

Job satisfaction of PhD students in Flanders

Authors: Katia Levecque (1), Chiara San Giorgi (1), Kaat Verbeke (1), Frederik Anseel (1)

(1) ECOOM-Ghent University, Department of Personnel Management, Work & Organizational Psychology

Contact: ecoom@ugent.be

GENERAL JOB SATISFACTION

In ECOOM-brief 12, we focussed on one specific aspect of the well-being of PhD students in Flanders, namely their mental health. We assessed that 1 in 3 PhD students was at risk of having or developing a mental health disorder (especially depression), a risk which was found to be significantly associated with the work organization and organizational policies of the Flemish universities (see ECOOM-website). In the current ECOOM-brief, we look into job satisfaction. Mental health and job satisfaction are merely two aspects of an individual's well-being, beside many other (i.e. turnover intentions, vitality, social connectedness or physical health). Because each aspect taps into a different part of well-being, and because they are affected or caused by different factors, the association between aspects of well-being is often weaker than assumed (see a.o. Griffeth, Hom & Gaertner, 2000; Faragher, Cass & Cooper, 2005; Yang et al, 2008).

Job satisfaction is a positive, emotional evaluation of, and attitude towards, one's own job. In most studies, focus is on "satisfaction with the job in general". However, there is another brand of research that looks into specific aspects of one's job, such as salary, work-life balance or learning opportunities.

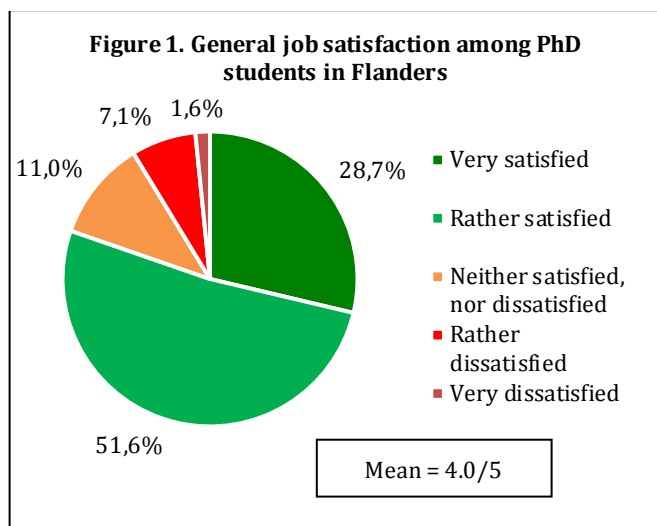
We look into general job satisfaction. Research has repeatedly found that an organization benefits from high levels of job satisfaction among its employees: better performance, fewer turnover intentions, less absenteeism and more commitment. The positive effect on job performance is especially high in case of complex jobs and high levels of job autonomy.

In the current study, we address three research questions: (1) *How satisfied are PhD students in Flanders with their job in general?* (2) *How does this satisfaction compare with other groups on the labour market?* and (3) *Is there an association between job satisfaction in PhD students on the one hand, and work organization and organizational policy of Flemish universities on the other hand?*

In order to answer these questions, we make use of data from the *Survey of Junior Researchers*, a survey conducted in 2013 by ECOOM - the Centre for R&D Monitoring of the Flemish Community - in the total population of junior researchers in all five universities in Flanders (see ECOOM-brief 8). For the current analyses, we restricted the sample to all PhD students enrolled in a PhD study in Flanders (N=3659).

HOW SATISFIED ARE PHD STUDENTS WITH THEIR JOB IN GENERAL?

In 2013 we asked PhD students "*How satisfied are you with your current job in general?*" Answers ranged from 1=very dissatisfied to 5=very satisfied. As Figure 1 shows, 51.6% of the PhD students is very satisfied, 28.7% is rather satisfied, while 11% is neither satisfied, nor dissatisfied. Another 7.1% reports being rather dissatisfied and 1.6% says to be very dissatisfied. On a scale from 1 to 5, the mean score is 4.0.



IN COMPARISON TO ...

Is the level of general job satisfaction in PhD students in Flanders higher, lower or similar to that of other employees on the Flemish labour market? And in comparison to academics outside Flanders?

Let's focus on the Flemish labour market first. In 2008, Securex found that the mean score for general job satisfaction among Flemish employees was 7.0/10. More recent statistics are not available. Unfortunately, job satisfaction is not incorporated in the Flemish *Quality of Labour Monitor*, periodically organized by the SERV. In the *Belgian Survey on Income and Living Conditions*, 93.6% of the highly educated work force reported to be "highly satisfied" or "totally satisfied" with their job (SILC, 2013).

What about the job satisfaction of academics outside Flanders? Scholarly attention for job satisfaction in academia has increased in recent years, especially in the USA. However, characterizing these studies is a wide variety of definitions and measurement instruments of job satisfaction, and a restriction to academics in one single department, university, region or country. This sets limits to possible comparisons.

