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Inspiring Ideas to Drive Gender Equality
at Higher Educations Institutions and Research
Performing Organizations in the Post-Pandemic
Scenario

GUIDANCE NOTES



SAGE19: Scientific and Academic Gender (in)equalities during COVID-19

*INSPIRING IDEAS TO DRIVE GENDER EQUALITY
AT HIGHER EDUCATIONS INSTITUTIONS AND RESEARCH
PERFORMING ORGANIZATIONS IN THE POST-PANDEMIC
SCENARIO - GUIDANCE NOTES*

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1. A few words before starting

This “Guidance notes” – produced by the “SAGE19: Scientific and Academic Gender (in)equality during Covid-19” project, funded by the Portuguese Foundation for Science and Technology (FCT) under the “Gender Research 4 Covid-19” programme, aimed to lay the cornerstones for the promotion of gender equality¹ in higher education institutions (HEIs) and research performing organizations (RPOs) in the aftermath of the Covid-19 pandemic. It is thus presented as a tool to assist policy decision-makers, specialists, HEIs and RPOs promoting actions to offset the increased inequalities between women and men in academic and scientific careers² observed during this health crisis. It presents some suggestions of mitigation strategies for possible future emergency situations, aiming at enabling a sustainable change concerning the disparities between women and men in HEIs and RPOs in Portugal.

All the discussions and recommendations presented in this manual are underpinned by the acknowledgement that the Covid-19 pandemic intensified the existing gender inequalities in society. Right from the beginning of this health crisis, in the European spring of 2020, the reduction in the submission of articles to indexed scientific journals by women compared to men was one of the first signs of this unequal impact on academic and scientific careers. Subsequently, more complex analyses revealed how women’s teaching, student supervision, administrative service, laboratory and fieldwork activities were also negatively affected by the transformations imposed by the pandemic. On the one hand, the actual gender asymmetries typical of academic career (e.g., concentration of women in more precarious positions, under-representation in senior career and decision-making positions, overload of administrative service, etc.)³ contributed to this stronger penalisation of women in relation to men. On the other hand, in view of the unequal division of reproductive work between women and men in the domestic sphere in general, women lecturers and researchers were overburdened with the increased household chores due to the suspension of nurseries, schools and services to support for children, adults and elderly family members dependent on assistance⁴.

1 One of the greatest limitations of our study was the impossibility of identifying transgender person in academic and/or scientific careers at HEIs and RPOs in Portugal. Therefore, although the understanding of gender is not confined to binarism, our findings and recommendations for the promotion of gender are restricted to the experience of women and men.

2 Academic career and work refer to the teaching and research activities carried out at higher education institutions.

3 Maria do Mar Pereira, *Power, Knowledge and Feminist Scholarship: An Ethnography of Academia* (Taylor & Francis, 2017); Bruce Macfarlane and Damon Burg, “Women professors and the academic housework trap”, *Journal of Higher Education Policy and Management*, 41 (3) (4 May 2019), pp. 262-274, <https://doi.org/10.1080/1360080X.2019.1589682>.

4 Alessandra Minello, Sara Martucci, and Lidia K. C. Manzo, “The pandemic and the academic mothers: present hardships and future perspectives”, *European Societies*, 23 (sup. 1) (19 February 2021), pp. S82-S94, <https://doi.org/10.1080/14616696.2020.1809690>.

The Covid-19 pandemic, however, could also be an opportunity to transform the gendered nature of HEIs and RPOs. By forcing unprecedented change in institutions' dynamics and systems, it opens the door to confront the existing gender inequalities in these institutions. In that regard, this manual, based on evidence compiled by the SAGE19 project, on the one hand, highlights the unequal effect of the health crisis on the career of women lecturers and researchers in Portugal when compared to men. On the other hand, it proposes recommendations that contribute to mitigate these effects and promote gender equality in HEIs and RPOs in the post-pandemic scenario, as well as for other emergency situations that may arise.

The next section frames the discussions about gender inequalities at HEIs and RPOs at a European and national level. This is followed by a description of the "SAGE19: Scientific and Academic Gender (in) equality during Covid19" project, and presentation of its findings. Finally, various recommendations are given concerning measures to mitigate and confront the gender inequalities at HEIs and RPOs in the aftermath of the pandemic.

2. Brief framing of gender inequalities at higher education institutions and research performing organizations

In line with the goals of the Beijing Declaration and Platform for Action (United Nations Fourth World Conference on Women, Beijing, 1995), the research and innovation policies proposed by the European Commission (EC) to promote equality between women and men are underpinned by strategies to stimulate and strengthen gender equality in academic and scientific in decision-making bodies and reinforce the dimension of the gender perspective in the sphere of higher education, research and innovation. Pursuant to the European Union (EU) legislation on gender equality (Directive 2006/54/EC), Member States are encouraged to create an environment that not only boosts the elimination of barriers to recruitment, but also the retention and career progression of women researchers and lecturers, especially at the early career stage. In this context, in February 2021, on the occasion of the International Day of Women and Girls in Science, the European Commissioner for Innovation, Research, Culture, Education and Youth announced the measures of Horizon Europe, the EU's key funding programme for research and innovation, in the area of gender equality. These included that from 2022 onwards it would be mandatory for public entities, organisations, HEIs and RPOs of all Member States to have a Gender Equality Plan in order to have access to the programme's funds. The goal is to promote the elimination of the inherent barriers to gender equality of those institutions and create strategies to overcome and/or mitigate the inequalities between women and men associated to the management of human resources, funding, decision-making, programmes to prevent and counteract sexist practices transversal to the culture of HEIs and RPOs and societal organisation in general.

Since 2011, in Portugal, National Plans for Equality have progressively stressed the importance of ensuring the continuation of the funding line that was active between 1999 and 2008 to support research projects that enhance scientific knowledge on gender relations. Moreover, the first cycle of the current National Strategy for Equality and Non-Discrimination (2018-2021) included for the first time measures aimed at promoting gender equality in higher education and in scientific and technological development. Additionally, national bodies such the Commission for Citizenship and Gender Equality (CIG), FCT and the Ministry of Science, Technology and Higher Education (MCTES) have progressively collaborated to promote initiatives and the funding of research projects in areas related to Studies on Gender and Gender Relations. The funding line of this project, promoted by the FCT in articulation with the State Secretariat for Citizenship and Equality and support of the CIG, "Gender Research 4 Covid-19", is a vivid example of that commitment. Furthermore, various Portuguese institutions have conducted research and intervention projects to boost equality between women and men and mainstream gender in higher education, through funding obtained under the National Strategic Reference Framework (QREN), under the Human Potential Operational Programme (POPH) (see Table 1).

An excellent example of this commitment to gender equality in higher education institutions is the Gender Equality in Higher Education Institutions (GE-HEI) project, which was developed at the Interdisciplinary Centre for Gender Studies (CIEG) and coordinated by Anália Torres, in partnership with the Higher Education Assessment and Accreditation Agency (A3ES) and the Institute for Gender, Equality, and Difference at the University of Iceland (RIKK). This is a groundbreaking project in Portugal due to its topic and partnerships with national institutions.

Table 1: Example of projects to boost gender equality and mainstream gender in higher education funded by the National Strategic Reference Framework, under the Human Potential Operational Programme involving Portuguese HEIs and RPOs.

PROJECT	PORTUGUESE INSTITUTIONS INVOLVED
<p><i>Redesigning Equality and Scientific Excellence Together</i></p> <p>H2020 – Grant agreement: 101006560</p>	<p>Universidade do Porto</p>
<p>Gearing Roles</p> <p><i>Gender Equality Actions in Research Institutions to Transform Gender Roles</i></p> <p>H2020 - Grant Agreement number: 824536</p>	<p>IGOT – Universidade de Lisboa</p>
<p>Supera</p> <p><i>Supporting the Promotion of Equality in Research and Academia</i></p> <p>H2020 - Grant Agreement number: 787829</p>	<p>Universidade de Coimbra</p>
<p>Spear</p> <p><i>Supporting and Implementing Plans for Gender Equality in Academia and Research</i></p> <p>H2020 - Grant Agreement number: 824544</p>	<p>Universidade Nova de Lisboa</p>
<p>Change</p> <p><i>Challenging Gender (In)Equality in Science and Research</i></p> <p>H2020 - Grant agreement ID: 787177</p>	<p>Universidade de Aveiro</p>
<p>Plotina</p> <p><i>Promoting Gender Balance and Inclusion in Research, Innovation and Training</i></p> <p>H2020 – Grant Agreement number: 666008</p>	<p>ISEG – Universidade de Lisboa</p>
<p>SAGE</p> <p><i>Systemic Action for Gender Equality</i></p> <p>H2020 – Grant Agreement number: 710534</p>	<p>Instituto Universitário de Lisboa</p>
<p>Equal-IST</p> <p><i>Gender Equality Plans for Information Sciences and Technology (IST) Research Institutions</i></p> <p>H2020 - Grant Agreement number: 710549</p>	<p>Universidade do Minho</p>

Source: Adapted from the GE-HEI – Gender Equality in Higher Education Institutions project. For further information on the project see <https://gehei.dges.gov.pt/>.

The growing importance of gender issues in Portugal is also visible in the inclusion women's, gender, feminist studies (WGFS) at higher education institutions at a postgraduate level (e.g., master in Women's Studies of the Universidade Aberta de Lisboa and Universidade Nova de Lisboa; the master and doctorate in Feminist Studies of Universidade de Coimbra; and the doctoral programme in Gender Studies of Universidade Nova de Lisboa).

Accordingly, this 'Guidance notes ' is consistent with the development of a national strategic vision to promote gender equality within HEIs and RPOs. It is presented as a tool aimed at contributing to the implementation of structural change in the gender inequality dynamics in this sphere, offering insights on the Portuguese pandemic context.

