

PhD Degree

Doctoral College

The situation of our doctors, and more specifically, their professional integration, was observed on December 1st 2017, one year after the date of their defense, and on December 1st 2019, three years after their defense. This study was carried out using a questionnaire designed by the Ministry of Higher Education, Research and Innovation (MESRI), which oversees all French universities.

Number of PhD holders surveyed: **211**

Number of respondents: **145**

Response rate: **69%**

Contents

- 1 - Profile of respondents
- 2 - Studies before PhD program
- 3 - PhD program
- 4 - Situation of PhD holders on December 1st 2019
- 5 - Developments in doctors' situations after 1 year and after 3 years

1 - Profile of respondents

All PhD holders

	Sex	
	N	%
Female	88	42%
Male	123	58%
Total	211	100%

	Nationality	
	N	%
French	121	57%
Foreign	90	43%
Total	211	100%

	Age	
	N	%
Under 24 years	0	0%
24 to 29 years	109	52%
30 to 34 years	65	31%
35 to 39 years	22	10%
40 to 44 years	7	3%
45 years and over	8	4%
Total	211	100%

Average = 31 years Standard Deviation = 6

Responding PhD holders

	Sex	
	N	%
Female	60	41%
Male	85	59%
Total	145	100%

	Nationality	
	N	%
French	99	68%
Foreign	46	32%
Total	145	100%

	Age	
	N	%
Under 24 years	0	0%
24 to 29 years	79	54%
30 to 34 years	41	28%
35 to 39 years	16	11%
40 to 44 years	4	3%
45 years and over	5	3%
Total	145	100%

Average = 31 years Standard Deviation = 6

NOTE: The profile of respondents is similar to that of the PhD holders surveyed, with the exception of foreign doctors, who are under-represented among the respondents.

2 - Studies before PhD program

► Last degree(s) awarded before PhD program

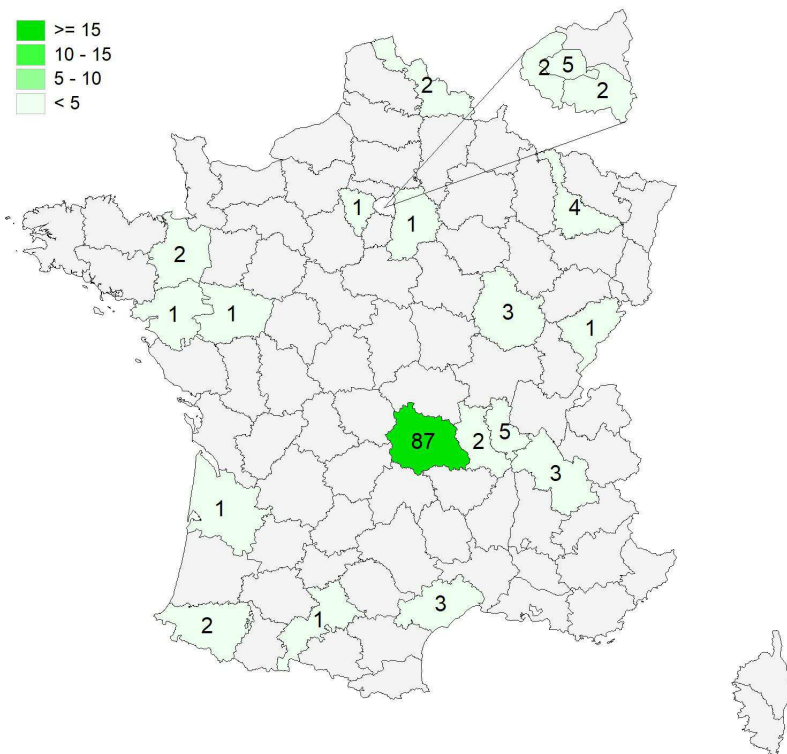
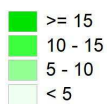
	N	
A Master's degree or equivalent	133	92%
An Engineering degree	20	14%
A Medical, Pharmacy, or Veterinary degree	12	8%
A PhD degree other than the last one awarded	1	0,7%
A degree in Management or Commerce	0	0%
A Validation of Professional Accomplishments (VAP)	0	0%

Response rate: 100%

► Location of last degree received

40% of doctors received their last degree from another institution than UCA.

