

VMB Survey on Supervision and Working Conditions at the D-BSSE of ETH Zurich

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1. Rationale

In April 2018, the Association of Scientific Staff at ETH Zurich (AVETH) published results of a survey about the welfare of students at ETH¹. The results showed that doctoral students at the Department of Biosystems Science and Engineering (D-BSSE) were very dissatisfied with their supervision. As an immediate response to these concerns, the department leadership together with a group of students created a task force to discuss and implement remedial measures. Amongst other things, they changed the way contracts are issued and installed mandatory thesis committee meetings at the D-BSSE.

As a next step towards a better and deeper understanding of the situation, the Scientific Staff Association of the D-BSSE (VMB) suggested carrying out a D-BSSE-specific survey, an idea that was welcomed by the department leadership. The VMB designed a survey for both doctoral and postdoctoral researchers, which was conducted at the end of the year 2019. This survey and its results are discussed in the report at hand.

A central goal of this survey is to improve communication between employers and employees regarding any issues. We think that tension builds up if two parties are not aware of or disregard each other's expectations and personal goals. We believe that tensions in the department can be eased through a) "changing the reality", which refers to the existing and unsatisfactory working conditions and/or behavior of the scientific staff, and b) "changing the expectations" of people involved, for instance by bringing to light unrealistic expectations which can be prevented by holding discussions and taking adequate measures. The survey aims at providing statistics for an implementation of both approaches.

We hope that the ongoing efforts can be adapted and improved to create a healthy environment and a place where people like to work. Furthermore, the survey aims to track the positive and negative changes of the general situation over the coming years and will be conducted on a regular basis.

2. Methods

The survey was sent to all scientific staff working at the D-BSSE consisting of PhD students, postdoctoral researchers, senior scientists, and those holding the position of 'Oberassistent'. We distributed a random and unique code to each participant to guarantee anonymity and to ensure that everyone could participate in the survey only once.

We maintained the confidentiality of the unprocessed data of the survey by only granting access to a small number of active VMB members. We then compiled a "survey analysis task force" consisting of 14 people (PhD students and postdoctoral researchers) from 11 different research groups. They carefully analyzed the results, drew conclusions, and constructed recommendations and feedback for the department.

¹ <https://doi.org/10.3929/ethz-b-000262661>

3. Results

3.1 General information

	PhD students	Senior staff*
Access to the survey	169	75
Completed the survey	146	53
Response rate	86%	71%

*Senior staff = postdoctoral researchers, Oberassistenten, senior scientists

3.2 Working conditions, satisfaction, and discrimination

The AVETH survey in 2018 uncovered a widespread power abuse as one major issue at ETH. At that time 43% of PhD students at the D-BSSE felt that their professor abused his/her power over them. Additionally, 45% of PhD students experienced work-related pressure (working overtime, contract prolongation, not granting holidays etc.) and 15% experienced emotional pressure. As we highlight below, the results of our survey indicate improvements in this regard.

The first part of the survey investigated how satisfied employees are with the amount of time they spend on different tasks (question 6). The results show that PhD students would like to spend more time on teaching (21%), lectures (25%) and supervision (35%) while the senior staff is mostly satisfied with the work distribution. Senior PhD students (3rd year and above) are particularly interested in taking on more supervision duties and attending lectures (question 6, correlation 1).

Regarding working hours, 88% of PhD students and 86% of senior staff reported that they work overtime (question 7). In most cases it is their own decision (66% of all PhD students and 82% of senior staff, respectively). Some respondents feel that their PI expects them to work overtime (18% of PhD students and 4% of senior staff). However, 4% of PhD students but none of the senior staff reported that they were directly told by their supervisor to work overtime. Regarding holidays, all but two students and all senior staff were allowed to use all their vacation days in 2019 and more than half used them fully (question 8). Additionally, most people find the atmosphere in their research group pleasant (82% of PhD students and 89% of senior staff, question 9). 18 PhD students (12%) and 6 senior staff (11%) reported that they feel that their professor abuses his/her power over them, which seems to be a reduction compared to 2018.

However, 19 PhD students and 1 senior staff member experienced some form of discrimination (question 10 and question 10, correlation 1). They were mostly (but not exclusively) discriminated against based on nationality or gender. The free text answers indicate that some of this could be caused by lacking sympathy for non-native German speakers. Of all people that felt discriminated against, over 70% stated that they knew whom

to talk to in order to resolve their problem. They mostly trust their peers (colleagues, VMB, persons of trust) and much less the department officials or administration (question 10, correlation 1).

In case of conflict with their professor, two thirds (66%) of PhD students responded that they know whom to talk to. About 13% do not know whom to talk to in case of conflicts, which is 32% less compared to the results of the AVETH survey (question 13).

When asked whether they feel that they are working with their professor, most respondents (>66%) reported that they are working *for* their professor rather than *with* him/her (question 14). This number has increased in comparison to 2018 (51%).

We further analyzed the trust that employees have in different members of the department to help them solving their problems. PhD students put most trust in their colleagues, in the student representatives and their professor but only little trust in the department officials. Two thirds (64%) of students say they can trust their professor while 16% say they cannot (question 13). Only one fourth (26%) of PhD students trust the department officials in context of problem resolution (question 13).

Finally, the survey shows that one fourth of students and senior staff feel that they are not treated equally on the same employment level, especially with respect to graduation requirements and salary (question 33). However, with the current survey questions, it is not possible to distinguish if these feelings are a result of real monetary inequalities or if they are based on miscommunication between the professors, department officials and employees.

3.3 Relationship with Professor (PI) and supervisor, science-related issues, appraisal meetings

Regarding the relationship with their professors, on average two thirds of PhD students and senior staff are free to develop their own ideas, feel supported and respected. Some people responded negatively to their relationship with their professor. The answers include not feeling respected (PhD students: 17%, senior staff: 9%) or supported in problematic situations (PhD students: 32%, senior staff: 15%). Furthermore, there were respondents who feel that their work is not valued (PhD students: 28%, senior staff: 11%), or that their PI does not maintain a positive work environment (PhD students: 30%, senior staff: 21%; question 14). Next, we investigated the frequency and helpfulness of scientific meetings between the employees and the professors. At the D-BSSE, almost 80% of PhD students are directly supervised by their professor (the principal investigator of the group, question 15). The remaining 20% are supervised by senior group members (postdoctoral researchers or senior scientists). We therefore analyzed the responses about the quality of scientific meetings of PhD students with their supervisor separately for the two groups.

Students who stated that the professor is not their main supervisor generally get more helpful and more frequent feedback from their supervisors (question 15-17) compared to students who are directly supervised by their professor. However, due to the small sample size of students who are not supervised by their professor (31), clear conclusions cannot be made.

Among students who are supervised by their PI, more than 30% state a lack of helpful feedback during scientific meetings. Out of those, one third (30%) does not know what to do next in their project and one third (30%) state they do not know the expectations of their professor (question 15, correlation 1). For those who indicated that discussions with the PI are not helpful, we observed a decrease in trust towards the professor (40% vs. 60% in all answers; compare question 18 and question 18, correlation 1). These students also feel less respected (50% compared to 80% in all answers, compare question 18 and question 18, correlation 2).

A general trend is that PhD students would like to have more scientific discussions not only with their professor, but also with their colleagues and external experts (question 21). Both PhD students and senior staff members find discussions with fellow PhD students more helpful than discussions with senior scientists, external experts, postdocs and their professor (question 20). Appraisal meetings were offered to about 60% of students and senior staff (question 25). In comparison to 2018 where only about 30% of respondents stated that they have had such meetings, we consider this a significant improvement of the situation.

3.4 Extracurricular opportunities, employment conditions, self-reflection

Extracurricular opportunities contribute positively to the working conditions of the employees. When asked about their interest in soft skill courses, 77% of PhD students and 68% of senior staff reported a high demand (question 26) while at the same time most PhD students (80%) and senior staff (55%) stated that they do not benefit from the same career development opportunities as other ETH employees who work in Zurich (question 28).

A substantial number of employees (39% of PhD students and 21% of senior staff) indicated that they did not get to attend external scientific events (conferences, seminars, workshops) often enough (question 29). Some respondents (21% and 17%) stated that they attended a conference less than once a year or even never (14% and 11%). Moreover, around 30% of students and senior staff do not get reimbursed for the daily allowance while attending such events (question 30). When asked about the professor's support to attend conferences in the AVETH survey, 21% of PhD students indicated that they were blocked from such events. Although the data is not directly comparable, we see that this situation has improved since at least 85% of students have attended at least one conference by the time of the survey (question 29).

Next, we analyzed how satisfied the employees are with their employment conditions. We found that half (48%) of PhD students and one quarter (26%) of senior staff have considered quitting their current employment (question 34). Those who have considered leaving, perceive the inequalities within one employment level (listed in question 33) more strongly compared to all respondents taken together (on average over all categories 37% vs. 25%; question 34, correlation 1). The most prevalent reason for considering leaving was the professor (question 35), in which case the employees have less trust in their professor (question 35, correlation 1) and do not believe that the professor maintains a positive work environment (question 35, correlation 2). However, more than 20% of students think that supervision improved in the last year while 47% claimed it stayed the same and 11% stated it

worsened. For senior staff, these numbers are 17% (supervision improved), 56% (supervision stayed the same) and 4% (supervision worsened, question 36), respectively.

To further investigate the atmosphere in the department regarding scientific activities, we asked whether employees are proud of their research at the D-BSSE. 79% of senior staff and 50% of PhD students stated that they were proud of their work (question 43) and 25% of PhD students stated that they are not proud of their work. While 84% of PhD students who are proud of their work also feel that their work is valued by their PI (question 43, correlation 1), 43% of students who are not proud of their work feel this way (question 43, correlation 2).

We next evaluated whether the level of pride a student feels for his/her research changes over time and found that being proud of one's research decreases over time. 15% of people who have spent less than 3 years at the department stated that they are not proud of their work compared to 38% who have spent more than 3 years at the department (question 43, correlation 3).

3.5 Questions specific to senior staff and PhD students

In the last section of the survey, we asked questions specific to each group, i.e. senior staff and PhD students. The aim of this was to evaluate whether specific needs of those career stage are met.

3.5.1 Questions specific to senior staff members: career opportunities, fostering independence

We found that approximately 20% of all senior staff does not feel comfortable discussing their future career steps with their PI. In addition, over 20% of senior staff indicated that the PI does not encourage them to apply for other positions and independent funding (question 47). This is an alarming result especially since most of the senior staff claimed to have joined ETH to do high quality research and pursue an academic career path (question 46).

3.5.2 Questions specific to PhD students: career and learning opportunities, research plan, committee meetings

When asked about personal and professional development, most PhD students (81%) feel they are developing scientifically and are learning new skills (question 48). While most students replied that they would pursue a doctoral degree to qualify for industry positions (60%) a significant part (47%) reported that they intend to follow up on an academic career (question 54).

To outline the theme and general directions of the doctoral studies and the future research activities, the PhD students are required to submit an initial research plan in agreement with the PI and the thesis committee members. In our survey, two thirds (63%) of PhD students (2nd year and above) claimed that the research plan became obsolete quickly and did not

guide them through their doctoral studies (question 49). This opinion is stronger within more senior PhD students (4th year and above; question 49, correlation 1).

Finally, we asked if students know what is expected from them to graduate. As a reference, in the 2018 AVETH survey 62% of PhD students at D-BSSE stated that they were not properly introduced to the requirements for graduation upon hiring. In the present survey, around one half of the students (53%) stated that they are aware of specific requirements for graduation. In this regard, 24% of students were told explicitly by their professor and 6% of students reported that their group had a formal list of graduation requirements. Notably, 21 PhD students (14%) have not tried to get this information (question 52).

