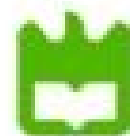




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**Proceedings of the
4th International Conference on
Gender Research**
A Virtual Conference hosted by
University of Aveiro
Portugal
21-22 June 2021



**Edited by
Professor Elisabeth T. Pereira, Professor Carlos Costa
and Professor Zélia Breda**

A conference managed by ACI, UK

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Proceedings of the

**4th International Conference on
Gender Research
ICGR 2021**

**A Virtual Conference
hosted by**

**University of Aveiro
Portugal**

21-22 June 2021

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E-Book ISBN: 978-1-912764-94-5

E-Book ISSN: 2516-2810

Book version ISBN: 978-1-912764-95-2

Book Version ISSN: 2516-2802

Published by Academic Conferences International Limited

Reading, UK

+44 (0) 118 324 6938

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Preface

These proceedings represent the work of contributors to the 4th International Conference on Gender Research (ICGR 2021), hosted by University of Aveiro, Portugal on 21-22 June 2021. The Conference Co-Chairs are Professor Elisabeth T. Pereira and Professor Carlos Costa, and the Programme Chair is Professor Zélia Breda, all from University of Aveiro, Portugal.

ICGR is a well-established event on the academic research calendar and now in its 4th year the key aim remains the opportunity for participants to share ideas and meet the people who hold them. The conference was due to be held at The University of Aveiro, Portugal but due to the global Covid-19 pandemic it was moved online to be held as a virtual event. The scope of papers will ensure an interesting two days. The subjects covered illustrate the wide range of topics that fall into this important and ever-growing area of research.

The opening keynote presentation is given by Professor Vanessa Ratten, from La Trobe University, Victoria, Australia on the topic of *Gender, Ageing and Entrepreneurial Ecosystems*. The second day of the conference will open with an address by Professor Erica Wilson, Southern Cross University, NSW, Australia who will talk about *Gender in the time of COVID: Imagining a more Inclusive (Tourism) World*.

With an initial submission of 113 abstracts, after the double blind, peer review process there are 37 Academic research papers, 2 PhD research papers, 1 Masters Research paper and 8 work-in-progress papers published in these Conference Proceedings. These papers represent research from, Austria, Belgium, Canada, Denmark, Iceland, India, Iran, Ireland, Israel, Italy, Mexico, Nigeria, North Cyprus, Poland, Portugal, South Africa, Spain, Turkey, UK, UAE, USA and Vietnam

We hope you enjoy the conference.

Professor Elisabeth T. Pereira, Professor Carlos Costa and Professor Zélia Breda

University of Aveiro
Portugal
June 2021

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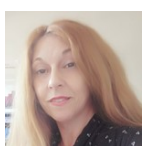
Biographies

Conference and Programme Chairs



Professor Carlos Costa is a full professor and entrepreneur based at the University of Aveiro, Portugal. Carlos started out doing an undergraduate degree in regional and urban planning (University of Aveiro). This was followed by a specialization in tourism, at the master's and doctoral level, at the University of Surrey, in the UK. Carlos is now Head of Department, at DEGEIT – the largest department of the University of Aveiro.

With publications at the highest level, Carlos also enjoys writing down-to-earth articles for the media and for the general public. As the Director of the PhD in Marketing and Strategy, as well as of the PhD in Tourism, both at the University of Aveiro, Carlos is an inspiration to colleagues and students alike – to perform beyond their dreams and achieve new entrepreneurial heights, whatever the domain may be.

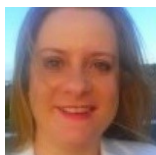


Professor Elisabeth T. Pereira holds a PhD and Master in the fields of Economics and Business Management. She is Assistant Professor of Economics at the University of Aveiro (Portugal), and senior researcher in the field of Competitiveness and Innovation at the Research Unit GOVCOPP-University of Aveiro. She is author of several dozen articles, books, chapter of books and communications at international conferences.



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Keynote Speakers



Vanessa Ratten is an Associate Professor of Entrepreneurship and Innovation in the Department of Management, Sport and Tourism, La Trobe Business School at La Trobe University, Melbourne, Australia. She is the Program Director for Entrepreneurship and Innovation courses and teaches Entrepreneurial Business Planning, Managing Innovation in Organisations and Entrepreneurship. She has published numerous books including "Gender and Family Entrepreneurship" (Routledge), "Diversity and Entrepreneurship" (Routledge), "Women Entrepreneurship in Family Business" (Routledge), "Entrepreneurship, Innovation and Smart Cities" (Routledge) and "Frugal Innovation" (Routledge). Her research interests include gender studies, international business, entrepreneurship and innovation.