Numbers



Geographical distribution

Auvergne-Rhône-Alpes	97	67%
Ile-de-France	11	8%
Other department in mainland France	21	15%
Abroad:	15	10%
Germany	1	7%
Brazil	1	7%
Burkina Faso	1	7%
Canada	1	7%
Iraq	1	7%
Italy	1	7%
Nigeria	1	7%
Romania	1	7%
Tunisia	4	27%
Turkey	1	7%
Venezuela	2	13%

Response rate : 99%

► Professional status before receiving PhD

- **33%** of PhD holders were employed before the PhD program.
- At enrollment, **21%** doctors had a job unrelated to their PhD project, **60%** of whom held on to the job during the program.

3 - PhD program

► PhD Specialization

	Female	Male
Molecular and Cellular Biology	9	3
Automation, Signal Processing	-	2
Environment, Population, and Ecology Biology	-	1
Biology of Organisms	-	3
Biomolecules, Pharmacology, Therapeutics	1	2
Agricultural Food Biotechnology, Food Sciences	2	-
Animal, Plant, and Microbial Biotechnology	-	3
Materials Chemistry	3	3
Chemistry and Physical Chemistry	1	2
Organic, Mineral and Industrial Chemistry	-	1
Elementary Particles, Theoretical Physics, Hot Plasmas	-	5
Private Law and Crime Science	2	-
Public Law	-	1
Materials Engineering	-	1
Process Engineering, Cold Plasmas	-	1
Physical, Human, Economic and Regional Geography	1	-
History and Civilizations: History and Archeology of Ancient and Medieval Worlds and of Art	1	-
Information Technology and Applications	-	11
Information Technology, Automation	-	2
French Language and Literature	2	1
Romance Languages and Literature: Spanish, Italian, Portuguese, Other Languages	-	1
Comparative Literature	2	-
Mathematics and Interactions	-	3
Fluids, Energetics, Thermal, Combustion, Acoustic, Biomechanical, Bioengineering Mechanics	1	-
Mechanics of Solids, Materials, and Surfaces	-	4
Mechanics, Energetics, Process Engineering, Civil Engineering	1	4
Philosophy	1	2
Physiology, Biology of Organisms, Populations, Interactions	2	2
Physics and Materials Science	2	2
Psychology, Clinical Psychology, Social Psychology	2	1
Clinical Research, Technological Innovation, Public Health	1	2
Management Sciences	1	-
Economics	1	7
Agronomic Sciences	-	1
Earth and Universe Sciences	4	1
Life and Health Sciences	13	9
Education Sciences	3	1
Anthropology and Ethnology	2	-
Information and Communication Sciences	1	1
Language Sciences: General Linguistics and Phonetics	1	-
Economic and Management Sciences	-	1
Solid Earth and Deep Strata	-	1
Solid Earth and Superficial Envelopes	-	3

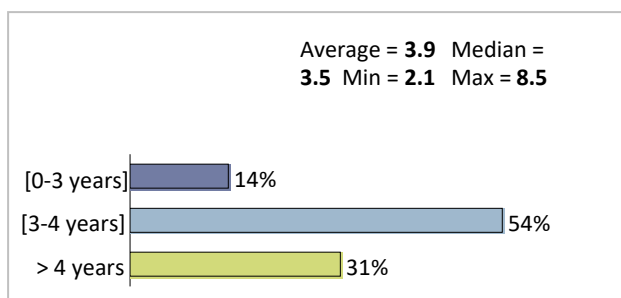
Response rate: 100%

► Dual-Degree Thesis Program

8% of PhDs were awarded as part of a dual-degree program.

75% doctors were foreign nationals and 33% of them carried out their PhD program in collaboration with a research laboratory in their home country.

► Duration of PhD program*



Response rate: 100%

*Deviation between the defense date and the registration date in number of years

► PhD Funding

	N	
Specific funding	115	81%
Personal resources	34	24%
Job unrelated to PhD project	18	13%
ATER position	16	11%
No funding	5	4%
Total	142	

Response rate: 98%

PhD funding contract types

	N	
Doctoral	69	61%
Scholarship	34	30%
Temporary job	21	19%
Permanent job	3	3%

Includes concurrent contracts (e.g. temp. + schol.)