Moreover, over 50% of PhD students stated that they do not feel they have been adequately introduced to the requirements of their job (question 44). Compared to the 2018 AVETH findings, we see an improvement in this area.

4. Conclusion

In general, most students and senior staff find the working atmosphere in their groups pleasant and know whom to turn to in case of problems or conflicts (question 9, question 10, question 13). However, only about half (54%) of the students state that they are proud of their own research work (question 43). The reasons for this can be various but the fact itself is worrying and should be investigated. Consequently, suitable measures need to be implemented to increase positivity and pride in their work. Additionally, a feeling of inequality concerns many people. This is not only caused by differential treatments within one group (question 33) but also by D-BSSE's remote location from the main campus in Zurich (question 28).

Workplace satisfaction relies on a functional relationship between professors and their doctoral students or senior staff. The negative responses reporting a lack of trust, respect and support unveil a need for change (question 14). While most respondents stated that supervision improved or remained the same during the last year, a significant part stated that it worsened over the course of the last year (question 36). About 1.5 years before this survey, the AVETH survey and the following discussions identified a lack of supervision to be a major issue, yet 11% of people reported that they have experienced a decline in quality of supervision at the D-BSSE during the last year.

Equally troubling are the 20 cases of discrimination at the workplace (question 10 and question 10, correlation 1). Discrimination, independent of the perpetrator, cannot be tolerated. Our department should be perceived as a place that fosters professional development and helps PhD students to learn and improve new skills (question 48). However, there are various issues that need to be addressed to make the time spent at the department a more valuable experience.

We therefore would like to present a set of recommendations that can help to further improve the working situation and the atmosphere at the department.

5. Recommendations

This survey has provided important statistics on the opinions and wishes of D-BSSE employees. It has shown us the positive trends which we can build upon and brought forward some areas of persistent concern. The results thus provide us with a great opportunity to think and plan the next steps that can be taken to improve the happiness and job satisfaction of all the members of the department. As the last section of the survey, we have focused on the existing concerns and outlined recommendations for the professors, the administration staff, the PhD students, and the senior staff of the department. These recommendations focus on areas that showed improvement but still need additional work, and more importantly issues which need rightful attention. We greatly appreciate the ongoing efforts by each member of the department, and our suggestions aim to support them by giving feedback.

5.1. Recommendations to professors and department officials

Professors

The present survey indicates that the department lacks clear and transparent communication between professors and the students as well as senior scientific staff. Therefore, there is an immediate need for the professors to a) initiate more conversations with their students and senior staff, b) endeavor to gain their trust, and c) develop a healthy work relationship with them. In particular, the professors can achieve this by exhibiting more interest in the well-being of their mentees and ensuring that their dialogue is understandable, productive, and respectful. We recommend that the professors have regular scheduled individual meetings with their PhD students and increase their efforts to ensure that the interactions are positive and useful for the students. We feel that professors will greatly boost the morale and enthusiasm of their students by engaging in discussions about the quality and importance of their doctoral project combined with honest and frequent feedback. This could help the students in putting their work in perspective. In addition, professors should clearly communicate their expectations for graduation to their PhD students as early as possible and help them in outlining broad goals at the beginning of their studies. This should be followed by periodic updates and revisions to the work plans. Along with doctoral committees providing feedback to PhD students, we suggest that professors could also include senior staff formally or informally in the supervision of PhD students.

In order to avoid incidents of discrimination, we want to emphasize that in all their interactions, professors should pay careful attention to the diverse cultural backgrounds of the D-BSSE staff, show sensitivity towards possible cultural differences and modify their interactions accordingly. Importantly, the survey indicates that a feeling of bias and disparity in salary levels and bonuses appears to create an environment of mistrust and favoritism. We recommend that together with the department officials, the professors should clearly and transparently communicate salary differences and bonus conditions in their group.

In addition to their current mentorship efforts, we recommend that the professors put more emphasis on engaging in discussions about the future career plans of their employees and about science beyond their specific projects. Considering the importance of scientific

meetings on academic development, future career, and enthusiasm, we strongly recommend that the professors encourage their staff to attend internal and external events. Although the survey indicates that soft skill courses are slightly more supported by the professors now than in 2018 (from 72% to 80-85%), yet unfortunately, a significant number of PhD students and senior staff have indicated that they do not get to attend external conferences and do not get sufficient reimbursement. By reimbursing their expenses and providing a daily allowance, the professors could demonstrate their support to the overall training and academic development of their PhD students and senior staff.

Department officials

We encourage the department officials (PhD office and responsible committee heads) to increase their readiness and enthusiasm when dealing with each issue and problematic situation reported, no matter how minor and rare. This will increase the trust of students in the administration's commitment towards enhancing their PhD experience and establishing an enthusiastic atmosphere in the department.

An area which needs more work at the D-BSSE is access to career development initiatives, extracurricular activities and soft skill training courses. We recommend that the administration foster this trend by employing programs to encourage open discussions within the department, especially about career development and future career steps between the senior staff and the professors. More specifically, we suggest that the administration supports students in getting access to courses offered by the University of Basel and regularly distributes information about them. We encourage our department officials to organize regular streaming of courses and events happening in Zurich. We think the recent emergency operations proved this feasible. They could even host recurring events, like CV checks as seen at ETH in Zurich, themselves here in Basel. This would be a step towards solving the problem that people feel disadvantaged compared to their colleagues in Zurich.

Professors & Department officials

Recruitment process: we suggest that the professors provide the future PhD students with statements about how they envision the development of their students. This will ensure better matching with PIs/groups and a better understanding by the students of the expectations and the goals of their PhD supervisor.

Research plan: We suggest that the research plan can be updated yearly during the thesis committee meetings. This way, all parties are clear on what needs to be done as a follow up, why research activities included in the proposal are potentially not followed, or whether certain plans were justifiably abandoned. A proposal in this direction is already discussed at ETH.

5.2. Recommendations to PhD students and senior staff

Communication and satisfaction at the workplace are multifaceted issues which need proactive efforts from not only the department officials but also the employees. We strongly encourage the PhD students and the scientific staff to provide regular feedback and increase their efforts to actively seek information from their professors and the administration. We recommend that all the members of the D-BSSE participate more in scientific conversations,

both within their group and across groups. This would help them in appreciating their work, in increasing their exposure and in training themselves for their future career prospects. We would like to state that it is also the responsibility of the students to ensure that they are sufficiently informed about the requirements related to their PhD. All members including the senior staff should know the rules and guidelines relevant to their work at the department. We recommend that PhD students and senior staff who would like to have more training options and extracurricular activities at the D-BSSE and want to attend more conferences, workshops and soft skill courses, actively communicate their wishes to the professors, administration and the VMB. Regular feedback would help the administration and the VMB in modifying their event plans according to changing interests of the current staff and the students. We believe that by providing their ideas, statistics of the number of interested people and volunteering in organizing such events, the PhD students and the senior staff can greatly contribute to increase the frequency and availability of workshops and courses. We encourage everyone to participate in the preparation and execution of training and communication activities planned by the department and the VMB. The scientific environment of the department would be enriched by a proactive participation of the PhD students and the senior staff in ensuring that an enthusiastic work environment is maintained at the D-BSSE.

6. Contributions

This survey was a joint project of volunteers and members of the VMB of the D-BSSE.

The survey was designed by the survey creation team under the lead of Gotthold Fläschner: Matej Žnidarič, Maaïke Welling, Matteo Togninalli, Silvia Ronchi, Bastian Rieck, Julija Pečerska, Selen Manioğlu, Ying Liu, Furkan Gökçe, Elisabetta Ghisu and Vishalini Emmenegger.

The survey was analyzed by the survey analysis team under the lead of Aleksandra Sapala: Florian Wilhelm, David Schweingruber, Aleksandra Sapala, Pawel Laskowski, Christine Lang, Akanksha Jain, Jana Huisman, Simon Höllerer, Anja Gumpinger, Furkan Gökçe, Gotthold Fläschner and Sara Dionisi.

Data visualization was done by Anja Gumpinger.

Aleksandra Sapala, Akanksha Jain and Simon Höllerer wrote the survey report.

7. Outlook

This survey was designed and analyzed by volunteers of the D-BSSE in Basel. This would not have been possible without the help and support of several people across the D-BSSE. We would like to thank everyone involved in this survey, especially all volunteers of the survey analysis team and the survey creation team. We thank AVETH and the student representatives of D-BIOL and D-MTEC, who supported us in the creation of this survey. We also thank all members of the VMB and the department leadership for their support.

We hope that we were able to summarize some aspects of supervision and working conditions that the doctoral students and scientific staff receive from their supervisor and their respective feelings about it. At the end of this report, we have provided recommendations for all parties involved. We will continue to work with the department leadership to address the issues presented herein.

We wish for everyone to participate in an open and honest communication towards a pleasant work environment that enables thriving research.

If you want to be a part of the VMB, would like to help in designing and analyzing our next survey or if you have any questions or comments, please contact us via vmb@bsse.ethz.ch.

Basel, May 13, 2020



Appendix

I. How to read the figures?

Bar plots, multiple choice (blue)

Bar plots with **blue** bars visualize the results to **multiple choice** questions. The count in parenthesis in the title indicates how often the question was answered. For example, "PhD (135 answers)" indicates that this question was answered by 135 PhD students. The y-axis contains the different answer options, and the x-axis displays how often the answer was chosen. Additionally, each bar is labelled with the percentage the counts correspond to. For example, if 27 answers are given, this corresponds to 20% of the total answers. The percentage does **not** include responses that did not answer the question. As a result, the counts sum up to the total count in the title, and percentages sum up to 100%.

Note: if percentages do not sum up to 100%, it means that the respondent opted for a free text answer which is not shown for confidentiality reasons, but was read and processed by the Survey Analysis Team (see the 'free text questions' section below).

Bar plots, multiple responses (green)

Bar plots with **green** bars visualize the results to **multiple response** questions. The count in parenthesis in the title indicates how often the question was answered. The y-axis contains the different answer options, and the x-axis displays how often the answer was chosen. As opposed to the multiple-choice bar plots, each bar is labelled with the explicit count, i.e. the corresponding value on the x-axis. Those questions could be answered with more than one answer, such that the bar-label exceeds the total count in the title of the plot.

Heatmap, ranking

The heatmap-like figures visualize results of groups of questions that had to be ranked, for example on scales ranging from "very likely" to "very unlikely", or "strongly agree" to "strongly disagree". In those figures, the title contains the number of individuals that answered **at least one** of the questions in the group. The questions can be found along the y-axis, and the answering options along the x-axis. The values in the figure correspond to percentages and are normalized to the number of individuals that answered the question. Darker shades of blue indicate higher numbers of answers, while lighter shades of blue indicate that an answer was chosen less often, as indicated in the color bar on the right side of the figure.

Free text questions

In some questions of the survey, no options were provided, and the respondent had the possibility to write anything on a certain subject. These answers were read and analyzed by the Survey Analysis Team but will not be published in this report to preserve anonymity.

II. Survey results

Question 1. Please enter the unique number you received.

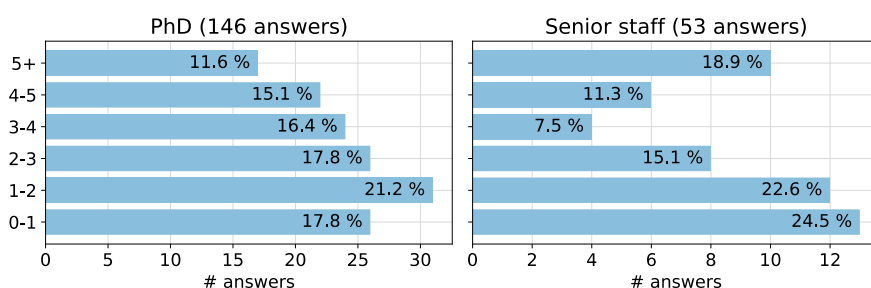
To get access to the survey, each PhD student and member of senior staff was handed a random, anonymous code. This was a way to ensure that each respondent will only fill out the survey once.

