

# Data collection in doctoral education in France

## Doctoral candidates and supervisors views on the doctorate

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# French doctoral education key figures

[https://publication.enseignementsup-recherche.gouv.fr/eesr/FR/T744/le\\_doctorat\\_et\\_les\\_docteurs/](https://publication.enseignementsup-recherche.gouv.fr/eesr/FR/T744/le_doctorat_et_les_docteurs/)

**270** Doctoral schools

**71 487** PhD candidates

**16 398** 1st year

**38%** international

**37%** in science and technology

**18%** in health and life sciences

**45%** in humanities and social sciences

**7.5%** in cotutelle

**77.8%** with **dedicated funding** for their thesis

**15.5%** prepare their theses in **parallel with a main and stable paid professional activity**

**6.7%** prepare their theses **without funding or without a stable and paid professional activity**



**13 590** doctoral degrees awarded per year

# Data collection in doctoral education in France



## Data collected yearly by the Ministry of Higher Education and Research

- **SIREDO (Research and Doctoral School Information System) Survey :**
  - Number of doctoral candidates enrolled per discipline (newly enrolled and total)
  - Funding's categories of doctoral candidates
  - Type and country of Master degree or equivalent obtained prior to doctorate
  - Cotutelles
  - Duration of theses defended
  - Gender, ...
- **Survey on career pathways of doctorate degree holders, 1, 3 and (soon) 5 years after graduation**
- **Database with search engine of defended French doctoral theses : <https://theses.fr/>**
  - contains dissertations and information on all doctoral theses defended in France since 1985.

# Survey on doctoral education in France

## The views of doctoral candidates and their supervisors



National field survey organized by the French national network of doctoral colleges (RNCD – France PhD)

The survey (2nd edition) was carried out in 2023 among doctoral candidates enrolled during the 2022-2023 academic year and among their supervisors.

The online questionnaire (in FR and EN) was disseminated via the doctoral schools of the network and via the directory of doctoral schools of the Ministry of Higher Education and Research (MESR).

- Responses were collected between **Jan 16 and Feb 17, 2023**.

The aim of this survey is to :

- Gather feedback from those most concerned with doctoral education on different dimensions, issues and challenges at the heart of the doctoral journey and to provide input on actions to improve the practices and conditions of doctoral training in France, and if necessary, ask for reforms or amendments to the national regulations on doctoral education.
- Update the general public perception of the functions of a doctorate, its importance for research and for society, and the conditions under which it is obtained.

# Participant statistics, report and data interface



## Participants who took part in the survey :

- **13 412 doctoral candidates** (+16% w.r.t. to the first edition)
- **7 803 supervisors** (+34%)

The **representativeness** of the respondents was checked against the national statistics of the MESR.

**Survey report (141 pages in French) downloadable @ :** <https://hal.science/hal-04308895>

**Access to the survey interactive online graphical data interface @ :**



Access the link target by clicking and holding down the CTRL button



**The main findings of the 2nd edition (2023)  
of the RNCD national survey among  
doctoral candidates and their supervisors**

# 1

## A central contribution of doctoral candidates to research in France



Supervisor's production

- More than 2/3
- Between 1/2 and 2/3



Research lab's production

- Between 1/3 and 1/2
- Less than 1/3

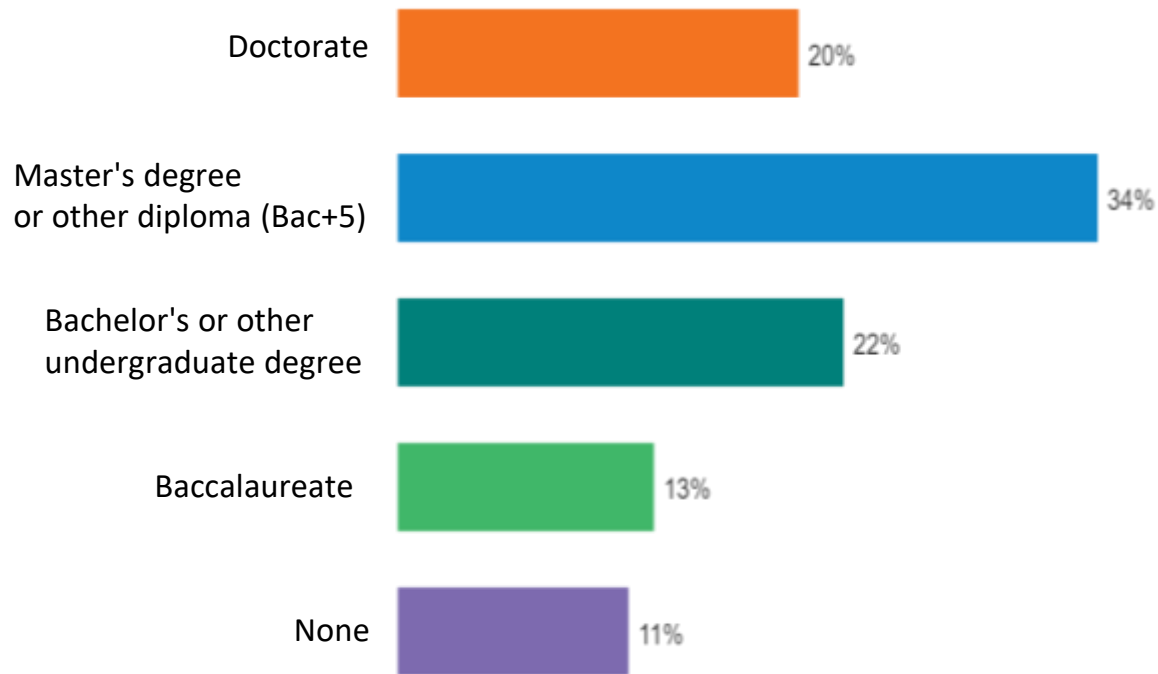
Supervisors of doctoral candidates estimate at :

- **74%** in Science and Technology (ST),
- **69%** in Life and Environmental Sciences (SVE),
- **24%** in Humanities and Social Sciences (SHS).

that **between half and all** of their research laboratory's scientific production is associated with a doctoral project.