A study by Bentley et al. (2013, 2015) of more than 24.000 academics in 19 countries enables some careful comparison. Similar to our approach, these researchers measured job satisfaction with an ordinal response to the question "How satisfied are you with your current job, in general?" Use was made of a 5-point Likert scale, ranging from 1=very low to 5=very high. A score of 4 or 5 is considered to indicate "satisfied". Respectively, in the Netherlands, Germany, the United Kingdom and the USA 70%, 56%, 44% and 61% of junior academics reported to be satisfied with their current job. In all of these countries, junior researchers seemed (slightly) less

satisfied with their job compared to senior academics. Another relevant statistic for the Netherlands was reported by the Central Bureau of Statistics in 2011: 82% of the Dutch population in the category "researchers, engineers, lecturers/professors and specialists" appeared to be satisfied or very satisfied with their current job.

WORK ORGANIZATION, ORGANIZATIONAL POLICY AND GENERAL JOB SATISFACTION

Is there a link between job satisfaction experienced by PhD students in Flanders on the one hand and work organization and organizational policies of universities on the other? Multivariate logistic regressions, presented in Table 1, shows this is the case.

We see that general job satisfaction is significantly higher ($OR > 1$) in case of: (1) high levels of job control (meaning job variation, job autonomy and skill discretion), (2) inspirational leadership, (3) when the PhD student expressed much interest in a future academic career, and (4) when he/she had a positive perception of the value of a PhD outside academia.

General job satisfaction is significantly lower ($OR < 1$): (1) in the applied sciences compared to the exact sciences and (2) in PhD students who do not receive a personal scholarship or who are not employed as a research assistant or a researcher on project funding. General job satisfaction was also lower (3) in case the PhD student had no promoter for his/her PhD track or in case there were several promoters. In addition, job satisfaction was also lower when (4) the promoter adopted a laissez-faire leadership style and (5) when job roles conflicted with family roles. Table 1 also points out the significant role played by (6) age: the older the PhD student, the lower his/her general job satisfaction.

Finally, Table 1 shows that the level of general job satisfaction does not differ according to job demands (such as work load or publication pressure), PhD phase, gender of the (main) promoter, gender composition of the research team, team conflict and closed team decision-making. Similarly, we found no significant association of job satisfaction with the PhD student's perceived chance of a future academic career, nor with experienced family-to-work conflict. Job satisfaction did not vary according to gender, the presence of a partner or children, nor did it vary across universities.

DISCUSSION

Although there is a long-standing research tradition on occupational well-being, scholars have been reluctant to

study their own well-being. As well-being is a complex phenomenon, it needs to be grasped from different angles. In ECOOM-brief 12, we dug into one specific aspect of well-being, namely mental health. In the current ECOOM-brief, the focus is on job satisfaction. In ECOOM-brief 14 we will zoom in on yet another aspect of PhD students' well-being, namely turnover intentions (or their intention to stop the PhD track prematurely).

The current study showed that half of the PhD students was very satisfied with his/her job in general, while 4 in 5 reported to be rather satisfied or very satisfied. This pattern holds for both males and females. General job satisfaction was associated with aspects of the work organization and the universities' organizational policies.

When interpreting our findings, three specific points should be kept in mind. The first pertains to the fact that tapping into job satisfaction with a single-item measurement instrument offers but a raw and limited picture. Unravelling the complexity of job satisfaction requires a multi-item approach, combining direct and indirect measurements. Therefore, the Survey of Junior Researchers 2013 did not only include a measurement of satisfaction with the current job in general, but also with specific job aspects. Within this context, PhD students reported to be (rather) satisfied with flexibility of working hours (86.8%), learning opportunities (74.1%), their promoter (68.6%) and job security (65.1%). Only 33.8% of the PhD students reported to be (rather) satisfied with their academic career opportunities.

A second point relates to the work organization and organizational policies of universities. Research linking both with job satisfaction in academia is mostly limited to the USA. However, international comparative research by Bentley et al. (2013, 2015) suggests that international variation in academic work leads to international variation in its association with job satisfaction.

A third and final point is the apparent incompatible finding of a high prevalence of general job satisfaction in the current analyses and the high prevalence of mental health disorders reported in ECOOM-brief 12. Although both job satisfaction and mental health are aspects of an individual's well-being, their correlation is less strong than often assumed (see a.o. Faragher, Cass & Cooper, 2005). Both constructs share a number of determinants, but both are also affected by unique causal factors. Job satisfaction, a so-called "job outcome", is (mainly) affected by work-related determinants. Mental health is a "health outcome" and the result of both work- and non-work related factors. A comparison of the multivariate findings in ECOOM-brief 12 and ECOOM-brief 13 shows that some aspects of the work organization and

organizational policy are only significantly associated with job satisfaction or only with mental health, while some aspects are associated with both.