Question 2. What position do you hold?

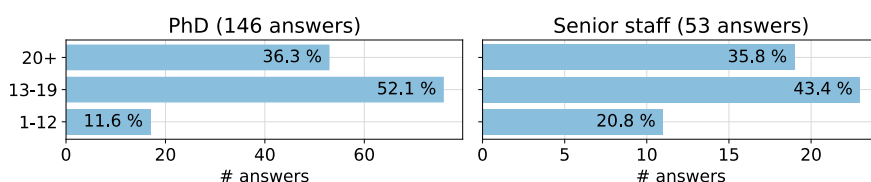
	PhD students	Senior staff*
Had access to the survey	169	75
Completed the survey	146 (86%)	53 (71%)

*Senior staff = postdoctoral researchers, Oberassistenten, senior scientists

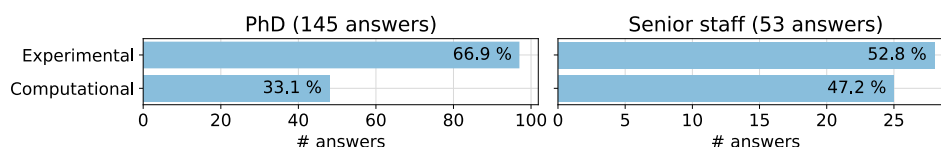
Question 3. For how long have you been in the department (in years)?



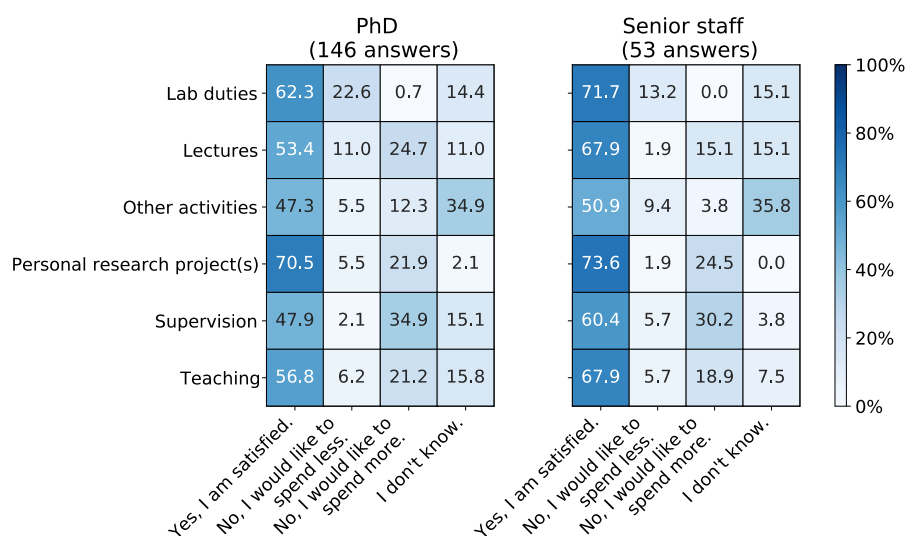
Question 4. How many people are there in your group?



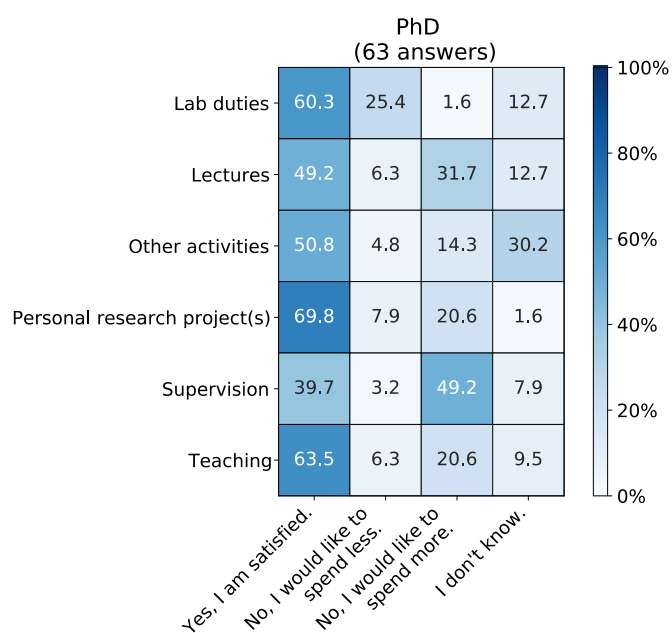
Question 5. How are you mainly working?



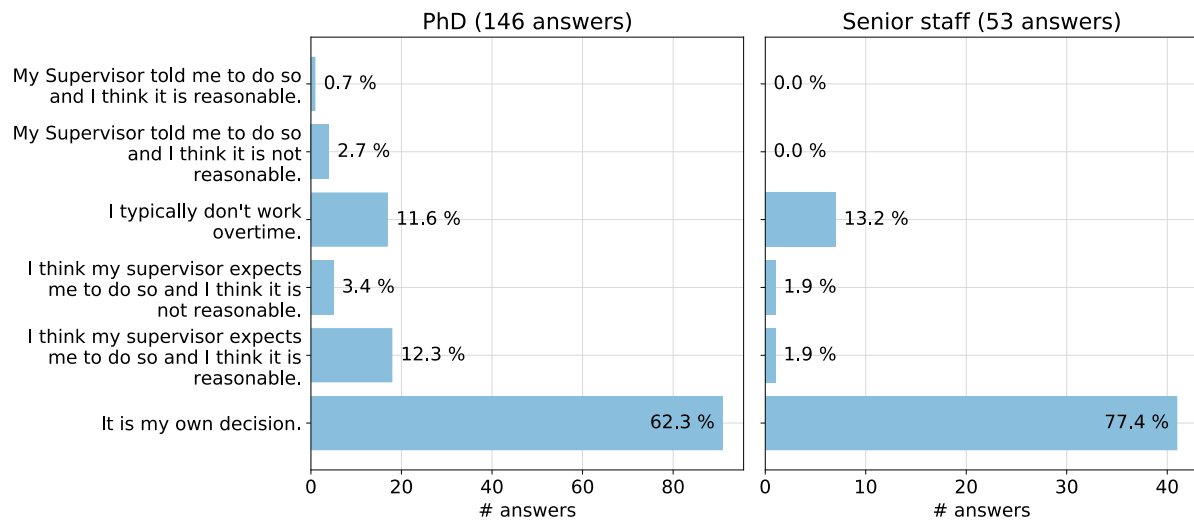
Question 6. Are you satisfied with the amount of time at work you spend for the following?



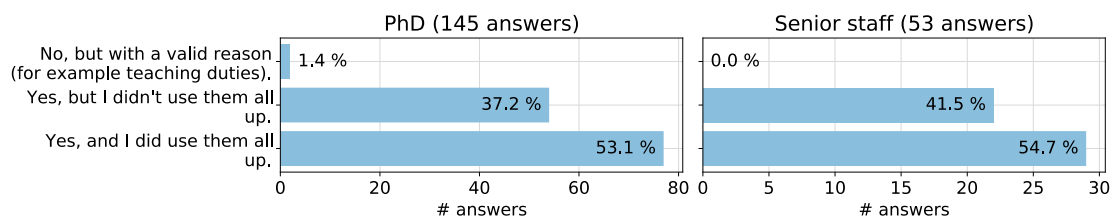
Question 6, correlation 1. Answers of PhD students who have been in the department for 3 years or longer (correlation with question 3).



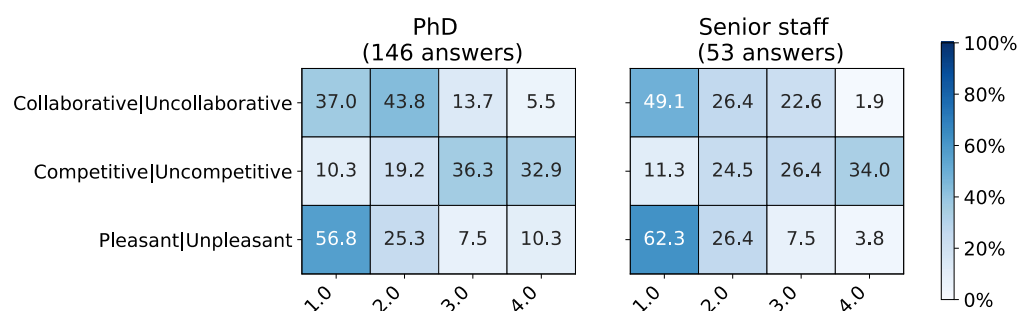
Question 7. Do you work overtime? What is the most common reason?



Question 8. Were you allowed to take all the holidays that you wanted last year (2019)?

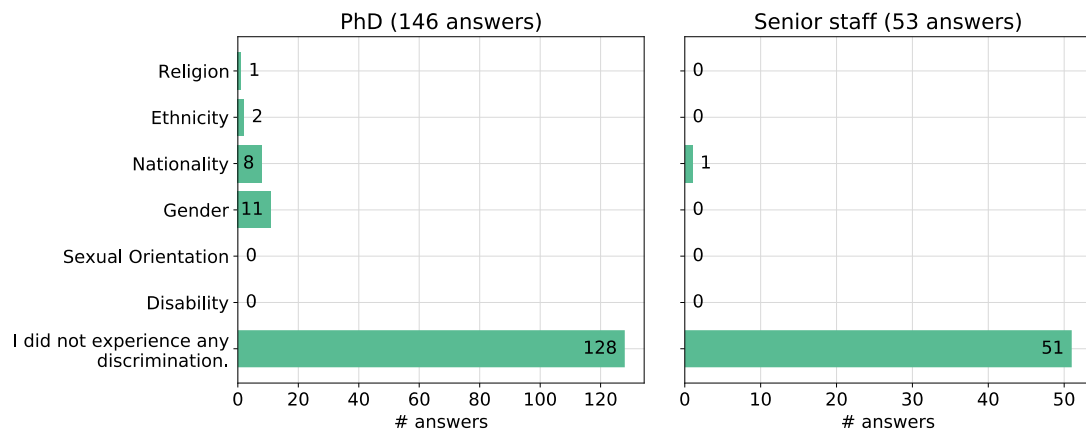


Question 9. What is the atmosphere like in your research group? For each answer, the y-axis represents a scale and the x-axis represents a score on that scale. For example, for the answer 'collaborative|uncollaborative', score 1 means 'completely collaborative' and score 4 means 'completely uncollaborative'.