# 2

## A major challenge/issue for social and gender diversification



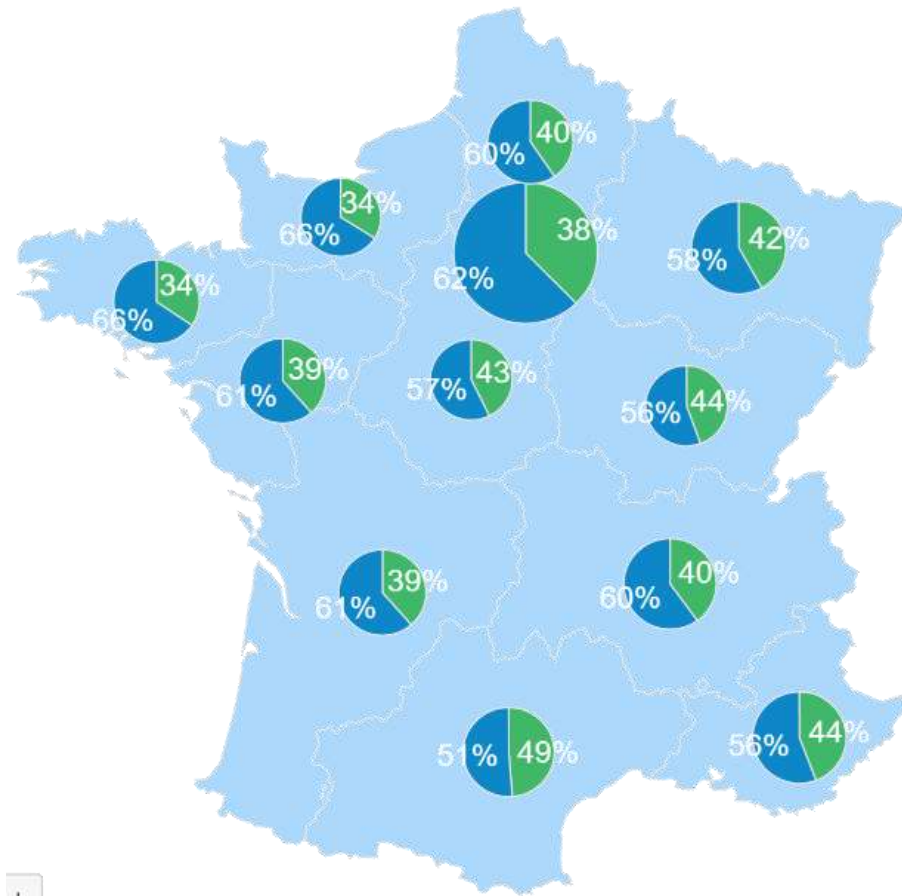
*Doctoral candidates' answers to the question : "Among your parents or close relatives who have or may have had an influence on your choice of studies, what is **the highest level of diploma** completed by at least one of them?"*

**Strong over-representation of doctoral candidates, French or international, whose parent holds a doctorate**

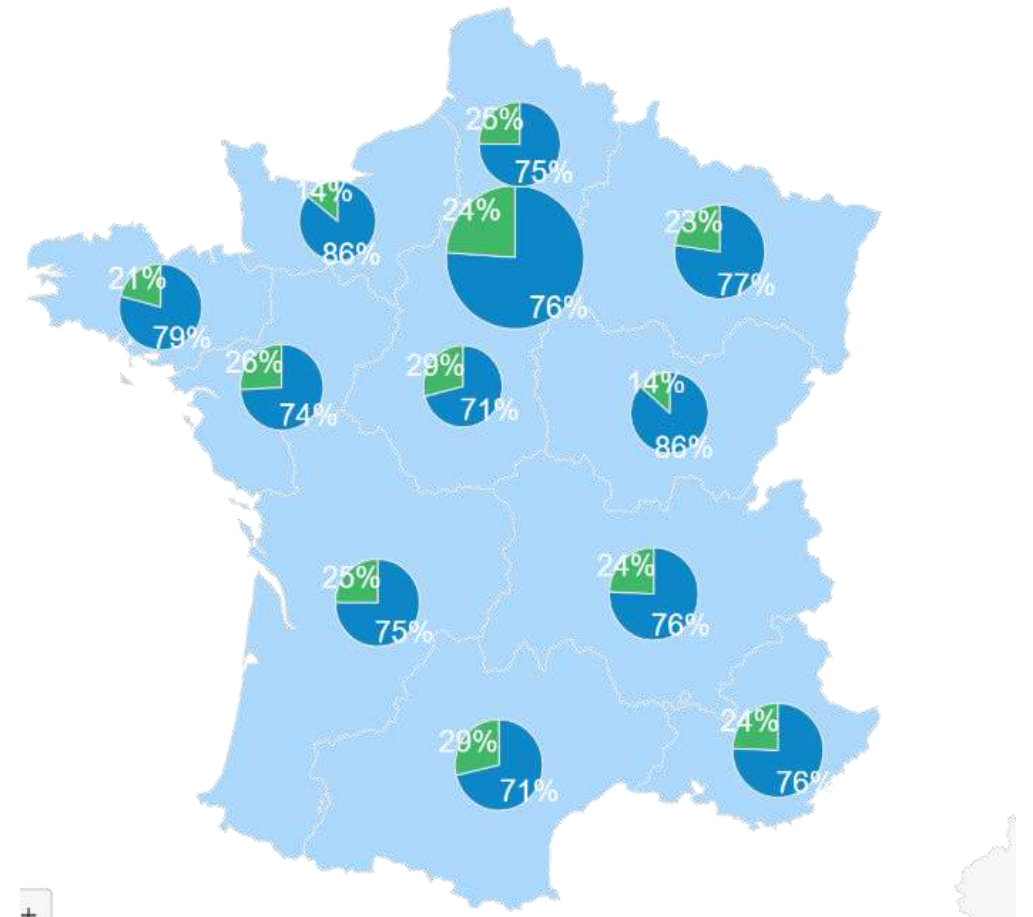
Among doctoral candidates **20%** have a parent or close relatives who holds a **doctorate** and **34%** a **master's degree** or equivalent, while doctorate holders represent approximately **1.3 %** of adults aged 25-64 in OECD countries and those with a master's degree **12%**.



