

COVID-19 Pandemic Up Close: Inquiring Into Personal Experiences of Global Young Researchers

Compiled by

Paulina Carmona-Mora, Bernardo Urbani, Iwona Janicka, Sandra López-Vergès, Delfina D'Alfonso

(May 2022- February 2023).

Funded by the Sasha Kagansky Interdisciplinary Grant (2021-2022) from the Global Young Academy.

Cover by Felipe Serrano. Illustrations by Jacopo Sacquegno, which capture virtual meetings fora.

Word cloud was generated with www.freeworldcloudgenerator.com

DOI: 10.26164/GYA_00993

This work is licensed under the Creative Commons license CC BY-SA 4.0.



**COVID-19 Pandemic Up Close:
Inquiring Into Personal Experiences of Global Young
Researchers**

*Dedicated to our colleague and friend Alexander (Sasha) Kagansky
(1975-2020)*

Index

| | Page |
|---|------|
| Introduction | 9 |
| Part 1 How everything started to change for young researchers | 17 |
| Part 2 Professional challenges emerge | 31 |
| Part 3 Dealing with science and personal life | 43 |
| Part 4 COVID-19: A boost for researchers' professional life | 55 |
| Part 5 Time for self-knowledge and personal growth | 63 |
| An Open Closure Looking at the testimonials, living a new phase of the pandemic times | 71 |
| Acknowledgements | 77 |
| References | 79 |
| Contribution of testimonials | 83 |

Introduction

Since the declaration of the COVID-19 pandemic by the World Health Organization in March 2020, there have been efforts to document personal stories on daily life, family life, as well as professional and personal routines. We considered that, as a group of young scholars, we must document the experiences of researchers with a global perspective as well as with an inner view. Personal and professional narratives are usually lacking when describing events that involve the human facets of those that create scientific knowledge. Thus, we have decided to explore the dynamics of the development of the pandemic in young researchers' lives by primarily compiling written stories of these challenging times, hoping that future generations and, eventually, historians of science will be able to reconstruct the memories of young researchers from all around the world between those years of 2020 and 2022.

For this project, we have conducted two virtual meetings with Global Young Academy (GYA) members from all continents, to discuss the impact of COVID-19 on the professional and personal lives of early and mid-career researchers from all continents. In these meetings, we discussed challenges as well as lessons from these difficult times and collectively constructed half a dozen relevant questions that were delivered to all GYA members and alumni (see figure below). Various members and alumni responded to those questions and delivered them to us while agreeing to the publication and analysis of their testimonials anonymously. These narratives are the core of this book, presented in the voices of their authors, without major intervention. Given that the testimonials come from different parts of the world, English was used as a common language, despite not being the first language for most participants as well as for the story compilers. In order to preserve the voice of each contributor, no major edits were made, only minor English editing for clarity. To avoid withholding intimate experiences and feelings from the narratives presented here, the testimonials are anonymous, although some contributors agreed to have their names listed.

COVID-19 implied changes in research work and productivity. Financial constraints greatly modulated scientific production during that period of time (Korbel and Stegle, 2020), in some cases dropping production (Riccaboni and Verginer, 2022), but in others, actually increasing it (Myers et al., 2020). The effect of the pandemic on funding of research directly related to this main event, or completely unrelated, increased differences between scientific fields as well as between world regions (Riccaboni and Verginer, 2022). Other effects of the pandemic were the cancellation of scientific events, to later become online events, and the reduction of opportunities in obtaining grants, with implications for the development of scientific realms especially in low-income countries (Subramanya, Lama and Acharya, 2020). Social distancing ultimately reduced the possibility of continuing research properly (Termini and Traver, 2020). In this sense, researchers at the beginning of their careers, doctoral students and post-doctoral fellows alike, were compromising their expected progress to further positions as their potential of finishing their projects on time diminished (Paula, 2020), and as travel and funding restrictions were maintained for more than two years in some countries.

The pandemic highlighted different inequality issues and raised alerts. In terms of gender disparities, for instance, in the US at the beginning of the lockdown, the productivity of female researchers dropped significantly compared to male researchers (Viglione, 2020; Cui, Ding and Zhu, 2022). Even more so, “female researchers tend to publish much fewer manuscripts than men, and they are much less represented in the relevant positions of manuscript authorships” (Bittante et al., 2020). There is evidence, for example, that at the beginning of the pandemic, in general, women scientists submitted fewer manuscripts than in the same period of time in 2019 (Vincent-Lamarre, Sugimoto and Larivière, no date). This situation was more critical in the case of female scientists from upper-middle-income countries, whose submission rate dropped more than their peers in high-income countries (Gabster et al., 2020). In fact, with the decrease in publications, women researchers were at risk in terms of authorship placement, which influences job promotion and stability (King and Frederickson, 2021). In addition, during the pandemic,

¹The edition of this book was finalized in early 2023.

²The GYA has 200 members, young scientists at the early stages of their independent academic careers, selected before 40 years of age for 5 years based on academic and non-academic merit as well as engagement. The GYA has an engaged body of 366 alumni (as of 2022) spread around the globe. Members and alumni together represent 100 countries.

female scientists with younger children faced severe setbacks of research time in order to devote time to their infants and school children, while facing lack of childcare and virtual schooling ((Myers et al., 2020; Barber et al., 2021). Another study provided evidence that regardless of race, women had the biggest problems in submitting and meeting deadlines during the pandemic (Stanisquaski et al., 2021).

While editing and reflecting on the chronicles presented in this book, we found that they are very transparent. They reveal several challenges young researchers have gone through in relation to their profession, but mainly issues and introspective learnings from their personal lives from a very honest point of view. In several stories, awareness of the privileged situation in a context of uncertainty and inequality is perceived. Also, the appreciation of time and opportunities to develop personal skills such as empathy and resilience played a sensitive role. The researchers who share their perspectives in this book and come from COVID-related careers appreciate that the link with local governments has been strengthened during the pandemic. Although we do not know the gender of the researchers (as it was not requested to guarantee anonymity), in many testimonials it can be deduced, as we found that women tend to make more explicit their gender in their stories. In some men's testimonials, there are usually no references to challenges related to housework or childcare, but in others, the involvement in family activities is mentioned. In any case, in sum, it is worth recalling the words of Termini and Traver (2020), who found that supporting early-career researchers is fundamental in crises like that of COVID-19; and certainly the views presented in this book provide a first-hand and active voice of what happened to young scientists between 2020 and 2022. Interestingly, we found that between the first discussions of their situation in 2020, in which we could sense the stress, fatigue, uncertainty and distress with the loss of lives of relatives and friends, and the testimonials collected in 2022, which had a more positive light, there was an important difference that could reflect the human ability to adapt to even the worst situations and to learn from them. To preserve the flow of personal narratives, the stories are presented without title, only with a symbol to mark the experience of one contributor from the other.

"I was very lucky that I had to write a lot of publications at that time [...]. I was also lucky to have given priority as a health researcher to go back to the lab and get experiments."

"...as I have much more time for writing"

"More focused on work owing to the pandemic, no students, no other researchers in the lab"

HIGH PRODUCTIVITY AND FOCUS

BUT AT THE COST OF

"lucky to have lots of data piling up that I didn't have time to analyze before, so I could take advantage to do that during the pandemic"

"Good time for writing for the Humanities"

EXHAUSTION AND TIREDNESS

- ① "...but the cost was that one forgot about other aspects of oneself (what else do I enjoy? what else am I than my research/my work?)"
- ② "Unfair claims on science and expectations from scientists, especially as virologists. We do science, we don't do policy."
- ③ "...but it was absolutely exhausting. Little understanding for scientists needing more time to write reports for funding bodies."

GENDER IMBALANCE

"No public debate on the role of men in emotional labor during the pandemic (that they do less...)"

"Stereotypical gender roles confirmed throughout the pandemic (unfair distribution of labor)"

"Women had more household responsibilities than men (homeschooling)"

"Care labor carried primarily by women in home schooling, taking care of the household, family members, friends, communities"

"Structural problems have become more visible (particularly in case of minority populations). I had an extremely bad reaction to a Covid-vaccine and in result no Covid passport which made daily life impossible."

"No struggles, only positive aspects."

"Covid as empathy generator?"

"Guilt about positive effects of Covid"

"More time was needed to transfer from an in person event to an online event. It is disappointing not to be able to see people live."

"Networking has become more difficult. Younger scholars pay the price for this more than senior ones, who already have established networks."

"How to move from simply surviving to thriving?"

DO YOU FEEL THE PANDEMIC HAS AFFECTED YOUR PROFESSIONAL LIFE (PRODUCTIVITY, DATA ACQUISITION, ETC.) AND HOW?

LIFE OUTSIDE THE LAB

"I was so hyperfocused at work during the pandemic, I forgot who I was outside the lab. I forgot about friends, relationships or leisure activities. It was hard to learn who I was outside the lab."

"No input from the outside."

One was left to oneself. Due to lack of good access to culture (exhibitions, theatre, museums), one only did and watched things that one already knew. No mental/emotional/cultural development."

"Being in the work-bubble constantly was difficult."

CHILDREN UPBRINGING

"Negative consequences of lack of structure for kids was noticeable. Kids need structure for future life that they usually get from school."

Homeschooling.
"Children became more insecure."

"Having to change the topic of research to Covid-related research. In some countries, biologists had to become virologists due to the nature of scientific landscape."

"For established colleagues it was fine. It was more difficult for younger scholars."

"Rich countries were setting the agenda without understanding other countries' limited resources (sequencing). They were punishing countries that were not 'delivering'."

DATA COLLECTION

'Unusual suspects' helping.
"Some countries that were less globally vocal about Covid (Japan, Singapore, China) were providing resources rather than simply judging countries that were 'not delivering' enough Covid-related data."

From heroes to monsters
"A quick change of public opinion towards virologists."

"Health - bad effects of Covid"

WHICH ASPECTS HAVE BEEN THE HARDEST TO MANAGE DURING THE PANDEMIC (PLEASE DEVELOP ON ANY ASPECT YOU WISH, PERSONAL, JOB PROSPECTS, RESEARCH, SOCIAL LIFE, ETC.)?

WHICH STRATEGIES DID YOU USE TO COPE WITH THE CHALLENGES FACED?

JACOPO SACQUEGANO

"Work, work, work. I wrote and studied all the time! That was about everything I did."

Meditation
Mindfulness
Exercise routines
Family

"Reaching out for help (friends, family, partners, therapists)."

"Going out to see nature. Night sky, skyline, sea, trees, garden, listening to birds."

"Knowing what's important."

Better time-redistribution. When one works, when is family time - one could decide oneself.

"Being reminded about the important aspects of our lives, [such as] friends, family."

WORK LIFE BALANCE

"New good habits for the post-pandemic time: Family time, sports."

"Re-prioritizing! Covid as a blessing for personal life (time-wise), thinking about what's important in life."

Rest at last!
"Too much travelling before Covid (conferences, meetings, workshops, etc.). Owing to Covid, one could finally rest - at home. One could finally complete a thought, write, re-connect with the family."

Hyper-productivity and focus!
"I wrote and got published 7 papers, a patent application and my PhD thesis in 3-4 months. Changed labs, finished a 2-year project in 1-year, wrote 4 grant applications."

"Hyperproductivity and hyper-focus (good for work)"

"Realizing how lucky one was on a personal level: not suffering a bad case of corona or being overburdened with care work."

"Having city to oneself. Only virologists and police on the streets."

"New research collaborations?"

"Everything improved. family, work... that is quite selfish to say (I feel)."

ANY SILVER LININGS?

MESSAGE TO THE FUTURE: WHAT COULD HAVE BEEN DONE BETTER? (IN TERMS OF WORK, LIFE, RESEARCH, PREPAREDNESS, ETC.)

"Don't forget who you are and the things you enjoy. Have plans for things you enjoy doing in different situations and scenarios."

