Sense of belonging & representation in STEM

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Belonging in college & STEM

Belonging refers to one's feeling of membership and acceptance in their field.[1]

Sense of belonging is

- Correlated to both achievement and retention of underrepresented students
- Context-dependent

[1] Good, C. *et al*. *Journal of personality and social psychology* 102.4 (2012): 700.

Data collection: interviews

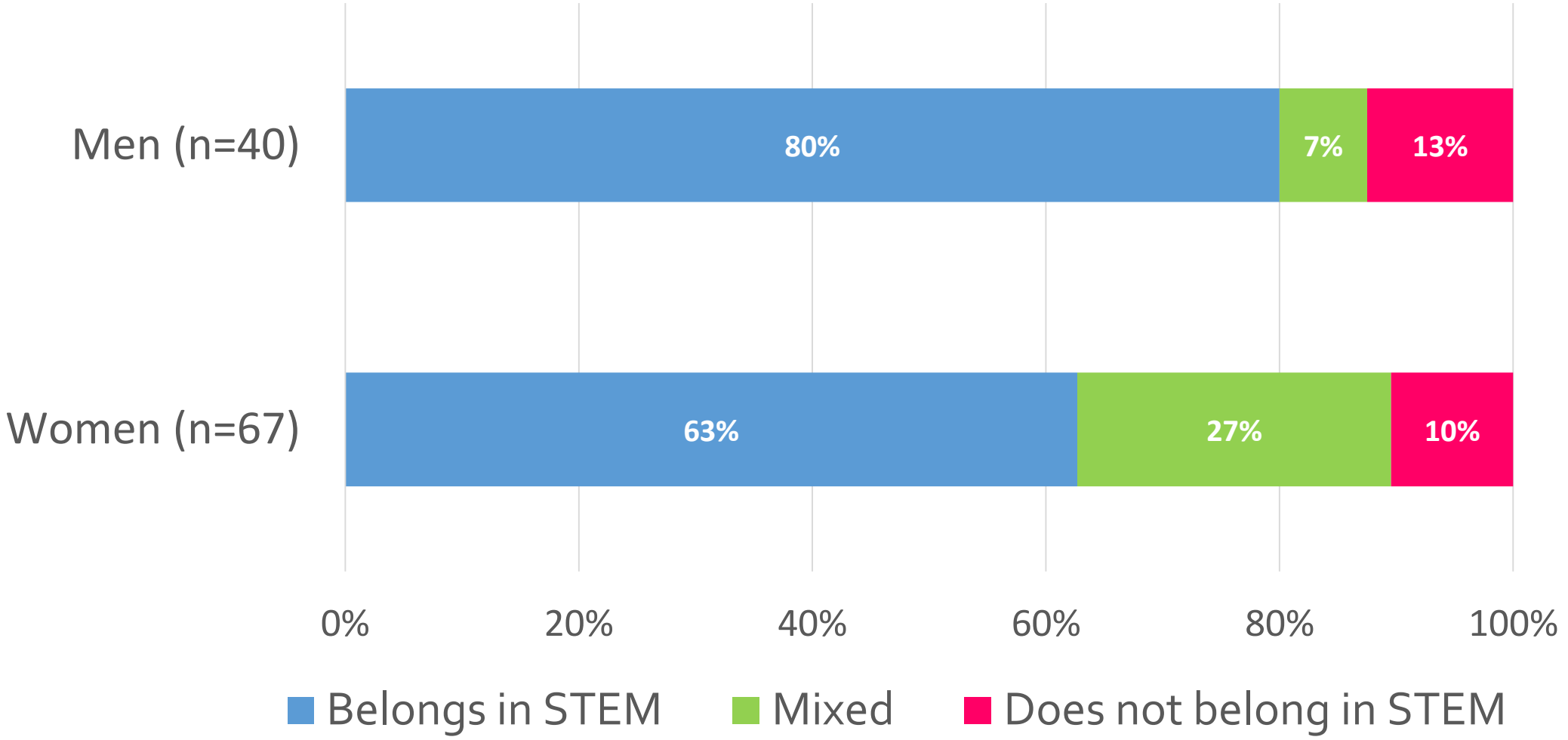
- Interviews conducted with 317 college seniors within the North Carolina higher education system.
- Looked at the 107 who were STEM majors
- Majors include:
  - Biology/health science
  - pSTEM