# A gender imbalance, especially among supervisors



**Female (34-49)% – Male (51-66)% doctoral candidates**



**Female (14-29)% – Male (71-86)% supervisors**

2 questions were put into perspective :  
"Are you a male (♂) or a female (♀) doctoral candidate ?"  
"Do you have a female of male supervisor (♀ DT ♂)?"

# 3

## A high level of satisfaction and a well identified situations of dissatisfaction

Answer to the question : "What is your level of satisfaction with your doctoral experience, in general ?"



Overall (all disciplines combined) :  
74% satisfied and 10% dissatisfied

The level of satisfaction or dissatisfaction is correlated with the conditions under which the research work is carried out.

For example: the answers of doctoral candidates to the question :

"Materially, are you satisfied with the conditions in which your work is carried out (funding, resources, material, research premises, office and equipment, ...)?"

Science and technology (ST)

Life and Environmental Sciences (SVE)

Humanities and Social Sciences (SHS)



- No, very dissatisfied
- No, dissatisfied
- Yes, satisfied
- Yes, very satisfied
- Nothing or almost nothing has been made available to me, so I'm carrying out my research work on my own.

# 4

## Supervision, training and follow-up of doctoral candidates



The survey shows a **high level of satisfaction** among doctoral candidates with regard to their supervisors and makes it possible to highlight, through feedback from the field, the main reasons for dissatisfaction.

Among doctoral candidates enrolled since less than 36 months, all disciplines combined, **84% are satisfied** and **7% are dissatisfied** with their doctoral supervision. The level of satisfaction or dissatisfaction is the same in all disciplines.

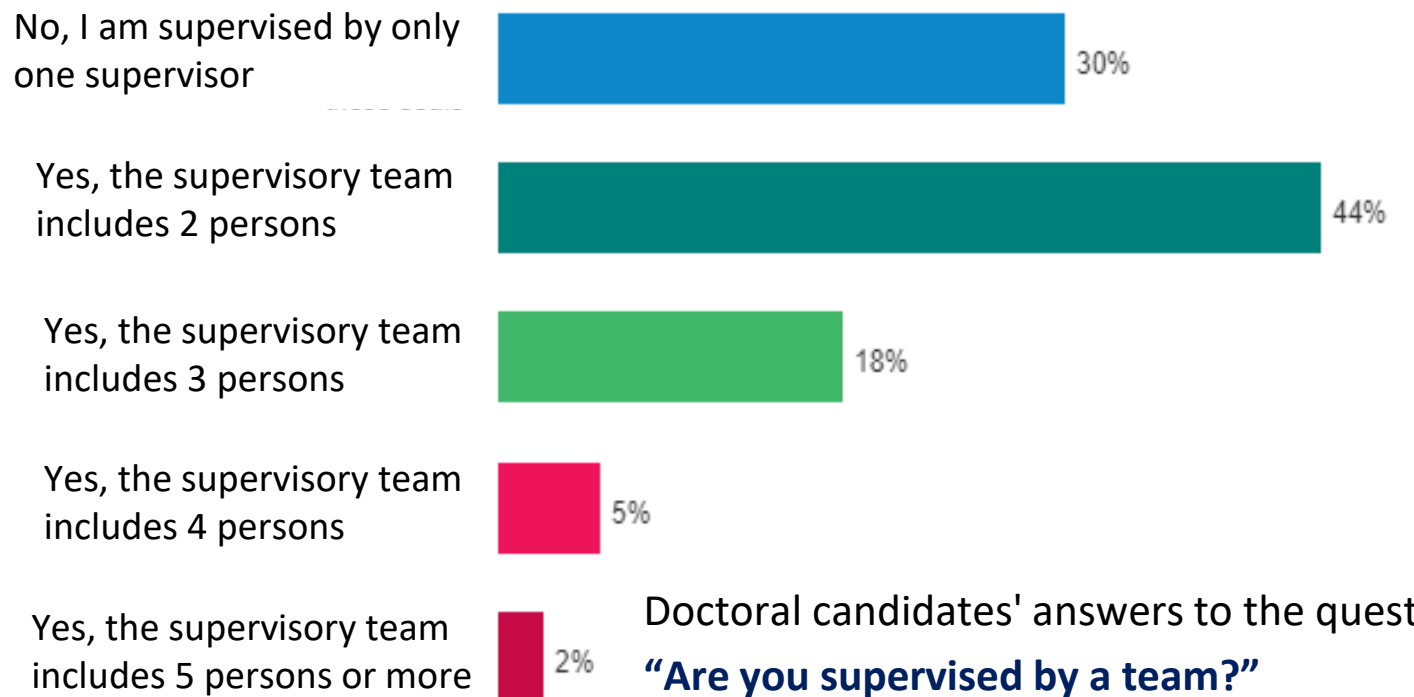


- Whatever the disciplinary fields, doctoral candidates have a vision close to that of their supervisors of what should be a good supervisor and clearly identify its different roles.
- Their answers show a **consensus on the portrait of the ideal supervisor**, who **makes himself available** for **constructive** and **regular exchanges**, ensures that the research question is relevant and original, sets realistic objectives, ensures that the material and financial conditions are met for the smooth running of the thesis, etc.