In view of the unprecedented disruptions caused by the Covid-19 pandemic in social dynamics, the pre-existing gender inequalities were further exacerbated ⁵. The Presidency of the EU taken up by Portugal during the first half of 2021, committed to identify and analyse how different organisations, including HEIs and RPOs, reacted to the health crisis, concerning the impact on women⁶. It was highlighted that the Covid-19 pandemic put the spotlight on how most of the paid and unpaid carer work falls on women, and how the labour market segregation fosters the vulnerability and labour, economic and social precariousness of women⁷.

Due to the gendered nature of HEIs and RPOs, in general, the transformations in teaching and research imposed by the Covid-19 pandemic affected women more strongly than their man colleagues⁸. Added to this is the fact that, due to the unequal bias of the distribution of reproductive work between women and men, the increased household chores primarily fell on women. Hence, many women lecturers and researchers reported having extra difficulties in conducting classes, continuing their fieldwork and submitting articles to indexed scientific journals, among other activities, especially during the lockdown periods, due to the closing of schools and care facilities for childcare and adults or elderly family members dependent on assistance⁹.

5 European Commission – EC, "Report on Gender Equality in the EU" (European Commission, 2021), https://ec.europa.eu/info/sites/default/files/aid_development_cooperation_fundamental_rights/annual_report_ge_2021_printable_en_0.pdf.

6 Trio of Presidencies: Declaration on Gender Equality, 2021, <https://www.2021portugal.eu/pt/programa/programa-do-trio/>

7 Trio of Presidencies: Declaration on Gender Equality, 2021.

8 Sara Ashencaen Crabtree, Luciana Esteves, and Ann Hemingway, "A 'new (ab)normal'?: scrutinising the work-life balance of academics under lockdown", *Journal of Further and Higher Education*. DOI: 10.1080/0309877X.2020.1853687.

9 Alessandra Minello, Sara Martucci, and Lidia K. C. Manzo, "The pandemic and the academic mothers: present hardships and future perspectives", *European Societies*, 23 (sup. 1) (19 February 2021), pp. S82-S94, <https://doi.org/10.1080/14616696.2020.1809690>.

3. We present SAGE19: "Scientific and Academic Gender (in)equality during Covid-19"

The primary goal of the SAGE19 project: "Scientific and Academic Gender (in)equality during Covid19" is to examine the impact of the Covid-19 pandemic on academic and scientific careers, considering the pre-existing gender inequalities in HEIs and RPOs in Portugal, and other challenges detected during the first year of the health crisis.

Preliminary studies show how the six-week lockdown in the European spring of 2020, during which mobility restrictions were enforced by the majority of the countries, compelling the adoption of a remote work model at HEIs and RPOs, concomitantly with the suspension of face-to-face attendance at nurseries and classes at school and the interruption of services supporting the care of children, adults or elderly family members dependent on assistance, gave rise to an unusual asymmetry between women and men concerning the submission of articles to scientific publications and preprint servers, grants and applications for new research projects¹⁰. These revelations provided evidence of the direct impact of the Covid-19 pandemic on the productivity of conventional bibliometric indicators (articles in indexed scientific journals, submission of projects, leadership of international projects, etc.) of women lecturers and researchers. As stressed by the international literature, in the context of the neoliberal academy¹¹, publishing in indexed scientific journals has been constructed as the key goal of academic and scientific work. Hence, a reduction in the productivity level of this indicator is highly damaging to academic and scientific careers¹².

In a scenario of uncertainties and anxieties, such as that triggered by the Covid-19 pandemic, the institutional and students' expectations that women teachers and supervisors would be more available to emotionally support their students also overloaded them, both in their professional responsibilities and at a psychological level¹³.

However, the impact of the Covid-19 pandemic on the career of women lecturers and researchers cannot be limited merely to the most critical months of the health crisis, as its long-term effect is likewise alarming. For this reason, it is crucial to implement immediate actions and measures to mitigate these constraints and promote gender equality within HEIs and RPOs and in the long-term dynamics of knowledge production.

10 Michelle I. Cardel, Natalie Dean, and Diana Montoya-Williams, "Preventing a secondary epidemic of lost early career scientists. Effects of COVID-19 pandemic on women with children", *Annals of the American Thoracic Society* 17 (11) (15 July 2020), pp. 1366-1370, <https://doi.org/10.1513/AnnalsATS.202006-5891P>; Ruomeng Cui, Hao Ding, and Feng Zhu, "Gender inequality in research productivity during the COVID-19 pandemic", SSRN Scholarly Paper (Rochester, NY: Social Science Research Network, 9 June 2020), <https://papers.ssrn.com/abstract=3623492>.

11 Sheila Slaughter and Larry L. Leslie, "Expanding and elaborating the concept of academic capitalism", *Organization*, 8 (2) (1 May 2001), pp. 154-161, <https://doi.org/10.1177/1350508401082003>.

12 Maria do Mar Pereira, "A pandemia na academia: fazer, e transformar, o trabalho científico em tempos de COVID19", in *Um Olhar Sociológico sobre a Crise*, org. Renato do Carmo, Inês Tavares and Ana Filipa Cândido (Lisbon: Inequality Observatory, 2020), <https://www.observatorio-das-desigualdades.com/observatoriodasdesigualdades/wp-content/uploads/2020/12/UmOlharSociolo%CC%81gicoSobreaCriseCovid19emLivro.pages.pdf>.

13 Michelle Newcomb, "The emotional labour of academia in the time of a pandemic: A feminist reflection", *Qualitative Social Work*, 20 (1-2) (1 March 2021), pp. 639-644, <https://doi.org/10.1177/1473325020981089>.

In order to analyse this issue, the SAGE19 project is based on three pillars of discussion:

- neoliberal academic¹⁴;
- emotional work and care work¹⁵;
- gendered organisations¹⁶.

We frame our analyses in the debates about how the contemporary transformations at HEIs and RPOs, due to the advancement of the neoliberal, entrepreneurial, marketing and privatisation approaches, have led to the implementation of metrified systems to audit and assess outcomes that promote the intensification of work and increased job insecurity¹⁷. Furthermore, we reflect on how, within this approach, students become consumers who hire a service. In this context, women lecturers and researchers are subject to higher expectations in relation to their availability and willingness to meet demands for providing care and attention to students, even outside the academic schedule¹⁸. We also consider how the culture of productivity metrics based on narrow bibliometric indicators has given rise to the intensification and extensification of academic and scientific work¹⁹. Lastly, we consider how the gendered a nature of HEIs and RPOs²⁰, combined with the persistence of the “ideal worker” model, hinders women’s career development.

In order to investigate how the issue of gender inequalities in HEIs and RPOs in the context of the Covid-19 pandemic has evolved in Portugal, the SAGE19 project followed a sequential mixed methodology. All the instruments used for this study were approved by the Ethics Committee and by the Data Protection Officer of Iscte-IUL. The fieldwork took place from December 2020 to March 2021.

14 Rosalind Gill, “Breaking the silence: The hidden injuries of neo-liberal academia”, in *Feminist Reflections* (Abingdon, UK: Routledge, 2010), pp. 228-244, <https://www.degruyter.com/document/doi/10.1515/fs-2016-0105/html>; Ruth Barcan, *Academic Life and Labour in the New University: Hope and Other Choices* (Routledge, 2013); Pereira, *Power, Knowledge and Feminist Scholarship*, op. cit.

15 Arlie Russell Hochschild, *The Managed Heart. Commercialization of the Human Feeling* (University of California Press, 1983), <https://www.degruyter.com/document/doi/10.1525/9780520951853/html>; Alison Mountz et al., “For slow scholarship: a feminist politics of resistance through collective action in the neoliberal university”, *ACME: An International Journal for Critical Geographies*, 14 (4) (18 August 2015), pp. 1235-1259.

16 Joan Acker, “Hierarchies, jobs, bodies: a theory of gendered organizations”, *Gender & Society*, 4 (2) (1 June 1990): 139-158, <https://doi.org/10.1177/089124390004002002>.

17 Ruth Barcan, *Academic Life and Labour in the New University. Hope and Other Choices* (Routledge, 2013); Pereira, *Power, Knowledge and Feminist Scholarship*, op. cit., Rosalind Gill, “Breaking the silence: the hidden injuries of neo-liberal academia”, in *Feminist Reflections* (Abingdon, UK: Routledge, 2010), pp. 228-244, <https://www.degruyter.com/document/doi/10.1515/fs-2016-0105/html>.

18 Amani El-Alayli, Ashley A. Hansen-Brown, and Michelle Ceynar, “Dancing backwards in high heels: female professors experience more work demands and special favor requests, particularly from academically entitled students”, *Sex Roles*, 79 (3) (1 August 2018), pp. 136-150, <https://doi.org/10.1007/s11199-017-0872-6>.

19 Gill, “Breaking the silence”, op. cit.; Barcan, *Academic Life and Labour in the New University*, op. cit.; Pereira, *Power, Knowledge and Feminist Scholarship*, op. cit.

20 Acker, “Hierarchies, jobs, bodies”, op. cit.

The analysed population is composed of women and men scientists, researchers and lectures holding a doctoral degree, affiliated at Portuguese HEIs and/or RPOs, who remained in the country during the Covid-19 pandemic, at least during the months of March to September 2020²¹.

The quantitative study enabled covering a broader population and finding correlations, taking gender as the analytical variable; while the qualitative dimension allowed for a more thorough investigation of some of the findings obtained through the quantitative analyses, in addition to addressing other issues that had not been alluded to, but that also emerged as relevant.

The quantitative data were collected through an online questionnaire sent by email to all the national public and private higher education institutions, as well as approximately 320 Portuguese research units. The questionnaire was composed of eight blocks of questions: (1) work situation; (2) concerns originated by the pandemic situation; (3) changes caused by the Covid-19 pandemic in accomplishing academic and scientific work and adaptation strategies; (4) development of academic and scientific work from September 2020 onwards; (5) characterisation of household space; (6) academic and scientific work and household chores and/or care work balance; (7) attitudes regarding the effects of the Covid-19 pandemic on family and professional life; and (8) socio-demographic information of the participants.