REFERENCES

Bentley, P.J., Coates, H., Dobson, I.R., Goedegebuure, L., & Meek, V.L. (2015). Academic Job Satisfaction from an International Comparative Perspective. In U. Teichler, W.K. Cummings (eds.), *Forming, Recruiting and Managing the Academic Profession* (pp.187-209). Springer Switzerland. doi: 10.1007/978-3-319-16080-1_10.

Bentley, P. J., Coates, H., Dobson, I. R., Goedegebuure, L., & Meek, V. L. (2013). Academic job satisfaction from an international comparative perspective: Factors associated with satisfaction across 12 countries. In *Job satisfaction around the Academic World* (pp. 239-262). Springer Netherlands.

Drucker-Godard, C., Fouque, T., Gollety, M., & Le Flanchec, A. (2015). Career plateauing, job satisfaction and commitment of scholars in French universities. *Public Organization Review*, 15(3), 335-351.

Faragher, E.B., Cass, M. & Cooper, C.L. (2005). The relationship between job satisfaction and health: a meta-analysis, *Occupational and Environmental Medicine*, 62 (2), 105-112.

Griffeth, R., Hom, P. & Gaertner, S. (2000). A meta-analysis of antecedents and correlates of employee turnover: Update, Moderator Tests, and Research Implications for the Next Millennium, *Journal of Management*, 26 (3), 463-488.

Securex (2008) White Paper: Tevredenheid en motivatie van de Belgische werk ZebraBenchmark België 2008

SILC-vragenlijst: Armoede en welzijn in België (2013): http://statbel.fgov.be/nl/binaries/PERSBERICHT_SILC2_013_tcm325-257336.pdf

Yang, L.-Q., Che, H. & Spector, P.E. (2008). Job stress and well-being: An examination from the view of person-environment fit, *Journal of Occupational and Organizational Psychology*, 81, 567-587.

Disclaimer: Disclaimer: This ECOOM-brief reports findings of scientific research conducted by ECOOM UGhent. Analyses and interpretations are the responsibility of the authors. They are not formal policy positions of the Flemish Government and Flemish authorities.

Table 1. Predictors of general job satisfaction in PhD students, Flanders (N=3.659): odds ratio (OR), 95% confidence interval (95% BI), level of significance			
	OR	95% BI	Sign
Constant	.282		n.s.
Work context			
Job demands	.756	(.558-1.024)	n.s.
Job control	2.693	(2.017-3.596)	***
Scientific discipline			***
Sciences (ref)	-	-	-
Biomedical sciences	.893	(.635-1.256)	n.s.
Applied sciences	.570	(.403-.806)	***
Humanities	1.357	(.852-2.162)	n.s.
Social sciences	.920	(.644-1.315)	n.s.
Type of appointment			**
Research assistant (ref)	-	-	-
Scholarship	.801	(.575-1.116)	n.s.
Research project	.793	(.564-1.115)	n.s.
No funding from university	.508	(.334-.773)	**
Other	.475	(.293-.769)	**
Unknown	.910	(.493-1.681)	n.s.
PhD phase			n.s.
Initiating (ref)	-	-	-
Executing	.814	(.602-1.100)	n.s.
Finishing	.714	(.503-1.015)	n.s.
Number of promoters			
One (ref)	-	-	-
None, or more than one	.784	(.631-.973)	*
Gender of the (main) promoter			
Male (ref)	-	-	-
Female	1.103	(.839-1.449)	n.s.
Leadership style: inspirational	1.645	(1.484-1.824)	***
Leadership style: autocratic	1.006	(.909-1.113)	n.s.
Leadership style: laissez-faire	.851	(.778-.930)	***
Much interest in an academic career	2.600	(2.083-3.244)	***
Perception of high chance of an academic career	.821	(.658-1.024)	n.s.
Positive perception of a career outside university	1.431	(1.250-1.638)	***
Organizational context			
University			n.s.
KU Leuven (ref)	-	-	-
Ghent University	1.282	(.999-1.645)	n.s.
Antwerp University	1.134	(.791-1.625)	n.s.
VU Brussel	1.227	(.865-1.740)	n.s.
Hasselt University	1.058	(.633-1.769)	n.s.
Team gender composition			n.s.
Balanced gender composition (ref)	-	-	-
Only males, or large majority is male	.808	(.629-1.037)	n.s.
Only females, or large majority is female	1.024	(.744-1.408)	n.s.
Team conflict	.905	(.779-1.053)	n.s.
Closed team decision-making	.904	(.791-1.032)	n.s.
Family work conflict	.939	(.822-1.073)	n.s.
Work family conflict	.771	(.666-.894)	***
Sociodemographics			
Female	.935	(.743-1.176)	n.s.
Age	.966	(.939-.994)	*
Partner	1.198	(.944-1.522)	n.s.
Children	1.130	(.795-1.605)	n.s.
<u>Model fit General job satisfaction</u>			
LR = 685.610 df = 35 p<0.001 Nagelkerke R ² = 0.323			

ref=reference category

n.s.=not significant *=p<0.05 **=p<0.01 ***=p<0.001