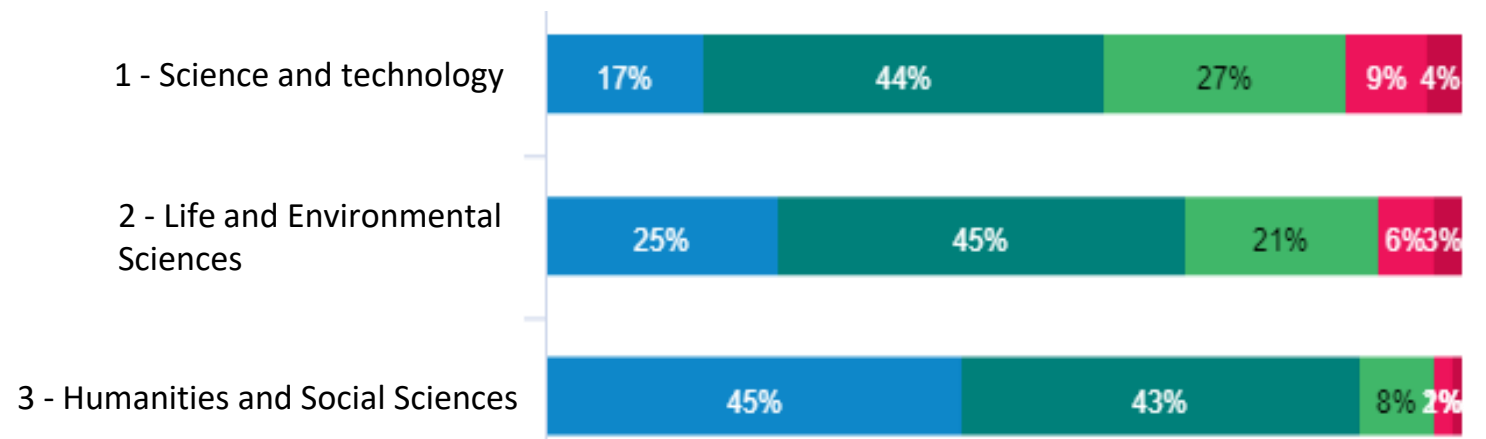
# Collegial supervision is dominant in the 3 main scientific domains

All fields combined: **70% of doctoral candidates are supervised by a team of supervisors.**

With differences depending on the scientific domain.



Doctoral candidates' answers to the question : **“Are you supervised by a team?”**



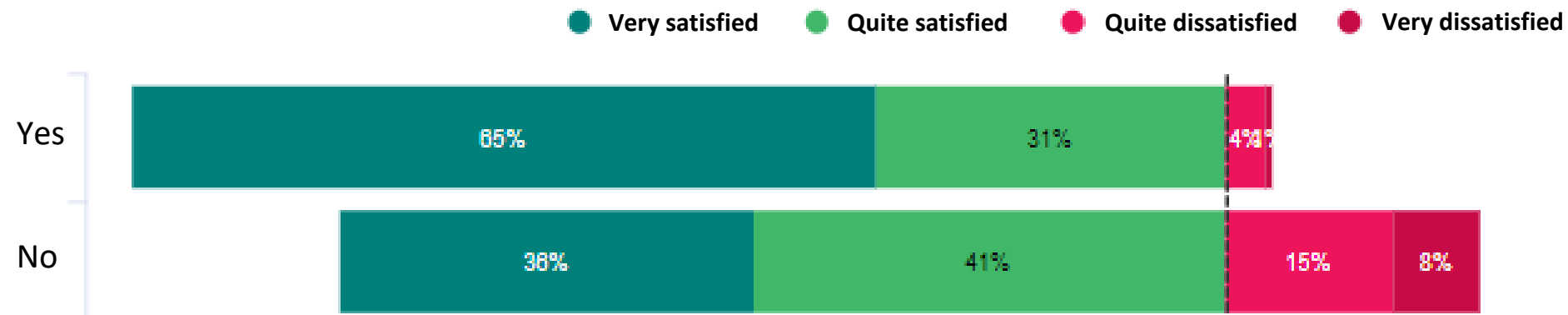
# Doctoral candidates were also asked about their thesis monitoring committee

The thesis monitoring committee provides support for doctoral candidate throughout the duration of their doctorate.

The committee is :

- attentive to any difficulties encountered by the doctoral candidate. Its role is not to resolve these difficulties, but to alert the doctoral school ;
- particularly vigilant in identifying any form of conflict, discrimination, moral or sexual harassment or sexist abuse.

Answers from doctoral candidates whose committee has already met at least once to the questions :  
are you satisfied with your monitoring committee; were you consulted on its composition?



**3.8%** of doctoral candidates did not have a monitoring committee even though they had been enrolled for more than 2 years

# 5

## About the attractiveness of a doctorate in France



86% of international doctoral candidates want to settle permanently in France after their graduation

61% want to settle in a country other than France or their country of nationality

67% want to settle in their country of nationality

With differences depending on when they arrived in France: **doctoral candidates who arrived in France later are less interested in settling there than those who came earlier.**

### Early arrival

I came to France to study for an undergraduate degree (Bachelor or equivalent diploma)



