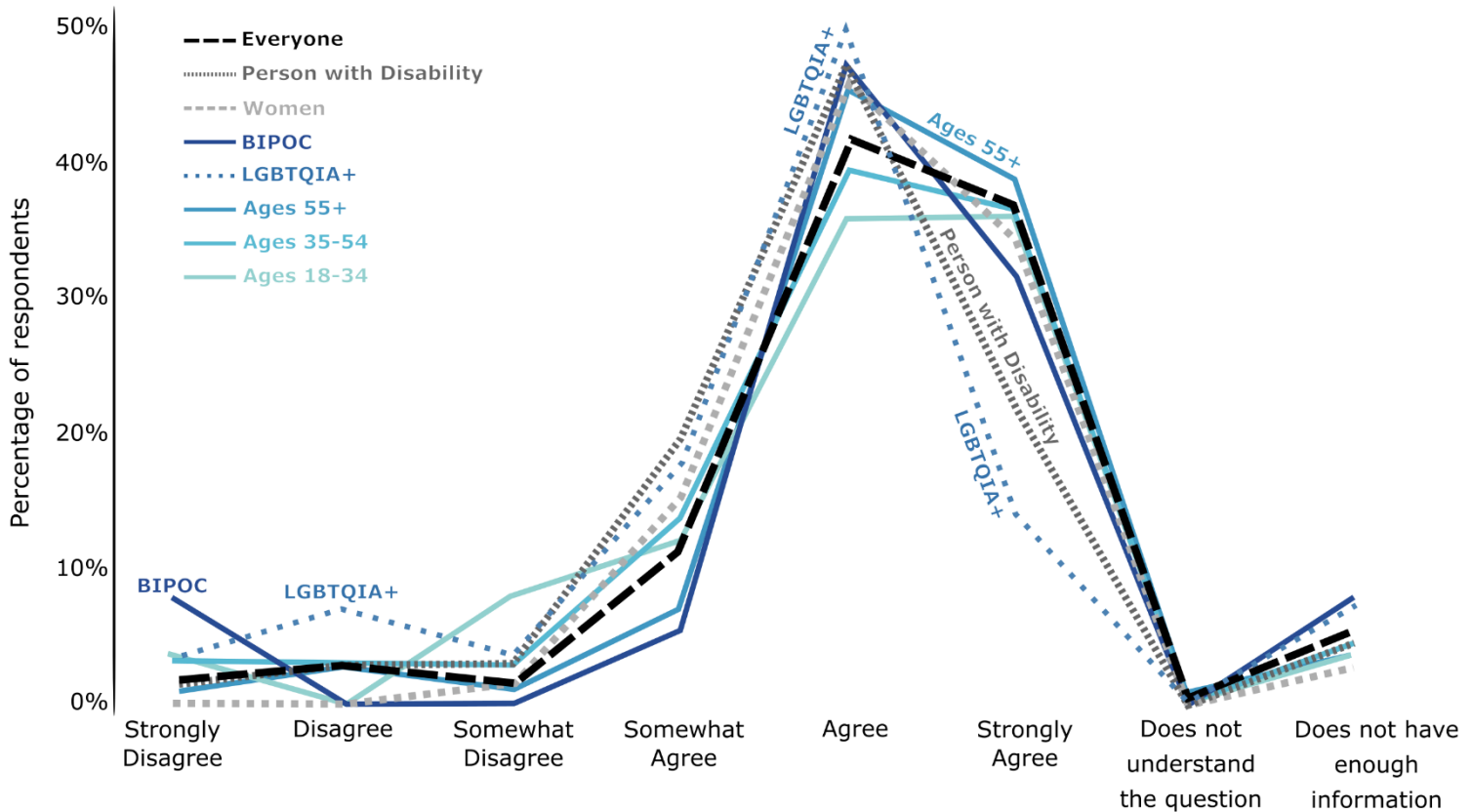
How much does a person agree or disagree that IPS is racist?



Racist

Racism is the discrimination of people based on their race or the color of their skin. Racism can be subtle or overt, individual or systemic. Overall, the trend was that respondents “disagree” to “strongly disagree” that IPS is racist. Respondents ages 18–34 have a similar trend line shape compared to other subgroups, albeit less pronounced. They were more likely to “somewhat disagree” to “somewhat agree” that IPS is racist. BIPOC respondents had a similar trend shape compared to other subgroups, but were more likely to “agree” or “strongly agree” that IPS is racist over other subgroups.

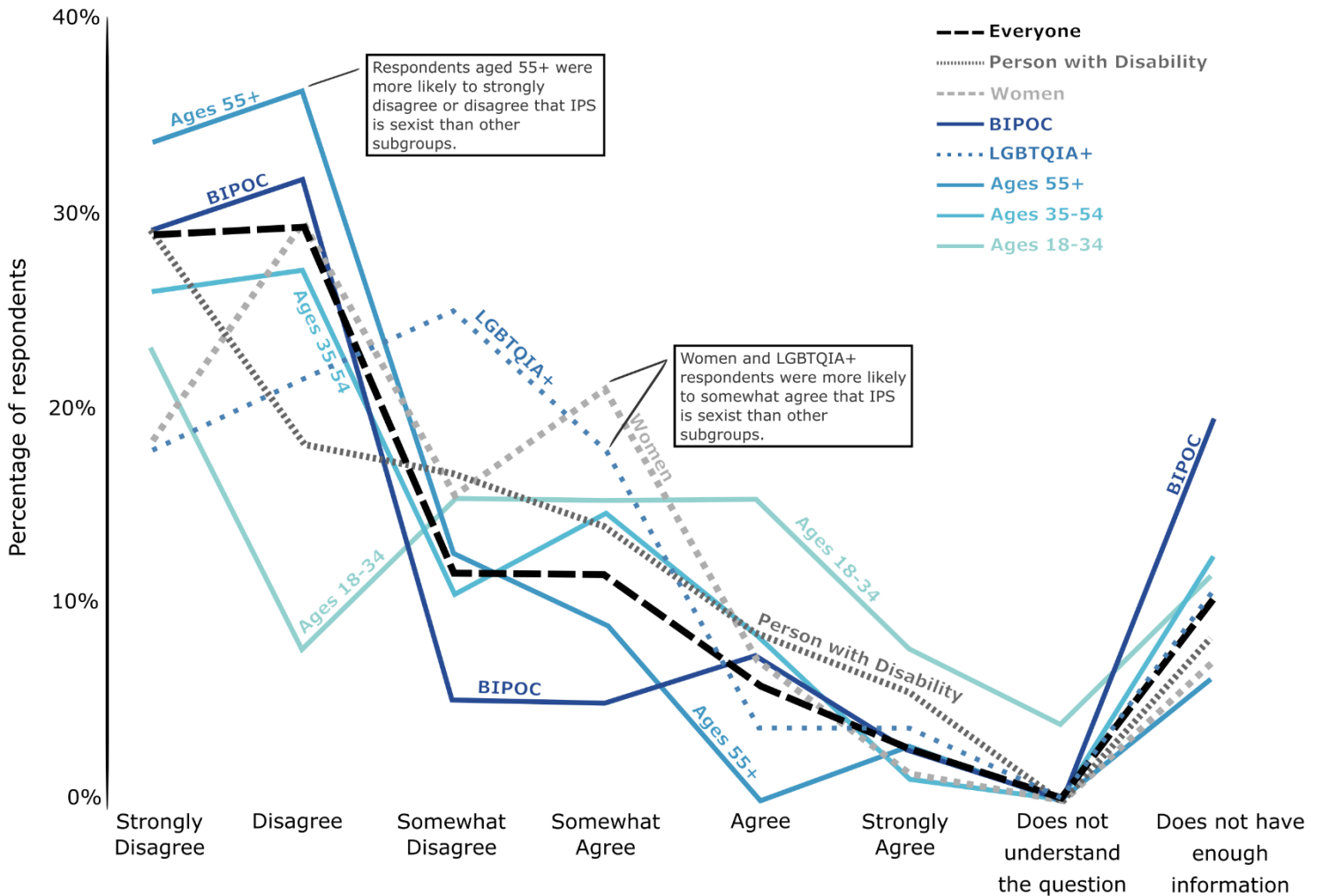
How much does a person agree or disagree that IPS is **respectful**?