Response rate: 78%

Sources of specific funding

	N	
State funding	61	54%
Regional government	29	26%
French public research funding agencies	11	10%
Foreign funding	8	7%
CIFRE	7	6%
Private funding from French-based organization	5	4%
Both private and public funding (excluding CIFRE)	4	4%
European Commission Funding	3	3%

Response rate: 77%

► Career Plan

	N	
Teaching or research in a public or private institution of higher education	68	48%
Working in R&D at a company	27	19%
Working in public research	18	13%
None	8	6%
Pursuing or progressing in job held before PhD	8	6%
Working in a company excluding R&D	5	3%
Working in the public sector excluding research and higher education	5	3%
Creating a company	2	1%
Career change	2	1%
Other	0	0%
Total	143	

Response rate: 99%

► CNU Qualification (National Council of Universities)

38% of doctors applied for a CNU qualification, of whom 89% received the qualification.

	Female	Male	Total
Received CNU qualification	21	27	48
Applied, awaiting response	-	1	1
Did not receive CNU qualification	3	2	5
Did not apply	35	52	87
Total	59	82	141

Response rate: 97%

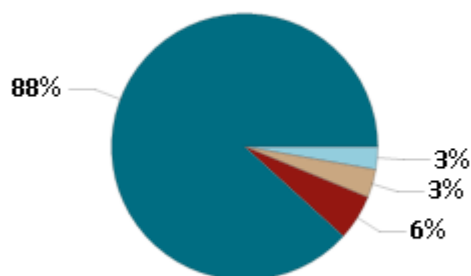
► Continuing studies

13 doctors enrolled in a program or a civil service exam after their PhD.

Level of studies	Male	Female	Total
Master, Engineering degree or equivalent	3	2	5
PhD, Accreditation to Supervise Research (HDR)	5	-	5
BTS, DUT, DEUST or equivalent	-	1	1
Other: professional certifications (IT, TOEIC, TOEFL, etc.)	1	1	2
Total	9	4	13

Response rate: 100%

Situation of PhD holders on December 1st 2019



	Female	Male	Total
Employed	52	76	128
Employed after 1/12/2019	2	2	4
Job Seeker	3	5	8
Other	3	2	5
Total	60	85	145

- ▶ **88%** of doctors from the class of 2016 were employed on December 1st 2019.
- ▶ **8** PhD holders, **8** of whom had already worked, were seeking employment, on average for the past **12** months.

They were seeking employment in the following fields:

Research and development	6
Higher education and research	3
Education (excluding higher education and research)	0
Innovation, research valorization and assistance	0

They were seeking employment in the following locations:

Their department of residence	3
Their region or neighboring departments	3
Everywhere in France	2
Abroad	0

- ▶ **5** PhD holders were in another situation on December 1st 2019. They did not give any further information about their situation.

KEY FIGURES

Employment rate (1)	Cadre rate (2)	Contract type			Sector		Other key figures	
		Permanent (3)	Post-doctoral contracts (4)	Other contracts (5)	Research (6)	Not research (7)	Median time spent before 1st job (8)	Median gross salary (8)
94%	94%	56.3%	18.0%	25.8%	37.7%	62.3%	1 month	€2,604

(1) Number of employed PhD holders / (Number of employed PhD holders + Number of job seeking PhD holders)

(2) Cadres of the following categories: civil servant, administrative, IT, company head, accredited profession, higher education teachers and scientific professions, secondary and school teachers

(3) Number of PhD holders with a stable contract: permanent, civil servant, company head, accredited profession / Number of employed PhD holders

(4) Number of PhD holders with a post-doctoral contract / Number of employed PhD holders

(5) Number of employed PhD holders with another contract: temporary, interim, adjunct position, ATER / Number of employed PhD holders

(6) Number of employed PhD holders in a company working in research / Number of employed PhD holders

(7) Number of employed PhD holders in a company not working in research / Number of employed PhD holders

(8) Median = value separating the top 50% of respondents and the 50% bottom respondents

Employment held on December 1st 2019

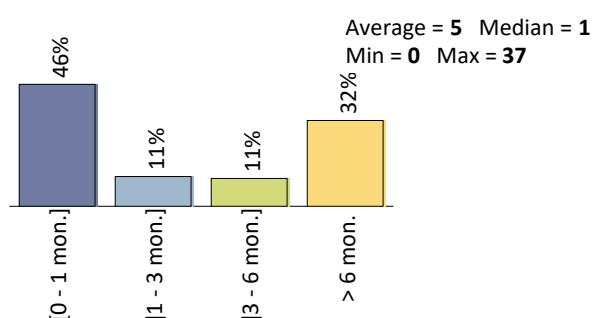
Current employment contract type

	Female	Male	Total
Permanent	26	46	72
Temporary (excl. post-doctoral)	12	19	31
Post-doctoral contract	12	11	23
ATER position	1	-	1
Adjunct position	1	-	1
Other	-	-	0
Total	52	76	128