Professor Erica Wilson is Pro Vice Chancellor (Academic Innovation) at Southern Cross University, based at the Lismore campus. Previously, Erica has held the roles of Deputy Vice Chancellor Academic (Acting), as well as Acting Dean, Deputy Head and Director of Teaching and Learning in the School of Business and Tourism. Born in Seattle, Erica has called Australia home for over three decades. Erica has published over 80 scholarly outputs, including two co-edited books, including, 'Women and Travel: Historical and Contemporary Perspectives' in 2017. She currently sits on the Editorial Advisory Boards for several journals focusing on management and hospitality research. Ministerially appointed, Erica was member of the Gondwana Rainforests of Australia World Heritage Technical and Scientific and Advisory Committee (from 2006 to 2015). She is passionate about supporting higher degree and early career research, and has supervised a number of PhDs, Masters by Research and Honours theses to successful completion. Erica is a proud advocate for gender equality in higher education and research.

Mini Track Chairs

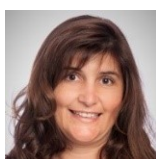


Tindara Addabbo is a full Professor in Economic Policy at the University of Modena and Reggio Emilia. Current main research areas: wage discrimination by gender, well-being, gender budgeting, gender gap in education, gender equity firms certification. Coordinator of Leading Towards Sustainable Gender Equality Plans in research institutions – (H2020-SwafS-2019 –873072). Web site:

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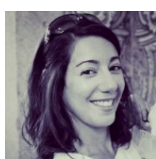
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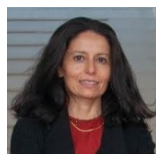
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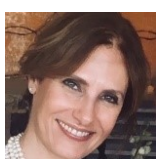
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How are you? Impressions on Covid-19 Lockdown from Women Scientists in Italy

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DOI: 10.34190/IGR.21.032

Abstract: The Covid-19 pandemic has changed our lives. The first and unexpected lockdown in Italy has seriously upset people daily routine, working organisation, socialisation and interactions with colleagues and relatives. To overcome the physical isolation and collect impressions, the “How are you?” online questionnaire was created and shared as a conversation among friends. Text mining techniques have been applied to almost one hundred replies, to highlight similarities and differences in the experiences lived during the lockdown, changes in daily actions, thoughts and reflections. Our findings show that the lockdown period was experienced as a moment of physical and relational confinement, provoking feelings such as fear, sadness and restlessness concerning the near future. However, it appears that many respondents accepted this lockdown as an opportunity to reorder their own lives, in terms of physical activities such as daily habits, and personal relationships and priorities. The fresco on which the paper is based is unique in terms of time, space, gender and professions. The written conversations took place from mid-March to the end of May 2020, i.e. during a period in which Italy was the first country in Europe to confine people home for all but essential reasons. Selected testimonies have been chosen among women professionals in science, mainly higher education professors and researchers. Since the questionnaire was aimed to collect free narratives, explicitly asked “from a few syllables to pages”, it allows to hear researchers’ voices, which often risk to remain unheard, and to collect them in a direct, fresh manner, without the constraints of structured questions. Topics covered in the conversations are highly gendered, including working conditions, work-life balance, family care. Moreover, since the initiative stemmed from a women scientists’ association, respondents provided interesting inputs regarding both gendered visions of the pandemic before and during it and their expectations afterwards centring on the roles that women play.

Keywords: Covid-19, emotion analysis, women in science, text-mining techniques

1. Introduction

Since the Covid-19 pandemic began, thousands of archives have been collected to classify, monitor for sharing pieces of information on Covid-19 and its impacts. Curators are mainly scientific institutions and the archives contain scientific and medical data; however, many universities and other organizations such as museums, libraries, scientific and cultural associations of various kinds, as well as individuals, have begun to collect “a bit of everything” potentially useful to describe the period: from tweets to videos diaries, from masks in all their declinations to recordings of common songs: everything has become a matter of study and conservation (Spinney 2020).

In the United States, the (Library of Congress 2020) collected photos - related to Covid-19 - with street scenes from New York, New Jersey and California by photographer Camilo Jose Vergara and a disparate amount of documentation on home life, different styles of face masks, daily lives of healthcare professionals, economic impact and the way people help each other, through web content, data and maps. The (Smithsonian's National Museum of American History 2020) has created a Quick Collection Task Force to chronicle the pandemic.