Respectful

In general, the trend shows that respondents were most likely to “agree” that IPS is respectful, with “strongly agree” being a close second. People with disabilities and LGBTQIA+ respondents were more likely to “strongly agree” to “somewhat agree” compared to the full sample. LGBTQIA+ respondents were also more likely to “disagree” than other subgroups and BIPOC respondents were more likely to “strongly disagree” than other subgroups. Respondents ages 18–34 were more likely to “somewhat disagree” that IPS is respectful than other subgroups.

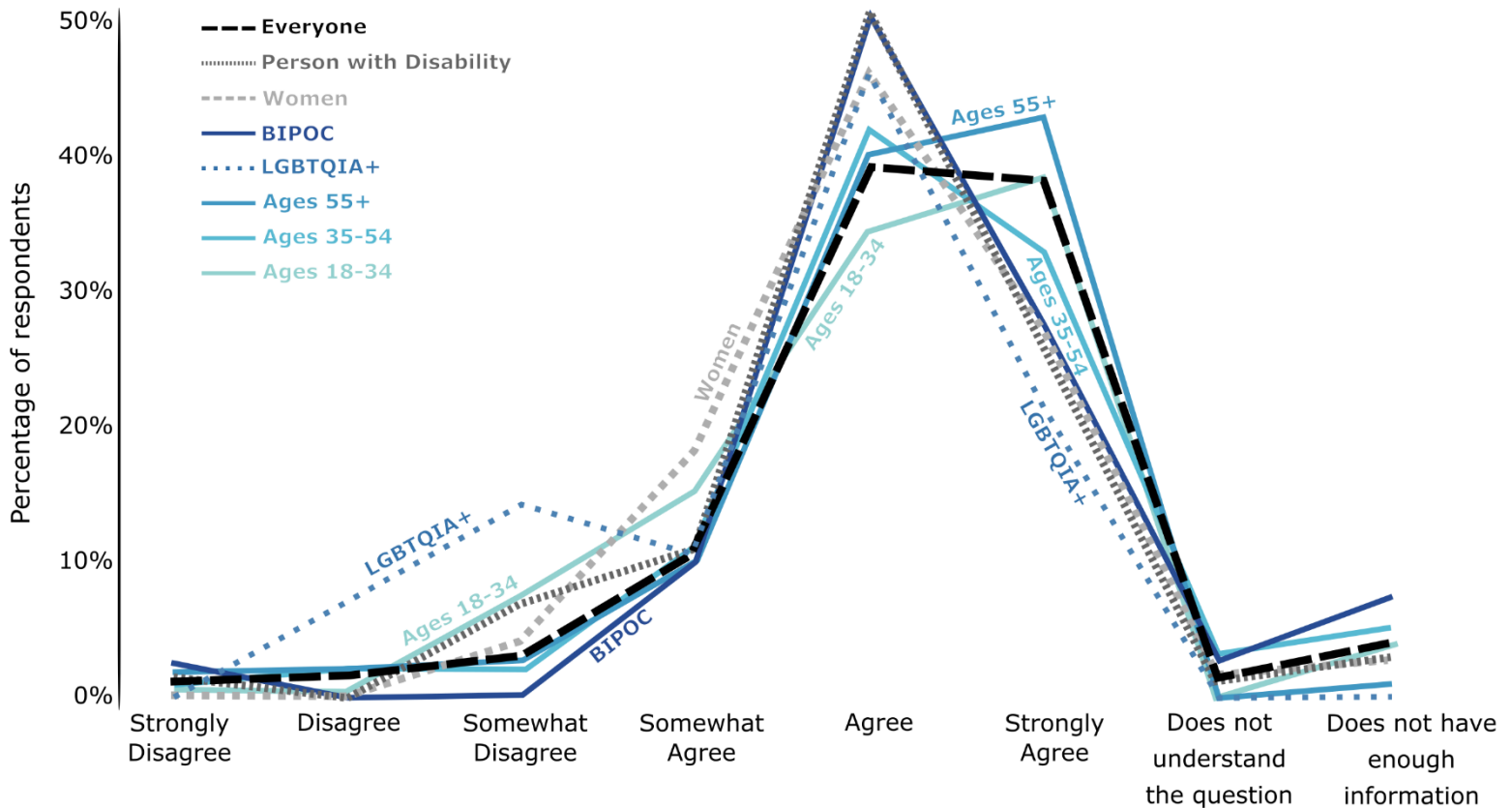
How much does a person agree or disagree that IPS is **sexist**?



Sexist

Sexism is the discrimination and prejudice against people on the basis of their sex or their gender. There is a general trend of disagreeing that IPS is sexist in the results, but there is a lack of a cohesive trend among subgroups. There are significant generational differences with the respondents ages 55+ being more likely to “strongly disagree” or “disagree” while ages 18-34 are far less likely to “strongly disagree” or “disagree” in comparison. LGBTQIA+ respondents were most likely to “somewhat disagree” within their subgroup and also compared to other subgroups. Women were mostly likely to “disagree” that IPS is sexist within their subgroup and were more likely to “somewhat agree” that IPS is sexist compared to other subgroups.

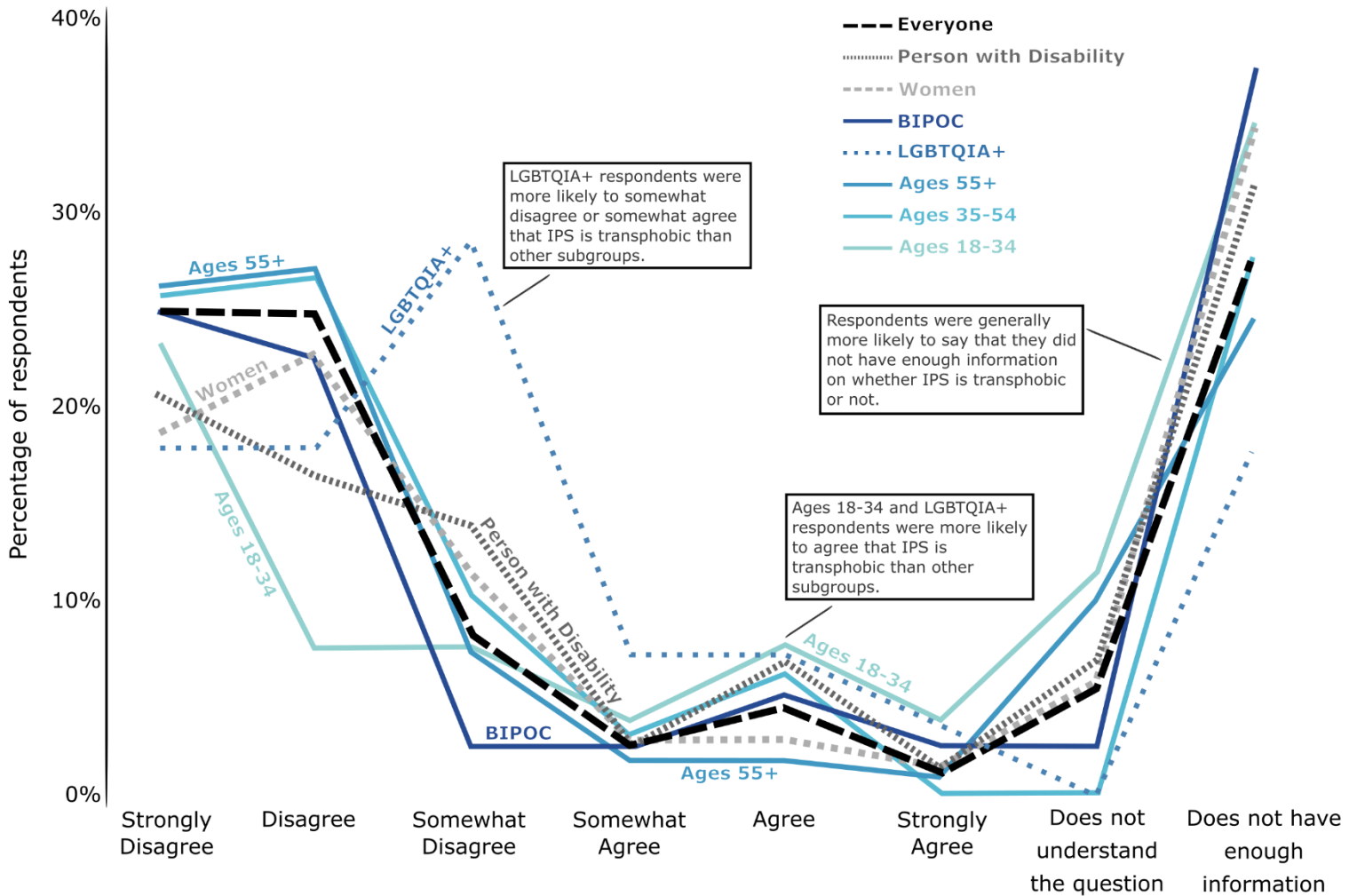
How much does a person agree or disagree that IPS is **welcoming**?