Response rate: 100%

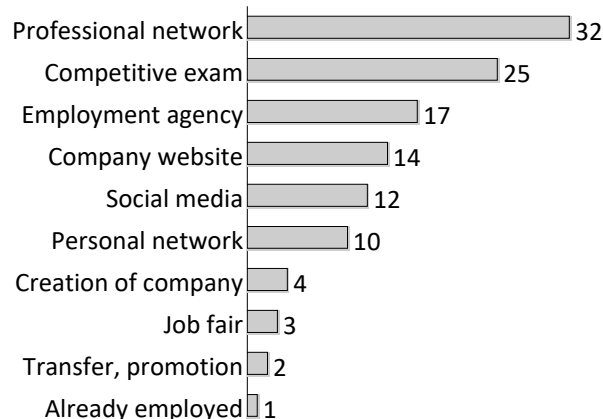
- ▶ 42% of PhD holders were still working at the first job obtained after their PhD defense.
- ▶ 94.5% of PhD holders worked full-time and 5.5% worked part-time.
- ▶ Temporary contracts varied between 1 and 60 months, with the median duration being 12 months.
- ▶ 56% of PhD holders had a stable job.

Time spent before 1st job



Response rate: 100%

Method of finding current job



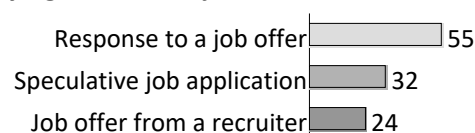
Response rate: 94%

Skills required for job

	N	Percentage
Project manager duties	68	65%
International work	65	63%
Staff management	62	60%
Budget management	46	44%

Response rate: 97%

Method of applying for current job



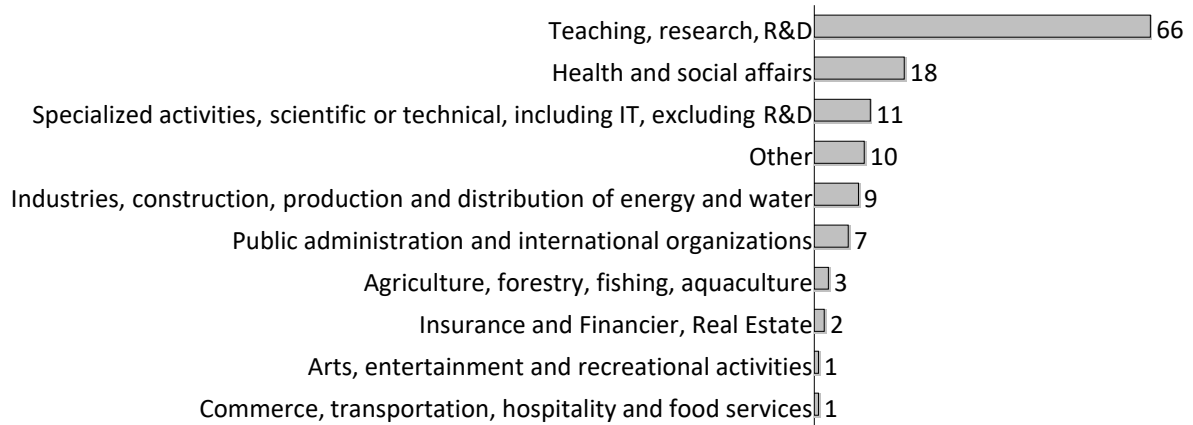
Response rate: 90%

Functions held at current job

	N	Percentage
Higher education and research	47	39%
Research and development	41	34%
Consulting, analysis, expertise	24	20%
Health	18	15%
Steering or managing projects or teams, public policy	15	12%
Research valorization and assistance, innovation	13	11%
Teaching (excluding higher education and research)	13	11%
Mediation, communication and scientific journalism	2	2%
Artistic creation	1	0.8%

Response rate: 95%

Employment by activity sector



Response rate: 100%

Company categories

	N	%
Civil service	68	54%
Private company	42	33%
International organization or non-EU organization	6	5%
A non-profit association or organization	5	4%
Your own	3	2%
Public company	3	2%
Other	-	0%
Individual with an accredited or independent profession	-	0%
Total	127	100%

Response rate: 99%

Company size

	N	%
0 employees	5	4%
1-9 employees	6	5%
10-249 employees	28	22%
250-4,999 employees	54	43%
>5,000 employees	32	26%
Total	125	