In the United Kingdom, countless initiatives have contributed to the creation of Covid-19-related collections, such as those aimed at collecting stories by professionals (Health & Care Professions Council 2020) and records from local communities often hosted by Universities; the (Library of Cambridge University 2020) “particularly wants to reflect the response of its community of staff and students to the present situation, as people adjust to new patterns of work, socialisation, and leisure”; (Plymouth City Council 2020) requested residents to leave diary pages, video blogs, videos, poems, songs and writings of all kinds in a memory box on the Council website, to contribute to the archives of the municipality. Similarly, the (Museum of London 2020) collected “both objects and first-hand experiences to reflect Londoners’ lives during the COVID-19 pandemic”.

In Italy, memories have been collected by universities, such as the Università Milano Bicocca (2020), while initiatives falling within the area of *narrative medicine* are numerous (Polvani et al, 2020; ISTUD Foundation, 2020). In parallel, investigations in different areas were performed. For instance, Bucchi and Saracino (2020) analysed people trust in information sources concerning the new virus; Cerbara et al (2020) their emotions; FPA Data Insight (2020) reactions of public employees; Cellini et al (2020) concentrated upon the gender perspective of home working as perceived in public research organizations; and Metcalfe et al (2020) illustrated the unveiled science-society relationships.

Our collection of experiences started in mid-March 2020, as a collection of conversations-like text. Unlike a survey, our study aimed at collecting mainly free narratives, explicitly asked “from a few syllables to pages”. Participants were contacted through a natural flow of invitations, instead of a sampling according to a set of specific criteria. The initial objective was to reflect together and keep record of this particular experience. With the support of text mining techniques, we analyse testimonies, and put a spotlight on the specific category of women in science, their changes in daily routine, the analysis of past and present experiences Covid-related, and expectations for the near future. The narrative dimension makes this collection one of its kind. Translations of Italian narrative text is provided for the sake of clarity.

2. Data collection and strategies for text analysis

2.1 Interviews

The interview was structured over a set of twelve questions. The first two questions regarded participants’ demographic aspects; while the remaining ten questions were formulated as to mock a spontaneous, typical friends’ conversation in the time of Covid-19, and that, perhaps, we all asked ourselves: how have our times and leisure/work habits changed? How did we spend the extended time that suddenly we had, moving from a hectic life marked by commitments, travels and appointments in a continuous flow of time? What would we carry with us when all this will be finished?

From mid-March up to the beginning of June 2020, during the first phase of the Covid-19 emergency in Italy, 96 responses were received. Participants came from a wide array different age, gender, profession, geographic area of residence. Written consent for signed contributions was asked and anonymous contributions was also envisaged. All collected contributions have been progressively published on a blog (<https://svevaavveduto.wixsite.com/des-covid19?lang=en>) and finally in a book (Avveduto 2020), thus being available and open for further analysis.

Regarding the distribution by geographical areas, most of the testimonies (82%) come from Italy. The others came from the Americas (USA, Canada, Colombia), Europe (United Kingdom, Norway, France, Belgium, Croatia, Cyprus) and Australia. The Italian respondents are mainly female, aged 51-67. Anonymous contributions have been a limited number (8 out of 96). The most frequent professionals who contributed included academics, mainly researchers and professors (a few of them retired), then journalists and writers. The most numerous group is that of middle aged, highly educated Italian women, working in Universities and research centres, sending their testimonies from Central Italy. During the period, this group of people shared the same lifestyle organisation, e.g. the lockdown started in March, the working conditions, in particular home working - following the ordinances which included closing Universities, schools, offices - behaviours and needs, part of them related to their professions and gender.

From the original data corpus, we decided to focus our analyses on a restricted group of 48 women professionals in science, education and culture and a selected subset of questions. Professions include researchers, technologists, communication officers at research centres, professionals working in agencies, museums, observatories; professors in higher education institutions; human resources consultants and diversity officers. Disciplines span from social science and humanities to those related to Science, Technology, Engineering and Mathematics (STEM). The majority of respondents are middle aged (27% aged 51-67), 13% are aged 36-50, 8% are retired but still active. Regarding testimonies, we focus on replies including changes, reflections about current situation, and expectations for the future.