Welcoming

In general, the trend shows that respondents were most likely to agree on some level that IPS is welcoming. We see that respondents ages 18–34 and ages 55+ are more likely to “strongly agree” that IPS is welcoming, with “agree” being a close second. LGBTQIA+ respondents were more likely to “disagree” or “somewhat disagree” that IPS is welcoming over other subgroups.

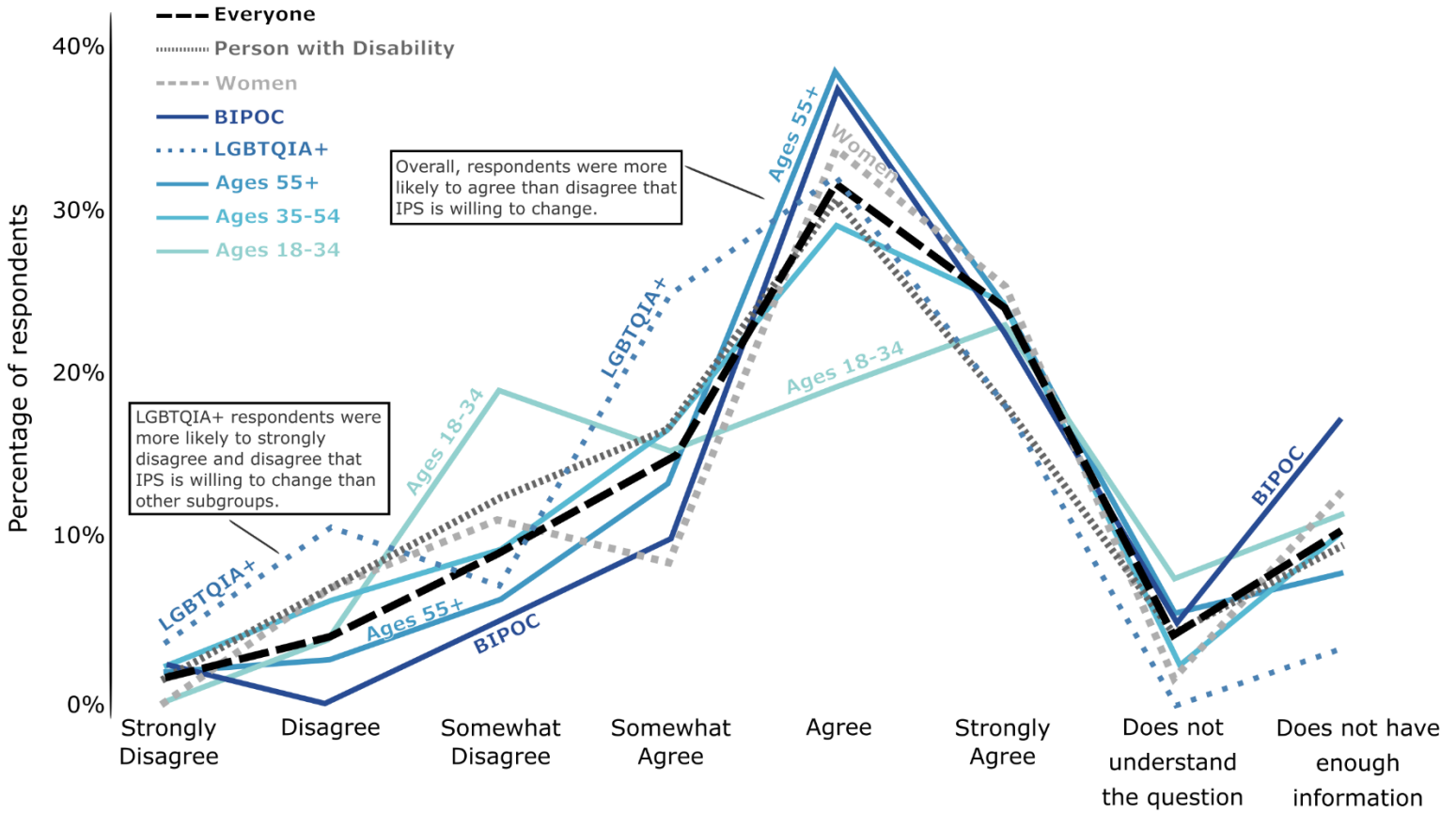
How much does a person agree or disagree that IPS is **transphobic**?



Transphobic

Transphobia is the dislike or discrimination against people who are transgender. Transgender people are those who are not the same gender as what they were assigned at birth. Of all the IPS qualities asked about in this survey, this is the only one that showed the peak for the response, “I do not have enough information to make a judgement.” Outside of this, the trend is toward disagreeing to some extent that IPS is transphobic. However, LGBTQIA+ respondents were more likely to “somewhat disagree” compared to all other subgroups. Respondents ages 18–34 and LGBTQIA+ respondents were more likely to “somewhat agree” and “agree” that IPS is transphobic compared to other subgroups.

How much does a person agree or disagree that IPS is **willing to change**?