Importance of nature and ecology.

"We will have more pathogens because we are destroying nature. No one wishes to discuss this: that we need to tackle the ecological question to prevent future pandemics."

"Public discussion on the fair distribution of care/emotional/household labor between the sexes."

Exposure to a range of people – "important for kids and their developments?"

"Workplaces need to be more flexible."

"More information on tools – how to make things work, both on professional and personal level."

"Science diplomacy is making progress. Discussions between scientists, politicians, policy makers are happening and that's important."

Prevention rather than reaction "More attention should be paid to healthy living and health service infrastructure rather than focusing only on putting out fires and reacting to disasters."

"Importance of health and health services."

FOCUS ON SOCIAL AND PERSONAL HEALTH

"Awareness about one's own limits health-wise."

"Underlying how important it is."



"Lack of empathy or understanding for the serious, long-term effects of Covid (long Covid)."

"Responsibility and support instead of feeling guilty. Help people who did not have a good time during the pandemic."

"People whom we have not seen before (with chronic illnesses like chronic fatigue), become visible after Covid. Perhaps we should help them more, actively support them."

"Solidarity in action."

CARING FOR OTHERS... AND FOR ONESELF



"Double-checking with oneself if you have the energy and health to pursue something new."

"Reclaiming one's health and life and owning the new 'post-Covid self'."

"Some institutions started to spread awareness about the importance of health on employees (Impact of stress on our health)."

"Work has piled up and one has an impression that one is not progressing (and that is tiring)."

"Many people taking sick leave for depression."

"Unevenly distributed privilege."

Gender influenced careers: "men became more successful than women during the pandemic."

"Losing rights and opportunities due to the pandemic, particularly in case of women."

"Countries have vastly different experiences of Coronavirus pandemic."

JACOPO SACRUEGANO

ANYTHING ELSE?

Part I

*How everything started to
change for young researchers*

“I still very clearly remember recounting the moment I heard on the news that COVID was spreading like wildfire throughout the world. It was February 2020, and although the virus had not yet entered my country, it was just a matter of time before our nation would also succumb to the tragic consequences of a pandemic ravaging the globe. And then, one night, headline news announced the first case, and then another, and another.

The questions that kept me most awake at night were not my career or my research, but the health and happiness of my partner, family, and students. What if they contracted the virus? How will they react to a novel virus for which an evidence base for prevention and treatment was non-existent? And what if the unimaginable happened? Most importantly, when would this horribleness be part of history lessons? Neighbors passed away and family members were infected, of whom some became severely ill and suffered from long COVID³ for considerable time periods.

Focusing back on my career, although I received a fellowship to travel to Italy during the pandemic, I had to cancel my plans. Leaving my partner and family behind with the prospect of not being able to travel home when a loved one fell ill was not an option. And most importantly, my country needed me to contribute to the creation and sharing of knowledge. During this time, I threw myself into my work and joined a Non-Governmental Organization (NGO), making it our first priority to find alternative and renewable resources for personal protection against a devastating virus.

Strangely, during the worldwide pandemic, the pressure to deliver on academic targets became even more cutthroat. Online meetings became the order of the day, lab access with ongoing lockdowns became extremely challenging, and restricted numbers of staff allowed on campus made planning a week's work a nightmare, combined with the delayed or even non-delivery of consumables and chemicals. And so, the list of worries kept mounting... Working from home presented another dimension of challenges and distractions. Ultimately, the joy of producing high-quality and tangible research outputs became the mission impossible! Moreover, the career prospects and trajectory of early career researchers were significantly and worryingly affected on a multidimensional level. The human aspect of scientific collaboration and exchange also tragically started to disappear, whilst being replaced by online interaction, which surprisingly, presented its own set of pros and cons.

³Long COVID, or Post-Acute COVID-19 Syndrome (PACS), was coined and recognized as a disease later in the pandemic.

I became a member of the Global Young Academy during the pandemic. And truly speaking, I was blown away! Here, amidst all the devastation and tragedy, were a group of like-minded individuals who deeply cared about the world, science and research, and each other. The passion and leadership of this group were even more infectious than the COVID virus itself!

What did I learn from the pandemic? That life and the ones closest to you are precious and most important. That people are resilient and resourceful. That with compassion and care for your fellow human, almost anything can alter from the impossible to the possible. That the world needs to prepare better for the unforeseen, that the role of scientists/researchers/academician/scholars should receive more attention, that robust leadership requires critical attention, and lastly and most importantly, that communication between the various stakeholders, including government, policy, the public, and researchers should be revolutionized.”

“Soon after New Year’s Day 2020, I read on the big screen that we have at the entrance of the Institute of Virology where I work the news flying around the world: “pneumonia of unknown origin found in China.” I thought it would be infectious, but not necessarily viral. You may say this is not the way a virologist should analyze a respiratory outbreak; however, in the microbiology and infectious diseases field, we might give the benefit of the doubt to less pathogenic germs if not enough information is available. Emerging bacteria may also be a cause of pneumonia, including severe ones. However, the news was on the screen over and over again for a few days.

At home, I watched the international news addressing the same issue but still, I was not suspicious and did not search for further information online. Then, after a couple of days, I said to myself that this outbreak cannot be caused by resistant bacteria to multiple antibiotics, leading Chinese patients to die. Next, I wondered if this may be an emerging respiratory virus, since China has been the origin of a number of them. On January 7, Chinese authorities confirmed they identified a novel coronavirus. Then I thought, “this is it.” A couple of weeks later, the first cases of the new coronavirus were reported out of China, and on January 30, the WHO declared COVID-19 (Coronavirus disease 2019) a Public Health Emergency of International Concern.

The rest is history. Every morning, like millions and millions of people all over the world, I checked the breaking news. Every day, the list of countries and infected cases grew and grew. Soon, everybody realized the virus would reach every corner of the world. No one will be safe. We were at the beginning of the pandemic, and besides the virus, panic was spreading all over the world.

Thousands of scientists across the globe started to work tirelessly to tackle this virus with prevention measures, new diagnostics, potential drugs, and vaccine candidates. Like many of my virology colleagues, I joined the effort. Because of my experience with drugs against RNA viruses (SARS-CoV-2, the causing agent of COVID-19 is an RNA virus as well), I began to test dozens of potential drug candidates against SARS-CoV-2 from my lab and international collaborators in the biocontainment level 3 laboratory of my university. This intensive research program was 24/7 while government agencies provided the expedited research funding.

It was a race to stop a killer. Hundreds of labs all over the world were doing the same. Many COVID-19 publications in PubMed came out every day. At first, they were a few dozen, and one could handle them, but soon they became hundreds. The amount of knowledge and data generated in this global health emergency has been unprecedented. We can say there is one Virology before and another Virology after this pandemic. My main topic of research, antivirals, has changed dramatically. Antiviral drugs usually take years to reach the market; however, for COVID-19 treatment, some of them have obtained the Emergency Use Authorization in the US in just months. A similar path has been taken by the effective anti-SARS-CoV-2 vaccines that have stopped the deadly and fast spread of this virus.

Unfortunately, not all countries have complete access to anti-SARS-CoV-2, but I am glad that step by step, developed nations have started to collaborate with less developed nations to facilitate the transfer of technology and knowledge. Therefore, not only vaccines manufactured in developed countries will reach these poor countries, but some of these very affected countries may be able to participate in the production and distribution of these valuable pharmaceuticals.

This pandemic has caused devastating harm to the health and economy of the whole world. On the other hand, in my field of work, emerging viruses, COVID-19 has changed the way we see and do virology research. We can say

the pandemic accelerated a revolution in the biomedical sciences in general and in virology in particular. We are coming out of this pandemic better prepared for the upcoming global challenges of emerging infectious diseases.”“The infection was spreading, and news from across the world were worrisome, but in India, most people seemed not to be worried about COVID-19. I had been following the progress of the disease quite intently for a while, as we, members of Indian Young Academy of Science (INAYAS) and GYA, had been working hard for months for the Annual General Meeting (AGM) in India. I was heading the local organizing committee, the venue had been finalized, applications for funding were being prepared, and I was getting more and more apprehensive. Finally, in early March, we took a major decision in the GYA Executive Committee (EC) to convert the AGM to a fully virtual event. When the pandemic hit, we were ready and relieved that we had made a timely decision.

However, back home, life went to a sudden standstill on 24th March 2020, when the Prime Minister announced a complete lockdown across the country, starting at midnight. The announcement had been made at 8:30 pm. Once again, I patted myself on the back because I had stocked up grocery and medical supplies, in anticipation of something like this. When I had gone into a frenzy and started stocking food and essentials, my family laughed at me. Now, it was my turn to laugh. The initial couple of weeks felt like a picnic. The children were happy that we were all at home together, and they didn't even miss not going out to play with friends. There was a lot of work to do at home, as our regular house help personnel could not come in to work. The children joined in to help with mopping, washing, and cooking; everything was a game for them. We had board games, cricket on the roof, meals at odd times, random snacks, and midday naps.

Gradually, life started falling into a pattern of virtual meetings, classes, household chores, endless phone calls with family, and following the pandemic curves. The new academic session started virtually for the children, and soon, we had four people in the same house living their own virtual lives for half the day. The chores that had initially seemed to be fun, became a burden. Procuring fresh supplies became a nightmare, as we had to stand in queues for hours just to enter the supermarket. Even then, supplies were irregular, and meals became monotonous. We were adjusting our lives at multiple levels, both personal and professional. Handling assignments and exams, managing institutional responsibilities and parenting from the

confines of home led to the blurring of boundaries, the office entered the bedroom, time zones were lost, and discipline waned. Health issues began setting in, amidst the constant fear of being infected with THE virus.

We live in a small town away from the city of Kolkata, where our parents live. So, in addition to managing our home and work during the lockdown, we went through the constant stress of knowing that if something went wrong with our parents, it would be extremely difficult for us to reach them immediately, especially because neither of us drive. Soon, we got busier than usual, because a different kind of pandemic struck society – the pandemic of pseudoscience and misinformation. TV channels, social media, and print media were flooded with false information and remedies that were a threat to the well-being of people, and did more damage than good to the public understanding of the disease. A large number of scientists and journalists got together to create a forum that took upon themselves the responsibility of creating content to bust myths, put out health advisories, and generate awareness of best practices. My husband and I, both scientists, got sucked in and found ourselves creating and translating content, attending panel discussions, engaging on social media and doing podcasts for ISRC – Indian Scientists' Response to COVID-19. The full family even got together to put together two plays for spreading awareness.

A year down the line, just when life had begun to get a little less abnormal, we were all positive. While the children had a mild infection, both of us were badly affected. In addition, my husband's family in Kolkata was affected too. We had visited them to get his parents vaccinated, and the source of the infection was probably the crowd at the vaccination center. My partner was constantly on the phone, managing his parents' long distances, ensuring that they had food and medicines. I was too ill to even get out of bed. The first day that I was able to walk without support, his fever was refusing to come down, and his SpO₂⁴ level was dropping. I spent an excruciating hour on the phone, contacting friends, colleagues, and doctors. And then, through a series of lucky connections, we found a hospital bed for him, but the hospital was quite far from us. We piled into the ambulance sent by our Institute and took him to the hospital. He was on oxygen, and I was constantly checking the SPO₂. At one point in time, I felt I would not make it to the hospital. My brother and a student were waiting for us at the hospital. The two hours of oxygen supply on the way had helped my husband. I

⁴SpO₂: Oxygen saturation.

was on the verge of collapse. A week and many ups and downs later, he came home, and the first time he saw me, he was shocked. I had a whole patch of white hair, which had not existed a week ago.

