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COVID-19 AND HOW IT AFFECTED THE LATIN AMERICAN
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COVID-19 AND HOW IT AFFECTED THE LATIN AMERICAN SOCIETY OF ODONATOLOGY

José A. Cuellar-Cardozo¹ & Hakan Bozdoğan²

RESUMEN

COMO EL COVID-19 HA AFECTADO A LA SOCIEDAD DE ODONATOLOGÍA LATINOAMERICANA

La situación global de la pandemia provocada por la enfermedad COVID-19 ha causado estragos en todos los sectores de la población, principalmente por la necesidad de mantener períodos de cuarentena y aislamiento. Esto también ha afectado al área de la investigación ya que tanto las universidades como los centros de investigación no relacionados con el virus han sido cerrados como medida de precaución. Como resultado de este problema, surge la pregunta de cómo los científicos, y especialmente aquellos que trabajan en investigaciones relacionadas con los odonatos, se han visto afectados por la situación actual y qué acciones han tomado para remediar este problema. Para ello, hemos decidido tomar en cuenta las experiencias de varios investigadores adscritos a SOL (Sociedad de Odonatología Latinoamericana) a partir de pequeñas entrevistas y recoger la información en forma de diálogos e ideas que nos permitan comprender los principales problemas y qué acciones han tomado para remediarlo. En consecuencia, hemos observado que las medidas para prevenir la propagación del virus han perturbado principalmente el trabajo de campo y laboratorio. Esto ha provocado que muchas investigaciones se suspendan o modifiquen, además de provocar que eventos científicos como congresos y simposios se cancelen o cambien su fecha de forma indefinida. Asimismo, a través de acciones como la adecuación de los hogares y el uso de herramientas de comunicación a distancia, muchos investigadores han podido hacer frente a la pandemia, pudiendo trabajar a un ritmo más lento.

Palabras Clave: Coronavirus, Cuarentena, Odonatología, Pandemia, SOL.

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ABSTRACT

The global situation regarding the pandemic caused by the COVID-19 disease has wreaked havoc on all sectors of the population, mainly caused by the need to maintain periods of quarantine and isolation. This has also affected research since both universities and research centers that are not related to the virus have been closed as a precautionary measure. As a result of this problem, the question arises as to how scientists, and especially those who research odonates, have been affected by the current situation and what actions they have taken to remedy this problem. To do this, we have decided to take into account the experiences of several researchers attached to SOL (Society of Latin American Odonatology) from short interviews and to collect information in the form of conversations and ideas that allow us to understand the main problems and what actions individuals have taken to remedy it. We have observed that measures to prevent the spread of the virus have mainly disrupted field and laboratory work. This has caused many investigations to be suspended or modified, in addition to causing scientific events such as conferences and symposia to be canceled or delayed indefinitely. Likewise, through actions such as working from home, and the use of long-distance communication tools, many researchers have been able to cope with the pandemic, albeit working at a slower pace.

Keywords: Coronavirus, Odonatology, Pandemic, Quarantine, SOL

INTRODUCTION

The pandemic caused by the SARS-CoV-2 virus and its consequent disease called COVID-19 has caused one of the greatest recent public health crises worldwide (Rodríguez-Morales *et al.*, 2020, Simbana-Rivera *et al.*, 2020). This has caused many countries to implement isolation and quarantine policies, causing the closure of universities and research centers, which, for researchers, results in the suspension and closure of activities, slowing down research projects (Bedford *et al.*, 2020). Similarly, the isolation policies also translate into the cancellation and postponement of dates in the planning of congresses and symposia, which paused communication within the scientific network and caused changes in the scheduled meetings of many scientific organizations, such as the case of the Latin American Society of Odonatology (SOL) that had planned its first congress in late 2020 in Peru, but now the date was moved (Sociedad de Odonatología Latinoamericana, 2020). That is why we asked researchers tell us how they have been able to work during the pandemic, what behaviors they have taken to mitigate their effects on their research and what are the biggest problems they face.

MATERIALS AND METHODS

To observe the perception that researchers had regarding how the Covid-19 pandemic and the health measures carried out by the different governments of their respective countries had affected it. We decided to conduct a survey with a single open question, which was: please describe in your own words, how you have been affected by the pandemic and in what way you feel that health measures have affected you the most? The question was sent by e-mail to the largest number of SOL members, expecting as many responses as possible. Subsequently, the responses were computed, analyzed, and quantified, classifying them according to what the researcher perceived as the greatest difficulties due to the pandemic (field trips, laboratory, writing papers, study classes, job, mental health, and coexistence at home). In addition, the responses to the interviews were incorporated into the text.