2.2 The text analysis

Text mining techniques were applied to identify systematic patterns among the responses to the various questions. In particular, our analysis is focused on 1) the single words used by each respondent through the

identification of the most recurrent terms within all the answers (term frequency or *tf*), as well as of the most important ones within each individual answer (through the calculation of the coefficient term frequency-inverse document frequency or *tf-idf*); 2) the relationships between word components, focusing both on pairs of adjacent words (bi-grams) and on those terms that tend to occur together even though they are not adjacent (by using Pearson's correlation coefficient). As the main language adopted in the questionnaire was Italian, text analysis included exclusively Italian words. We decided not to translate the graphs into another language (i.e. English) in order not to lose the linguistic and semantic characteristics of the language used by the respondents.

Additionally, for one particularly central question in the questionnaire - Q4: "*What has changed in your daily habits? In leisure, socialisation, personal and home care, nutrition?*" - an analysis of emotions was carried out in order to try to systematise the feelings, even conflicting ones, emerging from the answers. The analysis was carried out through an unsupervised system that allowed us to select specific emotions of interest, given the peculiarity of the period and of the emotions that can arise from experiencing such an emergency situation as a global pandemic. On the basis of the fundamental emotions as defined by the psychology underlying classic *emotion detection* (Ekman 1992) and interweaving them with the "COVID-19 emotions" (Mukherjee et al 2020, Kleinber et al 2020; Li et al 2020), we identified two balanced groups of six emotions each, three referring to a positive context and three to a negative context. Through the use of *Laser* (Artetxe and Schwenk 2019), a recent and popular system for the semantic representation of the period with vectors or sentence embeddings (Krasnowska-Kieraś and Wróblewska 2019), we were then able to identify the presence or absence of the emotions we identified in each single response.

3. Impressions of changes and visions of the future

3.1 What has changed and how during the first COVID-19 lockdown

The first two questions analysed - Q3 *How your working time and work habits have changed?* and Q4 - allow us to capture life changes experienced between pre-lockdown and during the lockdown.

Changes in work habits and daily routines are centred on the home (*casa*), the place most experienced during the three months of lockdown (see the most recurrent terms in Figure 1). At the heart of the change in working time and habits (Figure 2), the home - one of the recurring nodes and topics in the responses - assumes a value of space and time in relation to work (*lavoro*): while staying at home, scientists work in homeworking (called *smartworking* in Italy) and, despite being experienced by other family members such as kids (*bambino piccolo*), home is the place that allows to concentrate (*concentrare*). Habits (*abitudine*) have changed (*cambiare*) dramatically, and working remotely (*modalità telematico*) tries to give meaning to the own working day (*giornata lavorativa*) and week (*settimana*) schedule: "working helps, because there is still an agenda (and therefore a calendar) of meetings to attend, deadlines to meet, emails to answer or send" (S.L., Milan); additionally, some people try to not loose working habits, as reported by Anonymus: "In the morning I try to behave as if I were going out (to avoid being in my pyjamas all day), then I work, cook lunch for the family and then in the afternoon I work until the Civil Protection press-conference [which provided daily updates on the pandemic in Italy]". The majority of the female scientists interviewed reported as downside the lack of direct contact (*contatto*) and interaction (*interazione*) with colleagues (*collega*) in the office (*ufficio*) and, more generally, meeting people (*incontrare persona*) on a national (*nazionale*) and international (*internazionale*) level, a key-part of academic work despite the new communication technologies available.



Figure 3: Network plot of the most recurrent pairs of adjacent words (*bigrams*) among the answers to Question 4

According to the women scientists’ job profiles, the testimonies concerning work changes appear more homogeneous among the answers than those concerning changes in daily habits. Some scientists report that nothing has changed while others that the situation has changed dramatically. In all cases, all participants found a way of coexisting with the coronavirus and everything it has entailed on a personal and social level, in one way or another. However, many of the contributions about daily habits are composed of both positive aspects, such as greater care in food, as well as challenging sides, such as caring for elderly relatives and lack of “physical” socialisation. Therefore, in order to get a general picture of the respondents’ perception for this set of answers, an emotion analysis (Figure 4) was carried out as described above.

At a first look, our analyses suggest that the women scientists mainly show a positive attitude towards the lockdown despite the strong limitations they are experiencing, especially in terms of optimism - identified in 87.5% of the answers and associated with the hope and willingness of a future improvement for the current situation - and acceptance of the logistic and social constraints - identified in 75% of the answers and linked both to the ability to understand the seriousness of the situation, and to rediscover the home as a place of leisure, serenity and tranquillity. However, at the same time emotions linked to restlessness and sadness are significantly prevalent. The intolerance and irritation of living confined at home, the conflicts that could arise in the management of space and time, and the anger for the drastic change and deprivation to which the individual is subjected, can be found in 58.3% of the answers; in addition, the lack of social contact- that cannot be bridged with new communication technologies - appears in 52.1% of the answers.