The infection left our family with a lot of long-term damage. But I am worried about how the pandemic might have impacted the personality development and mental health of children. Virtual education has failed, at least in India. This would also be the case in many other countries, where the majority of children would have lost connection with education for prolonged periods of time, due to the lack of resources. Even where children had the resources, they would have missed their friends and peer interaction in the classroom environment. A school does not only serve as a site for imparting knowledge, but is a cauldron where various social elements come together to shape lives. The pandemic took away precious years from the lives of children. While they got an opportunity to spend more time with their parents and siblings, I worry about children who are exposed to abusive relationships. How would these prolonged times at home have impacted their lives? Will children who never got access to education during the pandemic ever be able to make up for the lost time? How did first-generation learners manage to clear their doubts while being stuck at home? How did the increased time with gadgets and the lack of outdoor activities impact the long-term health of children? I wonder whether we will ever have the full picture? Perhaps we will know a few decades down the line, and then, it will already be too late. It was this feeling of unease and an urge to contribute in some way that had led some of us at the GYA to initiate discussion on the focus area – Education for all. Unfortunately, the group did not generate enough enthusiasm within the GYA that could be sustained through prolonged activities, and efforts were mostly from individuals. Nevertheless, I tried on my own to initiate discussions in different forums and create awareness of the many ways in which access to education might have been impacted during the pandemic. I hope that we will continue to work for a better and brighter future for the children through the GYA.”

“In February 2020, when COVID-19 started to appear as a threat that was getting closer to my state, I decided to work from home more days per week, thinking that this could lower my chances to get infected. Then, in the first week of March, and because I work flexibly, I started to avoid the

peak commuting hours so I would travel in a bus with less people, thinking these were smart and meaningful actions to avoid the disease everyone was fearing so much. No one was thinking about masks back then! I knew my health conditions put me at higher risk of severe disease, so I knew I would do anything possible to avoid getting sick. As a scientist following the literature on this virus and the news from across the world, I realized something big was going to happen, so at home, we stocked up with essentials and medicines, we made different contingency plans for the family, but none of them were accurate for the level of what was coming, and for so many months of isolation. It would be hard to imagine at that time that I would be part of the first wave of infected people in my region. Little I knew when I arrived at the hospital, that it was already at full capacity, with stressed health personnel and with less resources than ever. I was in the emergency room for 10 hours, waiting for an isolation room to be vacated for me so I could be admitted. Despite being severely ill, I was able to notice the lack of personal protective equipment the hospital staff had. That was hard to witness, because even in those conditions, the healthcare personnel helping me showed no signs of fear when coming close to me to support me and comfort me in the most humane way. It was paradoxical to think that in the research labs we had an abundance of masks, gloves, and other protective equipment just dormant as the lockdown had started. I was glad to learn later that researchers in my area had donated everything they had to the COVID-19 response, from protective equipment to reagents for diagnosis.

Everything I heard on the news about this new disease was true, I experienced its severity firsthand. Before that, in the days when I just started with symptoms, I feared I could get sicker, so I rushed to finalize a manuscript I have been working on to submit it for publication. When I noticed I was deteriorating and breathing was harder, I started to back up all my research files and notified colleagues on where to find them to ensure research continuity in the worst-case scenario. I was only able to resume my work months after, and very slowly. I was definitely not ready to work again, but I felt after so long resting in bed, that it would help me to recover and regain strength. Having a routine again would help to distract me from the ongoing and new symptoms I was experiencing. Extreme fatigue, brain fog, sleep issues, smell and taste alterations, inability to focus, persistent shortness of breath, muscle weakness, were just a few of the plethora of new symptoms that were always there since my hospital stay. I had not received proper care

in those months since the healthcare system was so saturated, there was a long queue for all the rehabilitation services, specialists, and imaging. But, how could it be that I had all those symptoms? What could they mean? I started to log them, as a scientist, I felt these observations were important to have, they would have value at some point. I must not be the only one, this could not be psychosomatic, those were repetitive thoughts but back then, no one imagined that we were confronting the next big public health issue. Months later, those symptoms started to have a name: “long COVID”, later called PACS, or post-acute COVID syndrome, but mystery was still all around.

In the meantime, my manuscript was accepted in the first journal that it was submitted to around the time of my hospital stay. I was previously convinced that this was going to be a posthumous publication, so I was in disbelief that I was able to live that happy moment. But at the same time, it felt different, all the experiences lived in those previous months had put everything in perspective, so I felt more clarity on what was important in life. My career is exciting, I enjoy what I do, but my experience motivated me to really have more purpose in what I do, at the personal and at the professional level. I managed to be productive in many projects, with a lot of discipline and support from my family. My new motto was, “If I am going to be on Earth for another day, let’s make it a worthy one!”. My experience was definitely different to what many described to me in 2020-21. Back then, I had no chance to be bored, or anxious about the mobility restrictions, because anyways, my physical health would not allow me to go out or to do many activities. Nor could I pick up new hobbies or kill time in fun ways. I was busy surviving, but as extreme as it was, it was an incredible learning experience, and in that, there is a lot in common with many people, scientists or not, during the pandemic.

Time has passed and long COVID is still with me and with too many others around the globe. I eagerly follow the literature on this new disease - there are still too many questions around it, but now there is definitely more support for patients. I hope scientists get to the root of it and find successful treatments, so the very much desired and talked about since 2020 “go back to normal”, can be a reality for everyone, in the sense that every long hauler can reach their previous and full potential.”

“ Since the spread of the coronavirus in Mongolia, healthcare workers’ human and workplace rights have been constantly violated. As a health professional, I have witnessed many of my former medical school friends look like the picture below. In the picture, the doctor says: “-I’m tired because it’s only been two days since my recovery from COVID-19. In response, the government says: -Don’t make such a fuss; it’s time to get to work!”

The picture is one of the works included in this year’s exhibition entitled “The pandemic and human rights” launched by the collaboration of Amnesty International and local caricaturists to promote human rights education and display related cartoons to the world.



© Цэцэгийн БАЙДЫ / BAIDY Tseveg

Source: Amnesty International Mongolia, The Mongolian Caricaturists’ “Shogch Biir” Association, 2022. Public Domain

<https://amnesty.mn/index.php/2019-06-05-14-51-12/157-resources/online-news/2019-01-02-18-41-40/715-2022-01-27-15-27-56>

After the disease outbreak in the country in November 2020, the working conditions of health workers have started to deteriorate. The workload of health workers has increased dramatically due to the lack of proper allocation of human resources since the first wave of 2021. The isolation strategy exacerbated the shortage of healthcare workers. Initially, clinicians were required to undertake 14 days of quarantine after working with patients in the red zone for 14 days. During the second and third waves of 2021, tertiary hospitals switched back to regular working schedules, albeit it is still not defined how to properly allocate and mobilize human resources in case healthcare workers become infected or relieved from their work. In addition, there are constant social attacks and threats against healthcare workers, such as criticism on lack of prompt response and distrust of testing reliability. Overall, healthcare workers are affected by work under inadequate remuneration and uncertain legal protections.

At the primary healthcare service, physicians experienced heavy workloads and became unable to provide essential primary healthcare. It is reported that a primary care physician should visit 69 households a day in response to the COVID-19 patients. Because there is no separate social and psychological support service for families, primary healthcare providers played an essential role in both specific tasks.

Although the government has repeatedly provided one-time benefits, the legislative act indicating a threefold increase in the basic salary during a pandemic did not take effect. Despite receiving bonuses and overtime pay, the number of patients per doctor was too high, increasing their risk of being infected with COVID-19 and leading to burnout.

However, it was amusing that in the summer of 2021, instead of raising the salaries of health workers adequately, they were awarded medals and chanted praises.

In the picture below, the doctor says:"

"-Salary is not enough for running a livelihood. The authoritative person replies:

-We have praised you more than anyone else in songs and poems!"



Source: Amnesty International Mongolia, The Mongolian Caricaturists' "Shogch Biir" Association, 2022. Public Domain.

<https://amnesty.mn/index.php/2019-06-05-14-51-12/157-resources/online-news/2019-01-02-18-41-40/715-2022-01-27-15-27-56>

Part 2

Professional challenges emerge

“In the second half of the year 2019 I had made an important transition in my scientific career, by accepting a role as a scientific advisor to the government, related to plans for the development of large-scale projects focused on long-term outcomes in educational research and evaluation, as well as teaching initial and continuous education. The COVID-19 pandemic arrived only a few months after, bringing everything to a screeching halt. Resources for long-term projects had to be reassigned for emergency needs. In the field of education, the attention was redirected toward facing the immediate crisis. In terms of my scientific advisory role, during 2020 and 2021, I mostly generated policy briefs, materials, and recommendations aimed to guide, as much as possible, an effective evidence-based response for distance education, and later for a return to the classrooms, so that learning could take place, wellbeing could be prioritized, and inequalities gaps could be addressed.

Developing countries did the best they could, but it was a chaotic situation, particularly where governance systems were not set up for efficiency or evidence-based decision-making. In many cases, specialists and scientists did not have sufficient input, leadership was lacking while distrust grew, and consensus was difficult. Thus, many processes could have been managed better. In terms of education, the documented outcomes undoubtedly show that in Panama we failed our children. It has been immensely frustrating. Ultimately, I transitioned back to my research, but unlike the previous years, there was no collection of data for educational research projects in the schools - the schools were closed and empty for the most part. We managed to collect few and far between information related to the effects of the pandemic itself, but our focus on any other areas of study within education had shifted. Data on what was happening was unduly difficult to access, despite repeated attempts. There was also no time for the usual process of applying for new funding for projects before current projects were finished. Finally, much of the research completed right before the pandemic sat unpublished, as there was no time to sit and write, as we continued to focus more on trying to have a positive impact on the direction of the crisis, than on academic productivity, which took a hit.

In some ways, the first 6 months of the pandemic in 2020 were the hardest, as Panama underwent a total lockdown, and parents tried to work from home, while also being teachers to their children. The end of an

in-person social life, at a time of such uncertainty and widespread fear, was emotionally difficult. As an immune-compromised individual, the awareness of the fragility of our lives was a daily presence difficult to bear. At the same time, I realized it was a spiritual opportunity. The lockdown was a time in which a daily meditation practice was essential in our family. I was also blessed that Panama had access to vaccines, and an early-access program for vulnerable populations - which I was enraged to know many of my colleagues in other regions of the world did not have access to. While the full lockdown was slowly transitioned out, in Panama, schooling continued to be virtual, and many of us continued to work remotely well into 2021 and even faced our own emotionally difficult isolation again in early 2022 when Omicron hit us despite vaccination, masking, and care. Looking back, I felt blessed for the additional time I was able to spend with my children, especially given their young ages. Nonetheless, as a woman, I recognize how this care work fell mostly on me, as it did on most mothers, which generates a disparity in the personal and professional consequences.

Nowadays, there is still much work of rebuilding left. We will need to address the widening educational inequality gap in our country, generated by the disparate access to distance and in-person education during the 2020 and 2021 school years. The gender gap has also been widened, as some of the ground women had gained in many aspects was lost. Finally, disparate access to health and resources within and between countries was exemplified by an atrociously unequal vaccine rollout. I sincerely hope that we can look back in order to look forward, and plan ahead so that in the future, such differences never again are allowed to impact an entire generation in such unequal terms as it has ours. When the pandemic arrived, women in Panama were already dedicating more than double the hours to caring for the family and the home than men; and only a third as many households with children in public schools than households with children in private schools had computers at home. The COVID-19 pandemic has been such an indescribable tragedy, that it is difficult to highlight any silver linings. However, may it at least have served to shine a light on the consequences of the inequalities we allow to persist in our societies, so that we may now focus on closing the gaps.”

“COVID-19 had a significant effect on my professional life in a diverse manner. I suddenly lost the weekly physical meeting with my students, which made it extremely difficult to keep track of their research progress. The pandemic also made it difficult to follow up on the progress of the students, as everyone was facing challenges that came with the sudden global lockdown. I also felt it would be insensitive on my part if I continuously push for their work despite the difficult conditions that were prevailing globally.

