

Why PhD students in Flanders consider quitting their PhD

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TURNOVER, TURNOVER INTENTIONS AND UNDERLYING REASONS

Obtaining a PhD degree is often seen as a unique opportunity that is worth pursuing. Passion for science, hoping to be able to develop a lifesaving medicine, finding a solution to climate change, trying to better understand other cultures, fighting inequality, ... A multitude of motives encourage PhD students to start and to persist in the PhD process. However, expectations one might have at the beginning of the process are not always met, possibly leading to turnover intentions and sometimes even actual turnover.

In ECOOM-brief 19, we studied the prevalence of turnover intentions in PhD students leaving in Flanders in 2018. We established that almost 13% of the PhD students thought about quitting at least several times a month. However, we are still in the dark as to the motives underlying these turnover intentions. In the current study, we answer two research questions:

1. *Why do PhD students in Flanders consider quitting their PhD?*
2. *Do the motives underlying these turnover intentions differ according to gender, nationality, science cluster or PhD phase?*

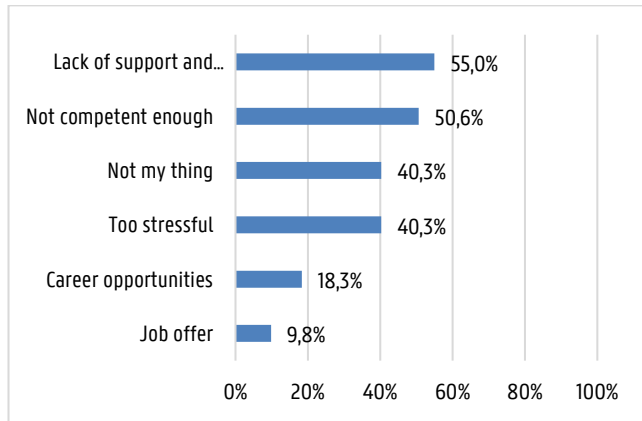
To answer our two research questions, we use the *Survey of Junior Researchers* 2018. This survey was collected by ECOOM Ghent University and targets all junior researchers working at the five universities in Flanders. For this study, we will focus on those PhD students who, at the time of the survey, indicated that they thought about quitting research at least a few times per month (N=387). For more information about the survey, we recommend reading ECOOM-brief 17.

WHY DO PHD STUDENTS CONSIDER QUITTING THEIR PHD?

Those PhD students who indicated to deal with turnover intentions at least a few times per month, answered an extra question in the *Survey of Junior Researchers*: *"There are many possible reasons why one decides to drop out of their doctoral research. Which reasons were decisive with regards to your own situation? (Multiple answers possible)"*. We provided the respondents with seven response options: (1) "The research was not what I had in mind.", (2) "I did not feel competent enough to do this type of work.", (3) "The work is too stressful, too demanding.", (4) The promotor(s) showed a lack of understanding and support.", (5) "There was an attractive job offer from a different employer.", (6) "The labour market outside the university offered more and better job prospects." and (7) "other, please specify: ____". The seventh and final response option provided the PhD students with the opportunity to explain why they thought about quitting in their own words. Figure 1 shows how often the first six response options were indicated by the PhD students in our sample.

Figure 1 indicates that a lack of support from the supervisor is the most prevalent motive for turnover intentions in our sample: 55.0% of the PhD students claims this as primary reason. One in two PhD students in our sample (50.6%) suffers from the so-called *imposter syndrome*: they feel like they are not competent enough for their job. 40.3% of the PhD students think about quitting because they feel like research is not really their thing, while another 40.3% say that their turnover intentions are caused by stress. Career opportunities also play a role in PhD students considerations to quit their PhD: 18.3% of the PhD students see greater career opportunities for themselves in the non-academic labour market. One in ten PhD students (9.8%) think about prematurely end their PhD due to an attractive job offer from another employer.

Figure 1. Motives for turnover intentions in PhD students in Flanders



The prevalence of one motive does not exclude the prevalence of others. Additional analyses of the first six response options show that only 19.1% of the PhD students in the sample give one single reason for considering to quit their PhD. For these people, a lack of support from their supervisor is their main motive. In 34.1% of the PhD students, we find that a combination of two motives lead to the consideration of a prematurely quitting the PhD process. In that case, it is a lack of support from the supervisor combined with the imposter syndrome that makes them consider quitting. Approximately 28.9% of the PhD students in our sample indicate three different response options at the same time. For them, the combination of a lack of supervisory support, the imposter syndrome and excessive stress levels is the cause of their intention of quitting. The remaining 16.8% of the PhD students gave four or more reasons for their intentions to leave (1.0% of the sample indicated none of the response options).