Response rate: 98%

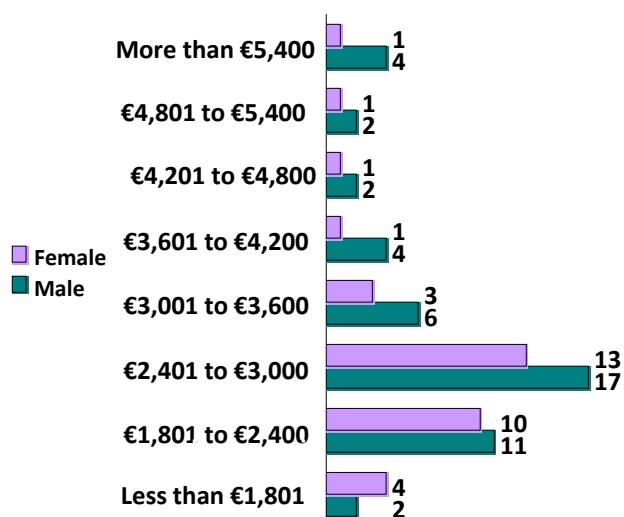
Employment status

	Female	Male	Total
Higher education teacher, scientific profession	19	27	46
Secondary school teacher	4	4	8
School teacher, instructor, or equivalent	1	-	1
Category A civil servant	4	2	6
Company head, retailer, or equivalent	2	1	3
Engineer or company technical <i>cadre</i>	14	34	48
Administrative or commercial <i>cadre</i>	2	4	6
Accredited profession, legal and technical	-	-	0
Accredited profession, medical	2	-	2
Salaried employee	3	2	5
Information, arts and entertainment profession	-	-	0
Intermediate profession, administrative and commercial	1	2	3
Total	52	76	128

Response rate: 100%

Salaries of PhD holders (excluding bonuses)

65% were satisfied with their salary.



Response rate: 83%

	Female	Male	Total
Average	€2,718	€3,142	€2,969
Min	€1,505	€1,353	€1,353
Max	€6,150	€7,626	€7,626
Median	€2,583	€2,706	€2,604

► The gross monthly salary of PhD holders (excluding bonuses) varied between €1,353 and €7,626. The median gross salary was €2,604*.

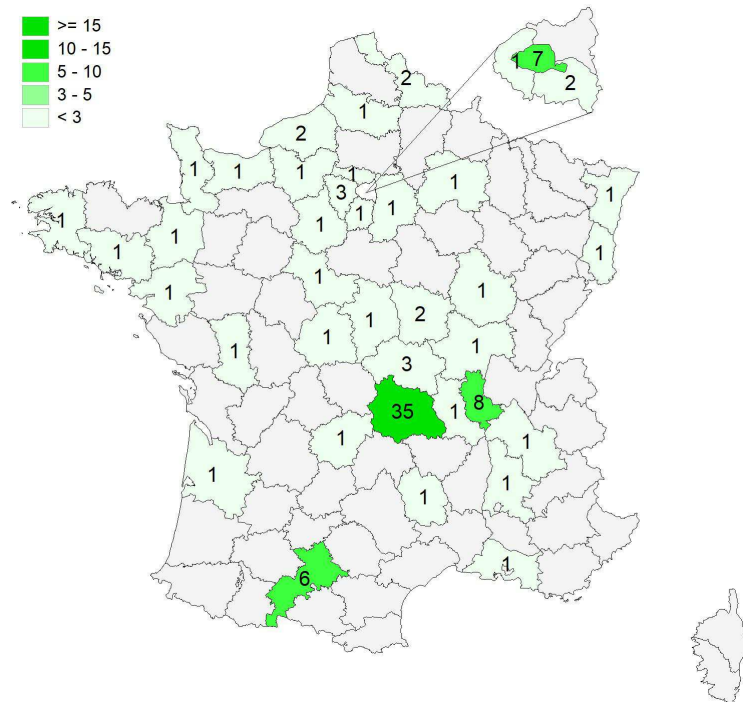
Salaries are calculated based on full-time employment. The salaries of PhD holders working abroad were not taken into account.

Bonuses

18 PhD holders specified the annual gross amount of the bonuses they received. These bonuses vary between €170 and €12,000, with the median amount being €2,250.