In terms of my research, fieldwork came to a standstill as it was not possible to engage with the participants during the pandemic. One of the focal points of my research entails engaging with diverse people from local communities to document their indigenous knowledge on local flora used for health and related issues. For almost a year, it was impossible to conduct any field survey, which translated to no data. To make up for this, I had to quickly re-focus my attention on developing extensive systematic reviews on different aspects of my research. Interestingly, these resulted in several review articles that were published in high-impact journals in my field.

I also missed physical conferences, which over the years have allowed me to expand my network. In as much as the virtual platform was available, the experience was not the same and internet connection can be a nightmare.

Even though different aspects of my life were affected, I was mostly worried about my partner, who as a medical doctor was in the forefront of the fight against COVID-19. Given that my partner was always at work, I struggled to take care of my 3-year-old daughter and work at the same time.

I struggled to maintain my sanity whenever I watched the update on TV. This is because of depressing updates on the high rate of deaths and other challenges that are being experienced across the world, which often become extremely overwhelming. The hard lockdown was depressing when I realized how many people lost their source of income and struggled to make ends meet.

In order not to be overwhelmed, I had short-term goals rather than long-term goals. I also ensured that I spent quality time reflecting on and assessing my progress. For example, I have a ‘To Do List’ daily which I reflect on at the end of the day. Seeing that I achieved my short-term targets gave me some level of fulfillment. Taking breaks in between my work was a very important strategy.

I also reduced the amount of time I watched news channels in order to get inspiration and remain motivated about life. I started a home-based exercise

schedule, which was a means of keeping my mind and body in shape.

The pandemic provided me with the opportunity to spend quality time with my little daughter. It gave me the opportunity to watch all her favorite cartoons. Ideally, such an opportunity will not be possible in the absence of the lockdown. The time I spent with my daughter was highly valuable, and I cannot trade this for anything.

Message to the future: Spending less time watching the news is one strategy that I would strongly recommend. This is essential because a lot of time was spent worrying and in fear, which also drains one emotionally.

The pandemic provided me with time to have a deep reflection on several aspects of my life. It was an opportunity to take stock and appreciate the importance of family. I became more aware of the value of life and the need to be appreciative of people while they were still alive. It also gives me a different dimension of how fragile and interconnected we are as humans.”

“The pandemic has definitely affected my professional life. As an academic, my work revolves around students. In-person interaction with students is a major component of the way we conduct classes. My research group also works the same way. While the teaching and research fraternity across geographies adapted to the online mode during the pandemic, my hope is that the students were able to assimilate the course material without much difficulty – that is something that could be a research area in itself.

While the pandemic allowed families to spend more time together, the entire period has had its own kinds of stresses. Work-life balance was tested to the hilt. Working hours – which, in the pre-pandemic era, were limited to the time one spent in one’s office – extended well-beyond office hours. This created its own set of challenges in the interpersonal relations in families. So, in my opinion, work-from-home really meant ‘working all day at home’. It took time to get into the groove of work-from-home. Over a period of time, the strategy that I adopted was to stick to clearly defined working hours (for office work!). This brought back some balance and eased off the stress to a great extent.

The silver lining is that all of us were able to appreciate the advantages of digital connectivity. As we move back to our ‘normal’ work schedules, we will be able to use technology to be more productive, not only at our respective workplaces but also in our homes.

I think the pandemic was a great eye-opener for the global community at large. While things like masks were a great savior, their very disposal is turning out to be a major environmental challenge. Maybe, the disposal of masks and other such materials could have been thought-out from the very beginning. But again, on the overall scale, I would give credit to all the stakeholders who managed this crisis to the best of their abilities. Humanity emerged as a winner. Of course (and hopefully so!), humbled and, going forward, sensitive toward the environment.

Keeping aside the above discussions, it was mentally very disturbing to see how people from different economic strata were affected – there were many who struggled for the basic needs in life, and have still not been able to recover from the economic crisis in their lives. The other thing that is still very disturbing is children losing both their parents. I think that this pandemic has taught us many lessons in different ways and showed us the true value of life!

The fight is still on as the pandemic has not yet ended, and we need to be ready for the new challenges we face as humanity.”“The COVID-19 pandemic came at a time when I was preparing for my Ph.D. graduation. I had booked my return flight ticket, and everything about the graduation had been concluded. Suddenly, I got an email from my University that the graduation ceremony had been postponed. That was the beginning of my experience with lockdown and working from home.

I would say, the lockdown was more of a blessing to my research activities than a setback. Before the lockdown, I had lots of datasets from my Ph.D. thesis that were yet to be analyzed and were not turned into research papers. I used that period of lockdown to work on these data and write them up. In my very short time in academia, I would say I was more productive during that time in terms of churning out research papers than at any other time. However, in terms of data acquisition and other professional advancements, the lockdown affected me greatly. From the lockdown period till this moment, I have not been able to acquire more data for my research. Also, I had wanted to go for a postdoctoral fellowship in Australia but because of the issue surrounding the COVID-19 pandemic and the lockdown, I could not go for the fellowship. I had been accepted by my host, and developed a project proposal with my host, and all of a sudden Australia came up with tough immigration restrictions for foreigners because of the rate the SARS-Cov-2 virus was mutating.

Further, during the pandemic, I was forced to be indoors with my family, which also has its own advantages and disadvantages. One of the advantages of the pandemic was that I was able to bond more with my family, while one of the disadvantages was that I had to spend more money on electricity and other social amenities. For instance, I would have to work most of the time all day on my laptop analyzing data and writing research papers, but the power situation in my country is nothing to write home about. So, I would say the pandemic affected my savings seriously, as I have to purchase fuel for my power-generating set to enable me to do work effectively.

In fighting some of the challenges faced with power coupled with the financial burden that comes with sourcing for alternative power supply, I had to devise means of always working more when there is power, and

had to work something in the early hours of the day when others are sleeping and having their rest, as the early hours of the day are usually when the power supply is regular in my country.

In my view, to forestall the setbacks brought about by the pandemic during the lockdown, appropriate measures should be taken to avoid such a crisis. Organizations should prepare for unforeseen circumstances such as the pandemic by arranging for alternatives for the physical office spaces, and also make provisions for incentives for their employees to cushion the effect of excessive expenses that come with situations like the pandemic. For the individuals, we should always be several steps ahead of situations like this, as I did by turning the pandemic time into more research output production time.”

“ The pandemic affected my professional life because it significantly reduced traveling and made all the meetings virtual. I was traveling within and outside the country for data collection, academic meetings, and conferences. When I did not travel, it increased my time at the office to focus on research and education, but it became more difficult to build new relationships and networks.

As I have been in the fieldwork in global health for more than 10 years and have been using ICT⁵ for data collection before COVID-19 started, difficulty in traveling itself did not affect my research. We asked local collaborators to go to the site and collect the data. One thing that affected my professional life the most, as I am in the nursing department, was that arrangement of students for clinical practicum or classroom practicum took a lot of time. As the number of COVID-19 patients increased, we needed to change the plan, prepare for a new plan, and implement it safely. So, repetition of this adjustment decreased the time I could use for research.

COVID-19 started when I moved to a new position at a university. So, in the beginning, I was alone and built a lab by myself. As I received graduate students from the next semester, they proceeded with research with my instructions. An assistant professor joined the next year as well, and we could share teaching responsibilities and research tasks. As we became a team, research work moved forward.

⁵ICT: Information and communication technologies.

I like the African proverb, “If you want to go fast, go alone. If you want to go far, go together”. I feel it is true in my case. I cannot do everything alone as I am conducting research in global health and have responsibilities in teaching and administration. With others who share responsibilities and research goals, we can move further.

I cannot imagine how I could do better in this unexpected pandemic. For my personal life, I could have asked for more help as I was pregnant and had a baby, but there was always a worry about infection if I asked someone to help at home. So, try as best as you can, share ideas with others, and move forward with them.

Other aspects? When we really fear infection, ICT always helps to talk with people without actually seeing them. But there is something missing if we only use online meetings. We need to articulate what exactly we are missing and consider a better way.”

“ As the world was grappling with the tragedy of the COVID-19 pandemic, Cameroon as well as many other affected countries reacted differently according to their exposure to credible information, lifestyles, gender, season, profession, etc.

From my perspective, it affected my daily life and work as a scientist. Networking has been invaluable to me as a researcher. Through virtual meetings, consulting, conferences, and workshops, I was able to discuss, share my opinion, and develop the project with people from different institutions and disciplines in my country as well as around the globe. I was able to attend at a minimal cost or for free very important courses and conferences. I had and still have access to more online meetings, at fairly affordable rates compared to the cost of any flight ticket and lodging, whether by road or by air, to these events. I have also been invited as a speaker to many events. This has improved my knowledge and built my skills and ability on topics related to COVID-19 as well as other cutting-edge topics. Even if science today is more global and increasingly collaborative, and even though the use of the internet has allowed us to narrow or break through the digital boundaries, it is still not the same as it remains hard to have the same ambiance and environment as in-person meet-

ings vis-a-vis virtual meetings.

I have gotten to learn and developed more interest in open science with all its components and was part of a joint publication with other GYA members entitled “Open Science for whom?”, published on open access source which gives room for more visibility and opportunity for collaboration.

Being one of the leaders of the laboratory of botany and traditional medicine at my Institute has impacted my work in different ways. Lab meetings were reduced to the minimum and even canceled, except in cases of emergency where we organized online meetings. The priorities of the Cameroon Government were to fight against this pandemic and with the Institute being one of the main public research institutions to address health problems of the population with regard to traditional medicine, some research activities were put on hold to focus on research of immediate importance and related to finding local solutions to COVID-19 pandemic.

As the president of the Cameroon Academy of Young Scientists (CAYS), we were able to organize virtual meetings over a period of 14 months on 15 cross-cutting subjects for young scientists and decision-makers at low cost with more audience and in collaboration with several research institutes, countries, and disciplines. We had positive feedback from those experiences.

The evidence suggests that the coronavirus pandemic impact will seriously spread across African countries due to the rapid method of transmission with little public safety net. There was then a fear, a psychosis around coronavirus in spite of the lower number of cases encountered in Cameroon and little or poor awareness of the reality and virulence of the virus. This was acute when there were positive cases around whether in the family, at work, or maybe the increase in lethal cases as reported by news outlets globally, especially in North America and Europe. This affected gatherings be it family, sociocultural or political or religious in nature. As a Christian, the pandemic affected my religious life because some churches were closed and there was this warmth of being together to worship and fellowship that was a hindrance to many.

The pandemic had its advantages and disadvantages, but in general the most difficult was participation in virtual meetings. As Head of the Service at the Division of Research and Promotion with over 200 personnel,

scientific engagements were minimal or virtual, adhering to the Government's prescriptions of gatherings of not more than 50 people.

The main challenges were the slowdown of activities interrelated with other aspects affected by COVID-19: difficulty to receive shipped materials for lab work; change in the focus of the main research axes with a priority on COVID-19; low bandwidth making it difficult to follow online meetings, conferences, workshops; at the institutional level, there is no adequate platform; and the fear to be infected as the number of cases increases worldwide.

The most damaging effect of the crisis is visible in the short term but it will even be more visible in the longer run. COVID-19 had greatly affected my life as a scientist, and changed the work environment, but on the other hand, offered new opportunities for local and international cooperation and e-learning for my research team and institute. Future plans include working on putting a disaster management plan in place to be tweaked and adaptable to the new challenges, choosing which skills I wish to improve and focus upon while planning online meetings around work to maintain a work-life balance and improved information infrastructure for better connectivity.

A silver lining from my perspective is that I integrate these new habits in my present and future career plan in such a way that after COVID-19, I continue or improve it.”