The data presented here refer to descriptive and inferential analyses, taking gender, parental status and children's age as independent variables.

Based on the analysis of a broader sample of lecturers and researchers (N=607), the aim of this component of the study is to understand how the Covid-19 pandemic was experienced by women and men, with or without care responsibilities related to children or, adults or elderly family members dependent on assistance.

The tables below summarise the sample profile.

21 The decision not to include doctoral students is justified by the understanding that this group's experience is qualitatively different from that of researchers and lecturers, as there are various responsibilities not entrusted to students that were strongly affected by the pandemic – namely coordination of curricular units, supervision of students in doctoral and post-doctoral programmes – but, at the same time, include other particular situations, such as the relationship with supervisors, grant renewal, thesis writing, etc. Nevertheless, we highlight the urgency of investigating the impact of the Covid-19 pandemic on doctoral students, as the training process of this group, comprising the country's next generation of lecturers, was harshly affected.

Figure 1: Population by sex

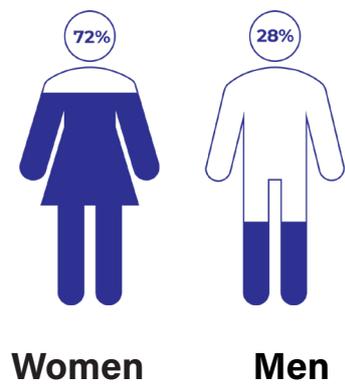


Figure 2: Situation regarding work, as a whole and by sex (%)

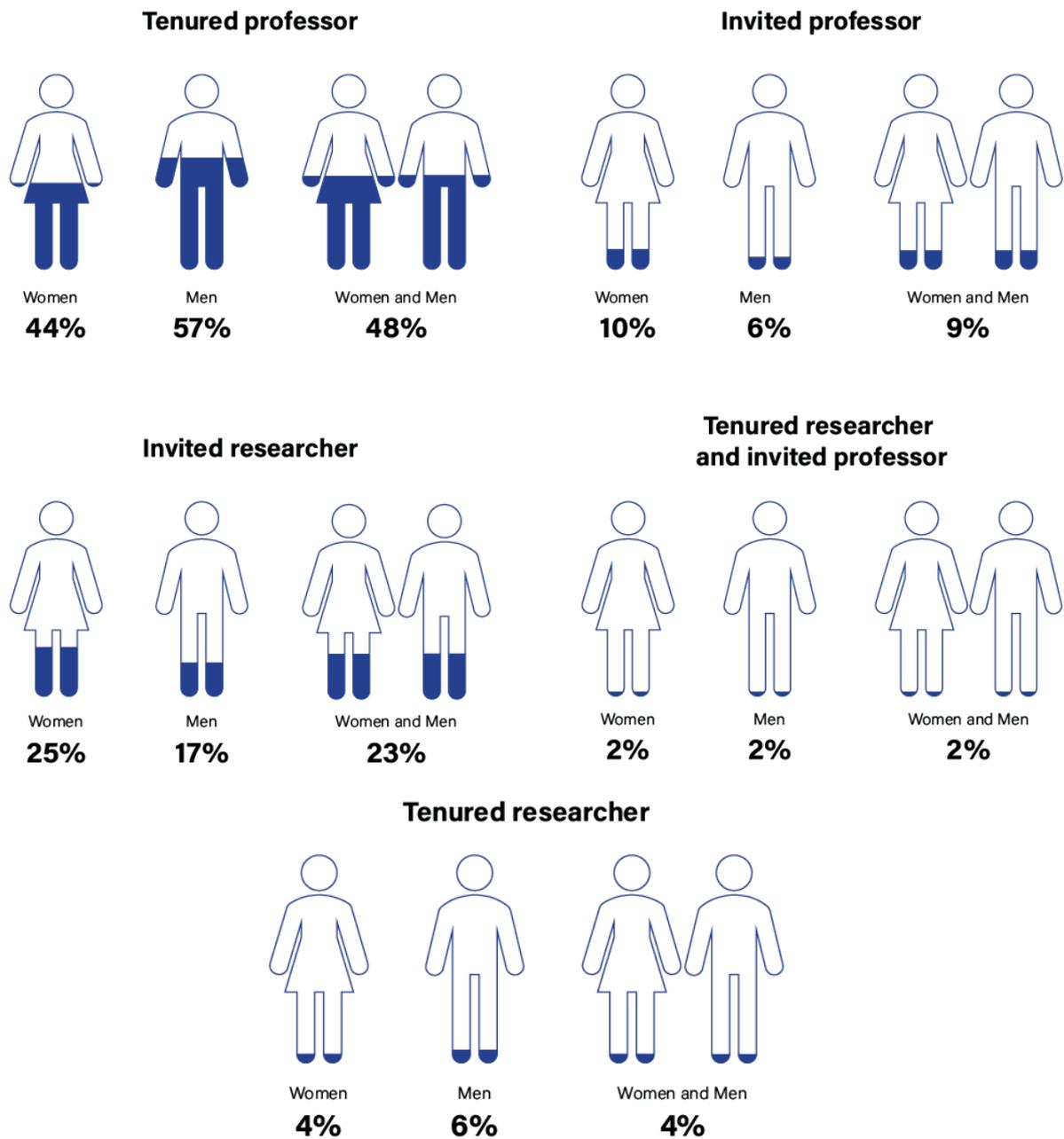


Figure 2: (continuation): Working situation, as a whole and by sex (%)

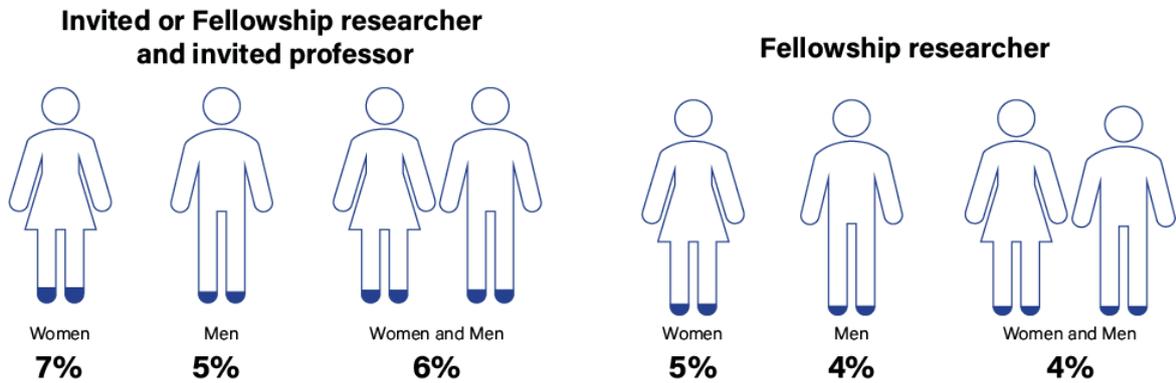
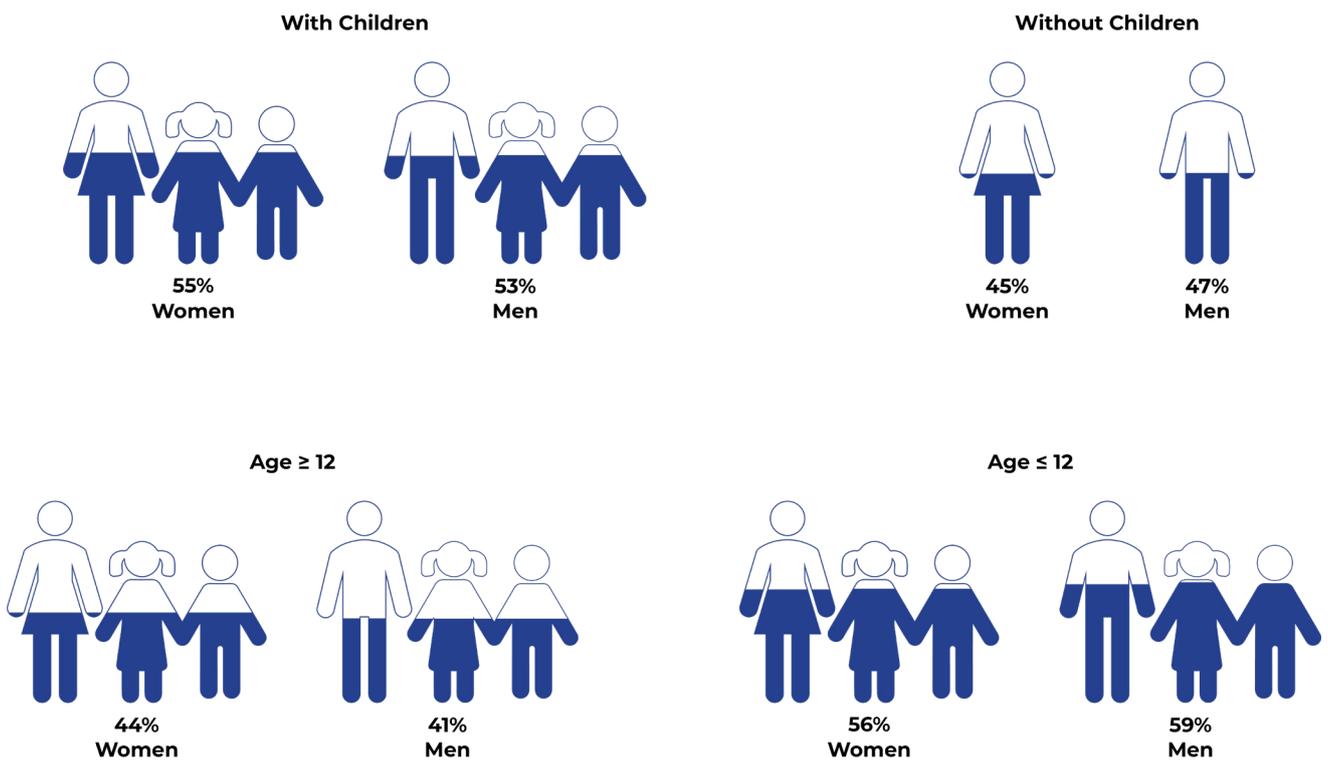


Figure 3: Presence/absence of children in the household and their age, by sex (%)



The qualitative component was developed through 17 interviews with women researchers and lecturers and two focus groups with women and men (Table 2). The in-depth interviews aimed at a more detailed assessment of the effects of the Covid-19 pandemic on the development of the women's professional activities, considering how the changes in family life affected the accomplishment of those activities. In turn, the focus groups sought to examine the effects experienced and strategies pursued comparatively by women and men to meet the demands of professional and family life during the health crisis and the perceptions in relation to their professional future.