Location of employment

Numbers



Geographical distribution of jobs

Auvergne-Rhône-Alpes	49	38%
Ile-de-France	16	13%
Other departments in mainland France	34	27%
Overseas France	0	0%
Abroad:	29	23%
Germany	3	10%
Belgium	1	3%
Burkina Faso	2	7%
Canada	1	3%
China	1	3%
Congo-Kinshasa	1	3%
Denmark	1	3%
United Arab Emirates	1	3%
United States	4	14%
Finland	1	3%
Japan	1	3%
Luxembourg	1	3%
Nigeria	1	3%
Poland	1	3%
Romania	1	3%
United Kingdom	1	3%
Sweden	1	3%
Switzerland	3	10%
Chad	1	3%
Tunisia	2	7%
Total	29	100%

Response Rate: 100%

List of jobs occupied

	Female	Male	Total
Researcher	8	8	16
Secondary School Teacher	4	5	9
Research and Development Engineer	0	7	7
Research Engineer	4	2	6
University Lecturer and Researcher	1	4	5
Development Engineer	3	1	4
Associate Professor	4	0	4
Associate Professor - Hospital Practitioner	2	2	4
Hospital Practitioner	1	3	4
Economist	0	3	3
University Instructor	1	2	3
Department Manager	2	1	3
Research Fellow	0	2	2
Teacher	0	2	2
Civil Engineer	0	2	2
Hospital Engineer	2	0	2
Computer Engineer	0	2	2
Systems Administrator	0	1	1
University Official	0	1	1
Farmer	0	1	1
Analyst	0	1	1
Research Assistant	0	1	1
ATER	1	0	1
State Administrative Worker	0	1	1
Chargé de mission	1	0	1
Research and Development Assistant	0	1	1
Partnership and Social Innovation Assistant	1	0	1
Research Valorization Assistant	1	0	1
Research and Development Project Manager	0	1	1
Consultant	0	1	1
Innovation Financing Consultant	1	0	1
International Consultant	0	1	1
Graphic Designer	1	0	1
Software Developer	0	1	1
Scientific Developer	0	1	1
Director of a Research and Development Center	0	1	1
Museum Director	1	0	1
Trainer	1	0	1
Engineer	0	1	1
Analytical Engineer	1	0	1
Business Intelligence Engineer	0	1	1
Fluids Engineer	0	1	1
Research and Development Engineer	0	1	1
Robotics Engineer	0	1	1
Gastroenterologist	0	1	1

Cadre jobs

		Female	Male	Total
<i>Cadre jobs</i>	General Practitioner	1	0	1
	Psychiatrist	0	1	1
	Training Services and Resources Mediator	1	0	1
	Nutritionist	1	0	1
	Medical Physician	0	1	1
	French as a Foreign Language Teacher	1	0	1
	School Teacher	1	0	1
	NGS and Bioinformatics Operations Manager	1	0	1
	Data Manager	0	1	1
	Trial Manager	0	1	1
	CNS Medication Development Manager	0	1	1
	Innovation Manager	0	1	1
	Scientific Assistance	1	0	1
	Metrologist	0	1	1
<i>Non cadre jobs</i>	Garbage Collector	0	1	1
	Building and Architecture Draftsman	1	0	1
	Software Developer	0	1	1
	Manager	1	0	1
	Development Engineer	0	1	1
	Process Methods Engineer	1	0	1
	Systems Engineer	0	1	1
	Laboratory Technician	1	0	1
Total	43	65	108	

