



Survey & Feedback Congress



NATIONAL STUDENT CONGRESS FOR ANTIBIOTIC RESISTANCE SURVEY ANSWERS

The congress was primarily addressed on students in the healthcare field. The problem of antibiotic resistance is an issue that has been put on a secondary level after the COVID-19 pandemic. For this reason, we were interested in knowing the **concerns** and **knowledge** they had acquired in their degrees in order to be able to **specify** the topics to be addressed at the congress. To this end, we sent out two surveys:

The first one, which was sent before the congress, was answered by 248 participants. The second one, after the end of the activity, was answered by 138 people.

Attendee's occupation

As shown in *Figure 1*, most of the participants who attended the congress were **students** (approx. **90%**) while the remaining 10% were professionals.

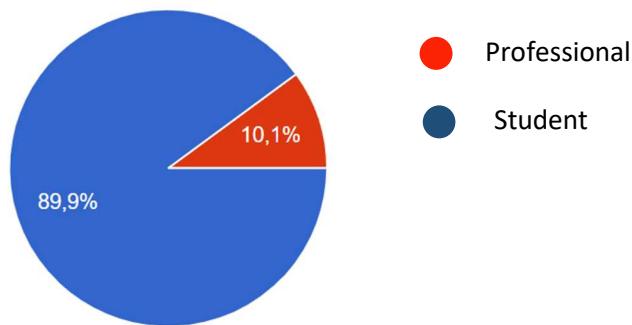


Figure 1. Percentage distribution between students (blue) and professionals (red).

The students came from different careers related to health sciences such as Biology, Medicine, Nutrition, Engineering and, Pharmacy, among others. As shown in *Figure 2*, the majority of students came from the fields of **Pharmacy (52,8%)** and **Medicine (35,1%)**.

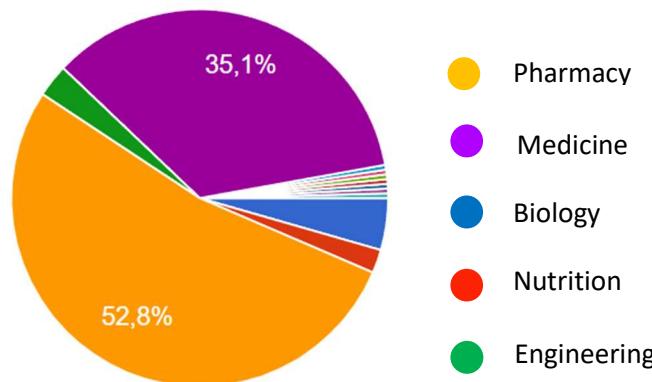


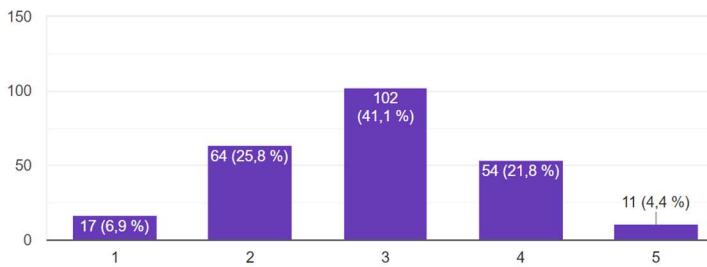
Figure 2. Representation of the different careers in percentages. In orange is Pharmacy and in violet, Medicine.

In both the first and second surveys, we asked the same questions with the aim of observing the **evolution of knowledge** of this important issue after having dealt with it at the congress.

In the survey, when the answer was given on a numerical scale, 1 constituted no knowledge and 5 a high level of expertise on the subject.

Question 1. On a numerical scale, how much do you consider yourself to know about antibiotic resistance?