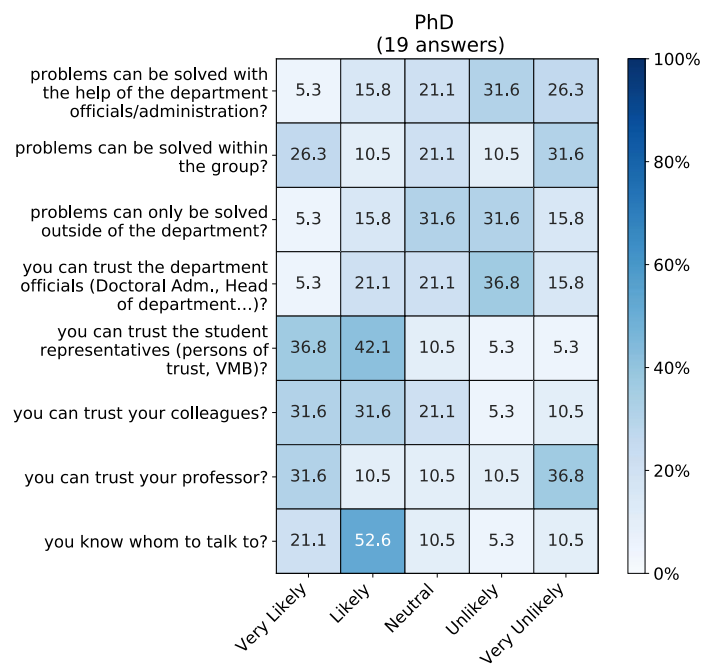


Question 10. Have you ever experienced any discrimination against you at the workplace? If so, what were you discriminated against?

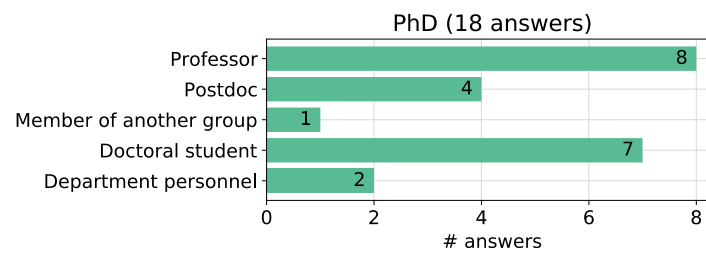
A common definition of discrimination: the unjust/unfair or different treatment of a particular person/group of people only because of who they are or because they possess certain characteristics.



Question 10, correlation 1. PhD students who claimed having experienced discrimination against them, correlated with question 13 ('Regarding problem resolution in case of conflict with your professor/colleagues, to what degree do you feel that...').



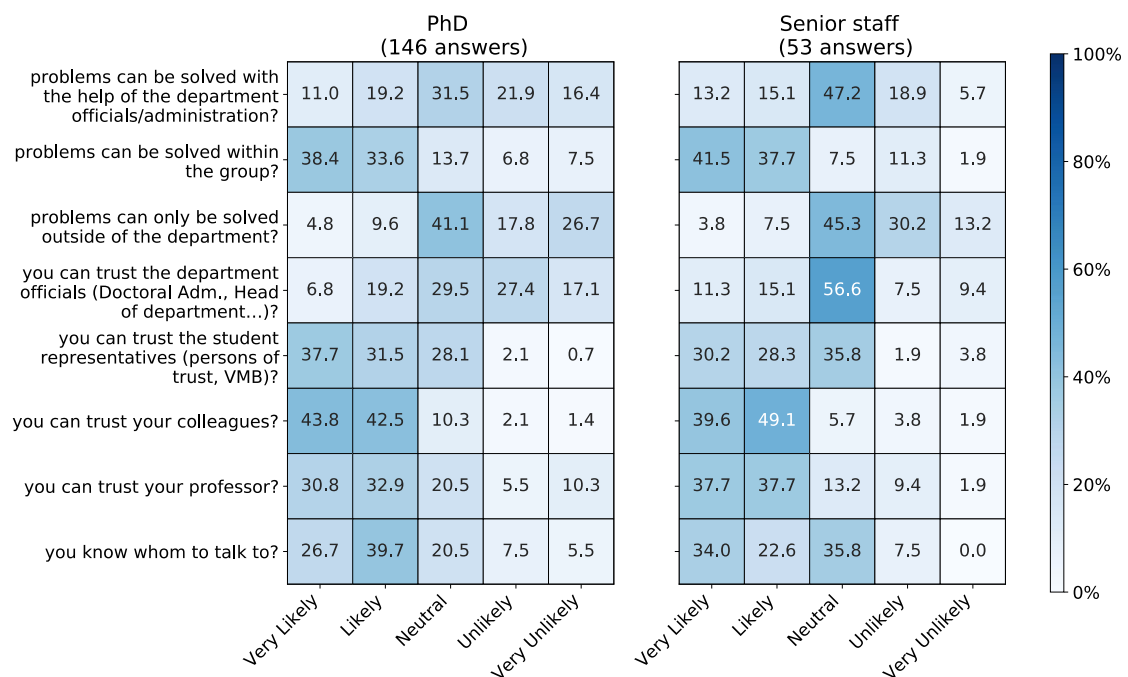
Question 11. If you did experience discrimination, who was the main perpetrator?
Note: no answers recorded from Senior staff.



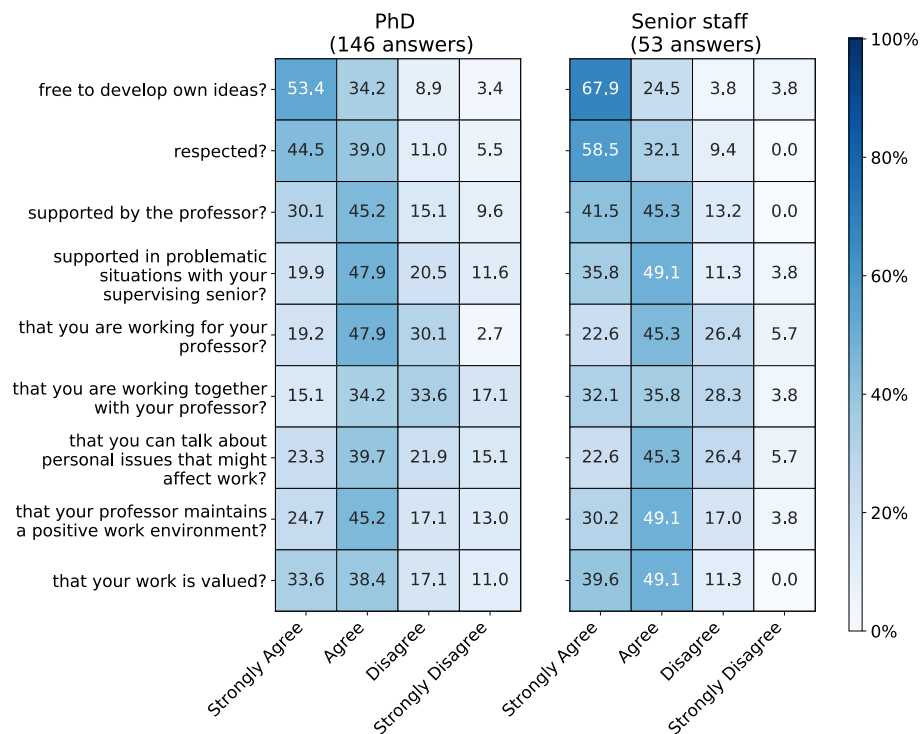
Question 12. If you have experienced discrimination, please comment on the frequency and details of the discrimination against you.

This was a free text question.

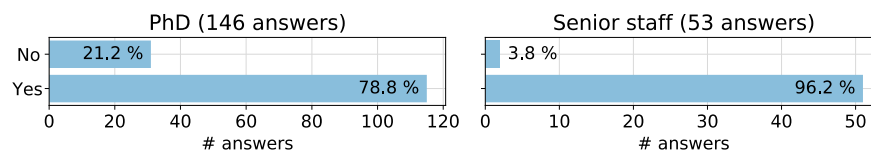
Question 13. Regarding problem resolution in case of conflict with your professor/colleagues, to what degree do you feel that...



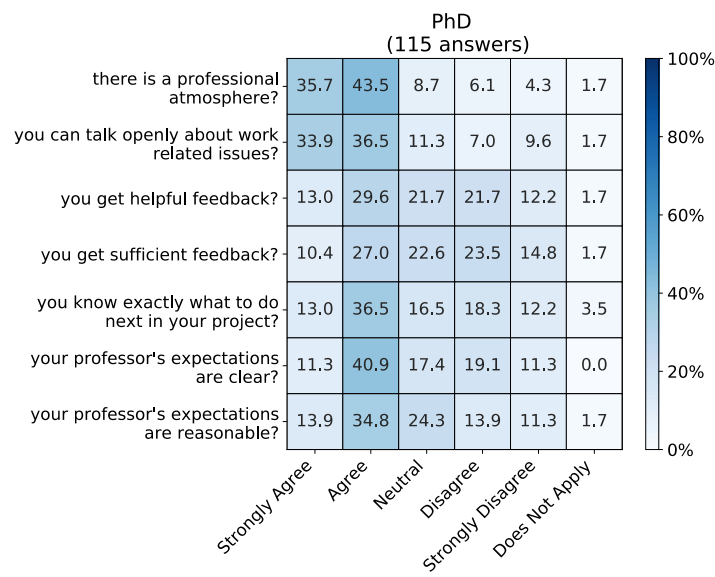
Question 14. Concerning your relationship with your professor, do you agree that you feel...



Question 15. Is your professor your main supervisor?

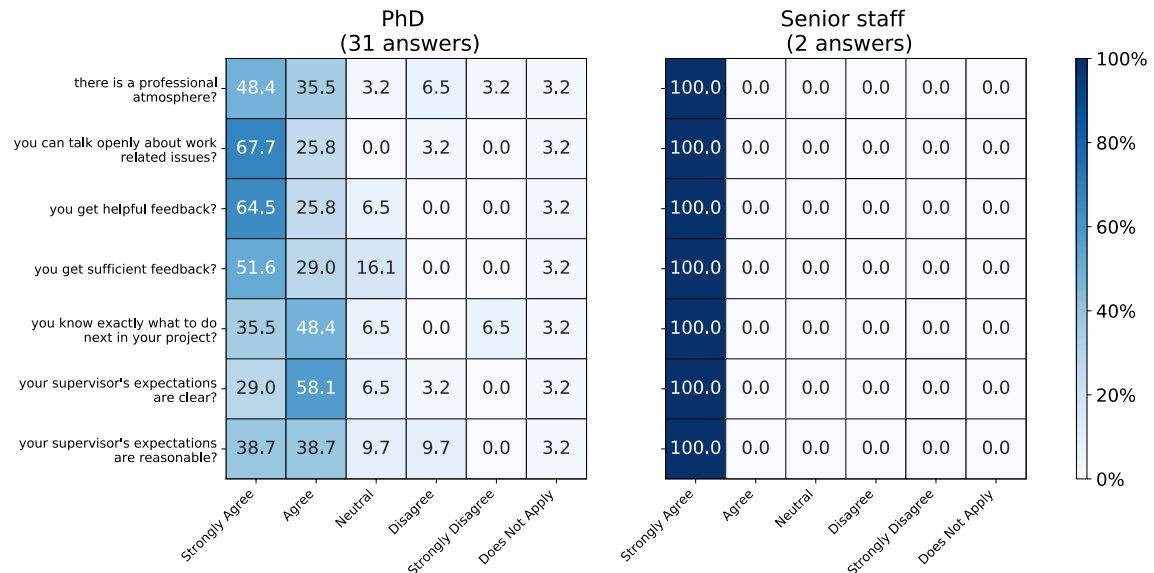


Question 15, correlation 1. PhD students who indicated that the professor is their main supervisor, correlated with question 18 ('regarding scientific meetings with your **professor**, to what extent do you feel that...').