Response rate: 100%

List of jobs broken down by Doctoral School

	ED LSHS	ED SVSAE	ED SEJPG	ED SF	ED SPI	Total
Researcher	2	8	0	4	2	16
Secondary School Teacher	2	1	1	3	2	9
Research and Development Engineer	0	3	0	1	3	7
Research Engineer	2	3	0	1	0	6
University Lecturer and Researcher	0	1	1	1	2	5
Development Engineer	2	1	0	1	0	4
Associate Professor	0	3	1	0	0	4
Associate Professor - Hospital Practitioner	1	3	0	0	0	4
Hospital Practitioner	0	4	0	0	0	4
Economist	0	0	3	0	0	3
University Instructor	0	1	1	0	1	3
Department Manager	0	2	1	0	0	3
Research Fellow	1	0	1	0	0	2
Teacher	0	0	0	0	2	2
Civil Engineer	0	0	0	0	2	2
Hospital Engineer	0	2	0	0	0	2
Computer Engineer	0	0	0	0	2	2
Systems Administrator	0	0	0	0	1	1
University Official	0	0	0	1	0	1
Farmer	0	1	0	0	0	1
Analyst	0	0	0	0	1	1
Research Assistant	1	0	0	0	0	1
<i>Cadre jobs</i> ATER	1	0	0	0	0	1
State Administrative Worker	0	0	1	0	0	1
Chargé de mission	0	1	0	0	0	1
Research and Development Assistant	0	1	0	0	0	1
Partnership and Social Innovation Assistant	0	0	0	1	0	1
Research Valorization Assistant	0	1	0	0	0	1
Research and Development Project Manager	0	0	0	0	1	1
Consultant	0	0	0	0	1	1
Innovation Financing Consultant	0	0	0	1	0	1
International Consultant	0	0	1	0	0	1
Graphic Designer	1	0	0	0	0	1
Software Developer	0	1	0	0	0	1
Scientific Developer	0	0	0	1	0	1
Director of a Research and Development Center	1	0	0	0	0	1
Museum Director	1	0	0	0	0	1
Trainer	1	0	0	0	0	1
Engineer	0	0	0	0	1	1
Analytical Engineer	0	1	0	0	0	1
Business Intelligence Engineer	0	1	0	0	0	1
Fluids Engineer	0	0	0	0	1	1
Research and Development Engineer	0	0	0	1	0	1
Robotics Engineer	0	0	0	0	1	1
Gastroenterologist	0	1	0	0	0	1

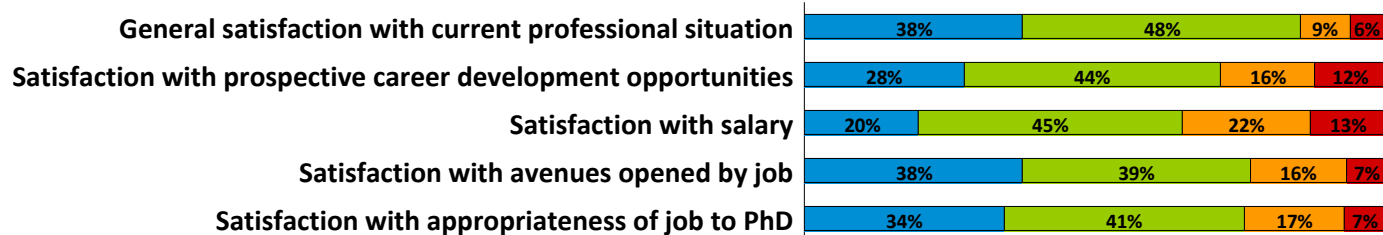
		ED LSHS	ED SEJPG	ED SF	ED SPI	ED SVSAE	Total
<i>Cadre job</i>	General Practitioner	0	1	0	0	0	1
	Psychiatrist	0	1	0	0	0	1
	Training Services and Resources Mediator	1	0	0	0	0	1
	Nutritionist	0	1	0	0	0	1
	Medical Physician	0	0	0	1	0	1
	French as a Foreign Language Teacher	1	0	0	0	0	1
	School Teacher	1	0	0	0	0	1
	NGS and Bioinformatics Operations Manager	0	1	0	0	0	1
	Data Manager	0	0	0	0	1	1
	Trial Manager	0	0	1	0	0	1
	CNS Medication Development Manager	0	1	0	0	0	1
	Innovation Manager	0	0	1	0	0	1
	Scientific Assistance	0	1	0	0	0	1
	Metrologist	0	0	0	1	0	1
		ED LSHS	ED SVSAE	ED SEJPG	ED SF	ED SPI	Total
<i>Non cadre</i>	Building and Architecture Draftsman	0	0	0	1	0	1
	Software Developer	0	0	0	1	0	1
	Garbage Collector	0	1	0	0	0	1
	Manager	1	0	0	0	0	1
	Design Engineer	0	0	0	0	1	1
	Process Methods Engineer	0	0	0	1	0	1
	Systems Engineer	0	0	0	0	1	1
	Laboratory Technician	0	1	0	0	0	1
Total	20	13	21	26	48	128	

Response rate: 100%

► **Job Satisfaction**

85% of doctors were satisfied with their job in general.