### Late arrival

I came to France for my doctorate or shortly before



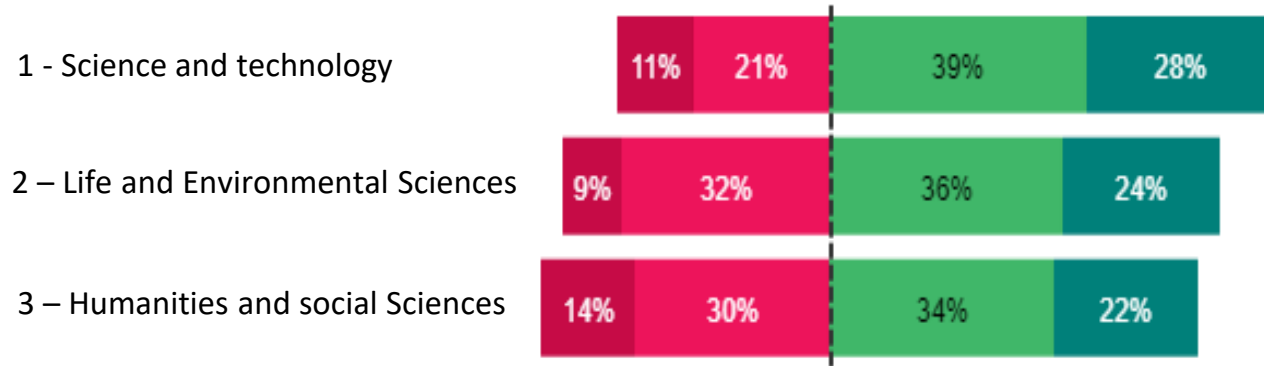
# 6

## Career prospects and career development



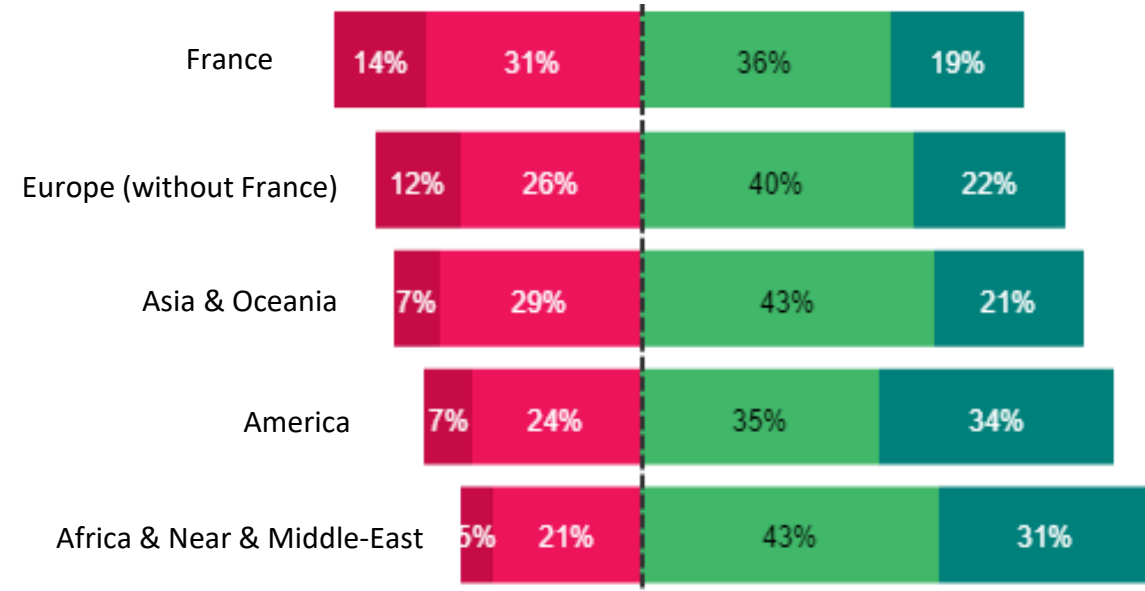
### Doctoral candidates worried about their future carrier

● With great concern   ● With some concern   ● Rather with confidence  
● With confidence



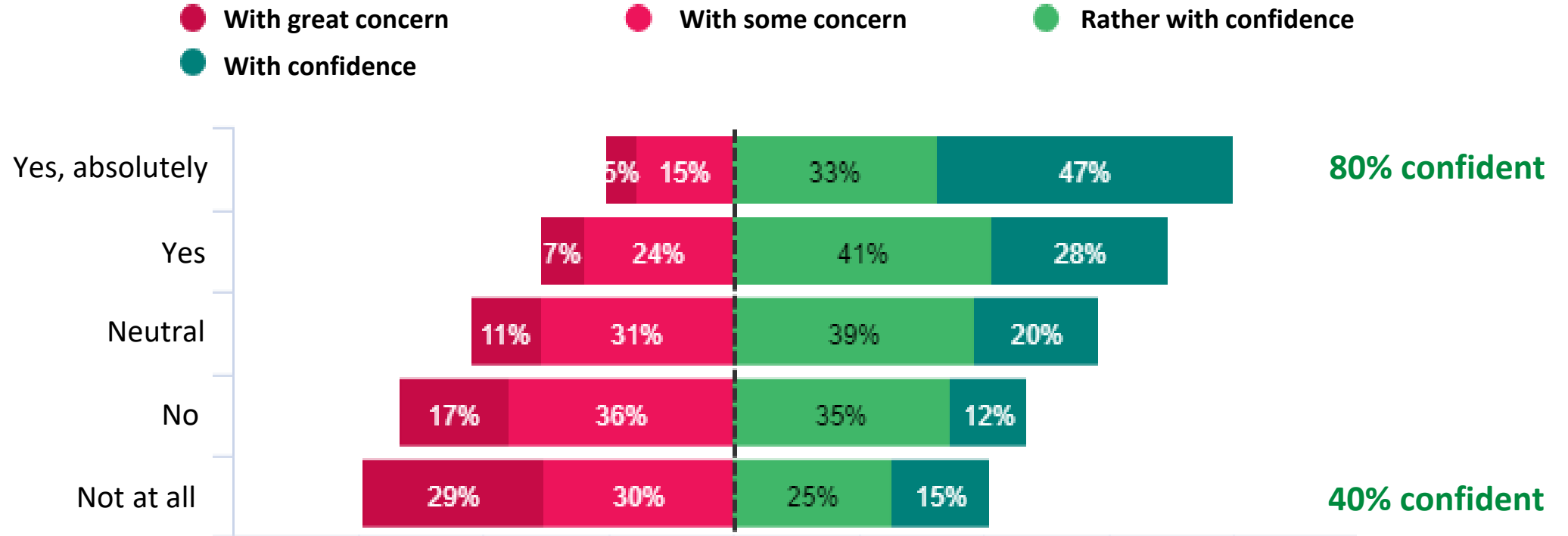
**3 years** after graduating, **92%** of doctorates are in employment, **67%** have a stable job, **96%** have a managerial/executive job and **85%** are satisfied with their professional situation.

### This concern has a strong cultural dimension



**the French are the most worried !**

# It stems, among other factors, from a lack of information



Answers from doctoral candidates enrolled for less than 3 years to the question :  
**"Is the information to which you have access adapted, useful, regularly updated?"**,  
according to their answers to the question they were asked about their carrier development  
**"In what state of mind are you approaching the future?"**.