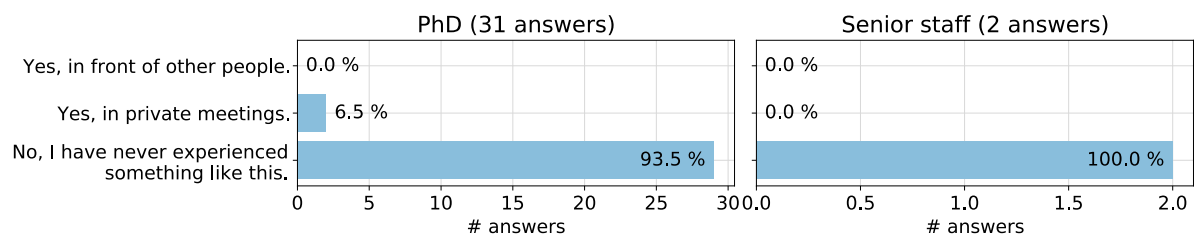


Note: questions 16 and 17 are specific to those who state that the professor is NOT their main supervisor.

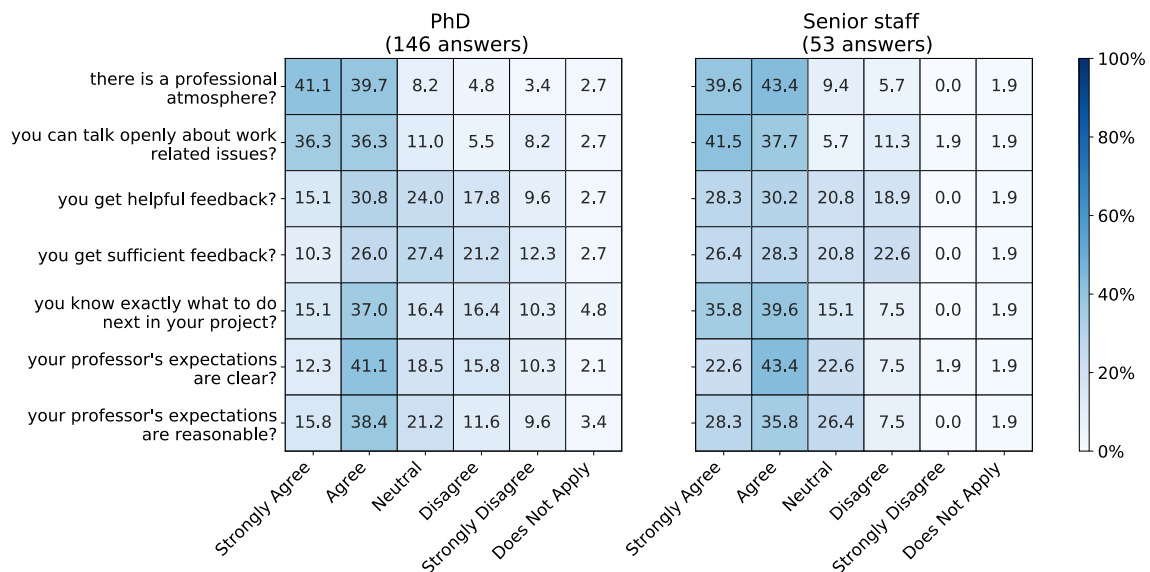
Question 16. Regarding scientific meetings with your **supervisor**, to what extent do you feel that...



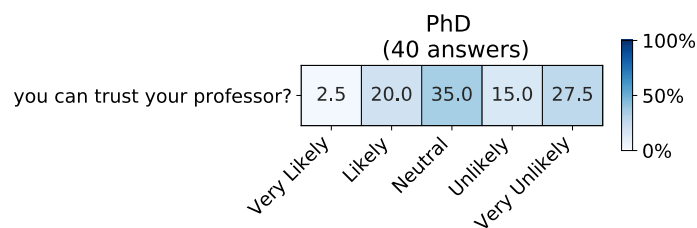
Question 17. Do you feel that your **supervisor** uses his/her position to exercise undue control or to gain power over you? The question is about your daily supervisor. Please note that you will answer the same question for your professor (PI) on the next page.



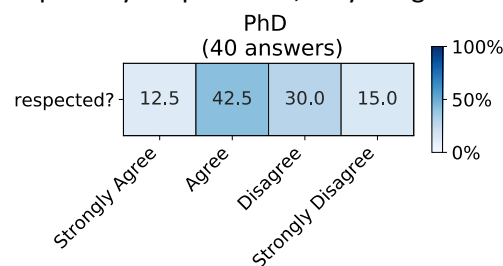
Question 18. Regarding scientific meetings with your **professor**, to what extent do you feel that...



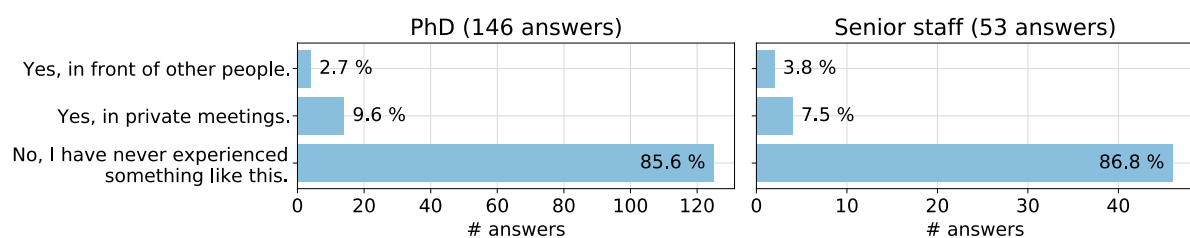
Question 18, correlation 1. PhD students who think they do not get helpful feedback during scientific meetings with their professor (answered 'disagree' and 'strongly disagree'), correlated with question 13 ('Regarding problem resolution in case of conflict with your professor/colleagues, to what degree do you feel that...').



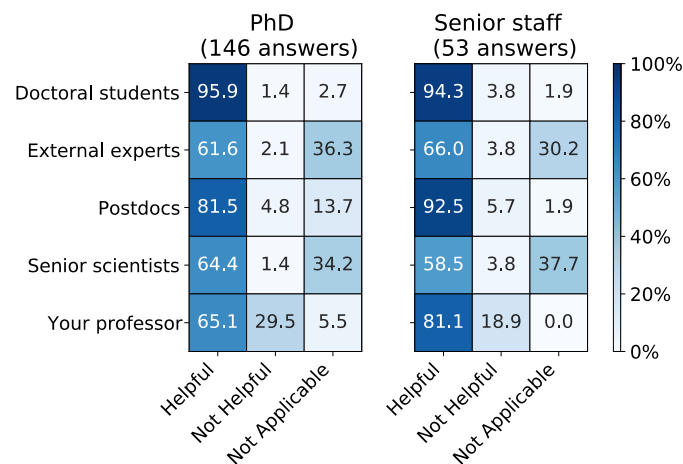
Question 18, correlation 2. PhD students who think they do not get helpful feedback during scientific meetings with their professor (answered 'disagree' and 'strongly disagree'), correlated with question 14 ('Concerning your relationship with your professor, do you agree that you feel...')



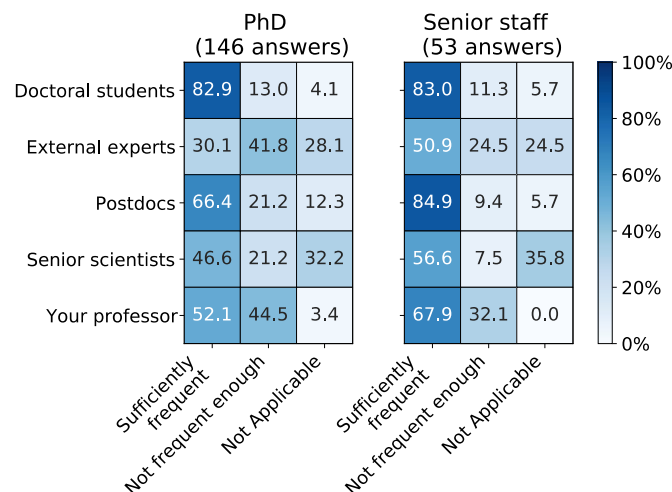
Question 19. Do you feel that your **professor** uses his/her position to exercise undue control or to gain power over you?



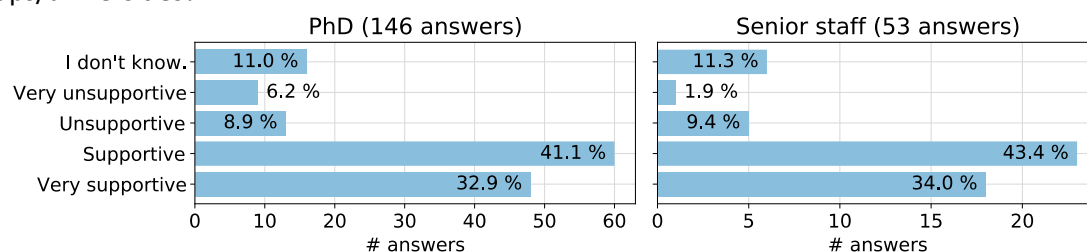
Question 20. What do you think about the **helpfulness** of scientific discussions with the following people?



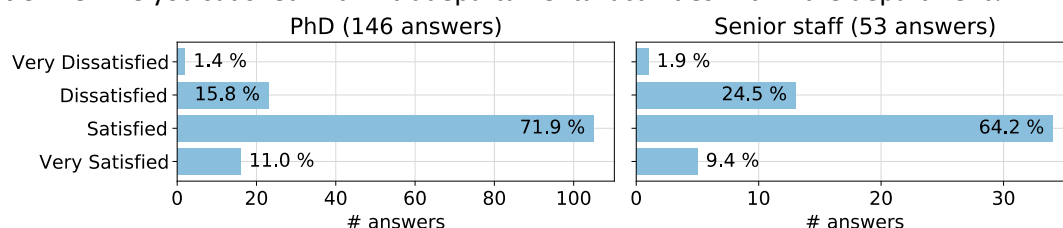
Question 21. What do you think about the **frequency** of scientific discussions with the following people?



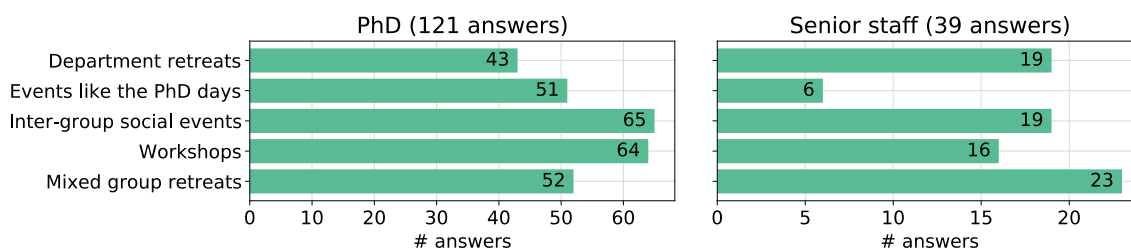
Question 22. How supportive is your professor concerning collaborations with other groups/universities?



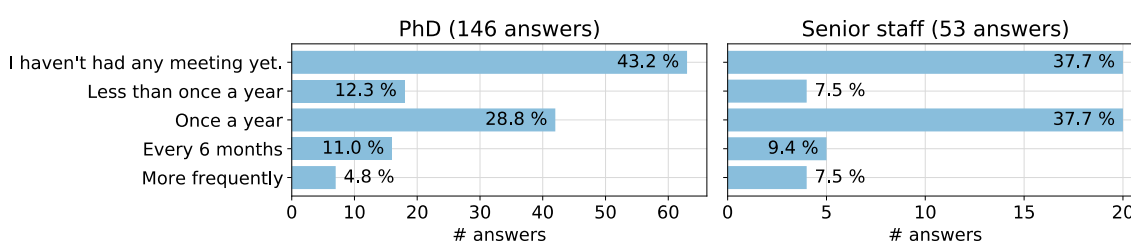
Question 23. Are you satisfied with intradepartmental activities within the department?