Willing to Change

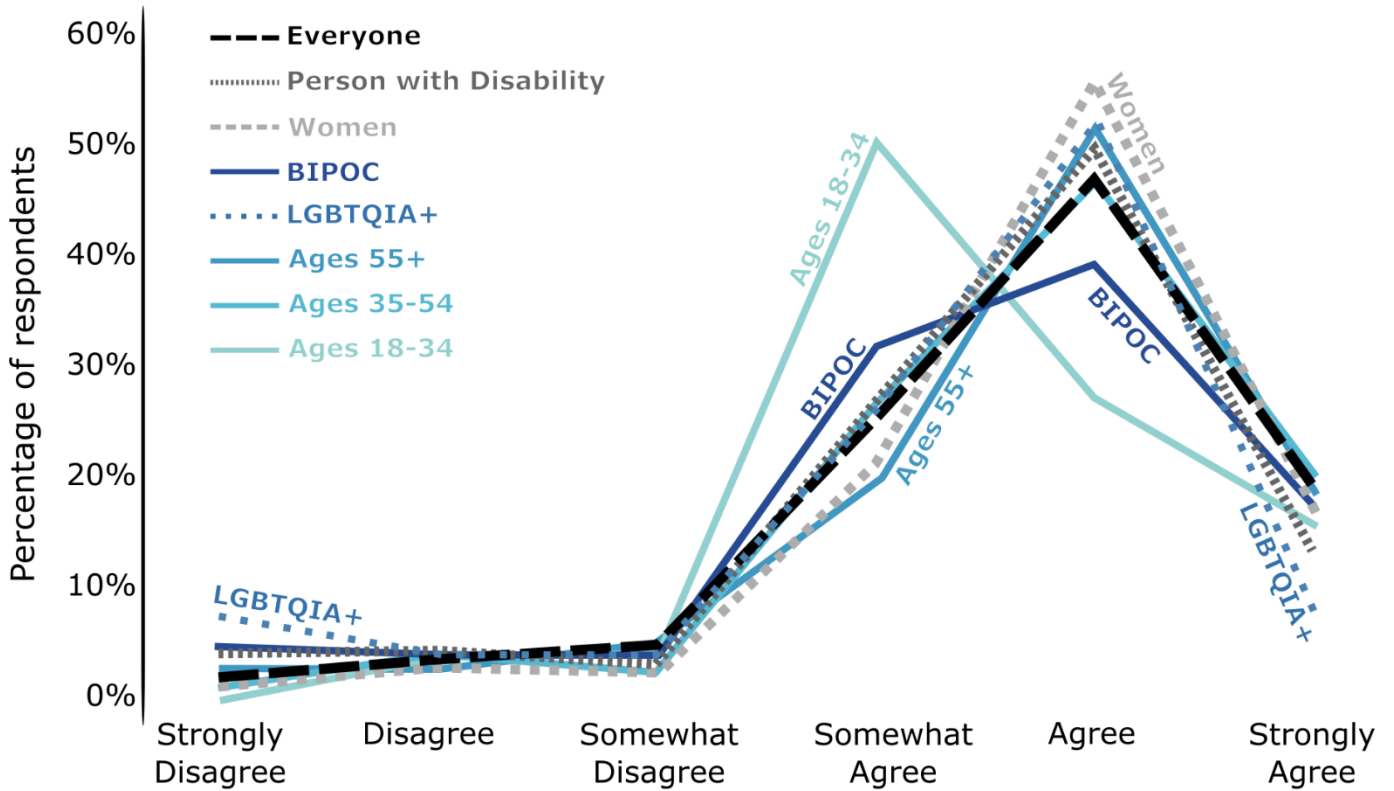
The overall trend here is that people agree to some extent that IPS is willing to change. LGBTQIA+ respondents were slightly more likely to “strongly disagree” and “disagree” than other subgroups. Respondents ages 18–34 were most likely to “strongly agree” that IPS is willing to change from the overall subgroup responses, but this response was fairly evenly matched with the subgroup’s overall response for “somewhat disagree.”



STATEMENTS ABOUT IPS

Another section of the survey asked respondents to rank how much they agreed with certain statements about themselves and their experience with the IPS community. The results are presented in a similar manner to the IPS qualities above. The difference was that people only ranked their answers from “strongly disagree” to “strongly agree” and were not given the options of “I do not understand the question” or “I do not have enough information.”

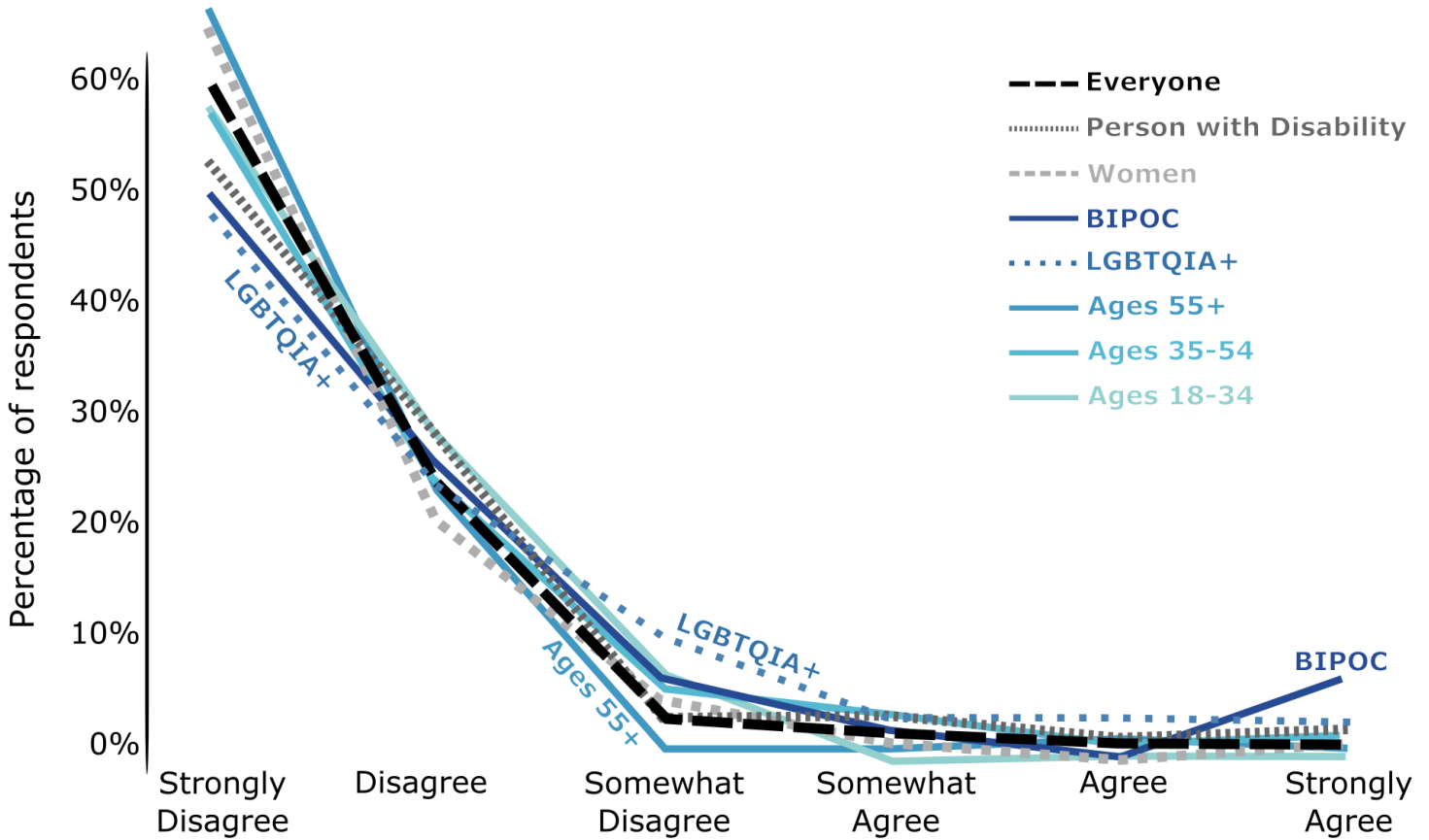
How much does a person agree or disagree that they **feel valued** by other members of the IPS community?



“I feel valued by the IPS community”

On the whole, respondents were most likely to respond that they agreed with the statement that they feel valued by the IPS community to some extent. However, we do see some significant differences in the overall trend with the respondents in the 18–34 age group and BIPOC group. Respondents ages 18-34 and BIPOC respondents were more likely to “somewhat agree” with this statement compared to other subgroups.