Part 3
*Dealing with science and
personal life*

“A week before the official lockdown began, my partner and I made the decision to take our five children out of school and nursery; they were 2, 4, 9, 13 and 16 years old. Our eldest has complex disabilities and was sitting his final year exams; all his additional support was stopped. Our four-year-old was assessed and received an autism diagnosis during lockdown. My partner is a primary school teacher who was able to work at home during the first lockdown. I am a Reader in Sociology and Social Policy and work full time. Life, which is complicated for my family at the best of times, became even more so in March 2020.

We live in Glasgow, Scotland, and are lucky enough to have a small garden, which is where the 2 and the 4-year-old spent much of the first lockdown. However, we do not have any workspaces in our home. After a week of stress trying to manage everything and achieving nothing, we created a rotation where my partner worked 9-11 and 1-3 and I worked 11-1 and 3-5. The rest of the time we looked after the children and helped the older kids manage online schooling. We worked by balancing our laptops on our knees on our double bed with the bedroom door closed. Some days, I would just sit there for a while to try and reconnect with my own thoughts. Every day was a whirlwind.

My immediate line manager was very accommodating and told me to just do what I could. I learned to prioritize my time; any meetings I had I organized for when I was looking after the children, so they could play in the background. I ‘saved’ my work time for when I needed to be able to think or concentrate. It was important for me that my colleagues saw what I was dealing with. Many of my colleagues, particularly the older men, were relishing the lack of commutes and having more time to write, whilst sitting in their book-lined, quiet office spaces. Their situations were a world away from the chaos in my home.

Having five children during this time felt like a lot. They all had different and competing needs, and I worried about each of them. We made the decision that the younger three should just play and that the 9-year-old could do schoolwork if she chose to. I bought her lots of books and arts and crafts materials; she was happy in her room using my phone to sit with her friends on FaceTime in the background, so she could paint and chat in a social virtual space.

Our 13-year-old and I did coaching for 5k, a ten-week running program. We went out three times a week at 7:30 am. We did this as I was worried about his

mental health as a teenager restricted to his home for the first time in his life. I enjoyed these runs and as a result felt physically and mentally much stronger. We also sat with him at night and watched box sets – Game of Thrones, Breaking Bad and other shows that wouldn't have been allowed as solo watching - so we could have an hour with him watching TV, which also gave him the opportunity to chat about his day. We still do this now, almost three years later.

Our 16-year-old needed lots of support for his exams, so my weekends were dedicated to that. I read everything from his courses and relayed it back in a way that he could understand to be able to complete the coursework and prep the exams. My professional teaching skills came into play here, but my patience was tested, even though I enjoyed feminist poetry. Eventually, legislation was introduced that allowed those with ASN⁶ to travel further and stay out of the house for longer. He was able to go out on his electric scooter taking photos, which helped calm his mind and kept him out of the house – as being shut in really stressed him out. The photographs he took during this period have since garnered national acclaim and won prizes.

As the lockdown wore on, at work we were told to prioritize teaching and student mental health, which I did. I had little headspace or time to think about my own writing or research activities anyway. During the second lockdown, my partner was required to go into work, but I still had to have the children at home, so I did very little of my own work and ended up having two months on sick leave as I was diagnosed as exhausted.

Overall, in terms of my work, there were a few things that saw me through. Ironically, I received a large research grant. I was then part of a research team that met online every Friday, and we created a network of support and inspiration. I came to look forward to Fridays at 9 am when we would have a catch-up in our virtual research space and then get on with the work. Being the Principal Investigator meant that I was able to delegate work, which took the pressure off me, at least initially. My pre-existing research group was another aspect of my job from which I drew solace. Two months before lockdown I had created a Gender Research Group and I moved this to an online group; we met weekly for writing retreats, and we organized a series of seminars from academics around the UK on the topic of gender which were intellectually stimulating and provided a much-needed break from my lockdown chaos.”

⁶ASN: *Additional support needs*

“Starting from the first day of the COVID-19 pandemic lockdown in March 2020, there was tremendous change and adaptations in my life as a part-time researcher with two small kindergarten-age children at the time. Being 24/7 available for two energetic children on my own was definitely challenging. Usually, we would have help from my parents-in-law, but due to the infection risk, we avoided that. At exactly the same time, my husband’s workload had doubled and he was working day and night, meaning that he could not help with any of the childcare throughout the whole year or two. My memories during the time of the first complete closure of the kindergarten were fragmented. My days were intense from the moment the children woke up to eat breakfast until they finally slept at night.

In the first week, due to the infection risk, my husband was concerned and felt that we should all stay home, but this proved to be even more challenging. The home became a mess with toys everywhere, and usually, I am a person who cannot stand being in the same place all day long (how different I am now, after two years in the pandemic, that I stay home happily to work and do leisure activities all week long without any trouble). From the second week of the lockdown onwards, I took the children outside and this was also challenging as the playgrounds were closed due to the strict measures. Parents and children were gathering opposite the playground instead, where there are green park spaces (which were strangely enough not sealed off, but the playgrounds were). We frequently went to a park near the river and I vividly remember the thoughts I had at this time “how long would this pandemic situation last?” and I photographed my children playing happily at this park.

If I remember correctly, the kindergarten reopened in June with shortened hours. I spent this time recovering from the exhaustion, stress, and anxiety of contracting the virus. In July, the kindergarten closed again for two weeks for its normal summer period. Needless to say, from March until August 2020, my work productivity severely decreased in the sense that I barely had any energy or time to do any research work in such circumstances, trying to keep my children and myself mentally and physically healthy. On a positive note, I did enjoy spending a lot of time together with my children and their friendship grew much stronger as well, as they only had each other to play with. The lockdown finally ended, and my oldest child started school after the summer holiday.

As a female researcher with childcare responsibilities, I was able to obtain funding from the university for a research assistant, who helped me significantly with data acquisition, which supported my research productivity. Due to a significant number of conferences/workshops being accessible and free online, I took great advantage of these, and listened to and participated in as many interesting and relevant resourceful events as possible. I was delighted that I could access these remotely, as in the recent past, I have not wanted to travel, and it was not possible/easy to travel to international conferences, or even commute to places nationally. I was also so grateful that the connectivity to these events was excellent and functioned so well, which was often problematic for some online events prior to the pandemic, and I was often frustrated that I could never access them remotely!

The most challenging part was finding structure in the day, especially when I had to plan activities for my children at the beginning. I also found it very difficult staying home and looking at the computer the whole day, especially in Zoom meetings. My eyes became dry, and I started having headaches after frequently looking at the computer. I realized a holiday away was definitely necessary, and we managed to go away in 2021 after my husband and I had 2 vaccination shots. We were so relieved just to be somewhere else and looking at other scenery. Upon return, I decided to go out every morning for a language class and I found that when I got home after the class, I had much more motivation and was much more productive in spending a few hours doing my part-time research alone. At this point, I needed to have interesting in-person social discussions with a teacher and classmates, not only online or alone activities on the computer. It was also important for me to improve in speaking the local language and I took the course, which satisfied my needs in many different ways.

For me, personally, the situation in the pandemic was a winding journey, requiring different coping mechanisms at different points, and this also led to much self-discovery along the way. I mastered several skills, for example, looking after my small children for long periods of time without breaks, and simultaneously planning and managing my workload, keeping calm in a stressful situation for several consecutive months, and prioritizing tasks based on their urgency. The silver lining is that as a result, I gained exceptional time management, problem-solving, leadership, maintaining work-life balance, and negotiation skills as well as many other skills.

We recently went back to the same park near the river that we often went to, and my thoughts back at that time filled my consciousness as we entered the park. It was a very nostalgic moment as I realize that it has been exactly two years since we were last at this spot and the same question still has no concrete answer to it. I photographed my children again and compared these photos with the old ones from two years ago. The pandemic is still not over, but I am very grateful to see how much these happy children have grown and how privileged we are in this part of the world, and how our livelihoods have not been severely impacted as in many other unfortunate cases around the world.”

“ Since the Covid-19 pandemic hit us back at the end of the fourth quarter (Q4) of the year 2019, my life has changed in all aspects and dimensions - be it professionally, personally, socially, family-wise, etc. In terms of a professional perspective, I believe all academics experienced more or less the same changes in conducting classes, examinations, Ph.D. or M.Sc. thesis presentations, audits, meetings, conferences, etc. All have been switched to online platforms rather than physical ones. Such changes do have advantages and disadvantages. The good things about having online-based events are 1) they can be conducted anytime and anywhere that they are based, at the time of the event, 2) it saves a lot of our resources (money, time, energy, commitment for traveling), 3) we can be in different events (even though not fully present) at one time in case we are needed at different occasions, 4) we can be an invited speaker, etc. for any conference in any part of the world as no costs are involved 5) same goes for us as organizers, in that we can invite examiners, speakers, panels, experts from any part of the globe who can benefit or support our research group, classes or event. But the drawbacks of not having a physical type of event are, eventually, that we lose that ‘human connection’ with our peers, students, networks, etc. For me, I believe that no matter how great technology is, it can never replace the special essence and vibe that one may experience from having face-to-face events or sessions.

Personally, the biggest challenge that I encountered due to the outbreak of the pandemic, especially during the period of the home quarantine (movement control order - MCO) was that related to the needs for our

kids to be homeschooled. The challenges of homeschooling not only include providing electronic devices for learning, but most importantly, spending quality time supervising and assisting our children with their schoolwork. For parents working full-time, this is quite frustrating, as we want to do our best to help, but at the same time, we have our own work and deadlines to meet. Being an academic can be advantageous as we work flexibly. But on the other hand, work can often become without limit – it comes in anytime, on any day - including nighttime and weekend.

At first, I tried so hard to keep up with the schedules given by my children's teachers – that is, to help my children with their learning and schoolwork during the daytime and return it to the teacher right away. But then I realized, this simply didn't work for me – especially when I had a hectic day. So, I asked the teachers to allow us to submit school work during the weekend, as I have much more time then. Of course, the teachers understand parents' time constraints, but it is challenging for them to be flexible as well.

Overall, looking back at the past two and half years being in occasional MCO - restricted from traveling even to our own hometown to visit our parents, unable to travel for work-related matters, kids need to be homeschooled, even going to do groceries were constrained to be within certain times only (cafes, shops, etc. were closed way earlier than before the pandemic era), the experiences have surely helped me a lot to develop and grow myself to be a better person. Now I understand better the meaning of how certain things in life are beyond our control. Some things in life are unpredictable, but what is most important is how we should react to those incoming things in our life. In my case, proper planning and discussions with my spouse on how to handle family and our own work-related matters, play a significant role in helping us to go through the pandemic era calmly and at the same time continue to do our routine the best that we could within the resources and capacity that we have under such circumstances.”

“I can still vividly remember that we sat in front of the television to watch our Prime Minister announce the Movement Control Order (MCO) that would start on 18th March 2020 due to the rising cases of COVID-19 in our country. Our university quickly responded to the order by announcing a new working mode, which is Work from Home (WFH). It was an alien mode for us who have to slide in our attendance at the campus every day for work during weekdays. All schools were closed, and all classes were to be conducted online via the Emergency Response Teaching mode. The first thing that came into my mind was how to organize my three young children aged between 3-7 years old while juggling with work at home. I was only appointed to the Chair of the School of Education less than two months ago! I have to look after my family while working, look after about 2000 students who were living in the campus accommodation but in panic mode due to the MCO and organize my staff, both the faculty members and supporting staff. I didn't have the experience of leading that many people in my life before.

In the first week of MCO, there were a lot of urgent online meetings at the university management level to discuss the best mode for teaching and assessment, and also supporting activities to train our faculty members to cope with the 100% online teaching and assessment. Not only training must be given to them, but also technical support because some of them were not that technologically savvy to teach online, some even rejected online teaching. We were asked to monitor the new mode of teaching for the faculty members and students. We had to check if the students had the devices and internet to join the classes online. A few weeks later, the MCO was extended. Our students who were stuck in campus started to experience emotional struggle, but they were not allowed to go home. Emotional and psychological support programs were designed and organized to help them virtually.