**Thank you !**



# Backup slides

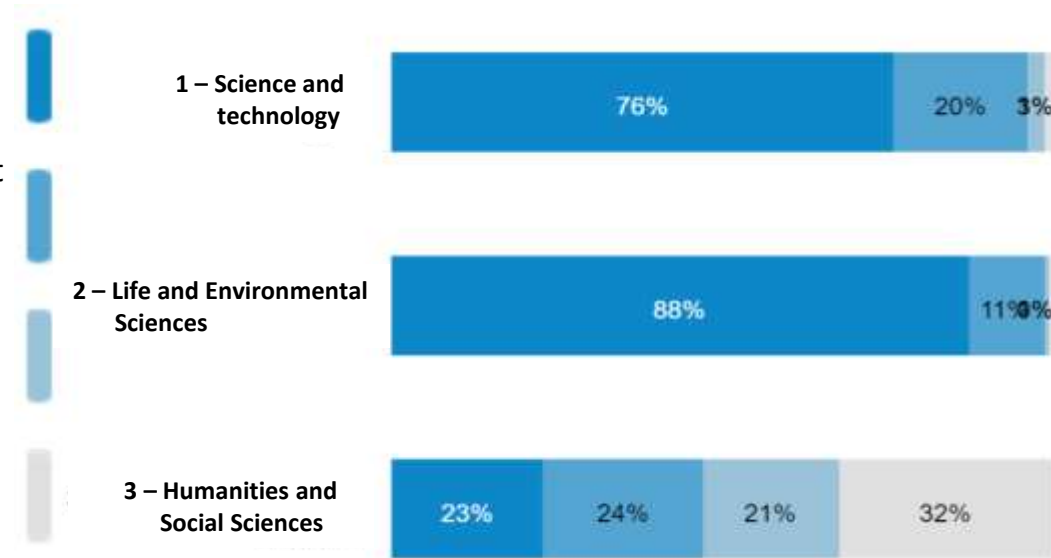
# With significant differences between disciplinary fields

The doctoral candidate and all members of the supervisory team co-sign all publications

Persons involved in thesis supervision do not necessarily co-sign the publications of their doctoral candidates

Persons involved in thesis supervision generally do not co-sign the publications of their doctoral candidates

Persons involved in thesis supervision never co-sign the publications of their doctoral candidates



## Related to Publishing Practices

## And to the genesis of the thesis project

	Science and technology	Life and Environmental Sciences	Humanities and Social Sciences
I am at the origin of my thesis subject (the research question and the ways to move forward on this question), I looked for a supervisor to accompany me on this subject in a second time.	4%	6%	43%
I brought the initial idea, but the thesis subject was co-constructed with my supervisor.	5%	6%	27%
My supervisor brought the initial idea but the subject was co-constructed with me.	29%	33%	19%
I applied for a subject proposed by my supervisor, in which the research question and the avenues for moving forward on the subject were already well defined.	63%	55%	11%

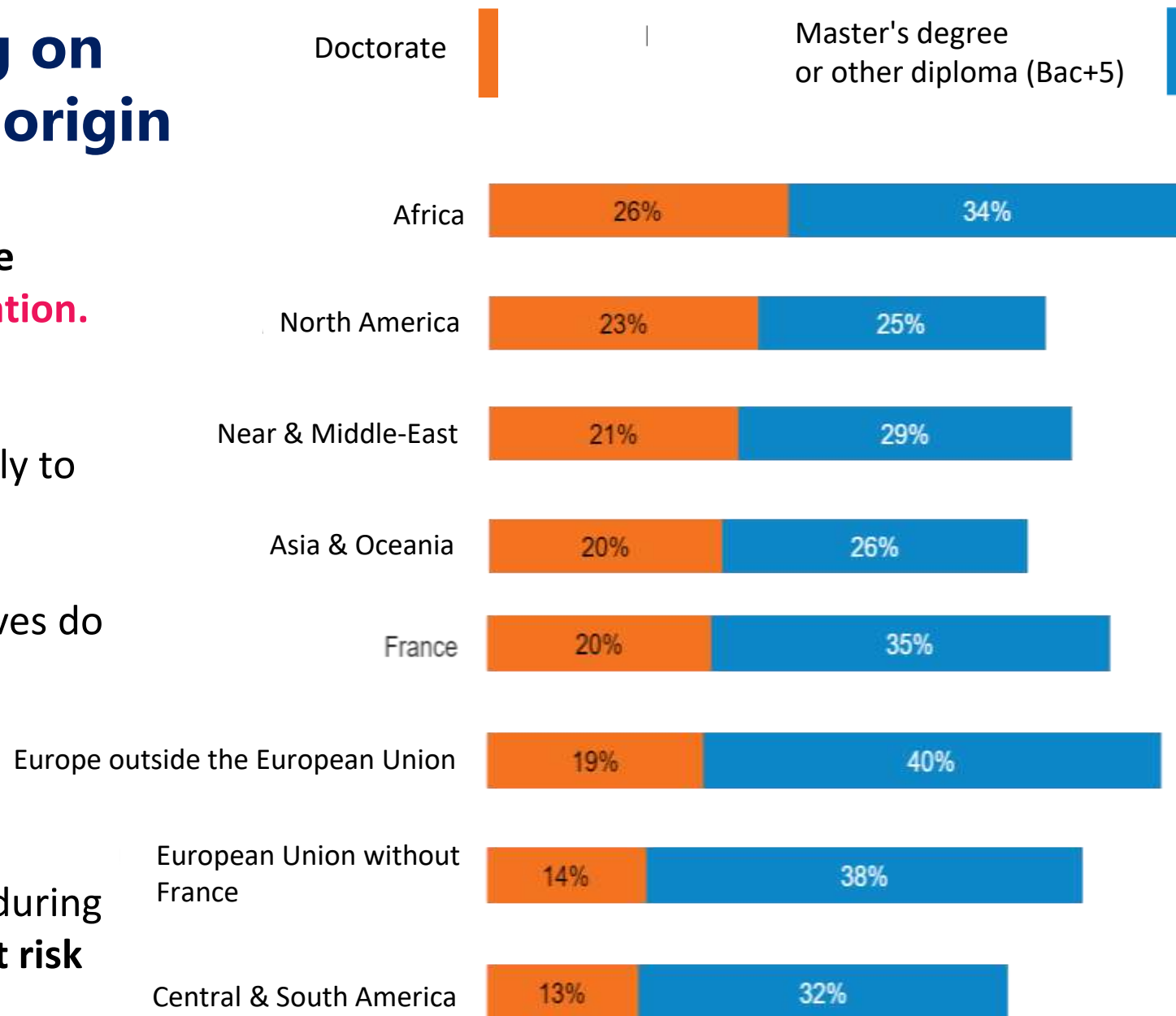
# With differences depending on the regions of the world of origin

Furthermore, all nationalities combined, the family circle is **source of advice and information**.