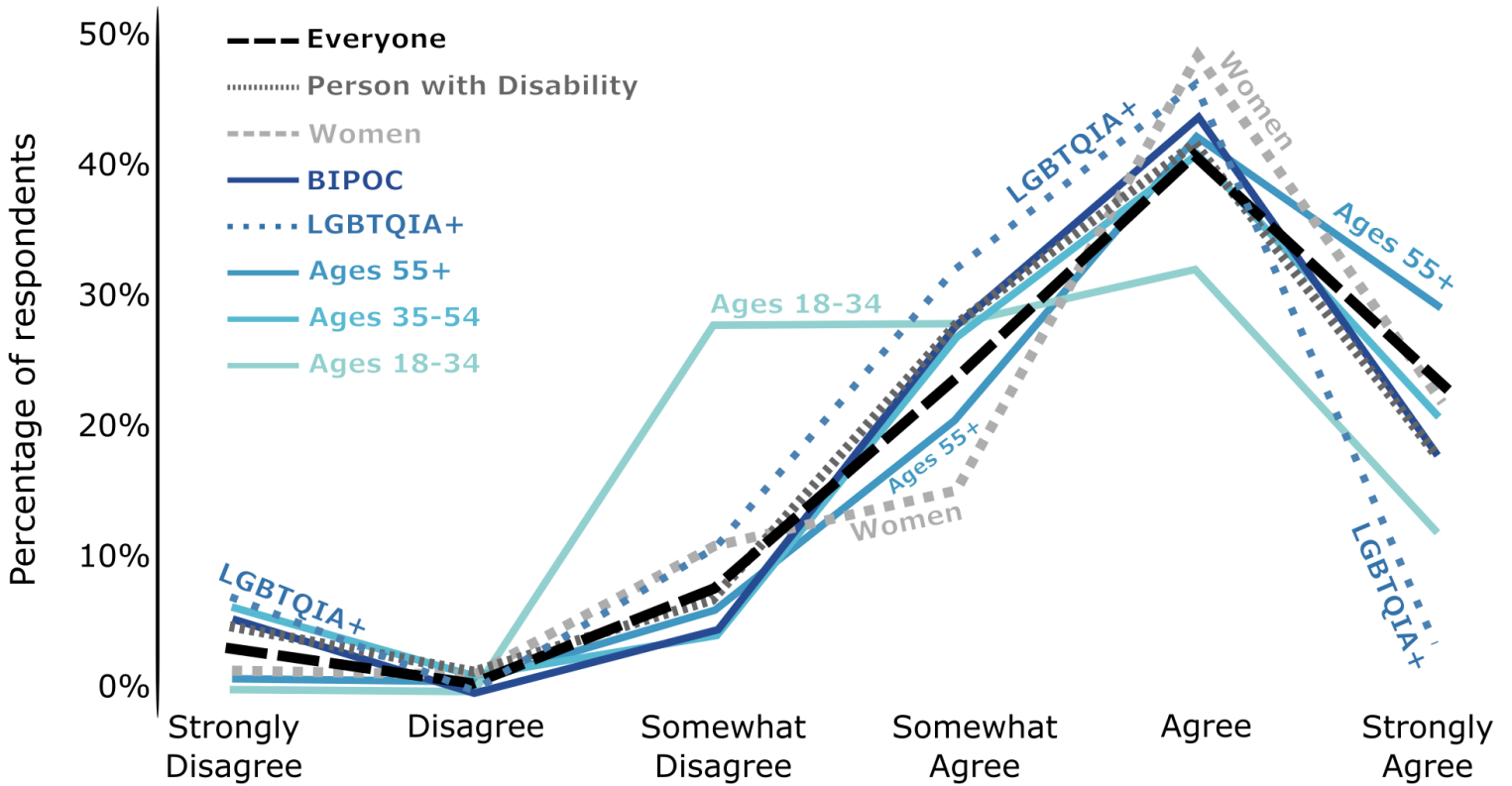
How much does a person agree or disagree that they **have considered leaving the planetarium field because they have felt isolated or unwelcomed by the IPS community?**



“I have considered leaving the planetarium field because I have felt isolated or unwelcomed by the IPS community”

Overall, the trend here was fairly consistent across groups with respondents most likely to respond that they “strongly disagree” that they have considered leaving the planetarium field because they felt isolated or unwelcomed by the IPS community. Small percentages of respondents were equally likely to agree to some extent. The most significant and notable difference is that BIPOC were more likely to “strongly agree” with this statement compared to other subgroups.

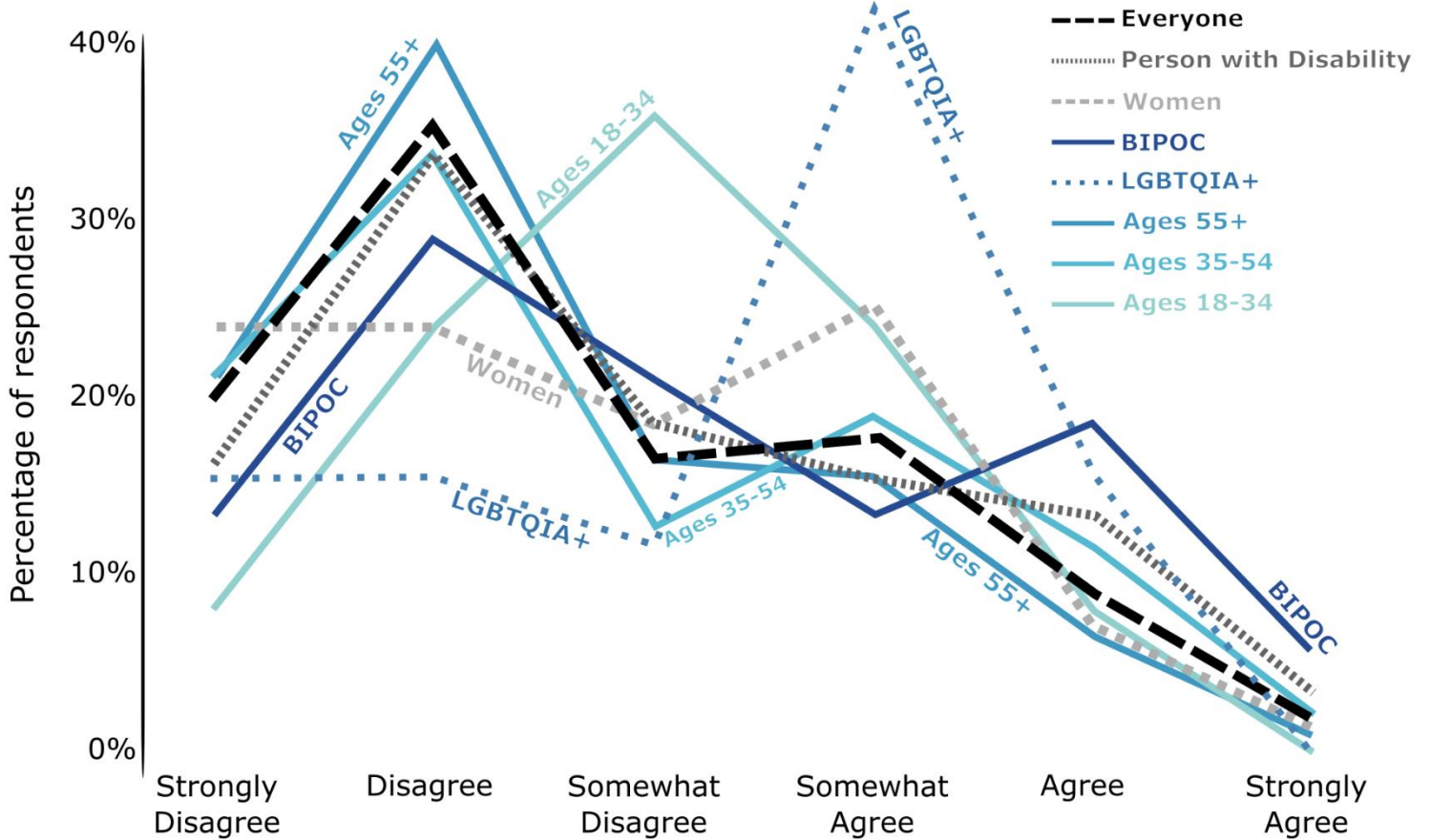
How much does a person agree or disagree that they feel they **belong in the IPS Community**?