Although the planning, discussion, and running of all the above programs were done online at home, I was also looking after my children, taking care of their online learning, and of course, doing house chores. I was sharing these with my husband at home, who is ever supportive. All the meetings for me were conducted using my mobile phone attached to an earphone. I would run around the house to cook, to arrange my children's online learning, chase after my children when they quarreled with each other and clean the house while listening to the discussions of the work meetings through the earphone. So much for multitasking! My dining table near the living room became my workspace because I had to ensure that my children were within my sight while I was working.

It was super difficult in the beginning. However, after a few weeks, all of us quickly adapted to WFH and MCO. We started to take advantage of WFH to organize more family activities. I could ensure that my 7-year-old son completed the basic recitation of the *Qur*anic Arabic and started to recite the *Qur*an during MCO. In less than 2 years, he has completed reciting the whole *Qur*an. I also started the basic Mandarin lesson for my 5-year-old daughter which proved to be useful when she started primary school this year. I also was able to take some time out once a month to give Islamic talks online, and later organized a weekly *Qur*anic class through online learning.

As the university continued to support online teaching, learning, and working, the digital tools were greatly improved. We were provided with unlimited cloud storage, unlimited internet data plans, business packages of a few types of video conferencing applications, and other support to ensure that we could work efficiently at home. Some of our students were given devices and data plans to ensure that they could learn remotely.

In terms of research, almost all our research work was suspended. We were given an extension to all our research projects until we were allowed to travel and carry out the research after the MCO was lifted. However, it was too long to wait for the MCO to be lifted. We proceeded to change the research methods and tried to achieve as close as we could to the original research objectives. Negotiations with the funders were made to modify the research outputs and timelines. It was a difficult time, but everyone was surprisingly very understanding, allowing flexibility. We could still complete the research projects by compromising a few things here and there.

During the pandemic, we can choose to be negative and only focus on the obstacles, or we can actually choose to take in everything positively, be thankful that we were not infected by COVID-19, and that we still have each other at home. To me understanding that all creatures are created by God, including the viruses, I know that all these are tests to prepare us to be God's worthy servants. There must be reasons behind all these that we may not be able to foresee. We need to tread the path carefully in this life with patience and gratitude, endure the tests, and make ourselves better persons until the day we meet our Lord.

Collectively as humans, we have learned to take care of each other during this trying time. People are more considerate and have a better understanding of the roles of women at work and working at home. We wear masks, take vaccines, and limit our movement during festive seasons, although we were dying to get

together because we care for each other. We learn to take care of our colleagues' family members when our colleagues or one of their family members were infected by COVID-19. Again, it was not easy, but it was fulfilling. Hopefully, the COVID-19 pandemic has prepared us to stand up to any other challenges in the future, as a species."

“I think the pandemic had its pros and cons on humanity and all of us, where we know quite well what we really had, where we were able to evaluate advantages of normal life more than its disadvantages. It was obvious that humans needed to take rest and how precious it is, the normal, or living outside the borders of health regulations and movement restrictions; even meeting people or just walking or going to the supermarket was restricted. I think I began to rediscover myself after years of running to achieve previously planned goals, to raise children, to manage with plans, duties, and endless tasks. Forced, as families, humans, and even researchers to take a rest.

As a woman scientist and mother, I had an extra burden to help my girls adapt to the new situation and to accept staying at home for days to attend lessons online and not to meet friends or family members. It was a complete prison for them, not only a lockdown, and my mission was really hard. Additionally, my research work stopped, and planned travels and activities were canceled, and I began to think how to overcome that really bad period. I realized that I had to accept the facts and the situation to start dealing actively with it. So, on a personal level, I found it a very good chance to be closer to family to support them in these hard times away from busy schedules and daily routines which pressured us sometimes away from family commitments and gatherings, so, it was a chance for more interaction and talking where I thought that new stronger relations formed during those hard times.

On the professional level, I tried to think outside of the box, transforming several activities to online ones, where I think technology has two dimensions as it increases the chances of remote activities and interactions but, on the other level, I think it doesn't have a similar effect of in-person meetings and activities. In general, technology decreased the bad consequences of COVID-19, as it connected the people and the world at those hard times. Also, I wrote and continued writing several papers which I had no time before to achieve or complete. Additionally, I wrote several articles and made interviews about my point of view on COVID-19. Also, I started a regular activity called Saturday science

webinars about the challenges facing humanity in the age of COVID-19 and beyond, to pay attention to all stakeholders about the current global problems and the suggested solutions.

I think generally, that the world will not return to its form as before COVID-19. The discrepancy between the abilities of countries to cope with the crises became really obvious and I think the new classification of countries will depend on knowledge ownership and how to harness sciences to impact and serve the society in emergency time. So, I wrote an article in the World Economic Forum as my message to global leaders, as a scientist from a developing country, to pay attention to the fact that it is a right and urgent time to increase international collaboration more than before on a scientific basis to solve humanity's problems, which appeared thoroughly during COVID-19 including health problems, saving clean water, energy, environment, etc. with real actions, not only with agreements and statements. Briefly, we have to be prepared that nature will not stop at COVID-19 where it gives us new chances to be prepared for the next pandemic or crisis but as one globe, not as individuals.”

Part 4

*COVID-19: A boost for
researchers' professional life*

“I must admit that I have been very lucky in the midst of the pandemic. Until now, neither I nor my closest family has been infected by the virus. Other members of my family have suffered from mild versions of the disease. At the same time, I have close friends who have suffered very painful losses.

Apart from not even being infected, my career has been boosted in the last two years. Since I don't do scientific laboratory research, I was able to transition to working from home during the lockdowns. I was even as or even more productive than working from the Institute. At the same time, I have close acquaintances who have had to close their livelihoods or have lost their jobs.

Also, during the lockdowns, I took advantage of my free time to communicate science amid so much uncertainty. Most importantly, at home, we create quality family time in the midst of adversity. At the same time, I know from loved ones that social isolation has led to serious mental health problems.

For me, the most difficult thing to manage during the pandemic was communicating uncertainties. As a life science professional, members of my family and community looked to me for answers. They expected optimistic answers or when we were going to reach a “normal” life again. I had to figure out how to do a good job in the role of “my trusted scientist”. It was not easy at all.

It may seem paradoxical, but my message of hope is that this will happen again. So let's make the most of each day to leave a legacy. Looking to the future, I am confident that this traumatic experience is a learning curve that will be very useful for the next global health crisis. I am confident that the next pandemic will be managed better.

It is crucial, however, to reduce the gap in access to medicines between rich and poor countries. Apart from personal and family misfortunes everywhere (or the opposite in my case), the increase in global inequality in this regard has been very sad and unfair.

Scientists as sources of information for policymakers, decision-makers, or diplomatic delegations will be in high demand. Early-career researchers, go and prepare yourself.”

“In the beginning, during the first six months of the pandemic (March-September 2020), it was a harsh time with lots of uncertainties. Living in the pandemic, by means of the de facto rhythms imposed by COVID-19, was difficult to understand. Time constraints for making some activities marked the pace of our quotidian life at that time. Nevertheless, when we finally understood some mechanisms of the virus; actually when we were informed about it, it was possible to arrange our personal and professional lives. Then, for example, schooling at distance was more feasible to carry out (although it was a difficult, if not extremely difficult, task) and the writing process of lagged papers was taking a, let's say, normal way. Certainly, data acquisition was null, as going to do fieldwork was impossible, but the writing was another story. Never in my professional time have I had so much time for writing than during the year 2021. I concentrated on working with already collected data, and it ended as an excellent task.

In my opinion, social life was the most difficult challenge. Contacting people in the lines of the supermarket was likely the most relevant social moment during so many months. Even the fact that virtuality filled such an interactive gap, we are human beings and online meetings did not substitute for humanity. In any case, we learned about flexibility, plasticity, and a lot of empathy with others.

The best way for coping with the pandemic was to (positively) adapt to it. How? Well, by taking advantage of it. On one side, by being more meticulous to timing and activity hours, and on the other, by exploring activities that under in-person schemas would be impossible to carry out (such as courses based abroad).

Being at home for long periods of time was great. I have a much more social life with my family (going to the park with my daughter every day or making sure of dining together).

An aspect that must be reflected on is that women took most of the roles in making it possible to overcome the pandemic (i.e. homeschooling). Even though men cooperated, this is an issue that must be reflected on in order to be able to confront potential future pandemics. As a take-home message: be careful as a rule regarding health, but, paradoxically, also being flexible allows surpassing these circumstances.”

“Most people see the pandemic as a way it has affected our normal routine, but I take it as a way that united people from all over the world. This is not just a realization of how interconnected we are, but also it is a wake-up call for all of us to stay united. As a Chief Research Officer at Nepal Health Research Council (NHRC), Government of Nepal, my responsibility is to advise the Government of Nepal through the generation of evidence for evidence-informed decision-making to address any public health problems such as COVID-19. Nepal reported the first case of COVID-19 on 23 January 2020 and then Nepal increased its surveillance and activated health emergency and operating centers. Nepal also activated the Incident Command System a few months after the first case report. Whether or not the pandemic restricts my mobility, research must keep going, and this has been some of the ways that the pandemic affected my professional life. I found that the limitation to travel and the risk of meeting in person somehow segregated us into our living space. I found this time a way to self-reflect on my journey. Despite sealed off hospitals and closure of many public institutions, we opened our office and continued networking and collaboration on COVID-19 publishing National Guidelines on Evidence Generation on COVID-19. The COVID-19 pandemic actually provided an opportunity to conduct several clinical trials on drugs and vaccines in Nepal. Furthermore, COVID-19 created avenues for open science with open access to all COVID-19 publications as well as the opportunity to join several conferences and meet virtually.

I worked closely with policymakers of the Ministry of Health and Population, Province Government, and Local Governments, and many thanks to the federal Government for nominating me to different expert committees to work on COVID-19. Working as a research scientist, I cannot let go of things that relate to the environment and public health. I listen to young minds and share my understanding of global issues that could be solved as a team. Even though we could not meet in person for most of the days, we remained updated with Zoom and other virtual meeting platforms, which also taught us to adopt new technology. That early morning virtual meeting with my colleagues and friends from other countries was a whole different vibe. My favorite part of the day was when I got involved in working virtually with young research scientists at NHRC. The feeling of service above self is immense, and this makes me happy as an individual. I am proud to witness the Nepali health research scientist community thrive and there is enough proof to show the increasing graph of environmental health research publications from Nepal.

To gather international perspectives, I coordinated an international event on “Science Advice and Diplomacy in the Battle against COVID-19” on 21 January in collaboration with INGSA⁷ Asia. I coordinated several webinars such as projections on COVID-19 which helped to develop the COVID-19 response plan of the Government of Nepal. We could continue our research on both COVID-19 and non-COVID during this pandemic.

Despite a burgeoning effect on the health system at the time of the COVID-19 pandemic in Nepal, it enabled the research community at NHRC to explore various domains of health research that helped the Ministry of Health and Population (MOHP) in making and implementing policies for the benefit of the public. I was worried about whether Nepal could deliver the vaccine and its rollout in tough geographical conditions. It also surprised me that Nepal vaccinated more than 70% of its population in the shortest span in the whole of South Asian countries. For advocating the timely availability of COVID-19, our team wrote several articles and blogs on the COVID-19 vaccine and equity.

Spending time with my two loving kids and wife every day after work always made me think twice on what unfolds in the future? Are you done with this pandemic? Is our health system resilient enough to tackle the upcoming challenges? I answer to myself sometimes, and I always find a way to learn and give back to the community through findings of research that could generate evidence for the upcoming generation to tackle. The big lesson for me after witnessing this pandemic is that there is always a way to solve challenges no matter what, and we will learn to be part of it. Finally, though COVID-19 affected my daily life and time with my family, it provided me with a big opportunity to serve the nation in a time of emergency and increase research capacity in the country.”