Doctoral candidates with a parent or close relative who holds a doctorate are more likely to be **confident in their professional future**.

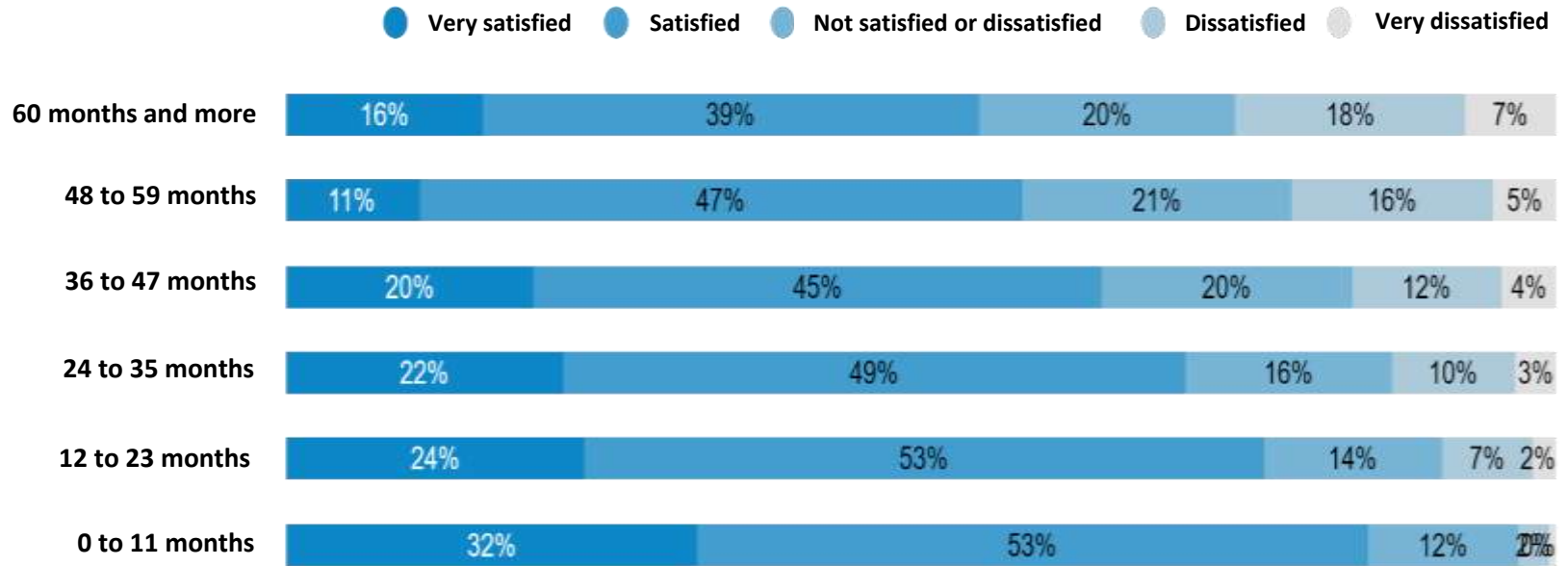
Doctoral candidates whose parents or relatives do not have a degree are **over-represented**

- among doctoral candidates who have **insufficient and irregular income**,
- among those who encounter difficulties during the preparation of their theses and are **at risk of dropping out**.



# Provided the thesis doesn't last too long!

Dissatisfaction with the doctoral experience **increases with the duration of the thesis**



**Subsample of doctoral candidates who declare they have dedicated funding to prepare their doctorate and that it is sufficient.**

Dissatisfaction related to the funding of the end of the thesis, **but not only**

Doctoral candidates enrolled since :	Very satisfied or satisfied	Neither satisfied nor dissatisfied	Very dissatisfied or dissatisfied
Less than a year	89%	9%	2%
12 à 23 months	82%	11%	7%
24 à 35 months	76%	14%	10%
36 à 47 months	78%	12%	11%
48 à 59 months	61%	26%	14%

# Psychosocial dimension of the doctorate

Doctoral candidates' answers to the question :

**"Do you feel exposed to the following psychosocial risks?"**

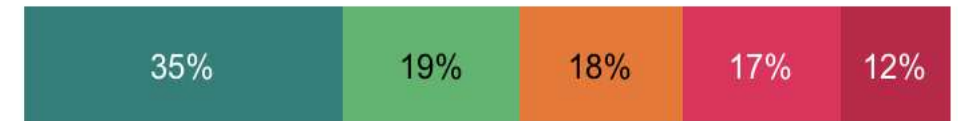
Internal violence (Moral or sexual harassment, Heightened conflicts)



External violence (Insults, threats, aggression, incivility)



Feeling isolated



Stress (imbalance between constraints and resources)



# Have you gone through a period of demotivation, loss of confidence, discouragement?

	All	Those who said they are exposed to moral or sexual harassment, or open conflicts
No, never	17%	5%
It happened to me, but I had support and I've been able to regain confidence and motivation	49%	31%
It happened to me and I had trouble regaining confidence and motivation even with the support of those around me	20%	30%
Yes, and I feel alone with my problems	10%	22%
Yes and I feel like I'm about to give up my PhD	4%	12%

# The risk of drop out

- Doctoral candidates who feel exposed to a **toxic environment** (moral or sexual harassment or conflictual environment or insults, threats, aggression, incivility ) are also those who are most likely to drop out their thesis (by a **factor 3**).
- **Feeling isolated** is also a risk factor for dropping out the doctoral project. Doctoral candidates who feel isolated are about **2 times** more likely to drop out their thesis.
- **Stress** concerns a much larger proportion of doctoral candidates, but has **no significant impact on the risk of drop out**.



# Psychosocial dimension of the doctorate

## Systemic factors contributing to the successful completion of a doctorate :

- **Properly funded thesis**
- Moderate supervision rate (ideally **between 2 and 3 doctoral candidates per supervisor**),
- **Frequent** scientific exchanges with the supervisors,
- A collegial supervision (**co-supervision**),
- A **rich scientific life** in the laboratory (access to seminar cycles, opportunities to have exchanges with national or international researchers, etc.),
- The **existence of associations**, networks and clubs of doctoral candidates.