“I feel I belong in the IPS community”

Overall, respondents generally agree to some extent that they feel like they belong in the IPS community. A significant difference is seen with respondents in the 18–34 age group, who were more likely to say they “somewhat disagree” and less likely to say they “agree” with the statement.

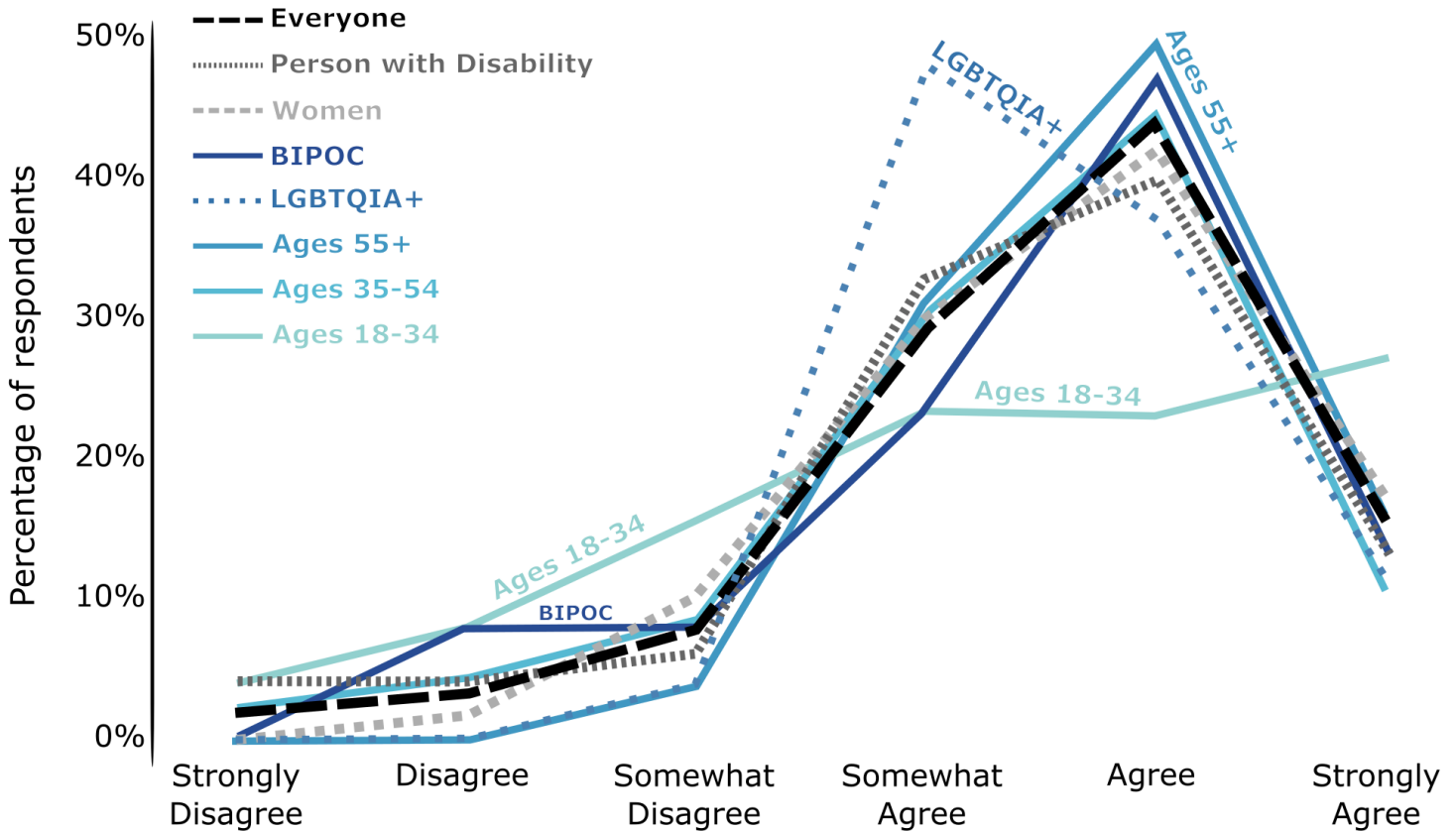
How much does a person agree or disagree that they **have to work harder than others to be taken seriously in the IPS community?**



“I have to work harder than others to be taken seriously in the IPS community”

The responses here show a majority of respondents saying they “disagree” that they have to work harder to be taken seriously in the IPS community. However, there is not a lot of cohesion, perhaps suggesting that different subgroups of respondents have a lot of different experiences. For instance, the respondents ages 18-34 were most likely to “somewhat disagree,” compared with the overall response, which was more likely to “disagree.” LGBTQIA+ respondents and women were most likely to “somewhat agree” that they have to work harder than others to be taken seriously in the IPS community, with LGBTQIA+ respondents much more likely to respond with “somewhat agree” compared to women. BIPOC were most likely to “agree” or “strongly agree” that they need to work harder to be taken seriously compared to other subgroups.

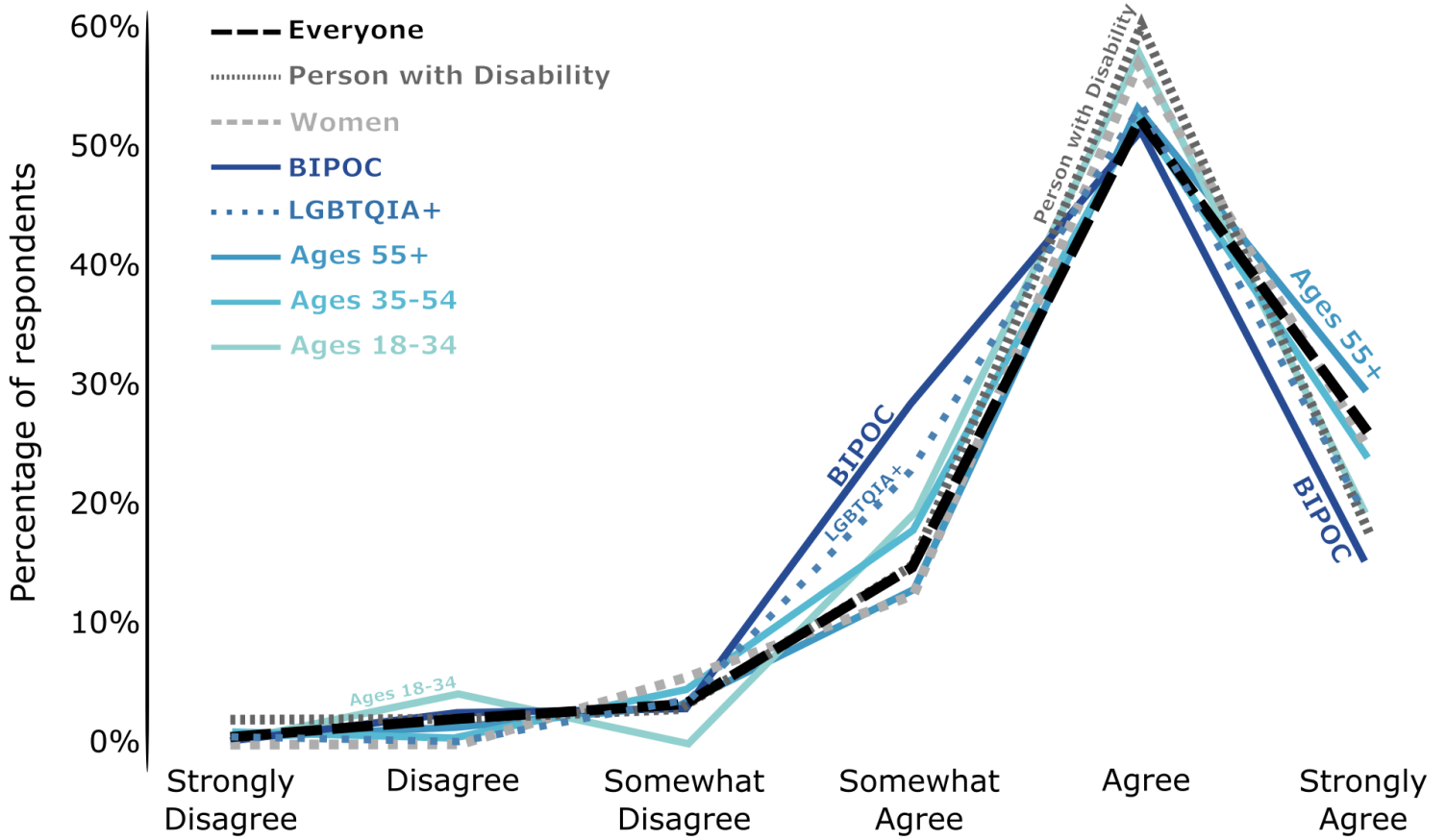
How much does a person agree or disagree that **the IPS community has a strong commitment to equity, diversity, and inclusion?**