	Very satisfied	Satisfied	Dissatisfied	Very dissatisfied
General satisfaction with current professional situation	44	56	10	7
Satisfaction with prospective career development opportunities	32	51	19	14
Satisfaction with salary	23	53	26	15
Satisfaction with avenues opened by job	44	46	19	8
Satisfaction with appropriateness of job to PhD	40	48	20	8



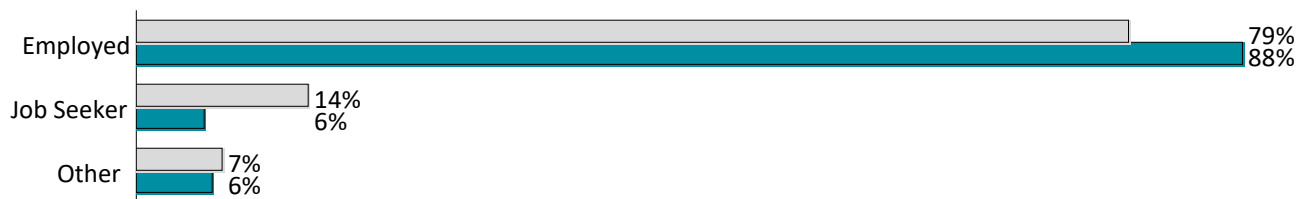
Response rate: 91%

52% of doctors declared that a PhD was required to perform their current job and 76% of doctors were satisfied with the appropriateness of the job to the PhD.

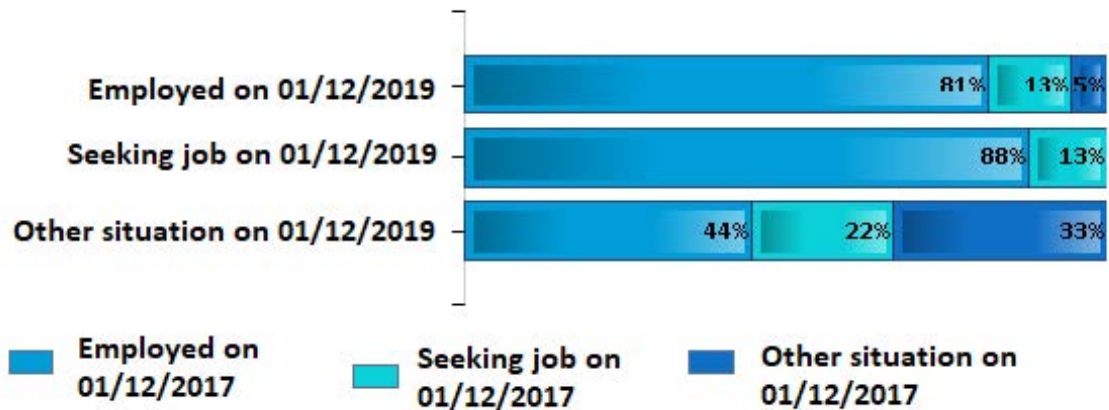
5 - Developments in doctors' situations 1 year and 3 years after receiving their degree

Situations on December 1st 2017 and 2019

	Employed		Job Seeker		Other		Total	
	N	%	N	%	N	%	N	%
Situation on 01/12/2017	115	79%	20	14%	10	7%	145	100%
Situation on 01/12/2019	128	88%	8	6%	9	6%	145	100%



► Development in doctors' situations after 1 year and after 3 years



81% of doctors employed on 01/12/2019 were already employed on 01/12/2017 and 88% of doctors seeking work on 01/12/2019 were employed on 01/12/2017.

GLOSSARY

ATER: Attaché Temporaire d'Enseignement et de Recherche (Temporary teaching and research assistant)

CNU: National Council of Universities to become an associate or full professor

CIFRE: Work placement agreement placing a PhD student in a company

Dual-Degree Thesis Program: A dual-degree thesis is a program to promote global engagement for PhD students and to develop scientific collaboration between foreign and French research teams.

Doctoral contract: The doctoral contract is the main type of funding granted to PhD students. The doctoral contract is open to all PhD students who have been enrolled for less than six months in their first year, with no age requirement.

Post-doctoral contract: A post-doctoral contract is a temporary work contract in the public and private research sphere, in France or abroad.

PhD degree: The PhD is the highest degree in higher education, training students for research by conducting research. In this respect, it is considered a professional research experience. It leads to the creation of new knowledge.

ED: Doctoral school

ED LSHS: Doctoral School of LITERATURE, HUMAN AND SOCIAL SCIENCES

ED SVSAE: Doctoral School of LIFE, HEALTH, AGRONOMY, AND ENVIRONMENTAL SCIENCES

ED SEJPG: Doctoral School of ECONOMIC, LAW, POLITICAL AND MANAGEMENT SCIENCES

ED SF: Doctoral School of FUNDAMENTAL SCIENCES

ED SPI: Doctoral School of ENGINEERING SCIENCES

MCU: Maitre de Conférence Universitaire (Associate Professor)