⁷INGSA: *International Network for Government Science Advice.*

“During the pandemic, we worked online. Actually, quarantine had advantages and disadvantages for me. First of all, being at home, I could focus on all my data from the past 10 years and write manuscripts. Because in the lab, we conduct research and take little time to analyze and write our results, I published many articles.

The disadvantages were that we were socially isolated, and I could only interact with friends through Zoom and other platforms. Since I was used to traveling a lot, my activities were almost stopped. I missed interactions with my colleagues and scientists.

I am a scientist, thus our experiments almost terminated during the pandemic, which affected my research productivity. Another difficulty was with sports activities outside. We were isolated in our rooms, and it affected my psychological behavior as well. Moreover, I also got COVID-19 infection and got treatment for several months.

The pandemic opened for me a new scientific topic, human nutrition, and diets. I got an online course and studied for two years on healthy nutrition and social rehabilitation. I even received a certificate. Reading and studying helped us to overcome these days. My family members were also busy with reading, painting, gaming, etc. I made myself busy with many webinars and international conferences, thus I did not feel much stress.

Message to the future: First of all, we should work together to avoid the next pandemic, and increase research on a related subject, how to sustain a healthy environment. In case of the next pandemic, we should develop more online activities, research, interactions, and even social life that will keep us mentally healthy. Especially, the online education system in schools and at universities should be improved, and new software should be developed. It will help students continue their study and scientific life in such unpredictable pandemic times.”

Part 5

*Time for self-knowledge and
personal growth*

“The COVID-19 pandemic hit everyone in many ways, some more profound than others. It was the time I was truly tested as a mother of very young children and my husband having been stuck in a foreign country despite losing his job, and as a career woman managing research in a low-resource setting. It was also the period I learned to appreciate what I have and harness my strengths to face the unanticipated dark days. Yet, paradoxically, it was also the most humbling experience in the most challenging way.

Before the pandemic, I was too busy chasing after a promotion. I worked very hard with a razor focus to build my career. I was never concerned about the seemingly rude or arrogant remarks which went in one ear and out the other. I was not bothered by the supposed maltreatment thrown at young researchers for lacking the seniority, title, rank, or simply because of gender. Having different academic affiliations was also a reason for prejudice. In fact, I could not have empathized with young mothers had I not been through pregnancies and being discriminated against (consciously or subconsciously) professionally. I deflected them all like a strong woman.

COVID-19 peeled off the armor I once wore in my battle to survive as a scientist in a country lacking resources. The lockdown compelled me to take a step back and slow down, during which I had ample time to process my thoughts and reflect on my journey as a young scientist. Mental health issues were no longer taboo. My lab consumables perished overnight when the facilities broke down. I watched the years of ‘begging’ and ‘exchanging’ consumables to build up my lab waste away with a blink of an eye. Yet, I had to step up to the game to lead my students, who also faced mental health challenges. Two people I knew contemplated suicide. One ‘pulled the trigger’. I wondered how I could be an effective leader, a mother, and a wife. My little ones were constantly crying for attention 24/7, tugging at my legs.

Being thankful helped me cope with adversities. I pulled through because of kindness, both on the giving and receiving ends. Looking at the pandemic from the glass-half-full perspective helped me cope. I was so ashamed that I tolerated inequality and obnoxious behaviors all these years. I realized that we should not accept or support discrimination and bullying as a norm. These trying times significantly shaped my mindset and showed me that kindness is a powerful remedy, whether as the giver or the recipient. While grappling with insecurities and worries about if and how things will be better, I was made aware that others encountered more considerable adversities, having

lost their jobs or loved ones or having very little to live on daily. At least I still receive my monthly salary and I have a roof over my head. So I started advocating for kindness in leadership and supporting inclusivity in all my philanthropic efforts. I now have the voice and platform to make a difference, and I am keen to utilize these opportunities to influence a positive change.”

“During the lockdown, I received a call in the middle of the night. A dear one called me saying she is feeling suicidal, and she is alone. Her mom was working at the hospital and was not able to be with her during the peak of the pandemic time. I kept talking to her till she felt better, and I was shivering inside with fear and suffocation myself. The call-related conversation allowed us to later ensure adequate mental health support professionals who are reachable. It was a very difficult time, especially as all felt disconnected during the pandemic time. We were so worried about our physical health during the pandemic, the mental issues subsided for a while, often, not knowing whether to seek help or where to ask for support. The entire pandemic situation was paired with this fear of receiving calls with some unwanted, unexpected bad news.

While I was worrying a lot, I must say that I was among the lucky people who could stay at home during the lockdown periods. I was able to teach my students online from home. So was my partner, and our kids continued their studies online. I had never stayed with my daughters continuously for so long. I was glad to have the family around. But it was not the case for many others. Some of my students struggled hard to get a good internet connection, staying away from the main city. I could hear the background noise, and he said he had to come to the local market to ensure better internet connections – a concept that countered social distancing. Apart from the platform-related issues, there were gaps in teaching and learning using the online platforms. Some of my undergraduate students shared their difficulties in learning when it comes to hands-on lessons. Some shared about difficulties in concentrating over the long hours online.

I was personally very enthusiastic about the online platforms initially. I later realized to what extent resource inequality is hampering the teaching-learning process. The individual differences in learning were hard to accommodate in the online classes. The authorities seemed to place the load of teaching students, and managing their anxieties, on the educators. I was personally

very frustrated after receiving instructions that were not written in a tone that considers the problems of the educators. I tried to raise the concern that the teachers are also overburdened, overworked, and stressed. At some point, I found myself continuously busy with online meetings, online teaching, and online discussion sessions. I found myself unable to complete a few of the promised works and lagging behind.

After the lockdown period, I continued my work as a researcher working in the field. I received a grant right before the pandemic to study the financial technology inclusion and access of women in Bangladesh. The study during the pandemic allowed me to take a look at the financial situation of women – many of whom were vulnerable because of the pandemic and lockdown-related economic struggles. I, along with other researchers in my team, met women all across Bangladesh. We ensured social distance and safety protocols during our study. We traveled to the middle of megacities to the farthest remote areas. The economic difficulties were severe, and contactless financial transactions were a great support. However, women were hesitant and less adept in using technology-based financial services. Apart from the difficulties, we found out about the resilience of our women and general people along with their optimistic view. The ones facing the hardest difficulties told me with a smile about how lucky they are, having a place to live, and being able to earn even if it's irregular. I was expecting the difficulties, but the positivity, hope, and the smile were something I had to bring back with me.

The COVID-19 pandemic taught me how the smallest things can bring immense joy to us. It can be a hug I gave my mom after the lockdowns were over. Or it's as simple as meeting my dear students in a physical classroom. I hope we can create a better world using the best lessons we learned by reaching out to others and fighting the difficulties together.”

“I guess that the pandemic has not affected me in any major way. I was very lucky. As a female academic without any direct care responsibilities (children, elderly parents, incapacitated partners, or ill friends), I could structure my time as I saw fit. My work is mainly conceptual, and I do not rely on data acquisition. I finally had the time to sit down and delve into ideas without being disturbed too much. I was also lucky that my institution was very accommodating and was trying to help their employees as much as possible. I know that that was not the case with my colleagues based in other

countries. I don't think that I produced more than I usually would, but I feel that I had more time to read and think about the bigger picture: What is the arc of my research from the long-term perspective? How do the smaller pieces fit together? What is the ambition of what I want to do in my academic career? What is actually worth doing – worth my time and the attention of others – and what is only a pointless exercise in academic form?

In light of the fact that I was lucky that neither I nor any of my kin fell severely ill, the harder aspect to manage was structuring my daily life in a healthy and balanced way. That means to plan a day, where I neither overwork nor overindulge. In a non-pandemic world, this is usually managed quite naturally by multiple social obligations that we need to fulfill: people we need to meet, events we need to attend, and routines which we have 'inherited' from our social environment. Once that's gone, we need to come up with a structure that works for us and this demands a lot of self-knowledge, honesty with oneself, and wisdom. During the pandemic, I led an isolated and semi-monastic lifestyle. This was because all my family and friends were elsewhere. What I found particularly challenging – apart from not being able to see people I love, like, and respect – was limited access to art and culture: exhibitions, live concerts, theater plays, or art performances. Of course, one could watch a film online or listen to music, but the problem was that there were no chance encounters anymore, no space for serendipity. I watched films that I knew I would like. I listened to music that I knew I liked. How do you develop if you are stuck with your own limited preferences?

In terms of coping strategies, I found healthy routines and structure very helpful: a bit of work, a bit of sport, a bit of social contact through Skype, a bit of culture, and a bit of nature per day kept me going. The pandemic was definitely a time of gaining self-knowledge, getting better at self-care, appreciating how fragile our health is, and realizing how important social support networks and health infrastructure are. I was lucky – again! – because the country I was based at during the pandemic was a well-organized and affluent welfare state.

I was extremely fortunate this time round. Let's be honest, my 'problems' were no problems at all. But who knows what will happen when the next pandemic arrives? I realized once again how vital my support networks were – not only my close family, but friends, acquaintances, colleagues, and allies. These need to be constantly maintained to work, both in good and bad times. And,

of course, on a macro socio-political level, I realized yet again that a robust, functioning, and well-funded health service infrastructure for all is absolutely key. For me, these were the lessons to remember in the future. Easy to say for a European, I know.”

“When the pandemic started, I was lucky enough that I had just finished with my Ph.D. As a matter of fact, I had my Ph.D. defense on the last day that my university was open. It was also the first hybrid viva in my university, as my external examiner couldn’t travel – the travel restrictions had just begun. The day before my viva was very stressful; I didn’t know I was to have a defense until 8 PM the night before.

The day after my defense, the whole city was on lockdown, and we couldn’t leave home unless for groceries or a 30-min walk every day. Given the situation, I decided to do the best I could with what I had and decided to focus on work to not think too much about the whole lockdown or the things I might be missing. I mean, considering the overall situation, I was lucky to be in a safe place, I had all I needed and most importantly I had my health. In the beginning, it was hard for me then that I could not volunteer to help out at any organization, as the first thing that crosses my mind in times of emergency (which were up to now natural disasters, e.g., hurricanes) is to go to the volunteering centers. So, what I told myself was, ok, the best way to help is to follow the rules and be compliant.

And so, I did, and it was actually very good for my career, I could really focus – I think hyper-focus on my work. In the 3-4 months I wasn’t allowed to go to the lab, I submitted my corrected thesis, published 5-6 papers, a patent, and wrote 4-5 grant applications. By the time I was back in the lab, it was full hands-on again, as there were still restrictions on, but I could go to work. So, I followed the same approach – work, work, work. After a year of that, I realized that all I had done for the past 4-5 years, was work. As a matter of fact, I was very confused about who I was outside the lab. I really didn’t know myself anymore. I couldn’t remember what gave me joy. I had very little going on for me outside of work. When I realized this, I looked for help and have been in therapy since. I have in the past year rediscovered many things I enjoy, like dancing, cycling, hiking, and hanging out with my loved ones. I now make more time to spend with my loved ones and put more effort in my relationships.

As a researcher, I think I will always struggle to find the right work/life balance as we have so many demands and personally, I want to do so many things all the time! I guess the pandemic was a good thing for me. It forced me to stop, look inside, and rethink what I thought was important in my life and what I wanted in the future. Now I know myself better and can make better-informed life choices. I am really one of the lucky ones!”