“The IPS community has a strong commitment to equity, diversity, and inclusion”

Respondents tend to agree on some level that IPS has a strong commitment to equity, diversity, and inclusion and most subgroups followed a similar trend to the full set of respondents. Notable differences are seen with respondents in the 18–34 age group, who had a flatter trend and were the most likely to “strongly agree” but also the most likely to “somewhat disagree” compared to other subgroups. LGBTQIA+ respondents were more likely to “somewhat agree” than “agree” that IPS has a strong commitment to equity, diversity, and inclusion compared to other subgroups.

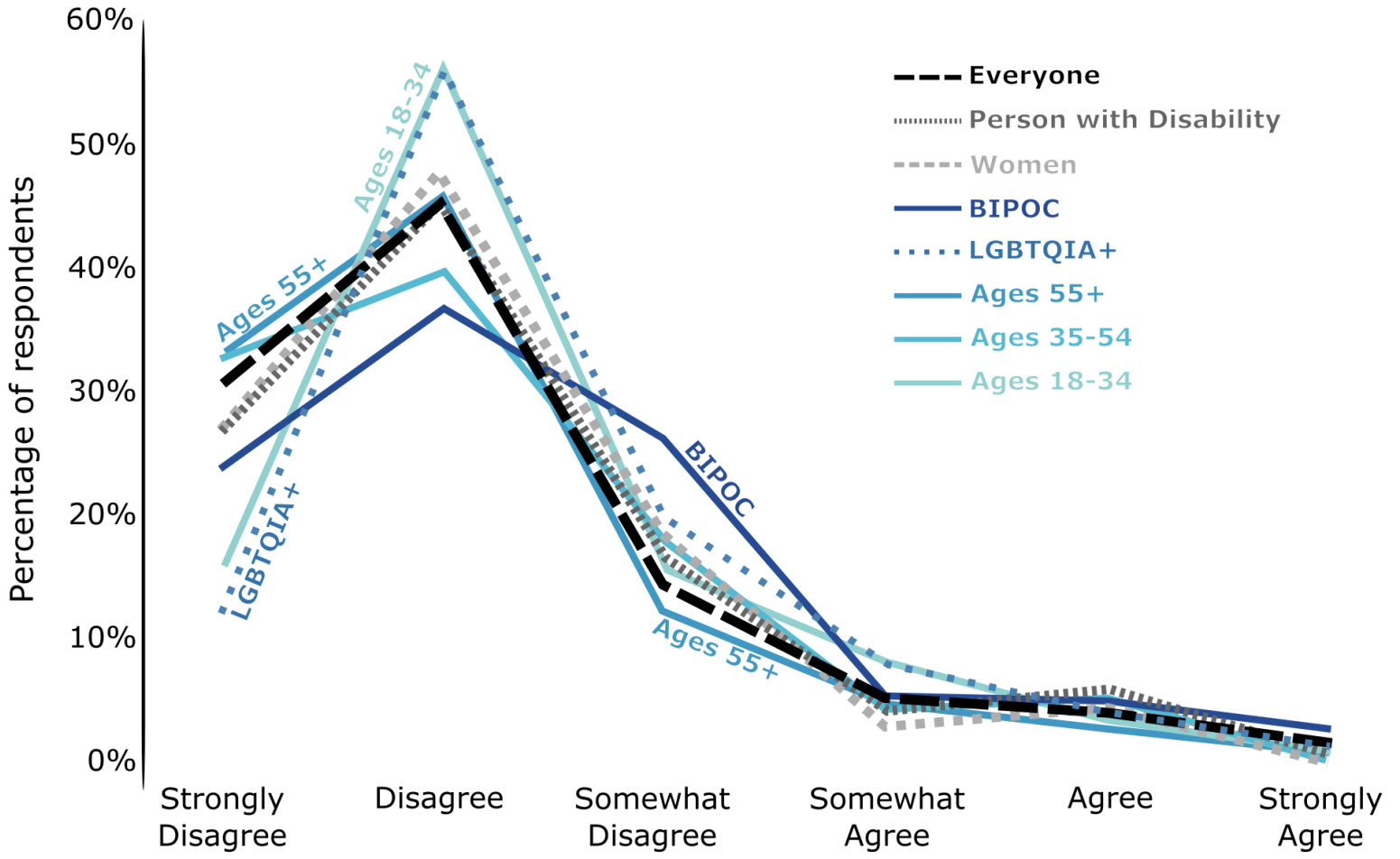
How much does a person agree or disagree that they **are treated with respect by others in the IPS community?**



“I am treated with respect by others in the IPS community”

Respondents were most likely to agree on some level that they are treated with respect by others in the IPS community. There is also consistency between groups, where we see similar trends with all subgroups.

How much does a person agree or disagree that they **feel others in the IPS community do not value their opinions?**



“I feel others in the IPS community do not value my opinions”

Overall, respondents were more likely to say that they “disagree” that others in the IPS community do not value their opinions and trends are fairly similar across all subgroups of respondents. However, BIPOC respondents were the most likely to “somewhat disagree” and least likely to “disagree” compared to other subgroups.

FREQUENCY OF NEGATIVE EXPERIENCES

We asked how often people **felt unwelcome, uncomfortable, or discriminated against due to different aspects of themselves**. Anything that is a non-zero percentage in the table below indicates that at least one person answered for that category. While the majority of the responses are “never,” there are responses representing that someone has felt uncomfortable, unwelcome, or discriminated against by members of the IPS community for every item.

	Never	1-2 times	3+	Notes
Ability/Disability/Impairment	96.6%	2.9%	0.4%	-
Accent	96.2%	3.4%	0.4%	-
Age	84.5%	12.1%	3.4%	Fairly evenly split between age groups who reported instances
Clothing	97.1%	2.5%	0.4%	Largely straight White men who have reported any instances
Gender	90.3%	7.6%	2.1%	Mostly women and non-binary respondents who reported instances
Height or Weight	93.7%	5.0%	1.3%	-
Language	95.4%	3.4%	1.3%	Entirely people outside of North America who reported instances
Marital Status	96.6%	3.4%	0.0%	-
National Origin	95.8%	4.2%	0.0%	-
Parental Status	97.4%	2.6%	0.0%	-
Politics	91.1%	6.4%	2.6%	Almost entirely people from North America who reported instances
Professional Experience	80.6%	16.5%	3.0%	-
Race/Ethnicity	97.5%	1.7%	0.8%	-
Religion	94.5%	3.8%	1.7%	Mostly people who are religious and Christian who reported instances
Sex	92.0%	6.8%	1.3%	Mostly women who reported instances
Sexual Orientation	98.3%	1.3%	0.4%	-
Wealth/Income	96.2%	2.5%	1.3%	-
Veteran Status	99.2%	0.9%	0.0%	-

There are also important factors to note about this data and about who responded, which can provide some context for the results. This is noted in the final column of the table in the notes section. Those without notes were ones with no significant or apparent differences between the demographics among respondents.