RESULTS AND DISCUSSION

A total of 16 researchers answered the questionnaire. These researchers were geographically distributed in 8 countries, and in terms of gender, a 1:1 ratio of men and women were recorded. Regarding the effects that the respondents perceived, which were classified according to whether they perceived it negatively or positively. In this context, the impact that was negatively perceived by 11 of the respondents was the laboratory and work, while nine of the respondents perceived that the pandemic helped to write papers (Table 1).

From interviews with various researchers belonging to SOL, from different Ibero-American countries, we have been able to compile experiences regarding how the pandemic and the isolation measures of each country have affected the development of their projects, demonstrating that each nation has a particular perspective of the pandemic and how best to face it. Therefore, we compile some of the most interesting interviews to observe the situation from the point of view of the researchers who are experiencing it. For example, in Argentina, the situation of the pandemic has worsened in recent months, and although the rate of infections has recently started to decrease, isolation procedures have not been flexible, making Argentina the longest-running quarantine in Latin American, maintained isolation and closure of places of work and study (Johnson *et al.*, 2020).

Table 1. List of researchers according to their gender and country, and their responses regarding the effects they have perceived of the pandemic. (X = bad perception, ✓ = good perception, - = No response/No perception)

Name	Gender	Country	Effect of the pandemic						
			Field trips	Laboratory	Writing papers	Study class	Job	Mental health	Coexistence at home
Danielle dos Santos	Female	Argentina	-	X	✓	-	X	X	X
Javier Muzón	Male	Argentina	X	X	-	-	X	-	-
Pablo Pessacq	Male	Argentina	-	X	X	-	X	X	X
Marciel Rodrigues	Male	Brazil	X	X	X	-	X	-	X
Jenilee Montes	Female	Colombia	X	X	✓	-	X	X	✓
Jose Cuellar	Male	Colombia	-	X	✓	-	-	X	X
Melizza Tobias	Female	Colombia	X	-	-	X	X	✓	✓
Adolfo Cordero	Male	Spain	X	X	✓	-	X	-	-
Alex Cordoba	Male	Mexico	-	X	✓	-	X	-	X
Catalina Suarez	Female	Mexico	X	-	-	X	-	-	-
Cornelio Bota	Male	Mexico	-	-	✓	-	-	X	-
Rodolfo Novelo	Male	Mexico	X	X	✓	-	X	-	X
Emmy Medina	Female	Peru	X	X	✓	-	X	-	✓
Michela Olaya	Female	Peru	-	X	✓	-	X	X	✓
Ashley Mariani	Female	Puerto Rico	-	-	X	X	-	X	X
Margenny Barrios	Female	Uruguay	-	-	-	-	-	-	-

In this country, researchers Javier Muzón and Pablo Pessacq tell us that:

“Here we continue with the isolation, trying to work each one from home. I tell you that in all the universities in the country the courses are 100% virtual, so most of us are adapting our classes in this new modality and the available platforms. What has affected us during this health crisis, is the [field] sampling. We had a field trip scheduled and were planning the last samples for this season from two other work projects and unfortunately had to discontinue all fieldwork. Furthermore, we are communicating with many colleagues and friends from all over the world, organizing the next SOL meeting (we are about to publish the first circular of the event), and preparing a report on the progress of our society and Odonatology in Latin America.”

“The quarantine that we have lived in Argentina since March affected almost every aspect of my life. Personally, I suffered the uncertainty generated by something that was totally beyond my control and that could directly affect my family, with the consequent emotional impact. In terms of work, one of the institutions to which I belong, work at home is encouraged in some way, but in general, there are no favorable conditions or physical space or connectivity (internet is very limited at this time in the city) to do it properly. In my case, we have a young daughter and her care is time-consuming and constantly distracts my attention. In the second field where I work, the National University of Patagonia, I normally gave the theory, in an online version, the university did not assist me in any way, beyond sending memorandums where, in general, it suspended face-to-face classes and evaluations of any kind. Both institutions underlined the prohibition to go to the workplace and recently provided training and protocols to eventually return to work, but did not provide any tools or training to facilitate work at home, nor did they establish dates of return to activities, not even under strict protocols.”