  - Chemistry
  - Computer science
  - Engineering
  - Math
  - Physics

Students were asked the question(s):

- **Do you feel like you belong in your major? Did you ever feel out of place?**

Belonging by gender



Reasons cited for not belonging in STEM

Lacks social identity

"[Other students] seemed to click with everybody else about stuff … They would talk to me but I kind of felt like these people really aren't my people."

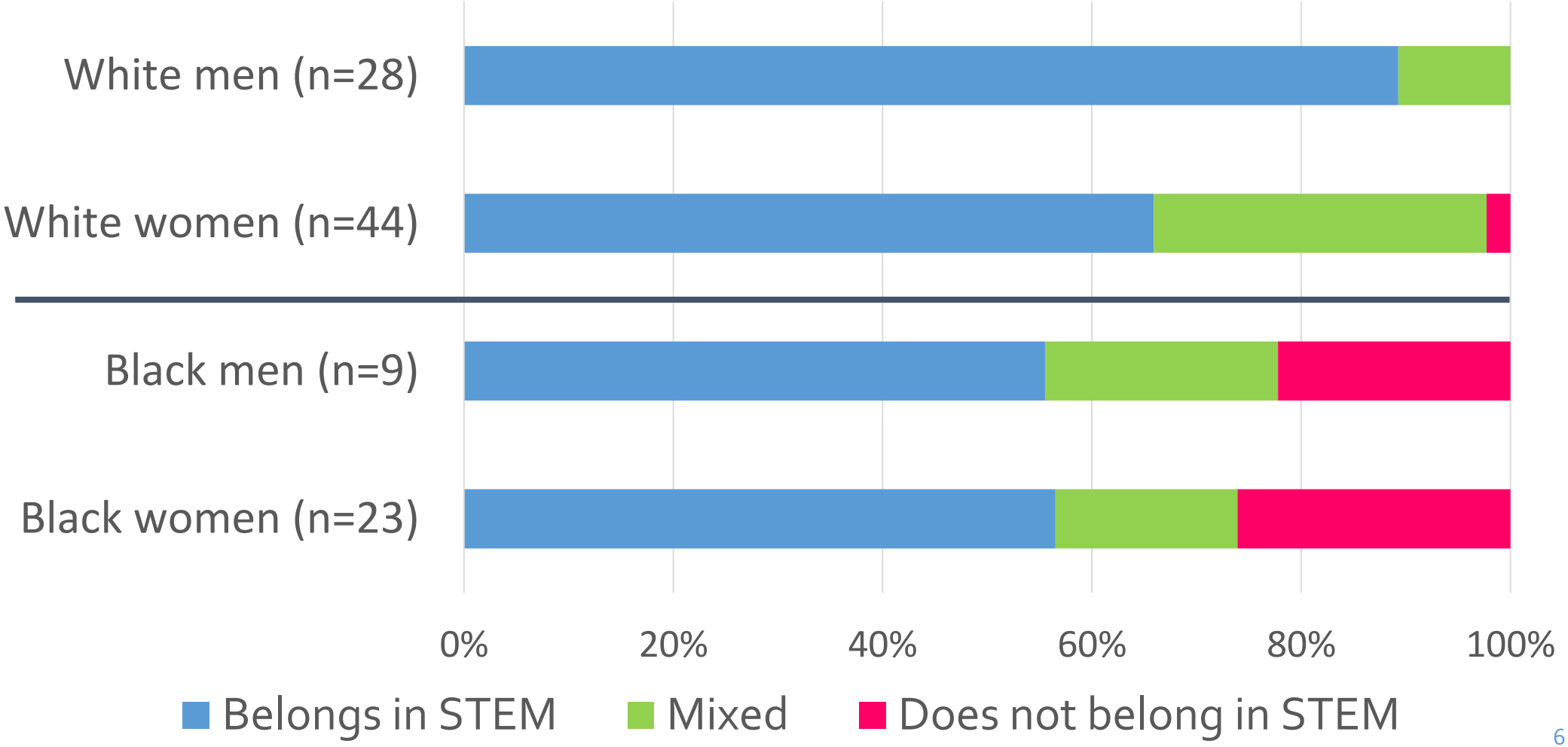
Lacks personal interest

"I enjoy [my major] but if I'm going to have to do something for the rest of my life, I want to … thoroughly enjoy it and have a passion for it."