Table 2: Profile of the participants

			Interviews	Focus groups
Personal aspects	Sex	Women	17	6
		Men	0	6
	Relationship	In a relationship	8	9
		Not in a relationship	9	2
	Parenthood	With children	11	7
		No children	6	4
	Nationality	Portuguese	14	8
		Foreign	3	3
Professional aspects	Academic position	Researcher	6	2
		Lecturer	1	0
		Researcher and lecturer	8	7
		Researcher, lecturer and administrative position	2	2
	Scientific field	Social sciences	5	4
		Information technology	1	0
		Life sciences	4	2
		Health	1	0
		Agriculture	2	0
		Language and communication	4	2
		Physics	0	1
		Sports	0	1
		Mathematics	0	1

Note: One of the participants of the focus group arrived after its beginning, thus, it was not possible to gather all her information profile.

4. What our investigations reveal: evidence of the impacts of the Covid-19 pandemic on gender inequalities within higher education institutions and research performing organizations in Portugal

The results obtained from our analysis are in line with other studies revealing the differentiated impact of the Covid-19 pandemic on the academic and scientific career of women and men²². The women in our study expressed feeling pressed to be constantly online to meet the demands for attention and emotional support of their students²³. Apart from that, they reported having a greater overload of administrative and bureaucratic work than their male colleagues. In this context and in view of the impossibility of meeting the demands of their teaching, research and academic administrative work, the majority of the women in our study chose to primarily dedicate their time to teaching and student supervision activities. The choice of not prioritising research, despite its pivotal importance to the development of their academic and scientific career is related to the gendered expectations of the HEIs and RPOs, of the students, that women lecturers and supervisors should be nurturing and sensitive to requests for emotional care, support and comfort. Likewise, these women's perception that lecturing is much more than merely conveying contents influenced these choices. For most of women we interviewed, teaching is understanding the students as holistic beings who are also battling with the uncertain and unexpected circumstances of their private lives.

I immediately did WhatsApp groups with them, which is still quite crazy up to date, because I have 150 students in WhatsApp groups; they send me messages, they call me on Saturday night, Sunday morning, and so forth. [E11, lecturer, researcher and course coordinator, Communication and Language Sciences]

The women lecturers and researchers caring for children, adult or elderly family members dependent on assistance, in general, did not identify the possibility of enhancing the flexibility of or reducing the lecturing workload, administrative work or research commitments at their institutions. Lack of flexibility was also observed with respect to deadlines for institutional assessments and national competitions. This institutional gender blindness arises from the proposal of universal measures for the academic and scientific community that do not take into account the specific needs of women.

In terms of options, the option was basically that proposed by the actual research unit, which was to continue and do telework. Well, that format already existed, the advice was not to interrupt the contract, or take sick leave, as that legal figure was in place telework was chosen. [E4, researcher, Restoration]

22 Pereira, "A pandemia na academia", op. cit.; Minello, Martucci and Manzo, "The pandemic and the academic mothers", op. cit.; Nathalie Ségeral, "Academic single mothering during a pandemic", Journal of the Motherhood Initiative for Research and Community Involvement, 7 December 2020, <https://jarm.journals.yorku.ca/index.php/jarm/article/view/40611>.

23 Our findings do not point to differences between the experience of the female lecturers and researchers. Lecturers who also conduct research reported similar challenges to those of the lecturers (both female) with respect to these activities. And similarly for female researcher with a lecturing workload, who also refer to facing barriers analogous to those reported by female lecturers.

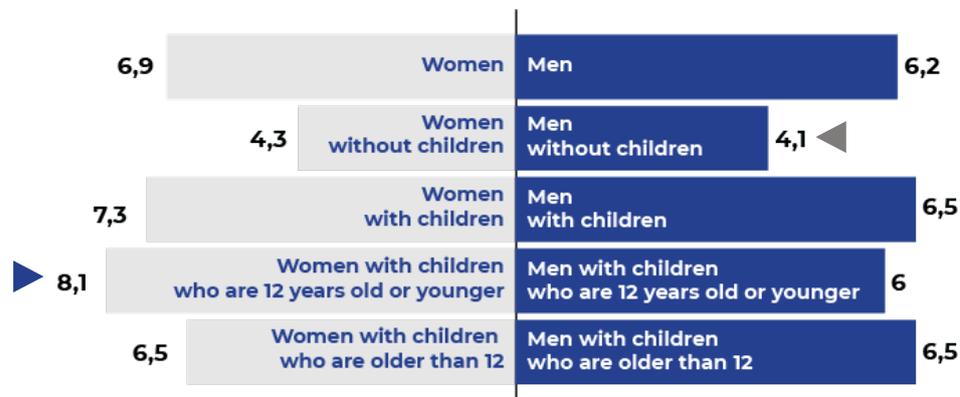
Figure 4: KPI relative to the pandemic's effects among the groups (mean values)

1. Covid-19 pandemic related concerns

Stress and anxiety levels



Caring of a child or an adult in need of assistance

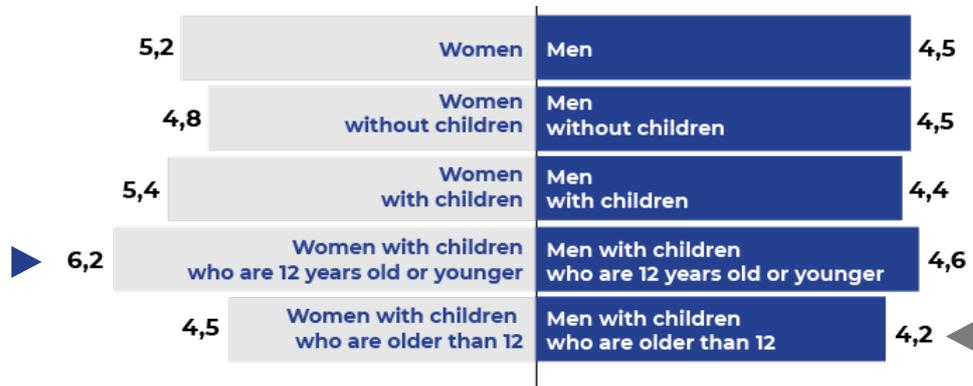


Financial insecurity

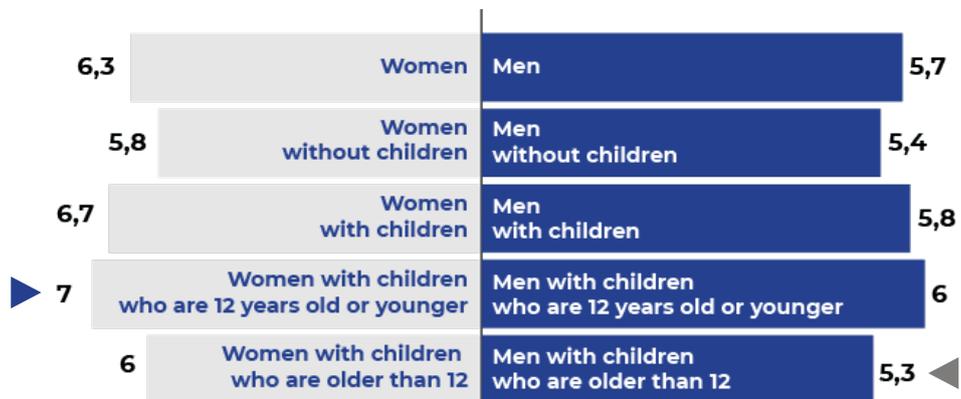


Figure 4: KPI relative to the pandemic's effects among the groups (mean values)

Job insecurity



Tenure and promotion



Increase of my research productivity indicators to the requirements of my institution



Figure 4: KPI relative to the pandemic's effects among the groups (mean values)

Teaching



2. Motivation levels



3. Recovery of the academic and scientific work pace

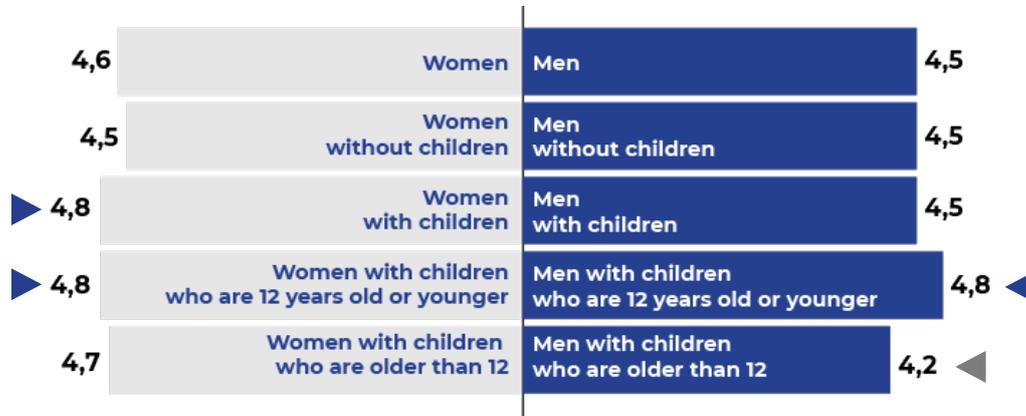


Figure 4: KPI relative to the pandemic's effects among the groups (mean values)