The diversity of the motives for intentions to quit the PhD becomes even greater when we look at the analyses of the 126 responses on the seventh response option: "other, specify: ____". Using qualitative analyses, we categorized those answers into groups. In order to categorize 60% of the answers into meaningful groups, we needed to create nine different groups. The remaining 40% of the answers were so diverse that it was impossible to assign them to any of the nine groups. Together, the three main categories account for one third of the answers that were formulated by the PhD students in our sample. Specifically, these were the motives that were related to: (1) "*problems with the supervisor other than a lack of support*", (2) "*a feeling that the research project does not contribute to society*" and (3) "*difficulties striking the right balance between work and family life*".

Apart from these three, we found six smaller categories: (4) "*combining multiple tasks and/or jobs leaves very little time for working on the actual research project*"; (5) "*problems involving colleagues*"; (6) "*concerns about funding*"; (7) "*doubts about the added value of a PhD for the remainder of the career*" and (8) "*a sense that the research process is too slow or provides disappointing results*". Finally, some PhD students in our sample say that they consider quitting their PhD because (9) "*they feel that it does not provide them with enough variation or challenge*".

DO MOTIVES FOR TURNOVER INTENTIONS DIFFER DEPENDING ON GENDER, NATIONALITY, SCIENCE CLUSTER OR PHD PHASE?

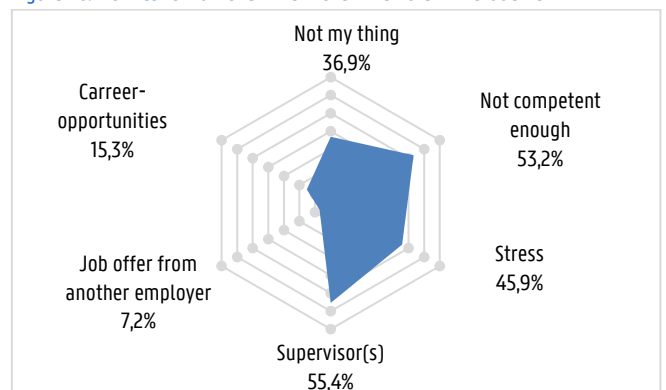
In order to answer this research question, we only consider the six answer options that were determined in advance by ECOOM UGent. In order to determine whether the observed differences are significant, we used logistic regression, supplemented by an analysis using 'contrasts', i.e. specific statistical comparisons.

In ECOOM-brief 19, we did not find any significant differences in the prevalence of turnover intentions in male and female PhD students. But perhaps men and women differ in the motives behind these intentions? Figures 2a and 2b indicate two gender differences that turn out to be significant. For example, more women than men indicate that they are considering prematurely quitting their doctoral research because they find the work too stressful. Another significant gender difference arises from the positive motivation of an attractive job offer by another employer: men indicate this as a motive for quitting the PhD process more frequently than female PhD students.

Figure 2a. Motives for turnover intentions in male PhD students



Figure 2b. Motives for turnover intentions in female PhD students



In Figures 3a to 3c, the motives for turnover intentions are broken down by nationality, more specifically between "Belgian", "EU28" and "non-EU28". Additional tests show that only one motive differs significantly in its prevalence depending on nationality: PhD students with the Belgian nationality indicate that their intentions to quit their PhD are

due to a feeling that they are not competent enough, while this motive is less prevalent among PhD students from outside the EU28.