In the case of Brazil, which is one of the countries most affected by the virus, the measures against the virus have been more and more restrictive affecting normality (Nakada & Urban, 2020). Marciel Rodrigues tells us:

“The pandemic took us all by surprise. Initially, we thought that the isolation would be quick and that we could soon return to normal activities. However, it did not happen. Concerning work, we brought material to identify at home and we have had a weekly meeting with students where we discussed projects and articles in progress. Other investigators were contacted by email. In the same way that jobs have also been performed remotely. Field activities were delayed due to the closure of the institution and lack of transportation that goes with social isolation. We hope at we can get back to activities and organize our research routine again.”

In Colombia, the pandemic was considered a superficial problem by the government, until the cases began to increase exponentially and measures were taken that have caused the population to adapt to the situation. One of the most problematic measures is the fact that all laboratories and universities are closed until further notice (Gómez-Ríos *et al.*, 2020). From this situation, the researchers Jenilee Montes and Melizza Tobias tell us about their experiences

“Since March the situation has been one of uncertainty, although the pandemic has given space for reflection, the feeling of uncertainty about the future is the one that causes the greatest anxiety. These times have served to dedicate more effort to reading and writing, activities that I had relegated or that I did sporadically when the field allowed me, however the need to resume activities in the field is necessary and the security protocols in Colombia to resume this work are still in process, therefore, it is necessary to be patient and use this time to organize an alternative work plan to continue the ongoing projects and devise new ones using mainly computer tools, with the limitations that this could entail.”

“Academically I have been a bit affected because I was in the field phase of my master's thesis. I had to suspend field activity and request an extension from the university to deliver my degree work. I am working from home, I work as a research manager at the university and it occupies me most of the time. I feel that I have had great growth, I have known myself more, I have better control of my emotions and I have enjoyed my family to the fullest. I feel like I'm just getting to know them.”

In the case of Spain, this country was, for a time, one of the countries most affected by the pandemic, having some of the highest mortality rates in the world. It was not until recently that the measures have relaxed a little and the Spanish return to everyday life (Legido-Quigley *et al.*, 2020). Here we interview the researcher Adolfo Cordero, who commented to us:

“In my case, the situation precipitated from the beginning of March [2020], with the closure of all activities, including the university. The quarantine mainly affected teaching activities, in addition to planning to participate in the Macrolatinos congress in Panama, but it has been postponed. That has changed the fieldwork plans I had thought of. So, I have worked at home mostly, in data processing, writing articles, and especially in distance teaching, which is very time-consuming.”

In Mexico, which is one of the Latin American nations most affected by the current health situation. And although contingency measures are beginning to relax, the return to normality does not appear imminent (Dattilo *et al.*, 2020). Here we interview Alex Cordoba and Rodolfo Novelo, who commented the following:

“Indeed, the pandemic has been crucial to all of our activities. In the workplace, it has been crucial for me to maintain two things as the head of my work group: a) that the goals can be achieved as far as possible; and, b) that the spirit of productivity does not decline. From the first, not everything is possible. For example, we had a long field season that cannot take place. Here adaptations had to be made to use other data and not to risk theses and projects. However, other goals have come forth such as statistical data analysis, article writing, and thesis. On the emotional side, my group seems to be doing relatively well and they are in order.”

“Fortunately, I was able to work in my laboratory because most of the staff went to work at home. So the impact on my work has been minimal. I have only been affected in that a course I was teaching was halved until further notice, and that I could not send loan material because there is no post office in my institution and it has to be done officially.”

Finally, in the case of Peru, the country recently became one of the epicenters of the pandemic in Latin America, so the measures have become more severe, something that affects people psychologically, and in the case of the researchers it has been all work stopped at the university so the investigations are suspended (Alvarez-Risco *et al.*, 2020). To go into detail, researcher Emmy Medina tells us that:

“In Peru, the start of the quarantine took us by surprise. We had to organize ourselves to go to the laboratory at that time to collect our things. They told us that in fifteen days the activities would be reactivated, but, as we have seen, the quarantine situation lasted until July. Even entry is restricted, you can only enter with prior authorization and to do specific things. The routine of going every day we no longer have it. Our lifestyle changed. Now, we spend time at home looking for information and writing. Field trips have been postponed until further notice since the number of infections per day has increased. The good thing is that the spirit is not daunted, you can still find things to do at home. Besides, there are several webinars from which we can learn and continue to nurture our knowledge.”