# Among doctoral candidates supervised by a team of supervisors

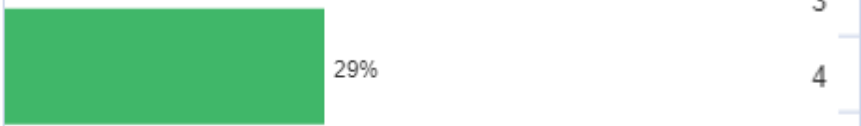
<b>Intergenerational supervisory teams</b>	<b>40%</b> of doctorale Candidates, 43% in ST, 42% in SVE and 35% in SHS. <b>57%</b> of supervisors, 60% in ST ; 54% in SVE and 52% in SHS.
<b>Interdisciplinary supervisory teams</b>	<b>34%</b> of doctorale Candidates, 34% in ST, 39% in SVE and 37% in SHS. <b>36%</b> of supervisors, 36% in ST ; 45% in SVE and 40% in SHS.
<b>Supervisory teams with national collaboration</b>	<b>29%</b> of doctorale Candidates, 29% in ST, 27% in SVE and 35% in SHS. <b>30%</b> of supervisors, 31% in ST ; 27% in SVE and 37% in SHS.
<b>Supervisory teams with international collaboration</b> <i>(including cotutelles)</i>	<b>15%</b> of doctorale Candidates, 13% in ST, 11% in SVE and 21% in SHS. <b>18%</b> of supervisors, 16% in ST ; 16% in SVE and 28% in SHS.
<b>Supervisory teams in collaboration with non-academic partners</b>	<b>14%</b> of doctorale Candidates, 18% in ST, 12% in SVE and 8% in SHS. <b>13%</b> of supervisors, 17% in ST ; 10% in SVE and 8% in SHS.

# A supervision rate of 2-3 is the most favourable: beyond that, the availability of the supervisor is at risk

**Advantage :**  
teamwork,  
solidarity



**Advantage :**  
information  
sharing, etc.



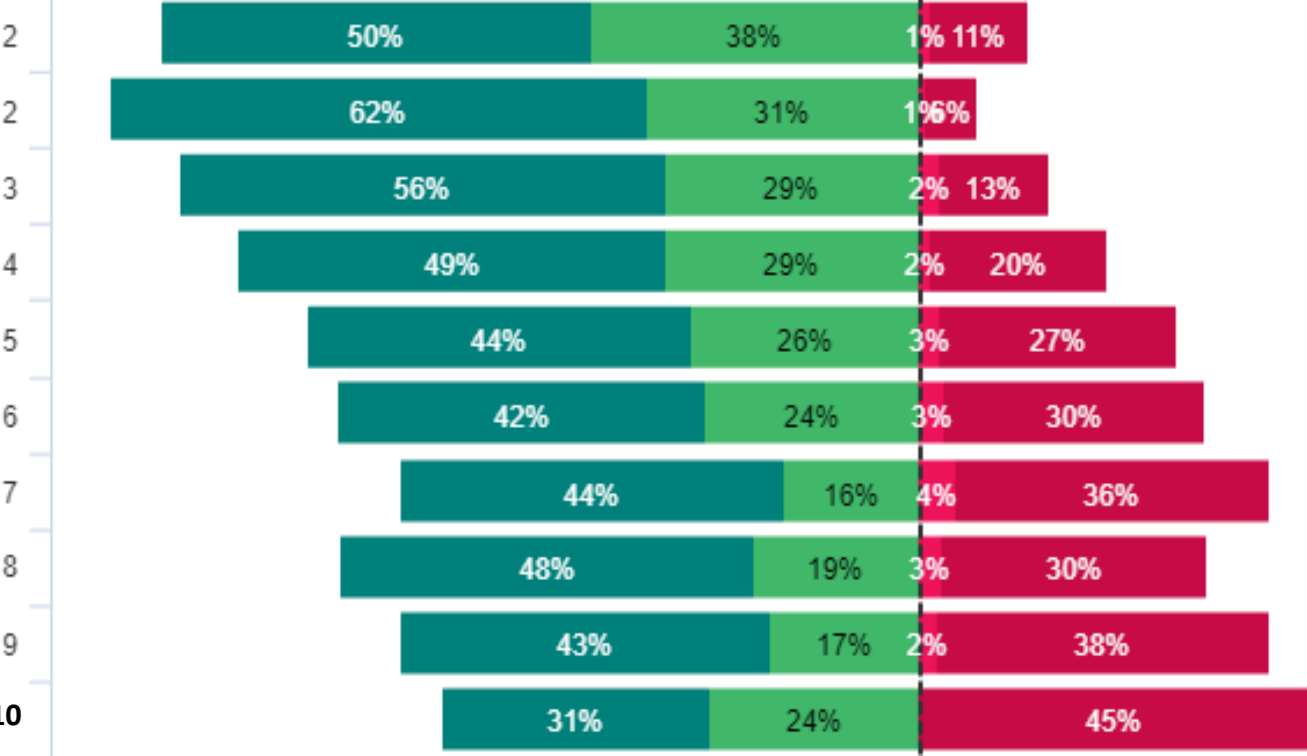
**Disadvantage :**  
competition  
between doctoral  
candidates



**disadvantage:**  
availability of the  
supervisor



More than 10



Answers from doctoral candidates to the question **"What do you think?"**. This question followed the question on the number of doctoral candidates supervised simultaneously by their thesis supervisor. The 40% of responses "not concerned or no opinion" were excluded for this representation.

# The central role of the master's degree



- **28%** of **international doctoral candidates** obtained their last degree in the **institution where they are preparing their doctorate.**



- **27%** of **international doctoral candidates** obtained their last degree in a **French institution other than the one where they are doing their doctorate.**



- **45%** of **international doctoral candidates** obtained their last degree before the doctorate at an **international institution**

Responses of **international doctoral candidates** to the question "**Where did you obtain your last degree before entering the doctorate?**"