Before:



After:

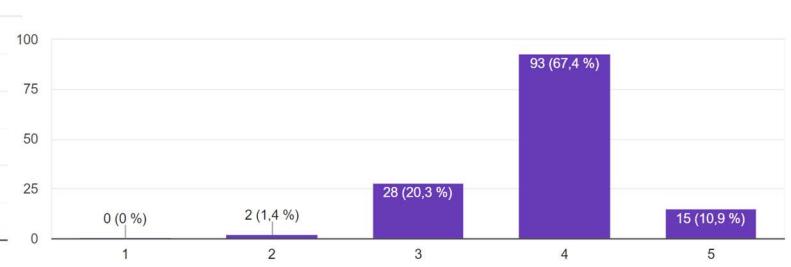
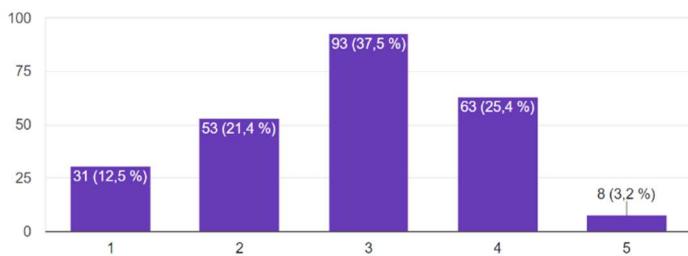


Figure 3. Distribution of the answers to Question 1. On the left are the answers before attending the congress and on the right, after having attended.

Question 2. On a numerical scale, are you familiar with the main mechanisms of resistance production?

Before:



After:

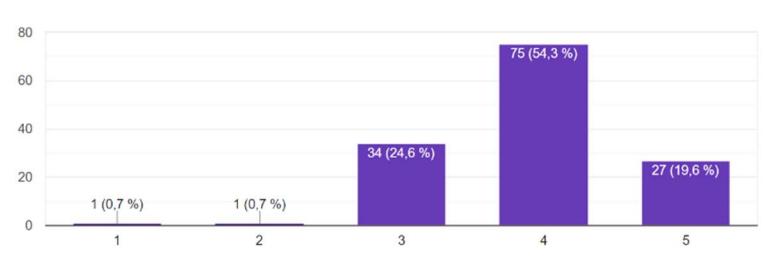
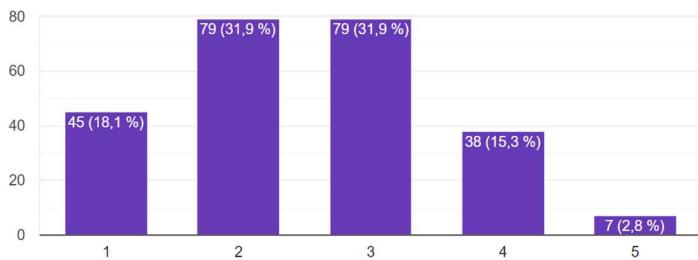


Figure 4. Distribution of the answers to Question 2, before and after the congress.

Question 3. On a numerical scale, are you familiar with the strategies for dealing with multidrug-resistant pathogens?

Before:



After:

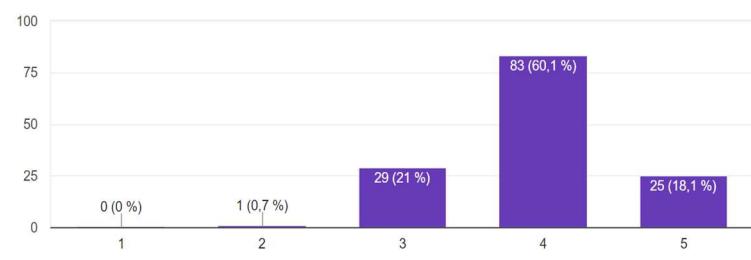
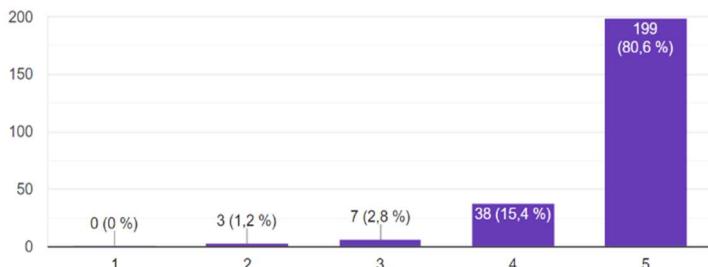


Figure 5. Distribution of the answers to Question 3, before and after the congress.

Question 4. On a numerical scale, how important do you think the development of these resistances is?