An Open Closure

*Looking at the testimonials,
living a new phase of the
pandemic times*

The COVID-19 pandemic was a difficult time for all of us but it was difficult in different ways. Various professional groups responded to the challenge in diverse ways. For example, the analysis of the testimonials of this book revealed that the lockdown caused significant disruptions in academic activities, especially due to the requirement to work from home. Virtuality presented several problems to those teaching and leading student research groups. The regular flow of research activities was not achieved smoothly. Researchers mentioned that not being able to attend face-to-face conferences or meetings was challenging and had negative effects on the outcomes of their work. Korbelt and Stegle (2020) conducted a survey in different Global North countries to learn about the effects of the pandemic on life scientists. They found that, at all career stages, video conferencing has gained importance in running group meetings or journal clubs and meeting collaborators, but with positive outcomes regarding distance communication with leaders and mentoring, contrary to the perspective of some young researchers who mentioned that virtuality complicated teamwork. This could reflect again inequalities between the Global North and other regions of the world, as well as difference of expectations taking into account career stage, location, cultural role of in-person interactions depending on the activities, especially teaching.

Achieving a balanced organization between work and home tasks during quarantine or lockdown was another major concern for researchers in the narratives from this compilation, especially for mother scientists and caregivers. Many of them commented on difficulties organizing a schedule that worked for them while working from home and taking care of their children. Another challenge that was mentioned in most testimonies was the impossibility of carrying out field and laboratory work. This has not allowed young researchers to move forward with their studies. This finding corresponds to that of Myers et al. (2020), who carried out a survey to find out the impact of the pandemic on scientists and found that laboratory-based fields were the most negatively affected. Termini and Traver (2020) wrote a “call to action” paper in which they also stated that with a reduction of personnel in laboratories and social distancing measures in place, the traditional laboratory dynamic limited collaborative research and reduced the natural exchange of ideas that occurs through informal conversations in the laboratory; something that young researchers expressed missing during this time.

In several testimonies, researchers recognize taking some time during the pan-

demically to question or think about their careers and their future. Some of them, actually, shifted to policy advice activities during this period. Recent investigations have evidenced that some scientists even shifted to COVID-oriented research as a priority during the pandemic times (Korbel and Stegle, 2020; Riccaboni and Verginer, 2022). In the testimonies, this was expressed only by one young researcher, although others expressed their accomplished feeling of contributing with their skills through service.

While some said they had problems with working online with their research groups as mentioned before, several professionals mentioned the opposite, that working online was very beneficial for them to create new networks of contacts. Some early and mid-career researchers even took advantage of the time at home and online to explore activities that under in-person schemas would have been impossible to carry out. Courses, conferences, and online meetings with experts were some of the opportunities to build new knowledge that researchers found during this time. Korbel and Stegle (2020) also found patterns of local and international cooperation, idea exchange, and electronic learning appearing during COVID-19.

Despite the fact that some researchers perceived that their productivity decreased, another set of narratives reveal that some of them began using the time of lockdown to further develop scientific projects while working from home. This is likely to have happened among those who do not rely on field or laboratory work to advance their research or that have a large amount of previously collected data. Another sign of increased productivity referenced in testimonies was that they managed to submit more papers than usual and apply for grants. In some cases, it was even possible to notice visible productive interactions across science and policy. These patterns are consistent with Korbel and Stegle (2020) who concluded that many researchers indicated that they were using the time of the shutdown to dedicate more time to data analysis, manuscripts, thesis writing, or developing grant applications.

Working from home during the pandemic undoubtedly intervened in professional and family dynamics, and young researchers are no exception. We found positive and negative perceptions around this interruption of work in personal life. Almost half of the testimonies valued being able to spend more time with family and strengthen relationships in their nuclear family, also with relatives and friends outside their home with whom they connected online. However, some perceived isolation as an obstacle to maintaining and

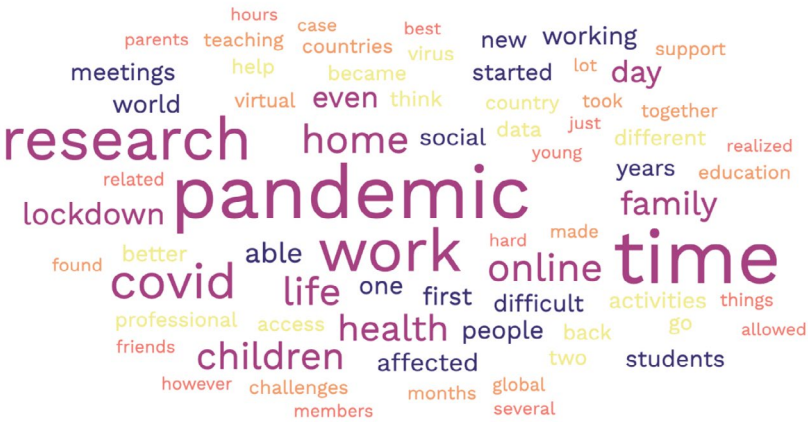
strengthening their relationships with family and friends.

Other challenges that emerged while working from home were childcare and online schooling. Some testimonies reveal difficulties to organize the home environment, so everyone can carry out their daily online activities, parents work and children take online classes. Greater difficulties emerged among those researchers who have large families or little children. Myers et al. (2020) provided evidence of this by noting that the largest disruption to scientists' productivity in the US and European research institutes was childcare.

Another way in which work interfered in scholars' personal lives in a challenging way was in terms of mental health. While some researchers mentioned that they faced emotionally difficult isolation, others expressed having suffered from anxiety or depression in times of lockdown, a fact that affected their productivity. Based on a recent survey, Barber et al. (2021) analyzed how demographics, time allocation, production mechanisms, and institutional factors affected research production during the pandemic, reaching similar conclusions. They found that concerns about isolation and health had considerable, negative research effects, which disproportionately affected junior faculty and Ph.D. students.

Despite mental health challenges among some researchers, others found a satisfying path to self-knowledge and personal growth. At least a third of the testimonies evidence that professionals managed to find time out from work to discover new hobbies or activities they enjoy like exercising, having contact with nature, meditating, or even joining an NGO to help fight COVID-19. Furthermore, several researchers valued having time to develop personal skills such as empathy, resilience, embrace kindness, and, mainly, global health awareness. Many of them recognized, from a very humble place, their privileged situation. In contrast, other scholars, who faced more complex adversities, were actually unable to work or were financially affected.

In sum, this book presents a candid view on how the COVID-19 was lived by young scholars around the world. The pandemic affected normality but also served to expose humanity, compassion, and solidarity. It changed our lives for bad and for good as most of us lost relatives, friends, or colleagues but also gained positive experiences and lessons for a better future. We hope that these challenging times will remain as an imprint in our generation for thinking on the well-being of the forthcoming ones.



Acknowledgements

We would like to thank the office of the Global Young Academy (GYA) for their support at different stages of this project, in particular to Jennifer Plaul. The GYA's Alexander "Sasha" Kagansky Interdisciplinary Grant funded this project (2021/2022), which was the first since the grant scheme was named after the late Dr. Kagansky. We appreciate the comments of the reviewers of the proposal that served to significantly improve the research project, and consequently, this final output. To Jacopo Sacquegno and Felipe Serano for their fantastic illustrations. The latter also completed the layout of the book. To our colleague and friend Cristina Blanco Sío-López for her presence at an early stage of the project. Finally, and especially, many thanks to all early and mid-career researchers of the Global Young Academy who graciously shared their personal perspectives of the COVID-19 pandemic to posterity.

References

- Barber, B.M. et al. (2021) 'What explains differences in finance research productivity during the pandemic?', *The Journal of finance*, 76(4), pp. 1655–1697.
- Bittante, C. et al. (2020) 'Gender disparity in authorships of manuscripts on the COVID-19 outbreak', *Zeitschrift für Gesundheitswissenschaften = Journal of public health*, pp. 1–2.
- Cui, R., Ding, H. and Zhu, F. (2022) 'Gender Inequality in Research Productivity During the COVID-19 Pandemic', *Manufacturing & Service Operations Management*, 24(2), pp. 707–726.
- Gabster, B.P. et al. (2020) 'Challenges for the female academic during the COVID-19 pandemic', *The Lancet*, pp. 1968–1970.
- King, M.M. and Frederickson, M.E. (2021) 'The Pandemic Penalty: The Gendered Effects of COVID-19 on Scientific Productivity', *Socius*, 7, p. 23780231211006977.
- Korbel, J.O. and Stegle, O. (2020) 'Effects of the COVID-19 pandemic on life scientists', *Genome biology*, 21(1), p. 113.
- Myers, K. et al. (2020) 'Quantifying the Immediate Effects of the COVID-19 Pandemic on Scientists'. Available at: <https://doi.org/10.2139/ssrn.3608302>.
- Paula, J.R. (2020) 'Lockdowns due to COVID-19 threaten PhD students' and early-career researchers' careers', *Nature ecology & evolution*, 4(8), p. 999.
- Riccaboni, M. and Verginer, L. (2022) 'The impact of the COVID-19 pandemic on scientific research in the life sciences', *PloS one*, 17(2), p. e0263001.
- Staniscuaski, F. et al. (2021) 'Gender, Race and Parenthood Impact Academic Productivity During the COVID-19 Pandemic: From Survey to Action', *Frontiers in psychology*, 12, p. 663252.
- Subramanya, S.H., Lama, B. and Acharya, K.P. (2020) 'Impact of COVID-19 pandemic on the scientific community', *Qatar medical journal*, 2020(1), p. 21.
- Termini, C.M. and Traver, D. (2020) 'Impact of COVID-19 on early career scientists: an optimistic guide for the future', *BMC biology*, 18(1), p. 95.
- Viglione, G. (2020) 'Are women publishing less during the pandemic? Here's what the data say', *Nature*, 581(7809), pp. 365–366.
- Vincent-Lamarre, P., Sugimoto, C.R. and Larivière, V. (no date) 'The decline of women's research production during the coronavirus pandemic', *Nature index* [Preprint].

Time capsule

To the young
scientists of the
future:

*This book was thought of mostly for you.
We had no opportunity to read about
the very personal experiences of scientists
who over a century ago dealt with or
suffered from the so-called Spanish flu
pandemic. We wish that this book will
bring hope to you who will very likely
overcome the next world pandemic.*

Contributors of testimonials

This list shows those that agreed to have their names listed, others remain anonymous.

Adeyemi Oladapo Aremu

Amal Amin

Amarjargal Dagvadorj

Anindita Bhadra

Bernardo Urbani

Connie Nshemereirwe

Dilfuza Egamberdieva

Edegbene Augustine Ovie

Fatin Aliah Phang

Felix Moronta Barrios

Iwona Janicka

Karen Jacqueline Cloete

Meghnath Dhimal

Mimi H. Hassim

Nancy Lombard

Nova Ahmed

Nzweundji Justine Germo

Oon Chern Ein

Sandeep Kaur-Ghumaan

Sandra López-Vergès

Yensi Flores Bueso

Yoko Shimpuku

Paulina Carmona-Mora (GYA, 2019-2024) is Scientist at the Department of Neurology and MIND Institute, University of California-Davis, United States. She specializes in gene regulation in neurological and neurodevelopmental disease.

Bernardo Urbani (GYA, 2017-2022) is Associate Researcher at the Venezuelan Institute for Scientific Research. His interests are primate behavioral ecology and conservation, ethnoprimateology/archaeoprimateology, and history of primatology.

Iwona Janicka (GYA 2019-2024) is Researcher at Aarhus University, Denmark. She specializes in contemporary European philosophy, with a focus on the question of social transformation and ecology.

Sandra López-Vergès (GYA 2018-2023) is Senior Health Researcher and Head of the Department of Research in Virology and Biotechnology at the Gorgas Memorial Institute for Health Studies in Panama. She is a Distinguished member of the Sistema Nacional de Investigación (SNI) from SENACYT.

Delfina D'Alfonso is educational consultant and researcher at the Centro de Investigación Educativa (CIEDU) in Panama.