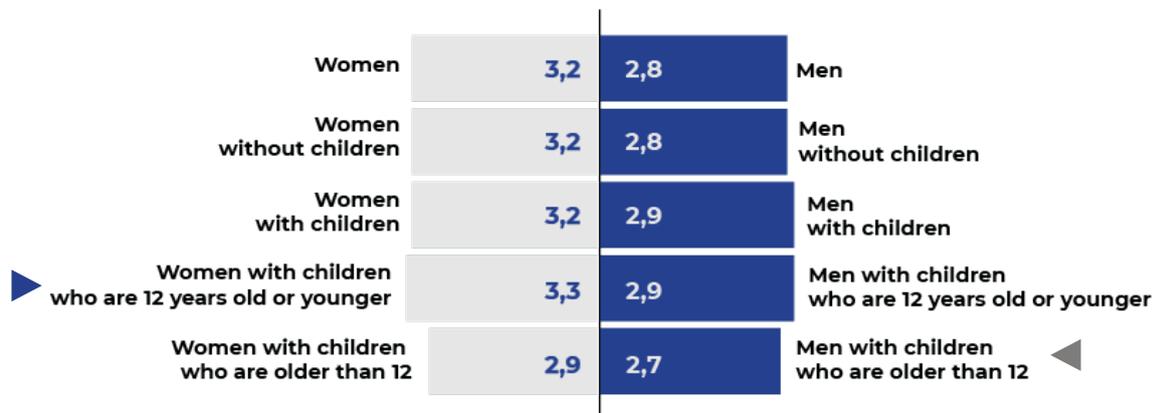
4. Attitudes

A - Evaluation of the Covid-19 pandemic impact on family and professional life balance

More pressure to balance family and professional life



Feeling guilty due to not dedicating sufficient time to professional life



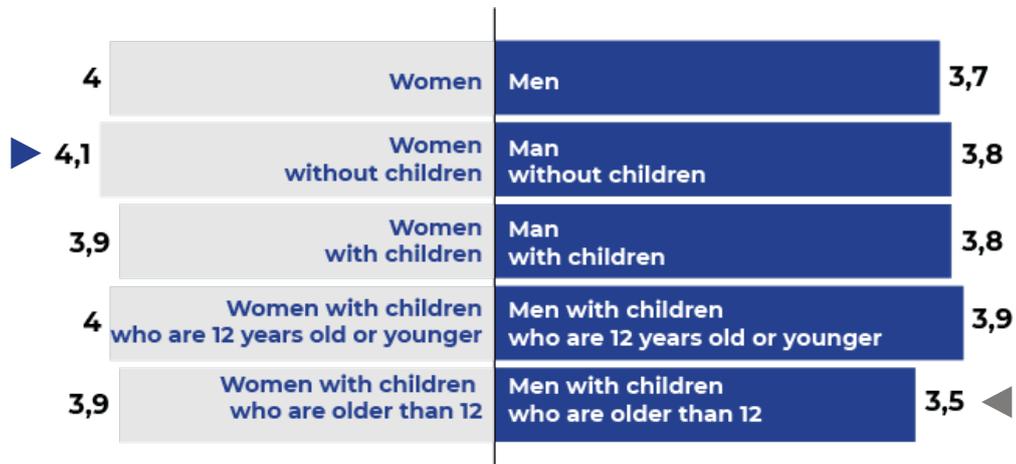
B - Evaluation of the Covid-19 pandemic impact on accomplishment of academic and scientific work

More time dedicated to students after the pandemic started

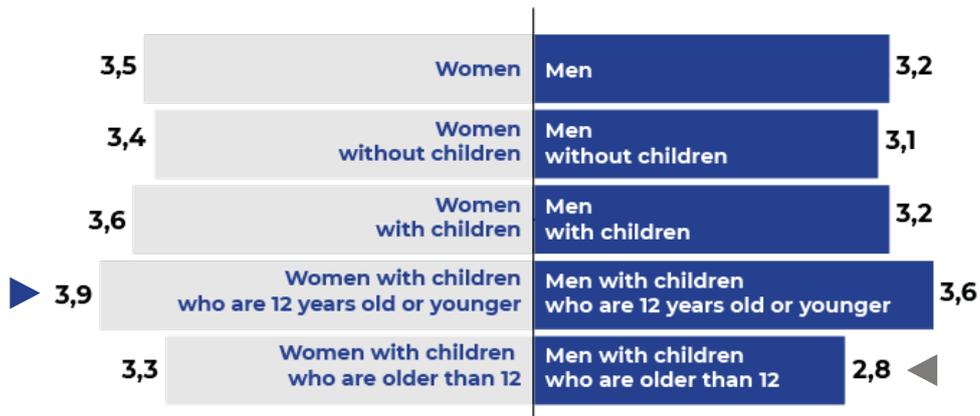


Figura 4: KPI relative to the pandemic's effects among the groups (mean values)

More pressure to be online since starting remote work



Negative impact of COVID-19 lockdowns on mental health



Increased administrative tasks in the academic context

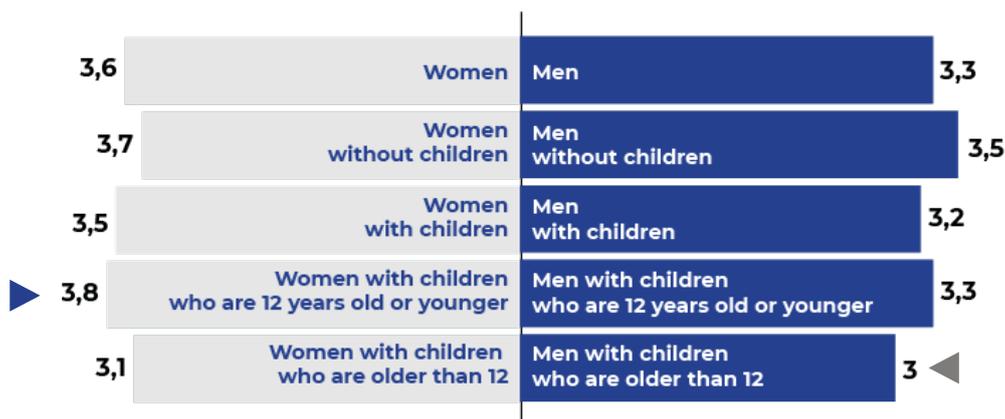


Figure 4: KPI relative to the pandemic's effects among the groups (mean values)

C - Evaluation of the Covid-19 pandemic impact on the professional pathways

Careers of women without children are less harmed



Perception that the academic performance of women and men was affected equally by the pandemic



Note: The mean values of the Key Performance Indicators (KPI) relative to concerns arising from the pandemic, motivation level and recovery of the pace of research work were obtained according to a scale of 11 points, where "0" corresponds to not applicable, "1" corresponds to "very low" and "10" corresponds to "very high". The motivation level was assessed based on a scale of 11 points. The mean values of the KPI relative to attitudes were calculated based on Likert type of scale of 6 points, where "1" corresponds to "strongly disagree", "5" corresponds to "strongly agree" and "6" corresponds to "don't know/no answer". The lowest mean value (grey flag) and the highest mean value (blue flag) is indicated for each KPI.

Many of our women we interviewed referred difficulty or impossibility of balancing the demands of family life, due to their responsibility with children, adult and elderly family member in dependent situations, and professional life, namely lecturing and research, pointing to the lack of space for care at HEIs and RPOs.

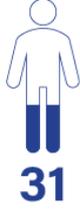
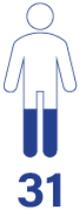
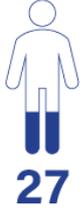
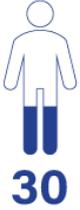
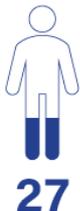
Since last year, with the situation that was progressing in other European countries, I understood that we would be taking that path, and of course, conducting research, as a single mother, as I am practically 100% with my child, I knew I was going to be very restricted, because he's a child, and requires a lot of attention, apart from still being highly dependent, he's got a lot of energy. [...] I stopped teaching, passed it on to my coordination as I had to stay at home with my child and it was impossible for me to reconcile that with a four-year child at the time [...]. [E5, researcher, Medical Sciences]

The constrain to maintain the pace of research and lecturing work led female researchers and lecturers to experience increased levels of concern about the productivity of their conventional bibliometric indicators, compared with men. Consequently, these women felt a increased lack of confidence concerning the continuation of their academic and scientific careers or future possibilities of career progression.

With the pandemic, I really wasn't able to strive towards that career progress, and I was aware of that... now there are two possibilities. Either I change job or I draw up a project during the months that I'm funded, which I doubt will happen. [E12, researcher, Pharmacy]

The answers to the questionnaire revealed the existence of a higher percentage of women, compared to men, who do not have an individual workstation at home and who face difficulties in balancing of demands of professional and family life.

Table 3: The pandemic's effects among women and men

	Women (%)	Men (%)
<p>1. Workspace at home</p> <p>Does not have individual workspace at home</p>	 <p>44</p>	 <p>31</p>
<p>2. Balance between academic activities and domestic and/or care work</p> <p>2.1 Balance between academic activities and domestic and/or care work</p> <p>Has not managed to balance academic activities and domestic and/or care work</p>	 <p>40</p>	 <p>31</p>
<p>2.2. Balance between academic activities and domestic and/or care work during the first State of Emergency (19 March to 2 May 2020)</p> <p>Satisfactory balance between work duties and personal demands</p>	 <p>23</p>	 <p>27</p>
<p>Alternating focus between academic activities and personal demands</p>	 <p>40</p>	 <p>30</p>
<p>3. Academic work routines during the first State of Emergency (19 March to 2 May 2020)</p> <p>Need to extend work hours, outside the usual, due to time spent on domestic and/or care work</p>	 <p>36</p>	 <p>27</p>

In addition to the differences in the impact of the Covid-19 pandemic between women and men at HEIs and RPOs, our results show that the professional, family and personal experience of women is very diversified. Although this may be obvious, it is important to highlight this point to avoid the construction of a stereotyped image of women lecturers and researchers as mothers, in a heterosexual relationship and with a stable job²⁴.