Figure 3a. Motives for turnover intentions in Belgian PhD students

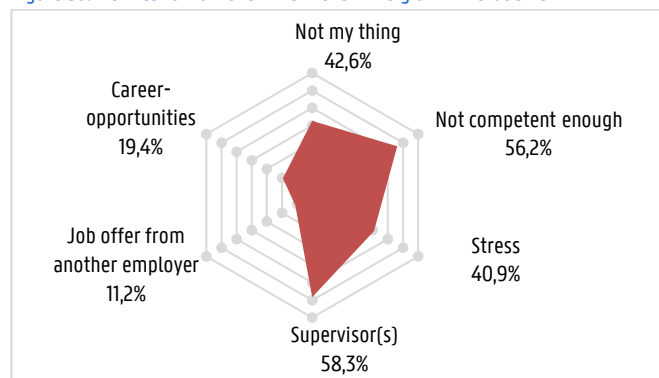


Figure 3b. Motives for turnover intentions in PhD students originating from EU28

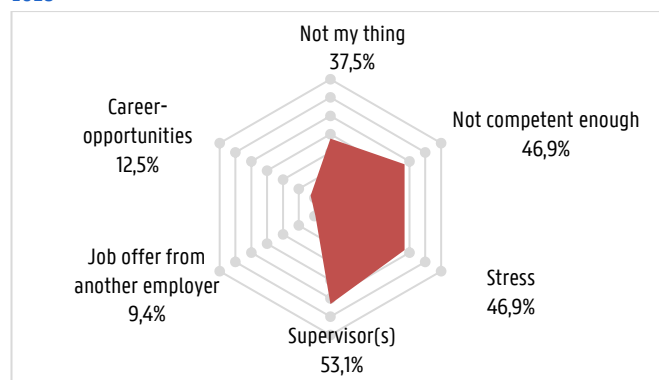
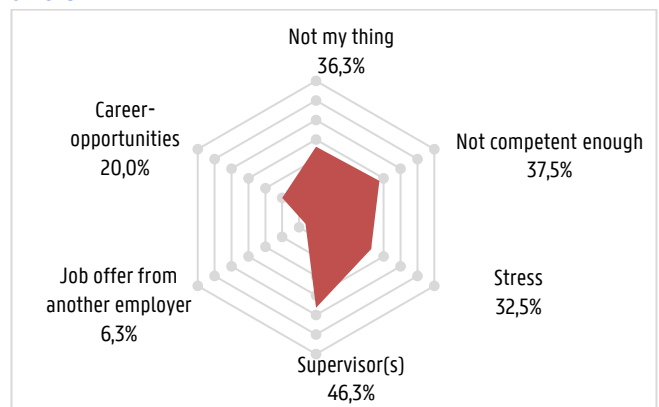


Figure 3c. Motives for turnover intentions for PhD students originating outside of EU28

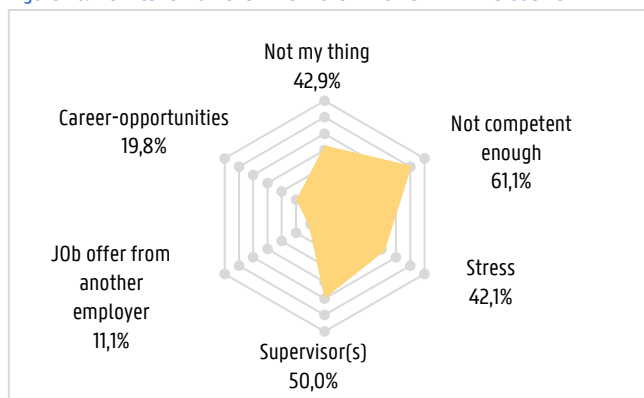


Do the motives behind turnover intentions differ significantly from one science cluster to another? In Figures 4a and b, we compare the PhD students from the cluster of STEM disciplines with their colleagues from the human and social sciences. In this comparison, only one significant difference arises: compared to their colleagues from the cluster of STEM disciplines, the intention of PhD students to quit the PhD from the human and social sciences is more often the result of the imposter syndrome.

Figure 4a. Motives for turnover intentions in STEM PhD students



Figure 4b. Motives for turnover intentions in non-STEM PhD students



Finally, we will also look at Figures 5a to 5c to gain some more insight into the motives for leaving depending on the phase of the doctoral process. This figure and additional significance tests show that PhD students are more likely to consider quitting their PhD in the implementation and completion phase of the PhD because of a lack of support from the PhD supervisor(s), compared to their colleagues who are just starting the PhD process.

Figure 5a. Motives for turnover intentions during the initial phase of the PhD process

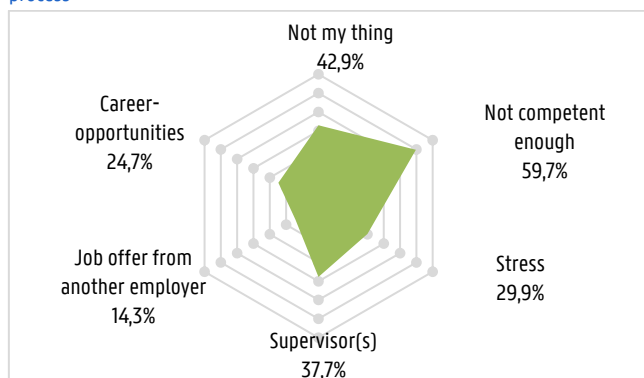


Figure 5b. Motives for turnover intentions during the implementation phase of the PhD process