Before:



After:

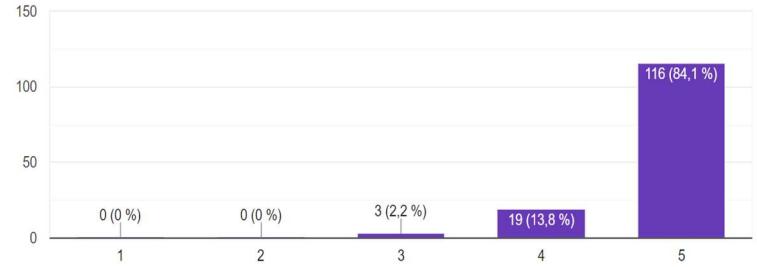


Figure 6. Distribution of the answers to Question 4, before and after the congress.

DISCUSSION

If we look at the answers to the questions asked on two different occasions, in many cases, the percentage of responses **changes** considerably, as in the first three questions.

These changes could indicate that there was an **increase in knowledge** about this problem so that the expectations of the congress were met.

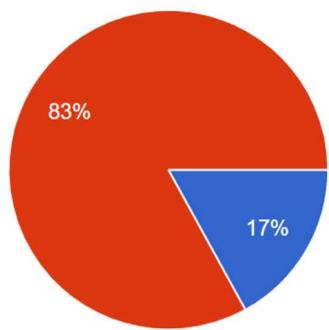
However, we cannot be sure of these results, since the same number of people did not respond to the second survey as responded to the first one.

In the last question, almost **no variation** is observed, which shows that the participants were **already aware** of the importance of the problem of antimicrobial resistance.

Question 5. Do you know any initiative to address this problem?

Then, we asked whether they were aware of any **initiative to address this problem** and, if so, what it was.

Before:



After:

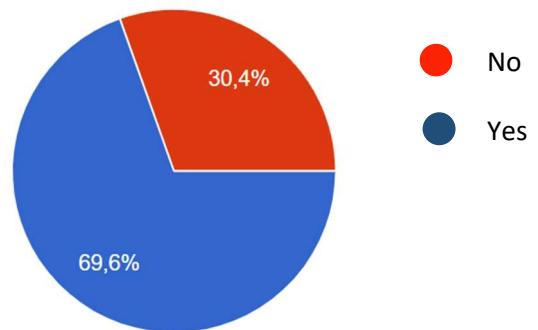


Figure 7: Results on the knowledge of initiatives.

As can be appreciated, before the congress, only **17%** were aware of any initiative. The ones they told us about were **PRAN**, which in Spain is the national antibiotic resistance plan, or **PROA**, the PRAN program for the optimization of antibiotic use.

After the congress, most of the answers to this question were affirmative (almost **70%**). In this case, we were told about other additional initiatives such as the **SAFE project** (Superbug Awareness For Education) promoted by ISGlobal, or our project, **ARIA**.

Question 6. Do you consider that the university provides adequate knowledge in this regard?

Finally, we asked two questions at the end of the second survey to ask their opinion about how this issue was treated at the **university** and how much the **general population** should be **involved**.

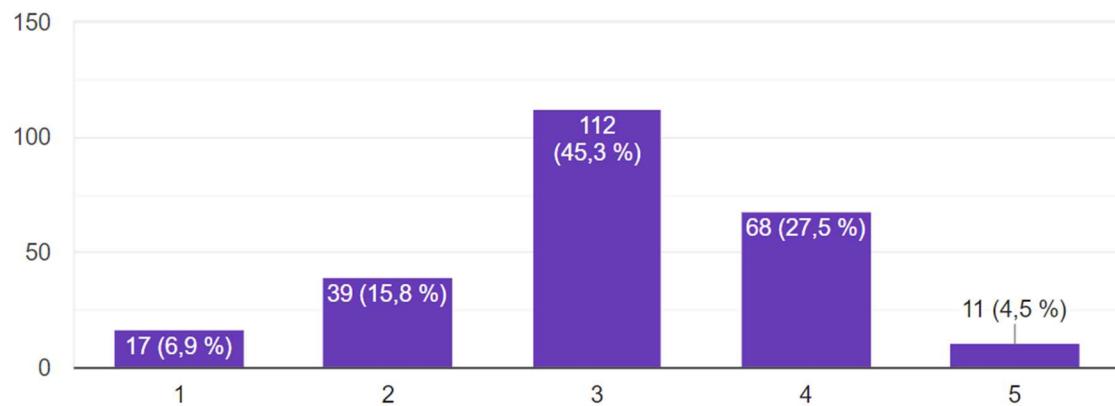


Figure 8: Distribution of the answers to Question 6.