The children's age is an important factor in the experience of family life and professional life balance of lecturers and researchers who are also mothers. Indeed, the mothers of younger children or children with lower levels of autonomy spend more time engaged in care tasks, which has a more negative impact on their availability for the demands of professional life than those with more autonomous children.

Conversely, women with children with a certain degree of autonomy at home refer to their presence in a positive way. In many cases, their children helped to carry out household chores and were good company.

My son normally does the heaviest tasks, he does the shopping [...] every now and then he says "no, no, let's get in the car and go take a healthy stroll [...] my son looks after lots of things and I don't feel overburdened, not in that regard. [E7, lecturer and researcher, Nursing]

For single mothers, however, the weight of maternity is completely different from what is represents to married mothers.

Of course, conducting research, as a single mother, as I am practically 100% with my child, I knew I was going to be very restricted [...] it was an abrupt nose-dive, I even tried to work through the night, and I managed for the first two weeks, but then get so exhausted that you just don't have the patience to look after the children during the day, then it's school online, then we have to go to the park to run, and then there's all the household chores. [E12, researcher, Pharmacy]

Furthermore, some women were responsible for adults and elderly family members dependent on assistance, who also demanded care and attention.

During the lockdown, I experienced the situation of having my mother sick with our management basically revolving around my mother's illness, the need to go to hospital for treatments. So, that adaptation or imposition would already have been there, even without lockdown; my brother, my father and I organised ourselves according to the hospital visits, the treatments. [E8, researcher, Biological Sciences]

Even women without responsibility regarding children or adults and elderly family members dependent on assistance shared experiences of stress and anxiety due to the uncertainties of the pandemic, and were therefore unable to maintain the pre-pandemic routines of their professional life.

Some of these women reported feeling compelled to be constantly online, available for their students' demands, resulting in a considerable increase of hours dedicated to academic work.

24 Maria do Mar Pereira, "Researching gender inequalities in academic labor during the COVID-19 pandemic: avoiding common problems and asking different questions," *Gender, Work & Organization*, n/a, (2021), pp. 1-12, <https://doi.org/10.1111/gwao.12618>.

Table 4: The pandemic's impact on women and men with children

	Women (%)	Men (%)
1. Workspace at home		
Individual workspace	 44	 55
Communal area of the house	 12	 23
Workspace shared with another adult or child	 44	 22
2. Balance between academic activities and personal demands		
2.1. Balance between academic activities and personal demands during the first State of Emergency (19 March to 2 May 2020)		
Satisfactory balance between academic activities and personal demands	 13	 25
Personal demands occupied the majority of the time	 16	 10
3. Academic work routines during the first State of Emergency (19 March to 2 May 2020)		
Routines remained unchanged	 6	 15
Need to extend work hours, outside the usual, due to time spent on domestic and/or care work	 50	 37

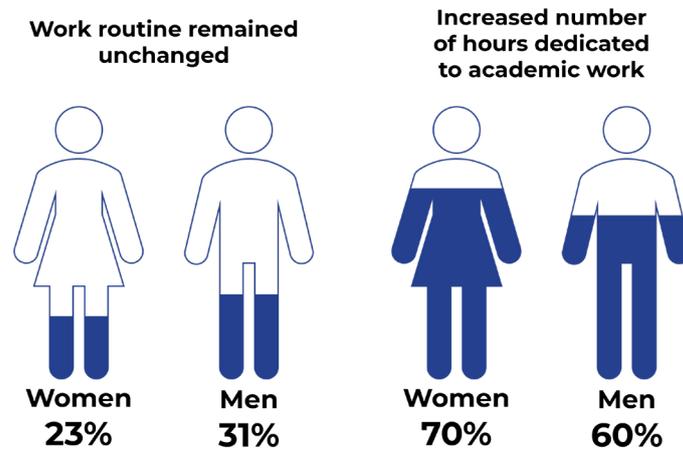
Note: Percentages calculated for the total sample of women with children and for the total sample of men with children.

Table 5: The pandemic's impact on women with children aged 12 years old or less and on woman with children aged above 12 years old

	Women with children who are 12 years old or younger (%)	Women with children who are older than 12 years old(%)
1. Workspace at home		
Individual space	 26	 69
Communal area of the house	 60	 27
Workspace shared with another adult or child	 14	 4
2. Balance between academic activities and personal demands		
2.1. Differential of hours dedicated to academic work before and following the pandemic		
Number of hours remained unchanged	 19	 16
Number of hours decreased	 35	 7
Number of hours increased	 46	 77
2.2. Balance between academic activities and personal demands during the first State of Emergency (19 March to 2 May 2020)		
Satisfactory balance between academic activities and personal demands	 8	 26
Academic activities occupied the majority of the time	 9	 34
Domestic and/or care work occupied the majority of the time	 19	 6
Alternating focus between academic activities and personal demands	 64	 34
3. Academic work routines during the first State of Emergency (19 March to 2 May 2020)		
Routines remained unchanged	 1	 12
Need to extend work hours, beyond the usual, due to time spent on domestic and/or care work	 66	 30

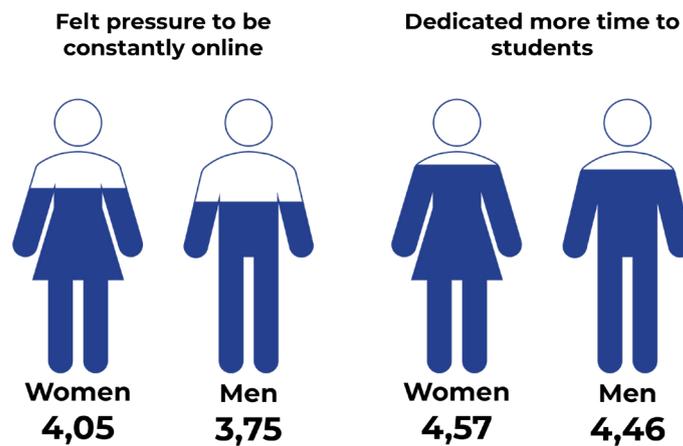
Note: Percentages calculated for the total sample of women with children aged 12 years old or less and for the total sample of woman with children aged above 12 years old

Figure 5: The pandemic's impact on the professional work routines of women and men without children under their care (% and mean value)



Note: Percentages calculated for the total sample of women with no children and for the total sample of men with no children.

Figura 6: Perceived changes in professional work routines of women and men without children under their care



Note: The indicated figures correspond to the mean values of each group, calculated based on Likert type of scale of 6 points (1 = strongly disagree, 5 = strongly agree, and "6 = don't know/no answer).

In many cases, the isolation and loneliness that women living alone experienced during that period, combined with the increased work hours had a negative impact on the mental health of the women lecturers and researchers and, consequently, also on their availability for academic and scientific work.

Perhaps I accepted doing this interview to tell you what I am about to say, because it's an important message from a person without children, who has no pressure, who is in an absolutely fantastic place,

who is generally even-tempered – I think [laughter] – light-hearted, at least, and who at the onset of the pandemic started to have panic attacks and, in fact, had to take medication during the early days of the pandemic [...] [I became] so fragile before the situation that we were experiencing. [...] The students' supervision concerned me enormously, actually, I think that was the factor that made me most vulnerable. [E17, researcher, Economics].

Lastly, the situation of job insecurity of some of the interviewed women lecturers and researchers contributed to a negative perception of the impacts of the Covid-19 pandemic on their professional life and future career prospects.

Well, I think it had a very negative impact on my career, because for me it was a lost year with the type of contract that I have, and I have a three-year work plan, so the fact of having lost a year is very bad... I get a bit nervous about that issue, I hope that the FCT or my institution will be somewhat flexible and that those who were unable to start the experiments can explain why this happened. [E2, researcher, Agronomy]

Despite this diversity of experiences, the women researchers and lecturers who participated in our study shared the unanimous vision that the Covid-19 pandemic brought in more and new barriers to their academic and scientific careers.

5. And now, what can be done?

The following recommendations are based on the ethical imperative that hHEIs and RPOs have responsibilities in relation to their communities. Furthermore, we follow the principles of gender mainstreaming defined by the Council of Europe, aimed at offering alternatives for the (re)organisation, improvement, development and assessment of policy implementation processes, in a manner ensuring that the gender equality perspective is an integral part of all policies, programmes and projects, at all levels and at all stages of their process²⁵. Therefore, these recommendations seek to contribute to promote gender equality in HEIs and RPOs in the post-pandemic scenario, by proposing intervention measures that enable: (a) the assessment of the impact of Covid-19 on teaching and research activities; (b) the identification of the short and medium-term priorities for the development of measures to contain and mitigate that impact; and (c) the planning of strategies that are sensitive to the differences between women and men for future emergency situations. These measures should be implemented in two spheres: (i) HEIs and RPOs; and (ii) funding agencies. The former, due to being the institutional site where women lecturers and researchers carry out their activities, and the latter due to being responsible for the funding of research projects.

The recommendations for the promotion of gender equality in HEIs and RPOs presented below should follow a phased methodology, step by step, aimed at understanding the pre-existing inequalities between women and men, the short-term impacts of the Covid-19 pandemic and the possible future implications. In this regard, it is necessary to emphasise the data that capture not only the impact of the external factors on remote work-related responsibilities (e.g., time spent on household chores and care work), but also the technical difficulties, the work plan changes and challenges to emotional well-being²⁶.

5.1. Higher education institutions and Research performing organizations

5.1.1. Beyond the pandemic times: gender audits²⁷

Even after the spreading of the virus is controlled, HEIs and RPOs should be committed to mitigating the negative effects of the Covid-19 pandemic on the career of women lecturers and researchers with the aim of promoting gender equality. For such, it is crucial that the women lecturers and researchers should be consulted directly, in order to gain knowledge on the effects and challenges imposed by the health crisis on their professional trajectories based on their own experiences and perceptions.