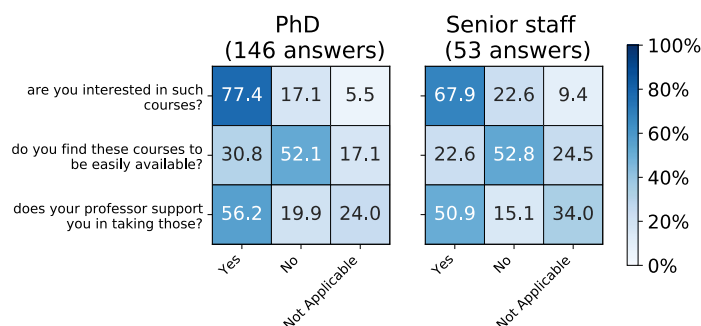
Question 24. Regarding those activities, would you like to have more...?



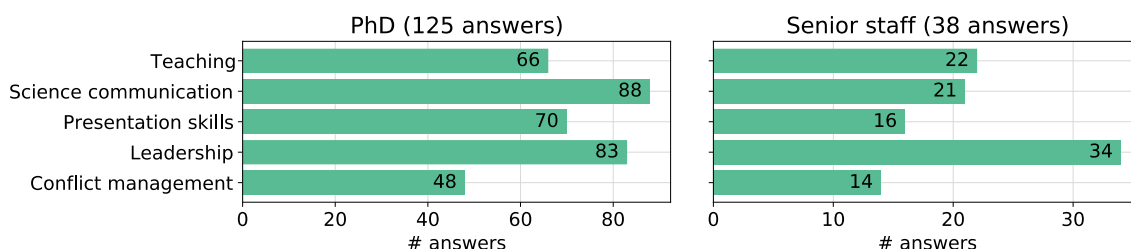
Question 25. How often do you have appraisal meetings with your professor as defined below?
Appraisal meetings are meant to track the personal development of employees, to provide the opportunity to give feedback in both directions, set scientific goals and discuss career plans.



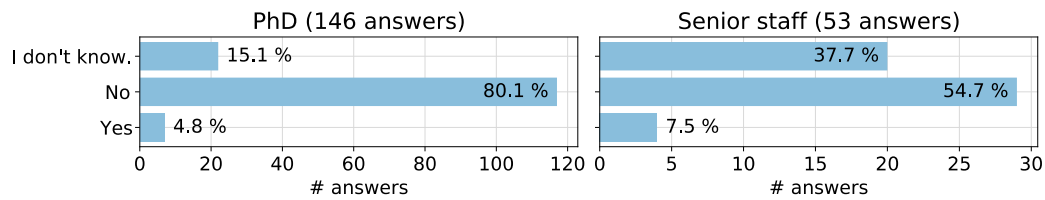
Question 26. Regarding soft skill courses such as graduate school courses, didactica programme, 'Learning to teach', job fairs, etc...



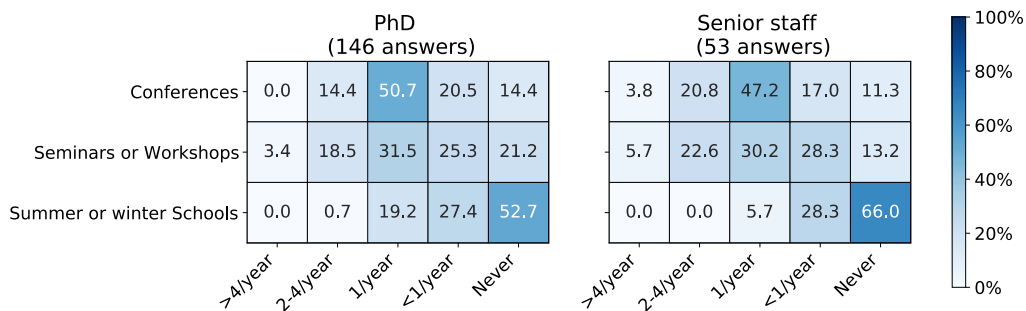
Question 27. If you are interested in these soft skill courses, what are the skills that you would like to learn or improve?



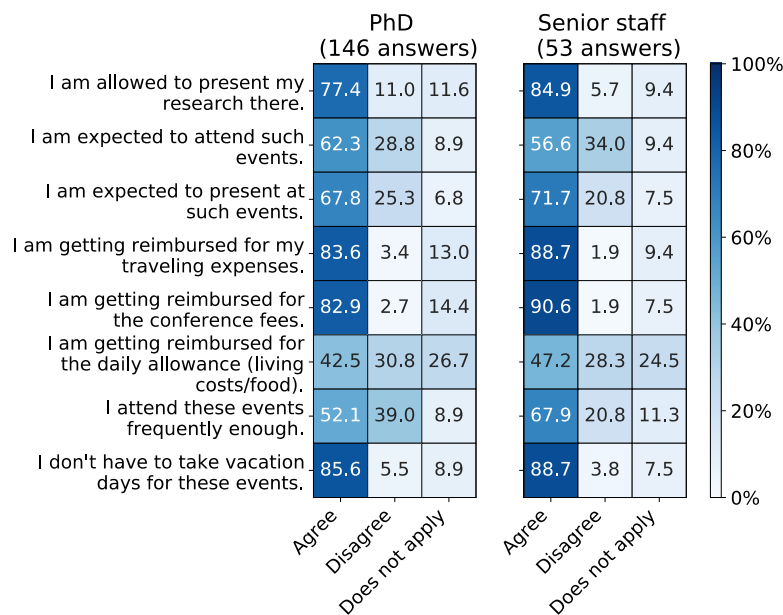
Question 28. In terms of career development events and offers in Basel, do you feel that you benefit from similar opportunities as compared to your colleagues in Zurich?



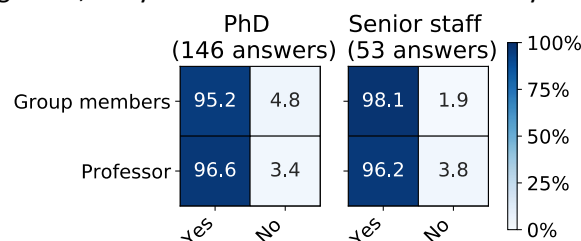
Question 29. How often do you attend conferences/seminars/workshops outside the department?



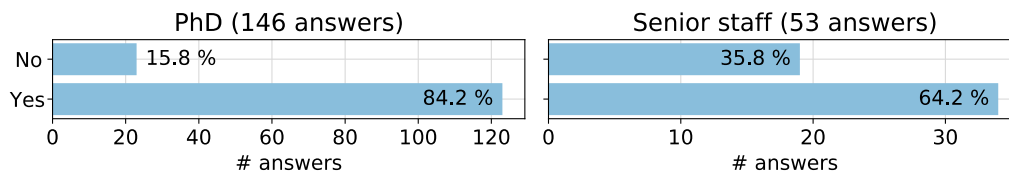
Question 30. Do you agree with the following statements regarding the events outside the department mentioned above?



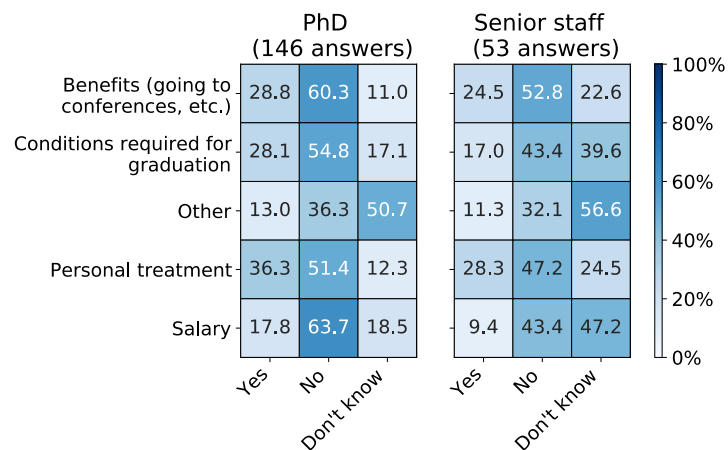
Question 31. Before being hired, did you have the chance to talk freely to:



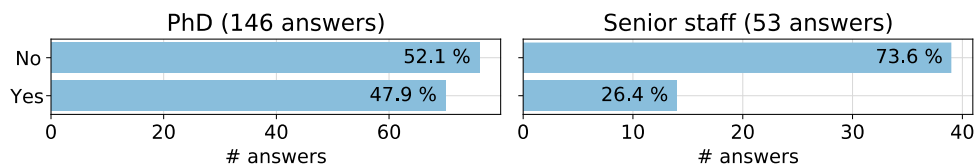
Question 32. Are you satisfied with the duration of your contract?



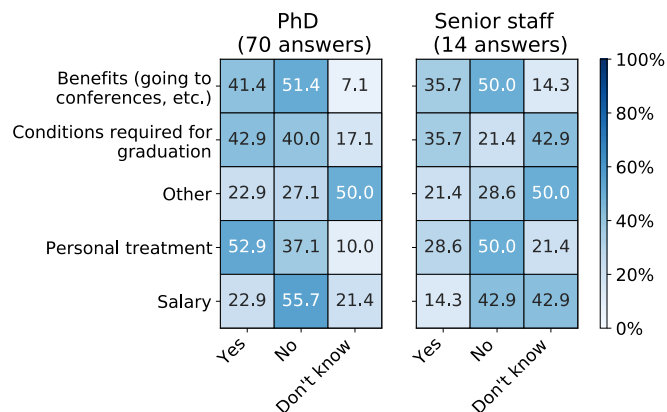
Question 33. Are people at the same employment level treated differently in your group in terms of:



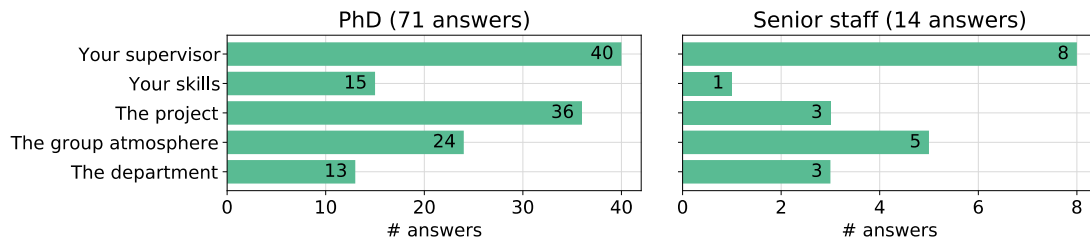
Question 34. Have you ever considered quitting your current employment?



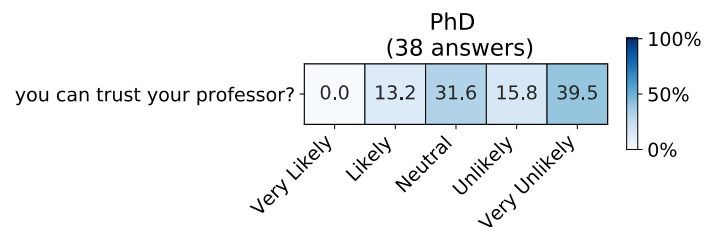
Question 34, correlation 1. Respondents who have considered quitting their current employment, correlated with question 33 ('Are people at the same employment level treated differently in your group in terms of...')



