

# Study environment in shortage occupation programmes with gender imbalances

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# Study environment in shortage occupation programmes with gender imbalances

The most prominent finding in this report is that students in the minority gender pursuing degree programmes in the fields of engineering, manufacturing and construction, health, and welfare experience significantly more gender-based discrimination than the majority gender.

Several areas of societal importance face worker shortages, both now and in the coming years.<sup>1</sup> Several of the so-called shortage occupations have a gender imbalance, especially in the areas of welfare and STEM (Science, Technology, Engineering, and Mathematics). One of the keys to securing future skills supply is to reduce gender-based choices so that the recruitment base is less limited by the gender coding<sup>2</sup> of occupations.

Previous studies have shown that the gender that is in the minority in the study programme often has a higher drop-out rate. This is especially true when men are in the minority.<sup>3</sup>

This report compares and examines how the minority and majority genders in three different fields of education experience their studies and study environment. Two of the fields examined have a large overrepresentation of female students while one has a clear male majority. The results come from the Eurostudent 8, a recurring survey that compares economic and social conditions for students in Sweden with many other countries in Europe. The analysis includes answers to the survey questions that deal with how students enjoy their education and study environment, including whether they feel they belong in higher education, how they experience support from teachers and whether they have experienced discrimination.<sup>4</sup> These aspects could affect whether the student completes their education and if they then stay in the profession in working life.

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<sup>1</sup> Arbetsförmedlingen 2024: *Arbetsmarknadsutsikterna hösten 2024*

<sup>2</sup> This means that, for example, professions are given a gender label based on norms and stereotypes of what women and men are suitable for.

<sup>3</sup> Jämställdhetsmyndigheten, 2022. *Val efter eget kön, En kunskapssammanställning om könsskillnader i utbildningsval.*

<sup>4</sup> [Eurostudent - Universitets- och högskolerådet \(UHR\)](#)

The results are intended to be used as a basis for efforts to widen recruitment, widen participation and increase student completion, by higher education institutions as well as by supporting authorities. The figures presented here may also form the basis for further analyses.

## Three fields of study with gender imbalances

The three fields of study examined in this report are engineering, manufacturing and construction, health, and welfare. Degree programmes in these fields are offered by the majority of the country's higher education institutions. Tables from the Bak- och framgrund database<sup>5</sup>, which are included in Swedish Council of Education's support material for widening access<sup>6</sup>, show, among other things, the gender distribution of all new undergraduate level programme entrants by field of study. The Eurostudent survey's division into fields of study is slightly different, with all education divided into 19 fields compared to the 35 in the support material. However, some of the fields of study contain largely the same degree programmes in both systems. Three of these fields have been selected for this report:

- In **engineering, manufacturing and construction**, the proportion of women among programme beginners is less than 25 percent. This includes a variety of engineering programmes.
- For **health** programmes, men make up less than 20 percent. The field includes a large proportion of nursing programmes.
- **Welfare** largely consists of social work programmes where 17 percent of all beginners are men.

## Clearest relationship when it comes to discrimination

A previous report based on results from Eurostudent 8 indicated that the three selected fields of study were three of those with the highest frequency of discrimination overall.<sup>7</sup> **Engineering, manufacturing and construction** was one of the fields of study where women experienced the most discrimination, and to a significantly greater extent than men in the same field. Men reported a similar experience in the field of **health**, stating that they felt discriminated against to almost twice the extent as women.

When we look at gender as a basis for discrimination among all respondents, it was by far the most common basis for discrimination among women, with

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<sup>5</sup> Owned by the Ladok Consortium and retrieves register data from Statistics Sweden.

<sup>6</sup> [Fördelningstabeller för att sätta mål - Universitets- och högskolerådet \(UHR\)](#)

<sup>7</sup> UHR 2024: *Studenters erfarenheter av diskriminering på svenska lärosäten. Resultat från Eurostudent 8.*

12 percent citing it. Of all male respondents, 5 percent had felt discriminated against based on gender.