25 Teresa Rees, *Mainstreaming Equality in the European Union* (Routledge, 2006).

26 An overall mapping of the impact of the Covid-19 pandemic on HEIs and RPOs, apart from considering the differences between women and men, should also pay attention to differences in terms of sexual orientation, gender identity, age, ethnicity, skills, employment situation, etc. This analysis would enable the development of solutions customised to the needs of the female and male lecturers and researchers comprising the communities of HEIs and RPOs. These differences should also be taken into account in the drawing up of contingency plans for any future emergency situation.

27 Sara Falcão Casaca and Johanne Lortie, *Género e Mudança Organizacional* (Turin: ILO, 2018).

Recommendation:

To conduct a diagnosis of the situation of women and men since the beginning of the health crisis with a view to analysing the implications of the Covid-19 pandemic on gender inequalities at the institution.

- This action should include:
- collection of institutional data broken down by sex, considering teaching, research, administrative service and management activities;
- interviews and/or focus groups with women and men lecturers, researchers and representatives of the institution's management positions;
- organisation of spaces of debate with the institutional communities.
- The analysis of the collected data will enable identification of the areas that require intervention.

Recommendation:

To monitor the performance of women and men in the different areas of academic and scientific work - teaching, research and management - considering an extended temporal frame - before, during and after the Covid-19 pandemic.

The monitoring of the performance of women and men in relation to academic and scientific work should consider:

- career progression of women and men according to type of contract, professional category and holding of senior management and decision-making positions;
- abandonment of academic and scientific careers by women and men, and their subsequent employment, especially in the case of researchers at the beginning of their professional trajectory;
- productivity of conventional bibliometric indicators: publication of scientific articles and books, approval of research projects, research team leadership, participation in research projects, organisation and participation in academic and scientific events;
- performance in teaching activities: number of hours lectured, number of curricular units, coordination of curricular units, students' assessment, number of hours dedicated to students outside the teaching schedule;
- administrative services: number of hours dedicated to management and administration activities, positions held;
- the social impact of academic and scientific work: alignment with the Sustainable Development Goals, sustainability;
- other types of production: participation in activities of dissemination of academic and scientific knowledge to civil society, attendance as specialists in public debates, non-academic publications.

Recommendation:

To prepare and implement an exceptional plan to face the inequalities between women and men arising from the Covid-19 pandemic

The diagnosis of gender inequalities in the context of the Covid-19 pandemic and the monitoring of professional performance will underpin the creation of an activity plan to promote the career of women lecturers and researchers, the establishment of targets and indicators to be achieved through this plan and the definition of an implementation timeline. HEIs and RPOs that already have a Gender Equality Plan may use it as a base to draw up this supplemental document.

5.1.2. Contextualise to better assess: situating the Covid-19 pandemic in performance assessment

Currently, the performance assessment of academic and scientific careers is primarily based on the productivity of conventional bibliometric indicators according to quantitative measurements: publication of articles in indexed scientific journals; books and book chapters published by renowned publishing establishments; capture of funding through approval of research projects; awards; patent creation; collaboration in research project teams; participation in international mobility programmes; etc. In the case of teaching duties, the students' evaluation of the classes are also taken into account. However, these conventional bibliometric indicators and students' evaluation neither allow a contextualisation nor a qualitative assessment of how the research and teaching activities of women were affected during the Covid-19 pandemic and what the immediate and long-term consequences may be.

Recommendation:

To include an explanatory section in the performance assessments, enabling a description of how the productivity of conventional bibliometric indicators and teaching activities were affected by the Covid-19 pandemic.

5.1.3. Stop to (re)start: anticipation of sabbaticals

In the context of HEIs and RPOs, sabbaticals allow lecturers and researchers to dedicating themselves exclusively to their research projects or other academic and scientific activities that will contribute to their professional development and to institutional growth – construction of research networks, preparation of major funding applications, writing of books, development of partnerships with other institutions, advanced training courses, etc. However, sabbaticals tend to be granted to lecturers and researchers who already have consolidated careers, excluding those in probation period.

Recommendations:

To reduce the number of years required to take a sabbatical.

To allow women academics and researchers undergoing probation period to take a sabbatical.

The exemption of women lecturers and researchers from teaching and administrative responsibilities will enable their exclusive dedication to research activities, scientific publications, patent development, network

creation, etc., offsetting the interruptions caused by the Covid-19 pandemic in time dedicated to research, and thus offering an opportunity to upgrade their professional curriculum.

5.1.4. Not all production is indexed: expand the definition of productivity indicators for performance assessment and career progression

Gender inequalities in HEIs and RPOs are visible from the practice of citation in academic and scientific articles to the composition of project evaluation boards, from the review body of indexed academic and scientific journals to the coordination of research projects and the disparate distribution of the administrative work burden. The result of these inequalities strongly affects the productivity of women with respect to submission of articles for publication in indexed scientific journals, project proposals for funding and invitations to lead research teams. Likewise, these indicators ignore other productions and activities in which women tend to be more involved than men: training actions, knowledge dissemination activities outside the academic and scientific environment, collaboration in writing training manuals for civil society, mentoring, supervision of students outside regular academic schedules.

Recommendations:

To redefine the productivity indicators to be considered in performance assessment.

To include a qualitative assessment in which the teaching or research activity of greatest social impact carried out during that period can be highlighted.

It is important that this change takes place not only in relation to the assessment processes of the most dramatic periods of the Covid-19 pandemic, but that it becomes a permanent transformation in the culture of the measurements and quantification of academic and scientific performance, promoting an increase in the importance of the social impact of teaching and research.

5.1.5. Give and receive: specialised mentoring programme for early career women lecturers and researchers

Supervision by a senior professor and lecturer bolster a more individualised guidance for young women lecturers and researchers concerning the dynamics of their academic and scientific career, boost the exchange of knowledge, stimulate intellectual growth, result in joint publications, foster the formation of contact networks, offer emotional support, etc.

In the current context of Covid-19 pandemic and subsequently, mentoring represents an efficient strategy to drive the professional trajectory and promote the retention of young women researchers and lecturers who were affected by the health crisis early in their career in hiring opportunities and project funding.

Recommendation:

To create official mentoring programmes for retention and career promotion of young lecturers and women researchers.

Nevertheless, the literature has shown that, in general, mentoring is conducted in an informal manner,

especially by women, without official institutional recognition of the work involved and the hours dedicated to this activity, further overloading women lecturers and researchers²⁸. Therefore, in order for women not to be penalised even more, it is essential for these programmes to be recognised by the institutions in performance assessment, included in the counting of work hours, and considered in career progression assessments.

5.1.6. The middle way: promotion of balance between family life and professional life

In the context of HEIs and RPOs, care work was one of the aspects that most affected the accomplishment of teaching and research activities. The transition from face-to-face classes to remote classes brought in new challenges for women lecturers and researchers who had care responsibilities. The constant presence at home of children or adults and elderly family members dependent on assistance due to the social distancing measures – closure of schools, day centres, homes for the elderly – inordinately increased the weight of care work, especially affecting women. Moreover, students' demands for emotional support required a greater dedication by women lecturers and supervisors to teaching activities. In most cases, their research projects were set aside, either because the teaching requests were more pressing or because their fieldwork was suspended. Consequently, the productivity of the conventional bibliometric indicators of this group, in particular the submission of articles to indexed scientific journals and funding applications, was severely affected. In order for women lecturers and researchers caring for children or adults and elderly family members dependent on assistance to be able to resume the research activities that were temporarily neglected during the Covid-19 pandemic, a temporary restructuring of their workload is required.

Recommendations:

To extend the time limits for the performance assessment of women caring for children and adults and elderly family members dependent on assistance.

To reduce the hours of teaching, student supervision and administrative work for women caring for children and adults and elderly family members dependent on assistance.

However, long before the Covid-19 pandemic, care work had already been shown to be a penalising factor for academic and scientific careers²⁹. In general, it is disconsidered that care work involving children exceeds the parental leave period and there is a tendency to render invisible the care of adults and elderly family members dependent on assistance. In addition to this, the intense requirement of productivity of the conventional bibliometric indicators has normalised the work culture into extended schedules and during the week, leading to high levels of stress, tiredness and exhaustion among women lecturers and researchers, compromising their time dedicated to family life. Therefore, it is even more important that these recommendations should become an integral part of the organisational culture of HEIs and RPOs so that in other emergency and crisis situations the impact on women lecturers and researchers caring for children, adults and elderly family members dependent on assistance is not as heavy as it has been so far.

28 Martina Angela Caretta and Caroline V. Faria, "Time and care in the 'lab' and the 'field': Slow mentoring and feminist research in Geography", *Geographical Review*, 110 (1-2) (2019), pp. 172-182, <https://doi.org/10.1111/gere.12369>.

29 Maureen Baker, "Gendered families, academic work and the 'motherhood penalty' ", *Women's Studies Journal*, 26 (1) (May 2012), pp. 11-24.

Recommendation:

To draw up plans for distribution of the teaching, student supervision and administrative work for women caring for children, adults and elderly family members dependent on assistance so as to enable balanced family life and professional life.

5.1.7. Talking to strengthen: support for emotional well-being

During the Covid-19 pandemic, the pressure due to responsibility related to care for children and adults and elderly family members dependent on assistance, the stress caused by the demands for attention by students, the long periods of isolation experienced by those who live alone, the fear and distress triggered by the uncertainties in relation to the future, the institutional demands for the production of conventional bibliometric indicators, the insecurity as to the renewal of scholarships and contracts for research and/or teaching had a negative impact on the mental health of women lecturers and researchers. Many women found support in informal spaces, especially through the social networks, where they were able to share their experiences, their frustrations and develop strategies to deal with the situation. However, face-to-face socialisation is essential for emotional well-being.