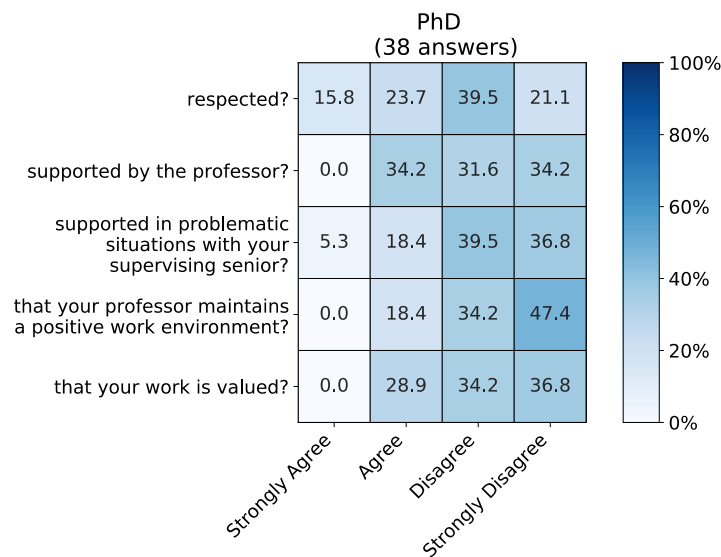
Question 35. If yes, what were the reasons why you consider(ed) quitting your job?



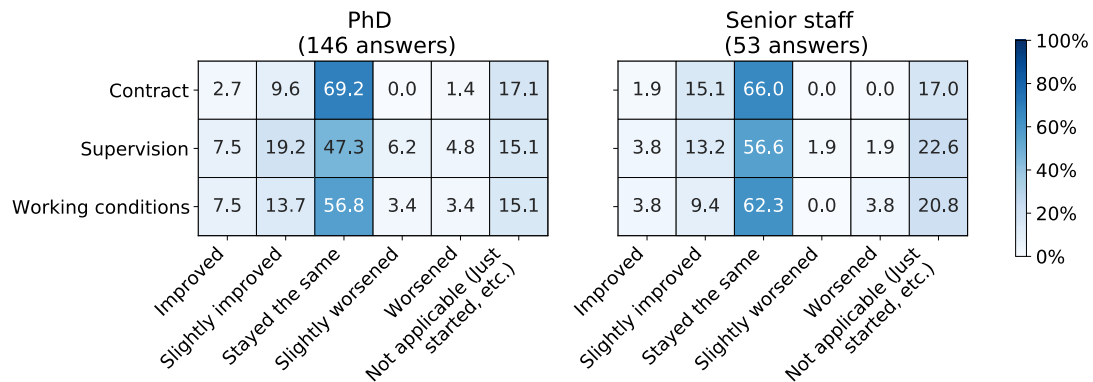
Question 35, correlation 1. PhD students who pointed to their supervisor as a reason they considered quitting. From the 40 students who chose this answer in question 35, we filtered out 2 students who in question 15 stated that the professor is not their main supervisor. These answers are correlated with question 13 ('Regarding problem resolution in case of conflict with your professor/colleagues, to what degree do you feel that...').



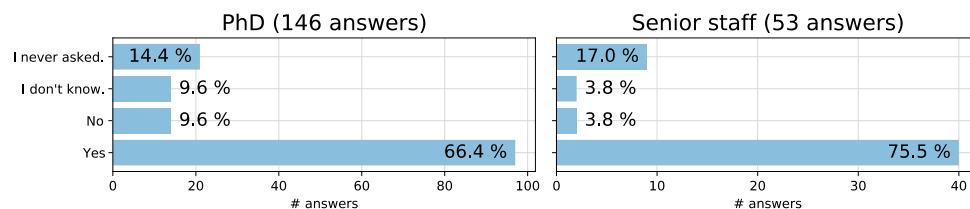
Question 35, correlation 2. PhD students who pointed to their supervisor as a reason they considered quitting. From the 40 students who chose this answer in question 35, we filtered out 2 students who in question 15 stated that the professor is not their main supervisor. These answers were correlated with question 14 ('Concerning your relationship with your professor, do you agree that you feel...').



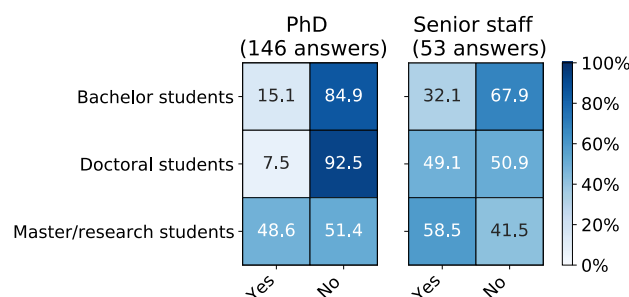
Question 36. How do you think your situation has changed in the last year regarding the following points?



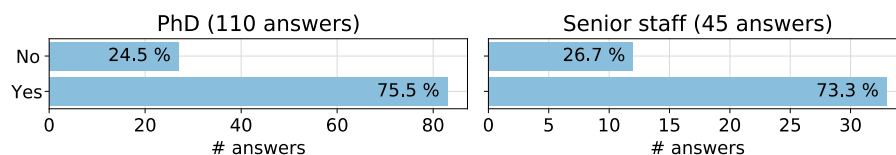
Question 37. Are you allowed to pursue independent projects as opposed to projects that have been 'assigned' by your supervisor?



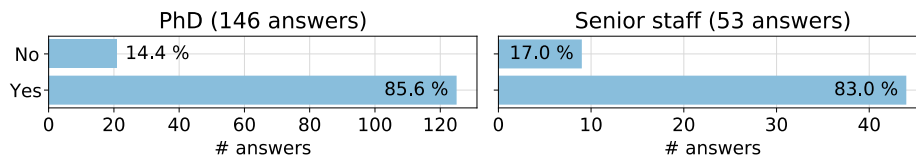
Question 38. Have you supervised students/interns?



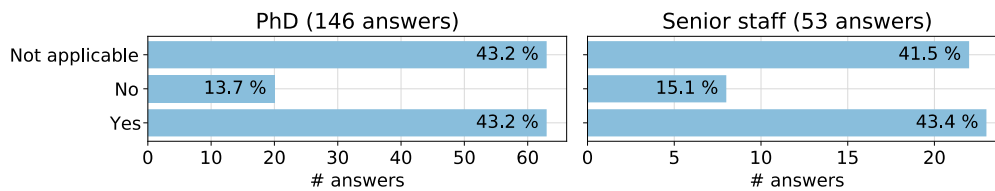
Question 39. Has this supervision been acknowledged by your supervisor?



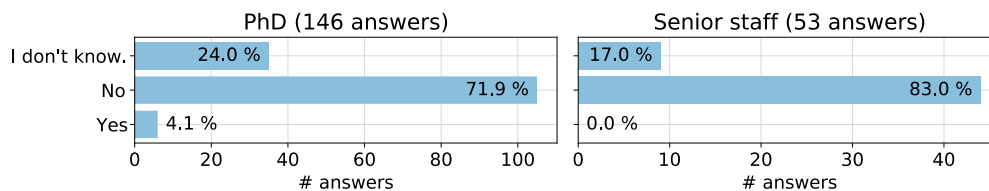
Question 40. Do you feel your professor is handling the order of the authors in a fair and transparent manner?



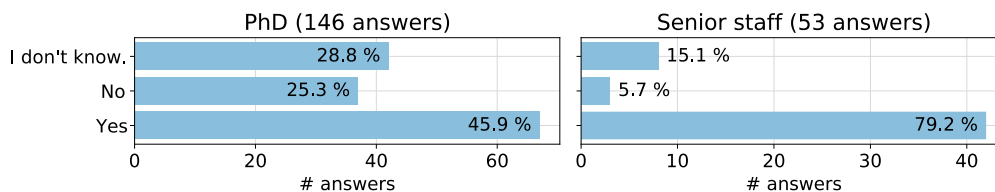
Question 41. Do you think your professor handles the (co-)corresponding authorship in a fair manner?



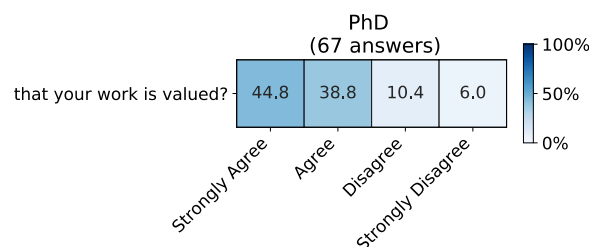
Question 42. Have you been prevented from publishing a finished project?



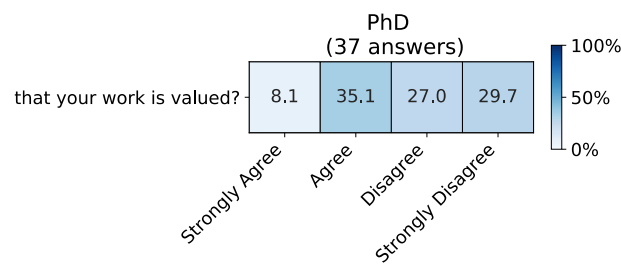
Question 43. Are you proud of the research work you have done?



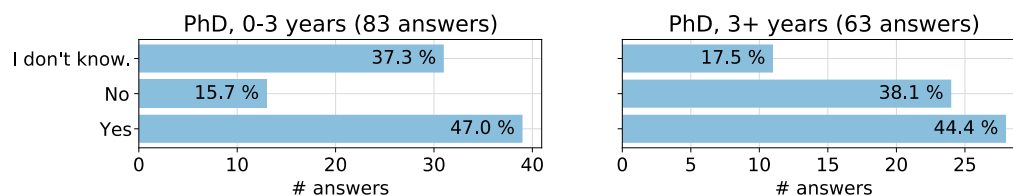
Question 43, correlation 1. PhD students who answered that they are proud of their research work, correlated with question 14 ('Concerning your relationship with your professor, do you agree that you feel...').



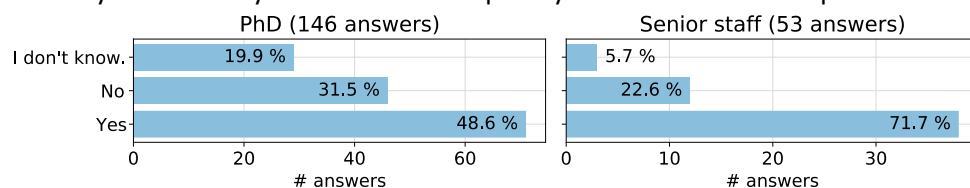
Question 43, correlation 2. PhD students who answered that they are not proud of their research work, correlated with question 14 ('Concerning your relationship with your professor, do you agree that you feel...').



Question 43, correlation 3. Answers of PhD students split by the number of years they have spent in the department (correlation with question 3).

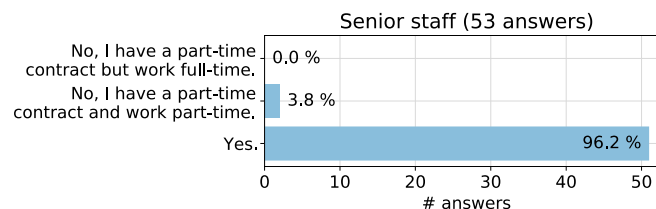


Question 44. Do you feel that you have been adequately introduced to the requirements of your job?



Note: questions 45-47 are specific to senior staff.