In conclusion, the pandemic has mainly affected the development of field and laboratory activities, resulting in the delay of different activities such as field trips and experiments, causing the suspension of projects, which together with the cancellation of scientific events, as congresses and symposia, they have caused delays in scientific research on odonates in this part of the world. However, the pandemic is also a situation that contributes to reading and writing exercise, allowing the researchers to produce better papers and formulate bigger projects and experiments to investigate in a near future, once the pandemic is over.

Finally, pandemic is seriously affecting the countries in Latin-America, being the new epicenter of the disease, being dangerous for biodiversity because its investigation and protection can be neglected, causing damage in regions as important as the Amazon, the bio-geographical Chocó, the Andes mountain range and other areas of ecological importance for the planet located in Latin-America.

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REFERENCES

Álvarez-Risco, A., Mejía, C. R., Delgado-Zegarra, J., Del-Águila-Arcentales, S., Arce-Esquivel, A. A., Valladares-Garrido, M. J., Portal, M.R., Villegas, L.F., Curioso, W.H., Sekar, M.C. & Yañez, J.A. (2020). The Peru Approach against the COVID-19 Infodemic: Insights and Strategies. *The American Journal of Tropical Medicine and Hygiene*. 536.

Bedford, J., Enria, D., Giesecke, J., Heymann, D. L., Ihekweazu, C., Kobinger, G., Lane, H. C., Memish, Z., Oh, M. D., Sall, A. A., Schuchat, A., Ungchusak, K. & Wieler, L. H. (2020) WHO Strategic and Technical Advisory Group for Infectious Hazards. COVID-19: towards controlling of a pandemic. *Lancet*. 2020 Mar 28;395(10229):1015-1018. doi: 10.1016/S0140-6736(20)30673-5. Epub 2020 Mar 17. PMID: 32197103; PMCID: PMC7270596.

Dattilo, W., Castro e Silva, A., Guevara, R., MacGregor-Fors, I. & Ribeiro, S. P. (2020). COVID-19 most vulnerable Mexican cities lack the public health infrastructure to face the pandemic: a new temporally-explicit model. *MedRxiv*.

Gómez-Ríos, D., Ramirez-Malule, D. & Ramirez-Malule, H. (2020). The effect of uncontrolled travelers and social distancing on the spread of novel coronavirus disease (COVID-19) in Colombia. *Travel Medicine and Infectious Disease*.

Johnson, M. C., Saletti-Cuesta, L. & Tumas, N. (2020). Emociones, preocupaciones y reflexiones frente a la pandemia del COVID-19 en Argentina. *Ciência & Saúde Coletiva*. 25: 2447-2456.

Legido-Quigley, H., Mateos-García, J. T., Campos, V. R., Gea-Sánchez, M., Muntaner, C. & McKee, M. (2020). The resilience of the Spanish health system against the COVID-19 pandemic. *The lancet public health*. 5(5): e251-e252.

Nakada, L. Y. K. & Urban, R. C. (2020). COVID-19 pandemic: Impacts on the air quality during the partial lockdown in São Paulo state, Brazil. *Science of The Total Environment*. 139087.

Rodriguez-Morales, Alfonso J., Bonilla-Aldana, D. K., Tiwari, R., Sah, R., Rabaan, A. A. & Dhama, K. (2020). COVID-19, an emerging coronavirus infection: current scenario and recent developments-an overview. *J Pure Appl. Microbiol.* 14: 6150.

Simbana-Rivera, K., Gómez-Barreno, L., Guerrero, J., Simbana-Guaycha, F., Fernández, R., López-Cortes, A. & Ortiz-Prado, E. (2020). Interim Analysis of Pandemic Coronavirus Disease 2019 (COVID-19) and the SARS-CoV-2 virus in Latin America and the Caribbean: Morbidity, Mortality and Molecular Testing Trends in the Region. *medRxiv*.
<https://doi.org/10.1101/2020.04.25.20079863>

Sociedad de Odonatología Latinoamericana (2020). I Congreso Latinoamericano de Odonatología - 3er Encuentro SOL [Internet]. <http://www.odonatasol.org>. [citado 27 agosto 2020]. Disponible en: <http://www.odonatasol.org/wp-content/uploads/2020/08/Cambio-de-Fecha-Pagina-Espa%C3%B1ol.png>

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