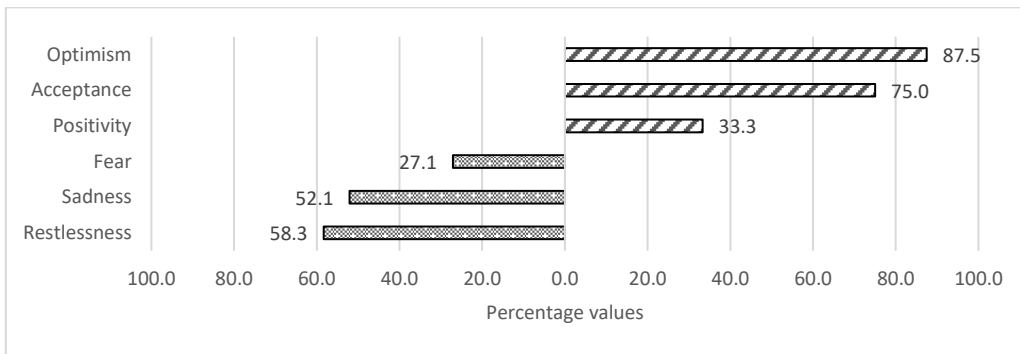


Figure 4: Emotions analysis: percentage of each individual emotion occurrence within the scientists’ responses to Question 4

of managing friends and professional relationships, to get used to planning travel and leisure according to different rules, to study in other ways, etc.” (E.G., Rome).

From an environmental perspective, P.C. would bring with her “the awareness that everyone's behaviour matters within our society. Satellite data show us an incredible decrease in polluting emissions, a good lesson in contrasting the greenhouse effect” (P.C., Milan). G.F. states “we cannot go back to the so-called *normality*, because the problem lies precisely in this normality, like a bug in an apple: the chain of errors linked by a predatory development model that is endangering the planet from recent decades. [...] There is not a previous situation to return to, but a future to invent, together. [...] We therefore need a qualitative leap in our collective consciousness to radically transform both economy and society towards a more ecological model” (G.F., Rome). Rethinking our materialistic culture is seen as crucial: “no more serial accumulation of goods to consume (or to accumulate, when we cannot consume them); more attention to the environment” (P.G., Bologna), “I would not like to forget [...] the struggles for change in the way of living, of exploiting the earth” (MR.M. Naples), as well as in appreciating the small and unnoticed things, “I would like to preserve the marvellous silence of the streets, the sounds of nature outside entering the house through the windows. The cleanliness of the air.” (D.V., Florence).



Figure 8: Network plot of the most recurrent pairs of adjacent words (*bigrams*) among the answers to Question 11

4. Conclusions

The work aimed to highlight feelings and perceptions experienced in Italy during Covid-19 time in Spring 2020 - one of the most dramatic periods in recent history - through the lens of written testimonies of women professionals in science. As both the text-analysis and the original wording of the various answers have shown, Covid-19 pandemic has brought changes in all spheres of women scientists and professionals daily life, including work, family and society, as of anyone else. Lockdown, suddenly introduced, caused disorientation; work and public spaces overlapped with private ones; routine activities became difficult; new communication tools – such as chats and video calls - balanced isolation and social distancing only partially. Negative feelings of uneasiness, fear, sadness prevailed. Isolation brought a new awareness of freedoms considered central and indispensable, such as being able to travel, go out and move to nurture relationships even from a physical and tactile point of view. This particular set of respondents suffered from an additional negative consequence of lockdown: the impossibility of experiencing an essential feature of their job: the laboratory life, the sharing of ideas and activities in the group of pair, the richness occurring from moving for scientific reasons from a place to another within the Country and abroad. Nevertheless, at the time of the collection of data the positive feelings of optimism and acceptance still prevailed. The situation highlighted anyway the importance of science-based decisions and of sanitary measures accessible to all. Finally, reflections show awareness and urgency of preserving and defending the environment from the materialistic culture dominating western societies. In this perspective, the European Green Deal could play a priority role, with direct effects both on a collective and personal level, leading to a paradigm shift in social and economic terms.

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