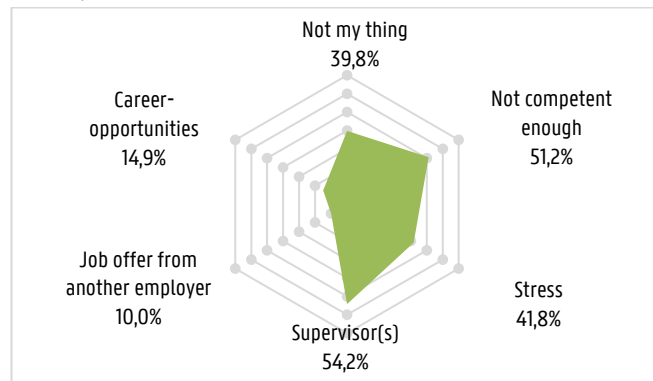
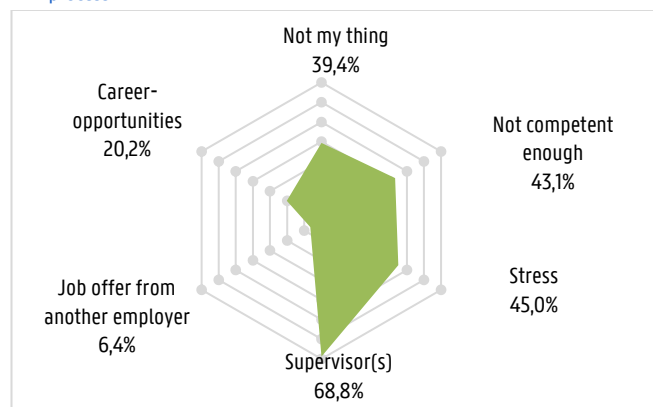


Figure 5c. Motives for turnover intentions during the completion phase of the PhD process



DISCUSSION

Employees who have left an organization have valuable information that can be used to develop an efficient and effective policy. So-called 'exit interviews' or 'exit surveys' are useful tools in this, given that they gather information either in the final stage of employment (the off-boarding phase) or after the individual has left the organization. In some organizations, an exit interview is an explicit part of the off-boarding process and offers both the employer and the employee the possibility of obtaining closure. It is placed on a par with the transfer of all collected company property, knowledge and projects and the completion of administrative formalities. Exit interviews and surveys can identify what is going well and areas where there is a need and room for improvement. Research shows that exit interviews prove useful in terms of retaining talent, optimizing performance, increasing innovative behaviour, reducing absenteeism and shortening the selection and recruitment process.

Flemish universities make use of exit surveys on a regular basis. Each university uses its own operational strategy to collect the information it needs for its policy. Research conducted at the five Flemish universities using the same online exit survey dates back to a period between October 2009 and August 2013 (in Kaat et al, 2013). Of all 962 respondents (response rate: 27.5%), 81% worked as junior researchers (whether or not in a PhD trajectory) and 19% worked as post-doctoral researchers. The junior researchers who left the institution on their own initiative were invited to specify the reasons for their departure. The

vast majority pointed out that they wanted a different job, and that they could get a more attractive job elsewhere. A majority also saw job insecurity or the content of the work at the university as a (very) important reason for leaving the institution. Plans to go abroad, difficulties combining work and private life and even though family, personal or health reasons were mentioned less often, they proved to be important motives for about a quarter of the respondents.

The motives for quitting research recorded in the ECOOM exit survey between 2009 and 2013 and the motives for junior researchers intending to leave recorded in the *Survey of Junior Researchers* 2018 are only partly parallel. While the exit survey primarily indicates a desire for different jobs and the offer of more attractive ones, the present study shows that only 9.8% of PhD students who were still working on their PhDs at the time of the survey mention a job offer as a reason to think about quitting their PhD. This is more the case for men than for women. Doctoral students in 2018 mainly point out that a lack of support from the supervisor(s) is a reason for their intentions to quit the PhD, followed by the so-called imposter syndrome. The latter is significantly more frequently cited by PhD students of Belgian nationality and PhD students in the human and social sciences. Furthermore, stress and strain, as well as the feeling that research is not at all their thing in two out of five PhD students, also seem to prompt people to think about quitting. Other common reasons that PhD students put forward themselves in the survey concern the societal value of a PhD, the feeling that the PhD is progressing too slowly, the let-down after disappointing results and the balance between work and family life. Four in five PhD students indicate that they are thinking about quitting their PhDs at least once a month, and there is more than one reason for doing so.

The motives behind the turnover intentions recorded in the Survey of Junior Researchers differ according to the PhD phase. The prevalence of the reason "lack of understanding and support from the supervisor(s)" turns out to significantly depending on the PhD phase: the later the PhD, the more the supervisor's role is indicated in the justification for quitting. This observation should be interpreted with some caution, as it is the end result of various dynamics that are related to quitting the PhD which could shape the results recorded in the survey. For example, it is possible that some motives lead to quitting research more often compared to other motives, which reduces the chance of pinpointing that specific motive in the latter stages of the PhD. Another dynamic is time-related: PhD students in the final phases of the PhD trajectory have already had a broader timeframe to develop intentions to quit research. However, their participation in the survey indicates that, despite this broader timeframe in which intentions to quit can be developed, they never decided to leave. The take-away message from ECOOM-brief 20 is that turnover intentions in PhD students at Flemish universities are significantly less prevalent in the later phases of the PhD. But those PhD students who consider quitting their PhD in the later phases justify this mainly by a lack of support on the part of the supervisor(s).

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