The survey also asked people how often they **felt they could not participate in IPS due to different aspects of their identity**. The results are similarly summarized in the next table. Again, any non-zero percentage means there is at least one person who indicated it has been difficult to participate due to an aspect of their identity.

	Never	Sometimes	Frequently	Always	Notes
Ability/Disability/Impairment	94.9%	4.3%	0.4%	0.4%	-
Accent	95.7%	3.0%	0.4%	0.9%	Entirely non-North American respondents who reported at least sometimes
Age	92.3%	6.0%	1.7%	0.0%	Half were 55+ who reported at least sometimes
Clothing	98.7%	0.9%	0.4%	0.0%	-
Gender	97.0%	2.60%	0.4%	0.0%	Entirely women or people who preferred not to say gender reported at least sometimes
Height or Weight	98.7%	1.3%	0.0%	0.0%	-
Language	88.4%	8.6%	2.2%	0.9%	Mostly non-North American respondents who reported at least sometimes
Marital Status	98.3%	1.7%	0.0%	0.0%	-
National Origin	96.5%	2.6%	0.9%	0.0%	-
Parental Status	96.5%	3.5%	0.0%	0.0%	All under 55 years old with minor children, more women than men, reported at least sometimes
Politics	95.2%	3.5%	0.9%	0.4%	-
Professional Experience	81.7%	14.9%	3.1%	0.4%	-
Race/Ethnicity	98.7%	0.4%	0.4%	0.4%	-
Religion	97.8%	1.7%	0.4%	0.0%	-
Sex	97.8%	1.7%	0.4%	0.0%	-
Sexual Orientation	97.4%	2.2%	0.4%	0.0%	Almost entirely LGBTQIA+ respondents who reported at least sometimes
Wealth/Income	95.2%	2.2%	2.2%	0.4%	-
Veteran Status	99.6%	0.4%	0.0%	0.0%	-

OPEN-ENDED QUESTIONS

The survey asked two open-ended questions where respondents were free to share anything else about themselves or their experiences. Some themes are summarized below, with the frequency listed in parentheses after each item. While some of the frequencies are low, it is important to highlight and reflect on all of the comments that were submitted.

On EDI Work

A few people commented that they were happy to see the survey being done as the first step toward reflection and making IPS more inclusive (3), while on the other hand some criticized the focus that IPS has on making EDI a priority and would rather see the organization go back to focusing on education and science communication and see our field as dying and we need to address that more. (4)

Some noted that IPS seems welcoming and they had never seen discrimination before. But some would also note they are in the majority and less likely to see anything. (6)

Some saw these as issues worth addressing, as to not address them could impair our ability to do good work. This would be within the IPS community as well as in our homes and for our audiences. (2)

Some noted that IPS has made a lot of progress in recent years on EDI issues and that they are supportive or proud of this work. (4)

One person noted that we should allow someone to have a path back in if they have miss-stepped or caused harm. (1)

On Negative Experiences

Some people have noticed that people with more conservative politics tend to be looked down upon. (1)

Some noted that they have experienced issues, but in general this was prior to 2017 when the code of conduct was enacted and the issues are more with individuals than the organization itself. However, it is also noted that IPS has not done enough to curb inappropriate behaviors from individuals who now make others uncomfortable after reporting experiences. (4)

There were also notes about people being affected by IPS decisions on where to host conferences or they themselves not being able to attend for fear of their own safety due to host country's policies, particularly around LGBTQIA+ issues. Or general concerns around safety. (3)

On Representation

There were criticisms that there are not many women or BIPOC in power at IPS or even in the membership. Similarly, there were criticisms that invited speakers are less frequently women and BIPOC at conferences. This leads to the perception that IPS is not doing active work around sexism and anti-racism. (2)

There was a comment that working groups of the technical side are male dominated which is seen by this person as intimidating for women. (1)

On Physical Accessibility

There were comments around accessibility for those with disabilities. Namely that people should not have to ask for accommodations and that many conference sites are inaccessible to wheelchair users and those with mobility issues. This was particularly true in Toulouse at IPS 2018 when it came to tours and the banquet location. (2)

While there were many criticisms around accessibility, someone had noted that when they asked for support and help, members were gracious and willing to make accommodations. (1)

For one with disabilities, they offered insight into their life with a disability. They noted some days are better than others and those days are unpredictable. (1)

Someone mentioned that the options at conferences need to be more considerate of dietary restrictions such as gluten free. (1)

On Economic Accessibility

The cost of participation was noted to be particularly difficult, especially retirees who are on limited income. (1)

Another note of economic accessibility is that some peoples' institutions do not allow them to travel internationally, making it difficult to participate in anything IPS does. (1)

The cost in general makes it difficult for many to participate and the virtual option was a great way to address this. (3) Another mentioned how great they thought the 2020 Virtual Conference was. (1)

Someone noted that the field is still largely dominated by White men, and that this may be more of an economic issue as women and BIPOC are also more often than not making less money. (1)

On the IPS Community

Some noted that they have never participated in IPS but hope to or hope to make a better effort to get involved. (4)

Some noted that they see IPS as family or very welcoming in general. (6)

One noted that they have not been to an IPS conference or very involved so it is hard to judge. (1)

One noted cliquish behavior, particularly among leadership and this can be intimidating to newcomers. (1)

Some noted that there is an inherent difficulty and awkwardness working across cultures in an international organization. While some said this is what makes us interesting, others noted that this can be particularly difficult for committee work. (4)

There was a note that IPS is still dominated by older White men that do not allow room for newer perspectives and ideas. (1)

Those with less experience have been insulted by those with more experience. (2)

One said there needs to be more emphasis on the international part of IPS. (1)

Someone said there was an emphasis on certain holidays that some do not observe and that results in discomfort. (1)

On How IPS Can Improve

It was noted that IPS does sometimes lag in communication to members. (1)

One mentioned that they would like IPS to try more new things. (1)

One said a mentorship program could be beneficial. (1)

On Roles in the Field

Some noted inequities between types of facilities and vendors (large vs. small facilities vs. portables), or that there needs to be better support of smaller planetariums. (9)

Someone commented about how vendors are treated in general and that they are treated differently in terms of the expectation to pay more and sponsor more. (1)

CONCLUSION

These results are simply the beginning to making our organization and our field more inclusive, diverse, and equitable. Moving forward, the EDI Committee will take this information and formulate recommendations to the IPS Board on actionable items, identifying areas for growth.

Additionally, we recognize these results represent a snapshot in time, and that they can provide a basis against which we can measure any continued progress or change. The intention is to repeat this survey at some regular interval, perhaps every 4-6 years, which will allow the EDI Committee to identify any long-term trends in these areas.

While it is the charge of the EDI Committee to support these initiatives, we hope that this work can inform and be a catalyst for growth beyond the Committee and IPS Board. We again encourage each of our fellow IPS members and industry colleagues to reflect on these results, and imagine the ways through which we can continue to grow the organization, and the field, to be more equitable, diverse, and inclusive in benefit of the many communities that we serve. If you have ideas or observations that you would like to share, please send them to the IPS EDI Committee at edi@ips-planetarium.org.