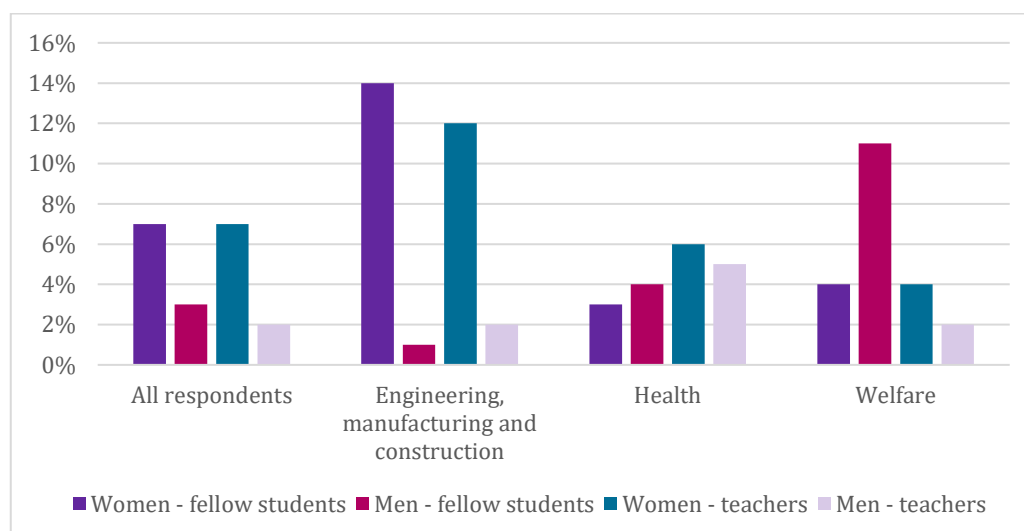
When the results are broken down by who committed the discriminatory act, fellow students or teachers, 7 percent of women stated that they experienced discrimination from both fellow students and teachers. Among men, 3 percent felt discriminated against by fellow students and 2 percent by teachers, see Figure 1.

As Figure 1 also shows, 14 percent of women studying **engineering, manufacturing and construction** felt discriminated against on the basis of gender by their fellow students, and 12 percent by teachers, while the figures for men were significantly lower, at 1 and 2 percent respectively.

In the **health** field, men experienced slightly more gender-based discrimination from fellow students than women, and more than the average for men in all fields of education. A slightly larger proportion of women than men felt discriminated against based on gender by teachers. Nevertheless, women were lower than the average for all respondents, while men were higher than the average for all men who responded to the survey.

Eleven percent of men in **welfare** programmes experienced discrimination based on gender from fellow students, which was significantly more than the 4 percent for women and the average for men in all fields of education (3 percent). The proportion who felt discriminated against by teachers was slightly higher for women than for men.

**Figure 1. Percentage of respondents who felt discriminated against because of their gender by fellow students and teachers, broken down by gender**



The figures for women in both **health** and **welfare** were therefore lower than the average for all female respondents, while men in these two areas experienced more discrimination than the average. Although it is not possible to ensure a causal relationship, clear patterns for the minority gender are visible here.

When asked whether they had been treated as less intelligent or competent than others, significantly more women than men in **engineering, manufacturing and construction** programmes responded affirmatively. The corresponding figure for men in programmes where they are the minority gender was not reported.

## No clear patterns regarding mental health

Twenty-nine percent of all students who responded to the survey indicated they suffered from mental health problems, which is significantly more frequent than among the general population. Mental health problems were more common among female students than male students, 33 percent and 22 percent respectively. Even within the three fields of study that this report focuses on, the proportion of men with mental health problems was lower than the proportion of women in all three fields. However, men in **health** were slightly above average compared to all men who responded to the survey, while women were above the female average in the field of **welfare**. It is therefore not possible to see any direct link to being in the minority gender, except possibly among men in **health**. Since mental health problems are much more common among women than among men, there are most likely other factors accounting for this.

## Belonging or considering dropping out

When asked whether students often feel that they do not belong in higher education and whether they seriously consider dropping out of their studies, men and women responded similarly. For the three fields of study examined in this report, all groups, both men and women, had less serious thoughts about dropping out of their studies than the average for all respondents. Explanations for this could be that programmes in these fields lead to clear professions and that they also have good job market prospects.

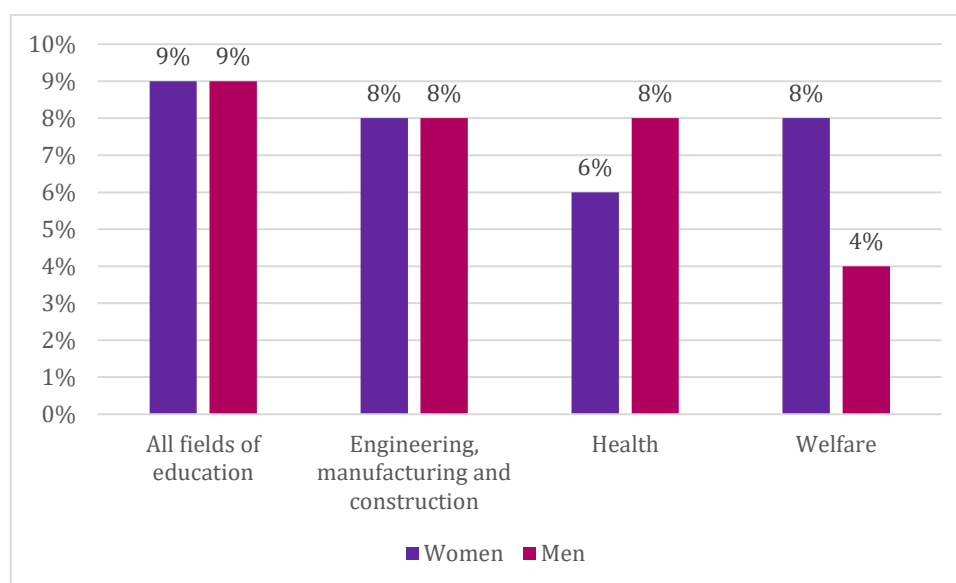
In **engineering, manufacturing and construction**, no direct differences were seen between women and men. Both groups felt more at home in higher education than average and were less likely to consider dropping out.