Recommendation:

To create groups for discussion and sharing experiences aimed at developing strategies to deal with the more enduring consequences of the Covid-19 pandemic on the emotional well-being of women researchers and lecturers.

The group could have an annual session dedicated to discussing how the Covid-19 pandemic continues to affect their emotional well-being and, consequently, their accomplishment of teaching and research activities, and the strategies that could be developed to overcome the barriers encountered.

5.1.8. Understand to solve it: parity in decision-making bodies

The Covid-19 pandemic confirmed the many complaints that have progressively been made by activists, regarding the non-sustainability of the way in which our society is organised. On the one hand, HEIs and RPOs should advocate for changes that promote the sustainability of our world. On the other hand, they should also be prepared for possible emergency and crisis situations that could happen, with special attention paid to how gender differences could unequally constrain the teaching and research performance.

Recommendations:

To integrate a gender equality perspective from the very beginning of the drawing up of contingency plans for emergency and crisis situations.

To ensure gender parity in the teams tasked with the process of creating the contingency plan for emergency situations and in the "Health and Safety Committees".

5.2. Funding agencies for research in science, technology and innovation

5.2.1. Monitor to improve: monitoring of the participation of women in calls for funding during and after the Covid-19 pandemic

The Covid-19 pandemic placed at risk various advances made in gender equality in the area of scientific research. In order to avoid a step backwards in this sphere it is essential to ensure the ongoing monitoring of the numbers related to women's participation in research projects since the outbreak of the health crisis, by collecting statistical data broken down by sex, considering leadership in the submission and coordination of research projects and team participation.

Recommendation:

To create a mechanism to monitor the presence of women in leadership positions and their participation in research teams, considering a timeframe that goes from before the start of the Covid-19 pandemic to beyond its most critical years.

The analysis of the collected data will enable identifying how women's participation in research was affected and may be used to support the creation of affirmative actions in this area.

5.2.2 Recognise the difficulties to advance: contextualise the pandemic's impact on applications for research projects

The productivity of the conventional bibliometric indicators holds a prime position in the assessment of the curricular merit of applications for research project funding. However, during the Covid-19 pandemic many women lecturers and researchers were unable to dedicate sufficient time to the publication of articles in indexed scientific journals, to continue the activities established in their research projects, to collaborate in international teams, to participate in national and international conferences, or to become involved in international mobility programmes, etc. Therefore, they were unable to update and upgrade their curricula.

Recommendation:

To include an explanatory section about the impacts of the Covid-19 pandemic on curricular merit and the productivity of conventional bibliometric indicators in applications for funding for research projects.

5.2.3. Flexibility to achieve goals: extension of deadlines for completion of research projects

With the social distancing rules, a large part of the researchers was simply unable to continue their research projects. The closing of laboratories, the restrictions to travel and interaction with other people forced the suspension of fieldwork and laboratory work, compromising the activities developed up to that date and imposing a replanning of timeframes. In contrast to classes, not all research plans were able to be "adapted" to a virtual environment, despite the efforts and creativity of the research teams. Depending on the area of knowledge, the impact of the interruption of laboratory work and fieldwork had different dimensions that will be extended beyond the most critical years of the Covid-19 pandemic, as experiments that were at an advanced stage were compromised, the contacts established with communities or key informants were lost and in certain cases the fieldwork continues to be inaccessible.

Recommendation:

To extend the deadlines for completion of research projects underway during the first two years of the pandemic according to the specific needs of each project.

To enable the redefinition of proposed results and outputs in on-going research projects.

5.2.4. Ideas are more valuable than curricula: boost the productivities of conventional biometric indicators

One of the first signs of how the Covid-19 pandemic unequally affected women lecturers and researchers, since the very beginning, was the lower submission of articles to indexed scientific journals by women in relation to men. In the current context of the quantification measurements of scientific productivity, the reduction of publications is very detrimental to hiring opportunities, career progression, the capture of funding through projects, the winning of scientific awards, and collaboration and partnerships with international projects³⁰.

The creation of a special programme to support women lecturers and researchers to develop research projects of short duration would increase the possibilities of publishing new articles based on the original findings obtained from the studies conducted, offsetting the period when they were unable to work on these activities due to the constraints triggered by the pandemic.

Along these same lines, informal partnerships outside funded projects – student supervision, post-doctoral tutorials, voluntary inclusion in research teams, occasional collaboration – could also promote positive outcomes, such as the writing of articles, book proposals, invitations to events, submission of projects for funding, etc. In order for these small initiatives to be fully tapped into, it is necessary that there should be financial support for translation of articles, payment of open access publishing charges, book publication, data collection, organisation and participation in events, etc.

Recommendations:

To create a special funding programme to drive the productivity of the conventional bibliometric indicators of women lecturers and researchers in different formats:

- **“Awards” for the accomplishment of short duration projects for tenured and hired women researchers and lecturers.**
- **Fixed-term contracts for women researchers and lecturers without employment contracts to carry out short duration projects.**
- **Funds to support the undertaking of specific activities carried by women researchers and lectures.**

In order to minimise the impact of asymmetries in the productivity of the conventional bibliometric indicators arising from the Covid-19 pandemic, the selection for this programme would be based on the innovative contributions that it could bring to the area in question and its social impact on the promotion of gender equality, without considering curricular merit. The selection process should also include a contextualisation

³⁰ Pereira, “Researching gender inequalities in academic pandemic labor during the Covid-19”, op. cit.

section on how the accomplishment of the research activities was affected during the health crisis.

5.2.5. One plus one is more than two: promote the presence of women in leadership positions of research projects

Project leadership is an important position for career progression in research. It enables developing a specific study to gain more in-depth knowledge on certain topics and, at the same time, fosters the development of skills concerning coordination, budget management and communication with different audiences. However, due to the existing dynamics of implicit gender discrimination and bias in HEIs and RPOs, women have less access to formal and informal opportunities for socialisation, while the gender stereotypes perpetuate a male-dominated leadership model limiting their leadership opportunities.³¹ Therefore, actions that actively promote the presence of women in leadership positions of research projects are fundamental.

Recommendation:

To define the presence of at least one woman in leadership positions of research projects either as principal investigator or co-principal investigator.

5.2.6. Create spaces: funding programmes for exclusive research projects on promotion of gender equality within HEIs and RPOs

The special support “Gender Research 4 Covid-19”, promoted by the FCT in articulation with the State Secretariat for Citizenship and Equality and with the CIG, is an example of a pioneer and excellent initiative with respect to the integration of a gender equality perspective in the national research agenda. It has allowed the selected projects³² to work on in-depth analyses of the impact of the Covid-19 pandemic on inequalities between women and men at HEIs and RPOs. Issues such as these would certainly have gone unnoticed without specific support due to the fact that these inequalities continue to be attenuated in our society in general. Support such as “Gender Research 4 Covid-19” has enabled the development of projects that offer empirical evidence for policy decision-makers to have stronger grounds underlying the policies to promote gender equality at HEIs and RPOs.

Recommendation:

To create a specific and permanent support line for projects for promotion of gender equality within HEIs and RPOs.

³¹ Casaca and Lortie, *Género e Mudança Organizacional*, op. cit.

³² Apart from “Sage19”, the project “Pandemia e Academia em casa – que efeitos no ensino, investigação e carreira? Estudo sobre as mudanças no sistema científico e de ensino superior” [Pandemic and Academia at home – what are the effects on teaching, research and career? Study on changes in the scientific and higher education system], coordinated by Professor Virgínia Ferreira of Universidade de Coimbra was also selected.

Figure 7: Summary of the recommendations to promote gender equality in HEIs and RPOs in the post-pandemic scenario

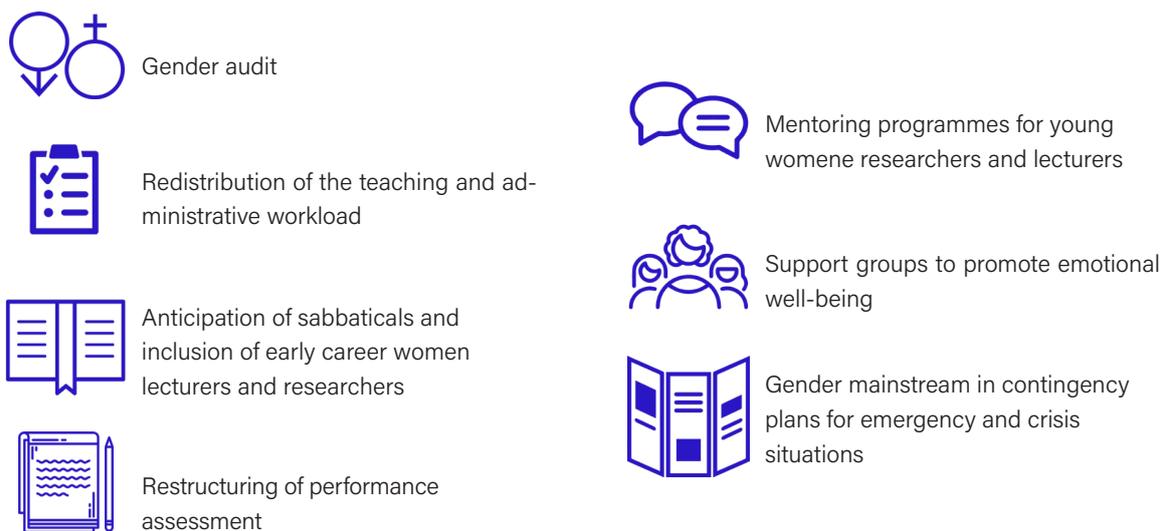
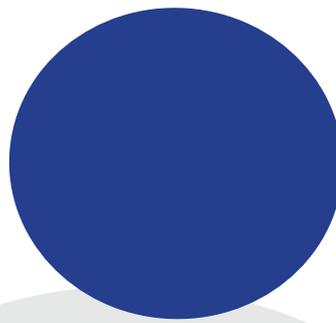


Figure 8: Agencies supporting research in science, technology and innovation







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