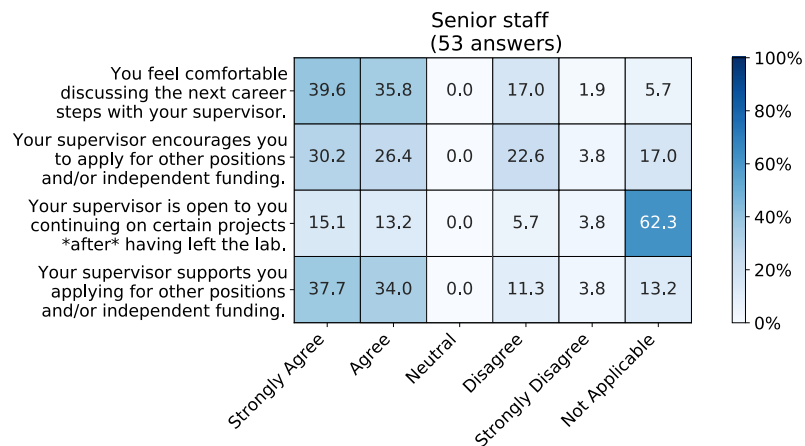
Question 45. Do you get at least the minimum wage of CHF 87'700 per year?



Question 46. Why do you work at ETH?

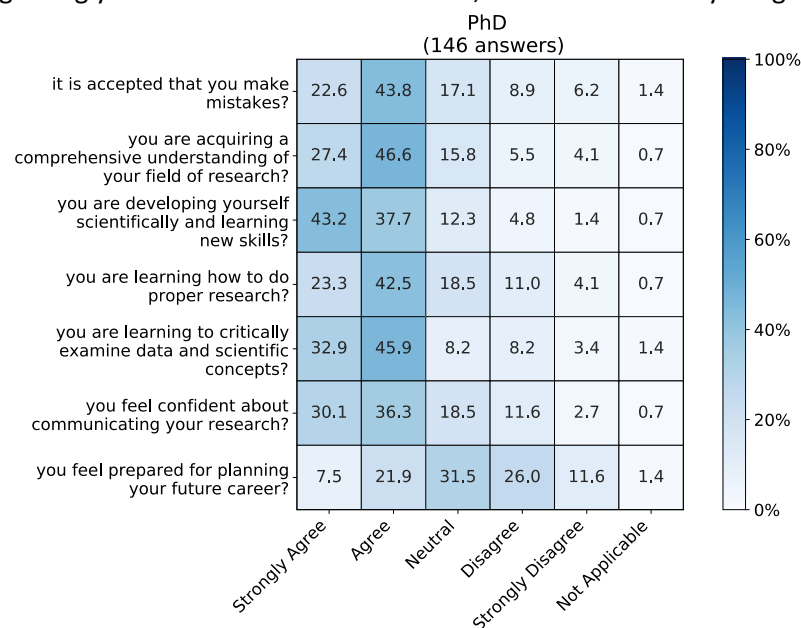


Question 47. To what extent do you agree with the following statements?

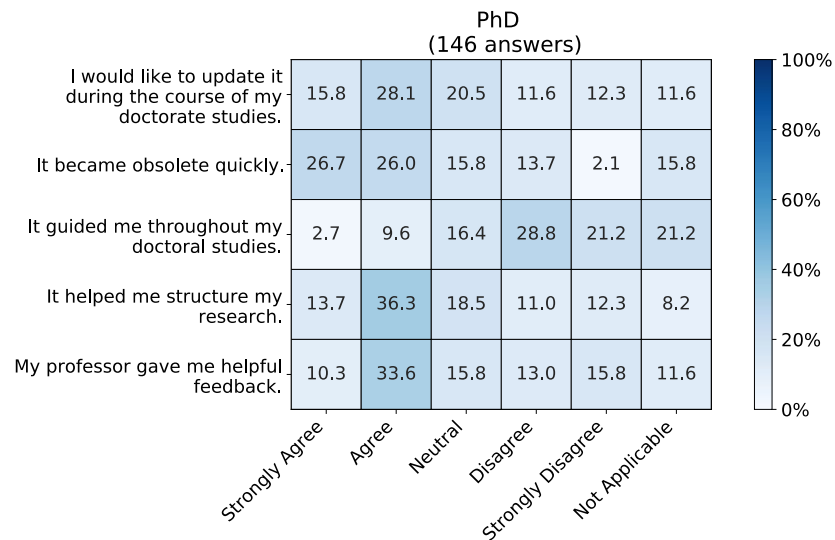


Note: questions 48-54 are specific to PhD students.

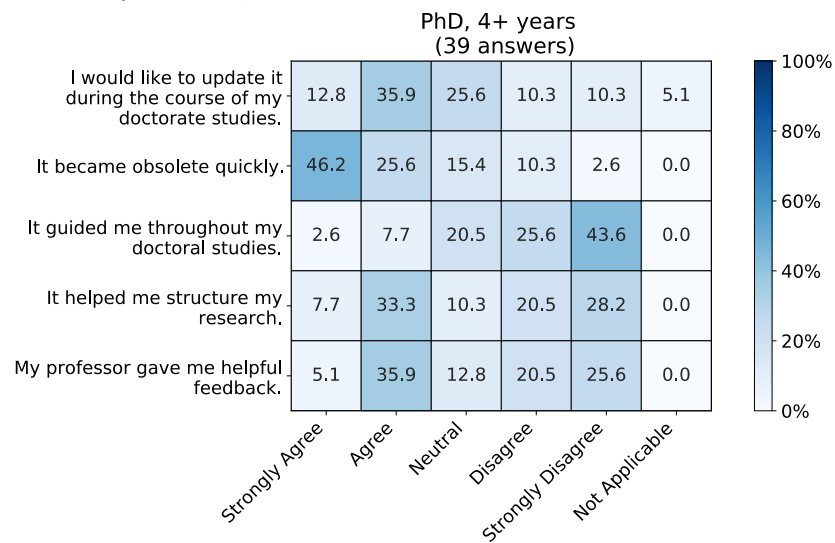
Question 48. Regarding your work as a doctoral student, to what extent do you agree that...



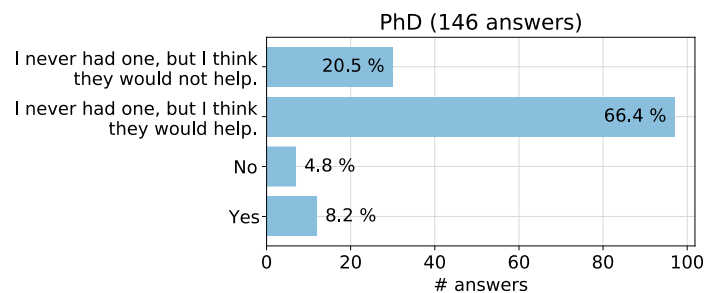
Question 49. How much do you agree with the following statements about the research plan?



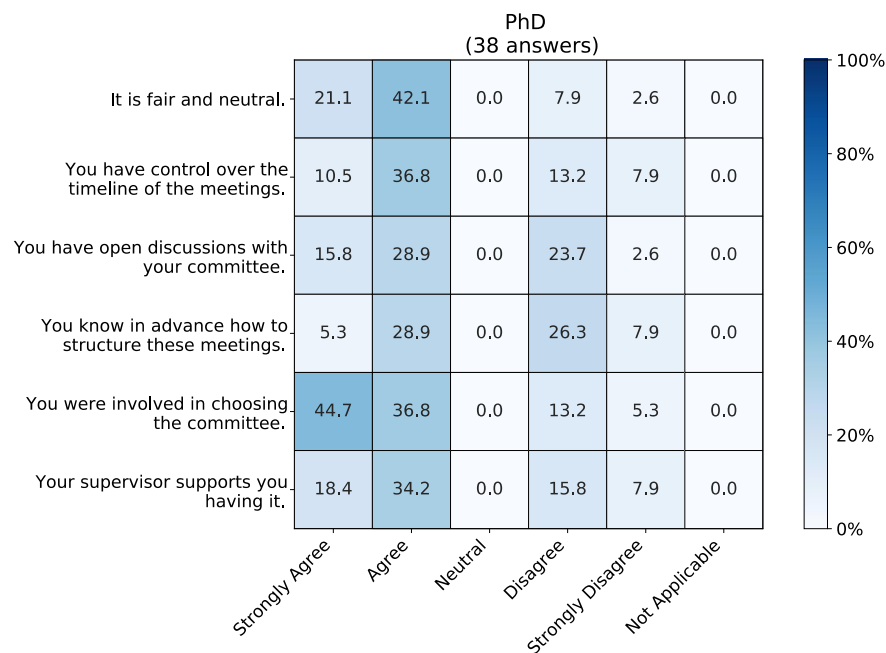
Question 49, correlation 1. Answers of PhD students who have been in the department for 4 years or longer (correlation with question 3).



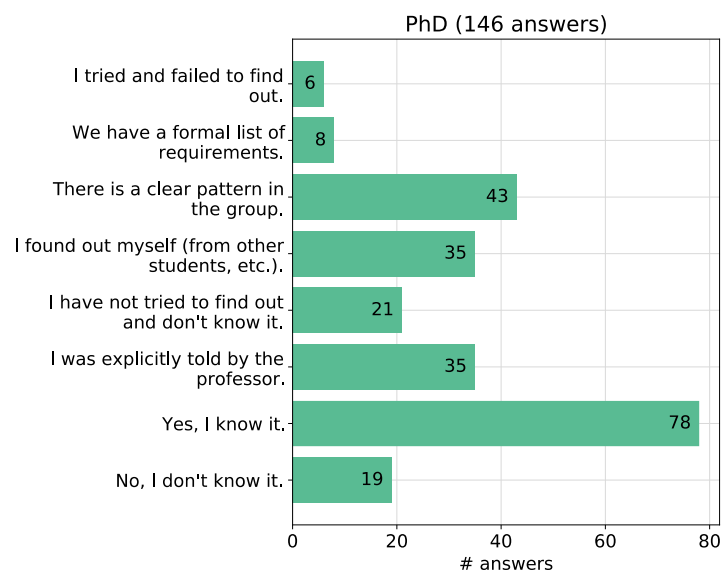
Question 50. Were your committee meetings helpful?



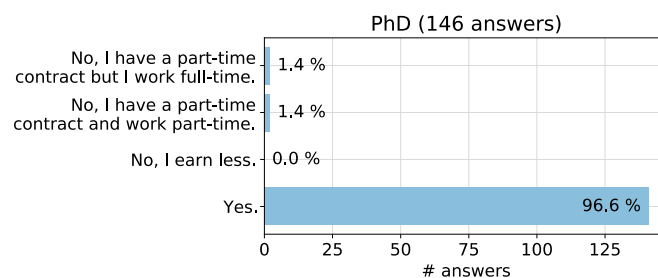
Question 51. If you had thesis committee meetings before, do you agree with the following statements?



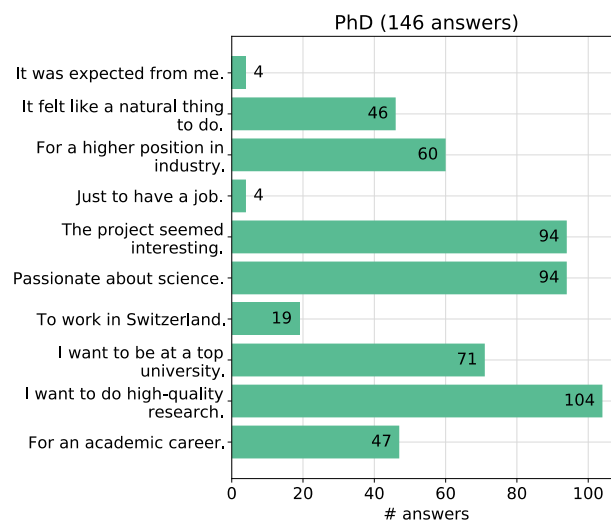
Question 52. Do you know what you are expected to do to finish your doctoral studies?



Question 53. Do you get at least the minimum wage of CHF 47'040 per year?



Question 54. Why did you decide to pursue a doctoral degree at ETH?



Question 55. Please add anything else you feel is worth sharing.

This was a free text question.