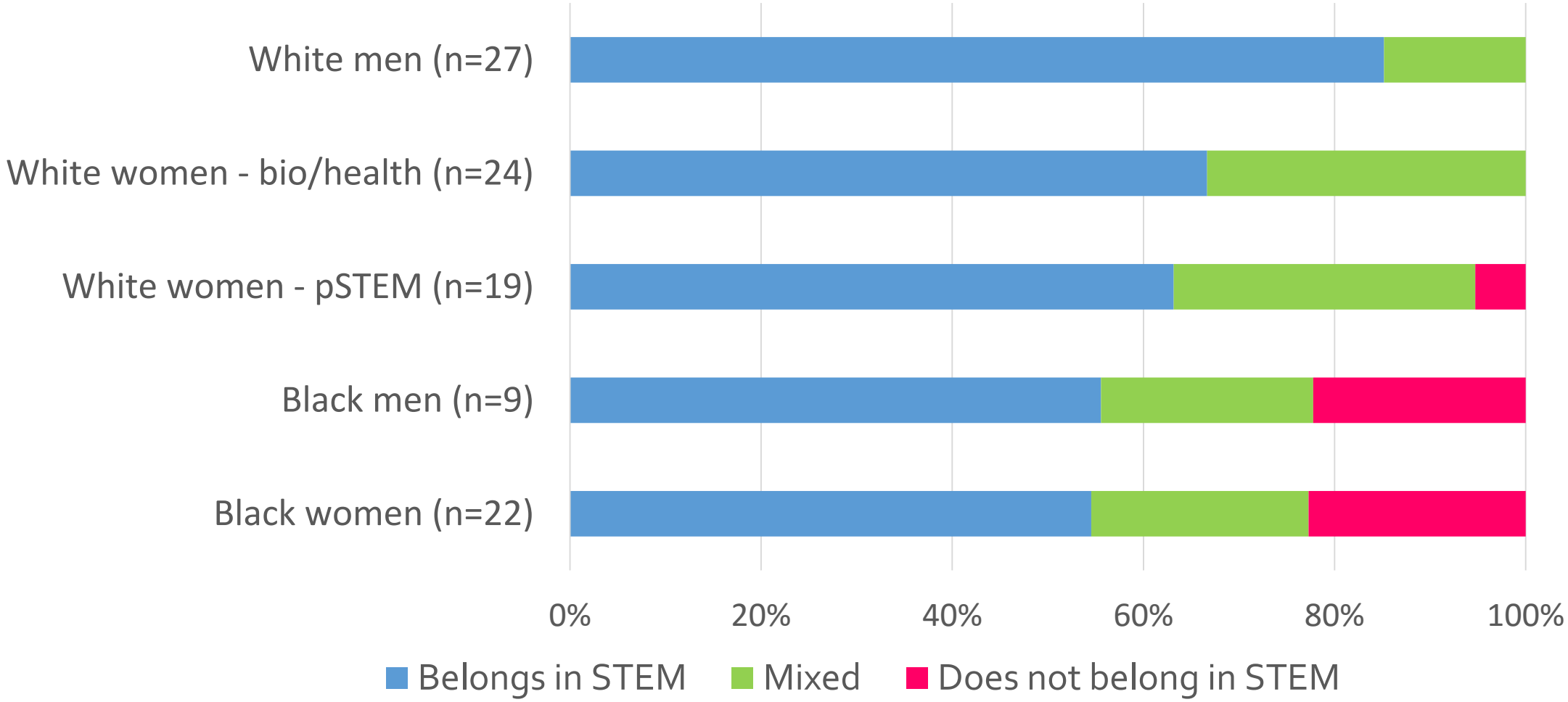
Lacks understanding

"I feel out of place because I think [other majors] know more than I do."