Men in **health** showed a slight tendency to feel that they did not belong in higher education more often than women in the same field. In **welfare**, the opposite was true, with women reporting this to a greater extent.

The same pattern was seen when it came to serious thoughts about dropping out of their studies. Men in the field of **health** were more likely to consider dropping out of their programme than women, while the reverse was true for **welfare**.

Among all respondents who answered the survey, 9 percent were seriously considering dropping out of their studies. Figure 2 shows how women and men differ in the three fields of study.

**Figure 2. Percentage of students with serious thoughts about dropping out of their studies**



## Support from teachers and fellow students

In general, male students were more likely to feel that teachers motivated them to do their best.

One difference between the sexes was that in **health**, twice as many women as men agreed completely that teachers motivate them to do their best. Although the differences between women and men were otherwise small for the three fields of education, women in **engineering, manufacturing and construction** felt to a slightly lesser extent than men that teachers motivate them.

Male students generally thought that their teachers were very good at explaining things more often than women did (57 and 53 percent respectively). This was also true for the three fields of study examined. The difference between the sexes was greatest in the field of **engineering, manufacturing and construction**, where 55 percent of men stated this, while the proportion for women was 48 percent.

Men were slightly more likely to state that they know many fellow students with whom they can discuss subject-related issues, including within these three fields of study. Women felt more often than men that they lacked such support. At the same time, the figures for the three fields of study were generally high compared to the averages, especially within **engineering, manufacturing and construction**.

## Different views on preparation for the labour market

Of all students who responded to the survey, 75 percent of women and 74 percent of men would recommend their education to others. Of the three fields of study, **engineering, manufacturing and construction** received the highest rating, with 80 percent of women and 78 percent of men saying they would recommend their education. The field of **health** also scored above average.

In the field of **welfare**, the difference between women and men was relatively large. Women were significantly more likely to recommend their education than men, 82 percent compared to 72 percent.

The men who responded to the survey generally had a slightly lower opinion than women of how well their current education was preparing them for the Swedish labour market. However, men in **health** believed that their education was preparing them well for the Swedish labour market, stating this to a greater extent than the women. In **welfare**, it was instead the women who believed this to a greater extent.

## Conclusions

The overall trend for women and men as the minority gender in their field of study was a significantly higher incidence of discrimination in the three areas studied.

Another characteristic of **women in Engineering, manufacturing and construction** was that they did not feel that their teachers motivated them or were good at explaining things to the same extent as men did.

**Men in health** were slightly above average in terms of mental health. They also had more frequent serious thoughts about dropping out of their programme and did not feel as often that their teachers motivated them to do their best. However, men believed more than women that their education prepared them well for the Swedish labour market.

**Men in welfare** felt more often than women that they belonged in higher education and were less likely to consider dropping out of their studies.

However, they were less likely than women to recommend their programme and did not believe as often that it prepared them well for the labour market.

The student completion rate in higher education is generally lower for men. Men are at greatest risk of dropping out of programmes that lead to careers as social workers, preschool teachers and nurses. The same pattern cannot be seen in programmes where women are in the minority. The gender distribution among graduates could therefore become more even in several professional degree programmes if the student completion rate for men increased.<sup>8</sup>

The data presented in this report cannot show any direct causal links between belonging to the minority gender in one's education, but the results can help shed light on the challenges faced by members of this group in the three fields of education studied. Previous studies show that students who belong to the underrepresented gender in a gender-segregated education experience various types of stress and obstacles in the study environment, including discrimination. Studies also show that when a minority group becomes large enough, vulnerability decreases and influence increases.<sup>9</sup> Thus, the risk of harassment and discrimination should decrease with a more even gender distribution. Knowledge about discrimination and other aspects of being in the minority gender can hopefully contribute to identifying and addressing various issues to improve the study situation and increase student completion.

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<sup>8</sup> UKÄ 2025:10. *Kvinnor och män i högre utbildning. En undersökning av könsbundna utbildningsval och genomströmning i utbildning på grundnivå och avancerad nivå.*

<sup>9</sup> Jämställdhetsmyndigheten 2022: *Val efter eget kön, En kunskapssammanställning om könsskillnader i utbildningsval.*





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