Question 7. Do you think that the general population should get more involved?

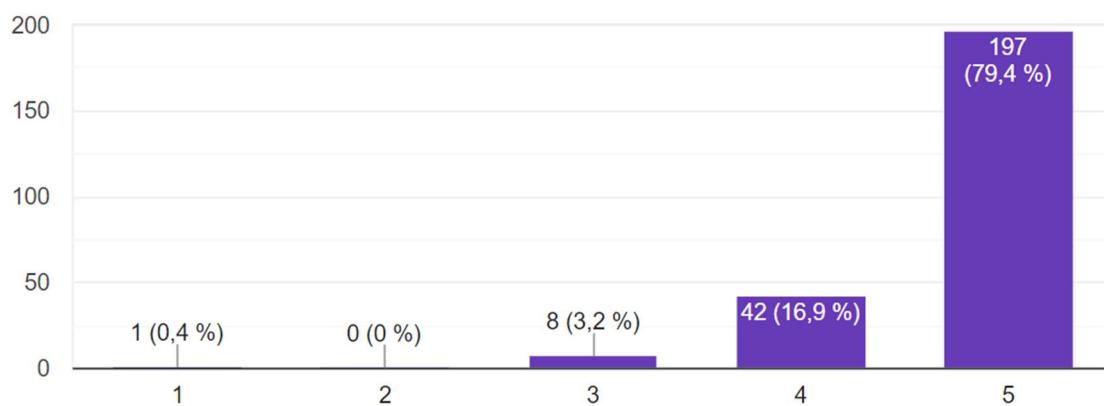


Figure 9: Distribution of the answers to Question 7.

We were surprised to learn that the issue of antibiotic resistance was **not always given adequate importance** at the university level and that the necessary knowledge to deal with the problem was not imparted. On the other hand, we consider it a success that, after the congress, students felt more aware and considered that the whole population in general should get involved.

AUDIENCE FEEDBACK AND SUGGESTIONS

The following are some of the comments we received from participants:

- Very interesting and very well organized!!!!
- Very dynamic and entertaining, great job!!!!
- Very dynamic, well explained and interesting!!!!
- It has been my first congress and I consider it has been very interesting. It has helped me to grow on a personal level and to increase my knowledge about it, thank you very much!
- It has been very interesting, very digestible and personally it has helped me to reflect on the importance of antibiotic resistance. Thank you very much for your time and effort!
- Very interesting and clear presentations. I thought it was a very good idea.
- It was very good. Thanks to the organizing committee and all the associations involved. I really appreciate the work involved. It has seemed to me a beautiful and very current initiative. Thank you and I will be looking forward to new days in the near future.
- I found it very interesting. A large number of professionals contributing their bit of information to us is always appreciated. Thank you very much for the opportunity!
- Personally I would like to deal next time with the more specific topic of the brain. Doing this same program, with the same structure (talks, escape room, doctors, etc), but dealing with the subject of the brain.
- I found it very interesting and important. The lecture on synthetic biology was very good. Very novel and interesting project. A future event on the relationship of microbiota with diseases, resistances, probiotics, etc. would be nice.
- It has been very interesting since we have learned, in my opinion, things that the university does not teach us and does not make us think about them, such as the importance of trying to stop the increase of resistances. The methods shown here are simple and very effective and with this we can really get to stop this problem. What is clear is that we can no longer ignore this problem and as students we already have more idea of how to spread it and put into practice these informative methods.
- It has been very interesting, I have learned many things about resistances and how to avoid them. In the career we talk about them, but practically they do not emphasize how we can prevent them from occurring and this conference has been enlightening about this issue, apart from many others. It would also be interesting to talk about how to avoid superinfections in hospitalized patients, a subject about which there is still a lot to learn in my opinion.