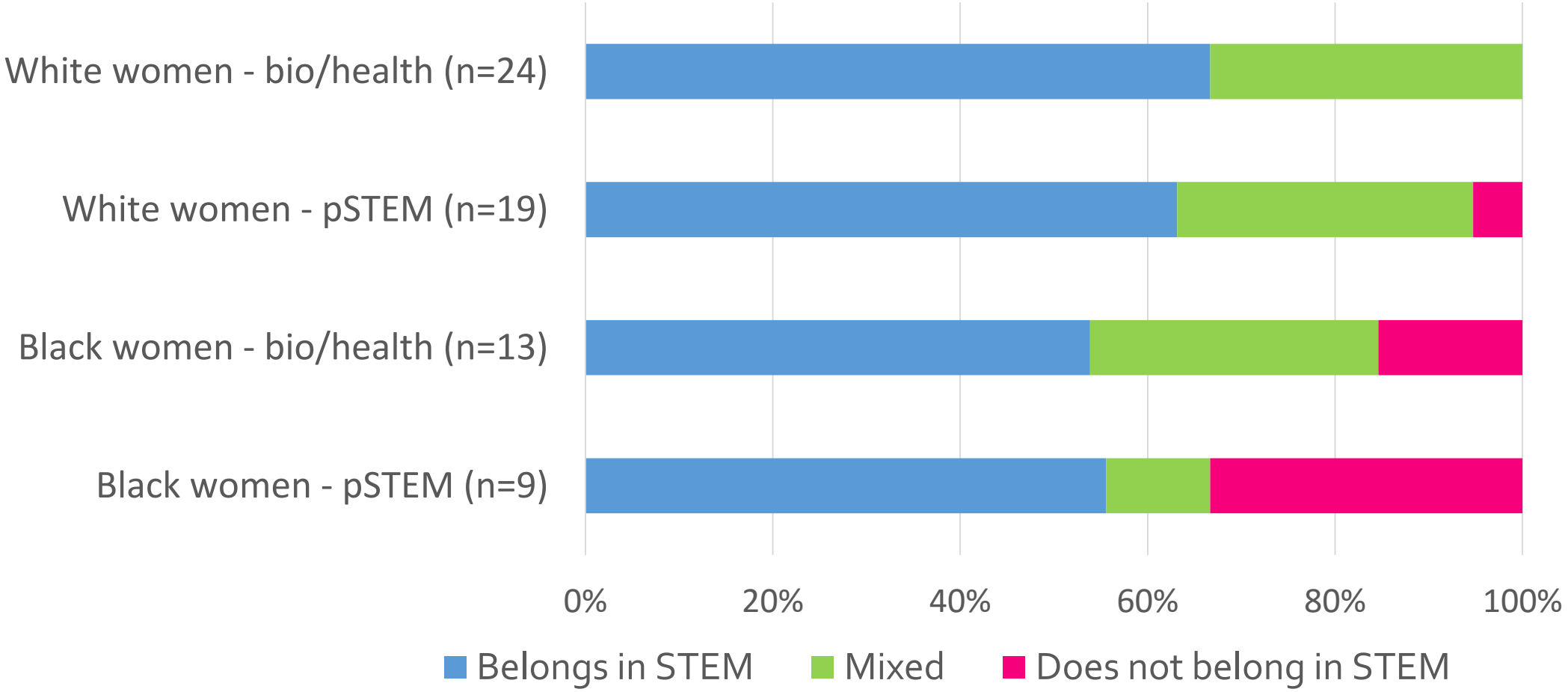
Belonging by gender & race



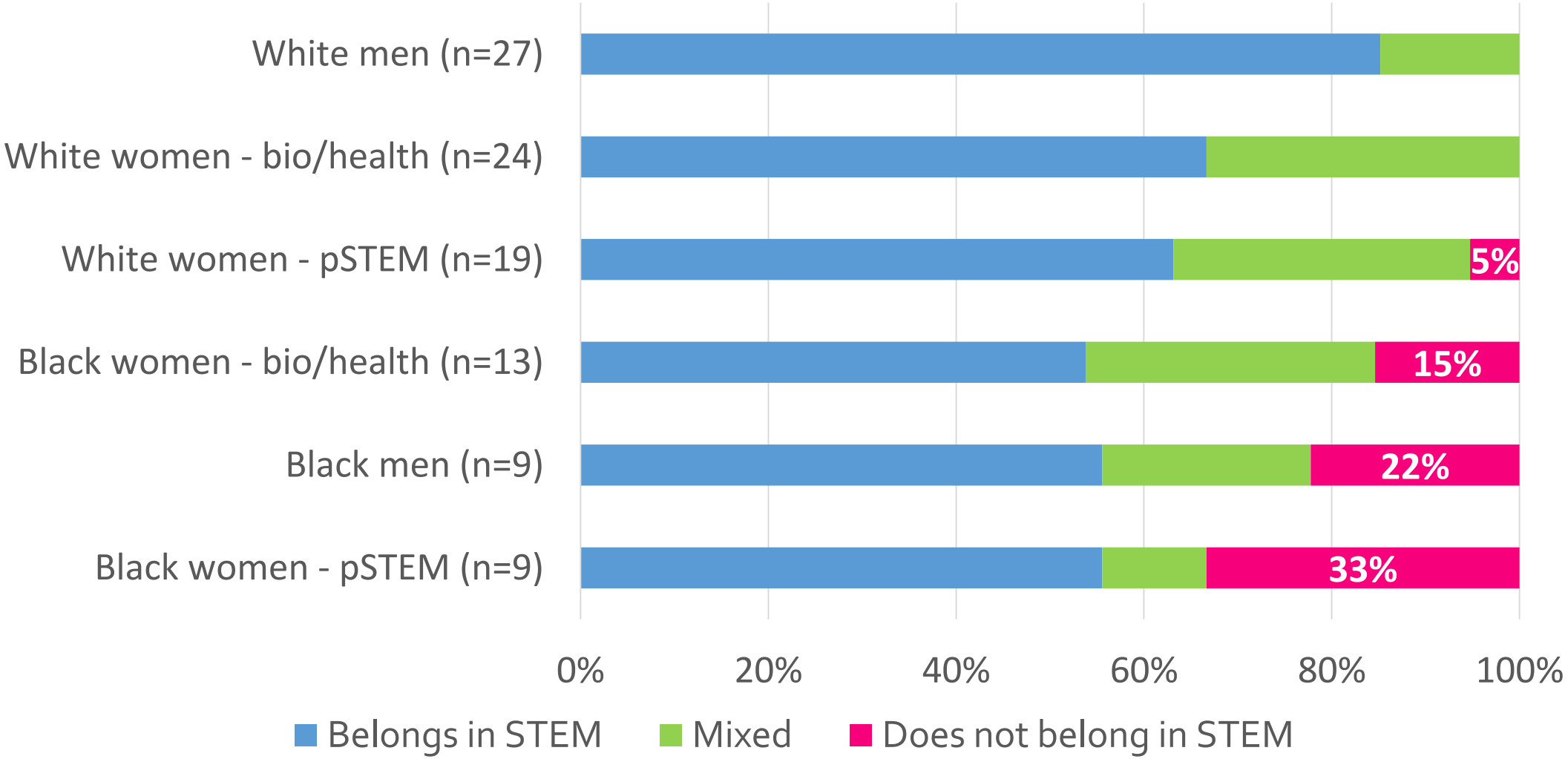
Belonging by representation in major



Belonging by representation of women in major



Belonging by representation



Discussion

- White men report the highest sense of belonging: **100% of white men reported feeling they belonged in their STEM major**.
- **Black students have the lowest reporting of belonging**.
- Women are more likely to have mixed responses about their sense of belonging than men are.
- Differences between women's sense of belonging is *dependent on representation of women in their major*.

Representation in one's major, based on both race and gender, has an impact on sense of belonging.

When considering belonging of students in STEM, analysis based on both **gender *and* race** must be used.