

Summary of the study

‘Experiences of researchers who interact with the media and social networks in Spain’

2024

Scientists around the world have had negative experiences after speaking to the media and on social media platforms. Several surveys – such as those commissioned by [Nature](#), [Science](#) and [Economist Impact](#) – have documented these experiences in other countries during the Covid-19 pandemic. The present study centres on attacks related to the media exposure of researchers in Spain, who recalled their experiences after speaking to the media about any science-related topic in the past five years. The analysis is based on data obtained from a survey carried out in June and July 2024. The study also examines the respondents' habits of participation in the media and on social media, as well as their perception of the benefits and obstacles they encounter, with a focus on gender differences. Finally, the study examines the personal and professional consequences of these attacks for scientists, the coping mechanisms they use to deal with them, and the response they receive from their institutions.

This study is an initiative of the [Science Media Centre Spain](#) (SMC), a science information office set up by the [Spanish Foundation for Science and Technology](#) (FECYT) in 2022. The SMC offers resources for journalists and statements from expert sources to help media outlets cover science-related news with agility and rigour. The study was coordinated by the SMC and carried out with the [Gureiker](#) research group at the University of the Basque Country (UPV/EHU).

Our study is a first step to shed light, in Spain, on a situation that has already been analysed and addressed in other countries. It will pave the way for new lines of work and the creation of science communication resources to help researchers who may face dissuasive experiences – at a time when their participation in communication activities is encouraged.

Please note that the English version of this summary is based on a machine translation.

CONTENT

TECHNICAL SPECIFICATIONS	4
1. DESCRIPTIVE ANALYSIS OF THE SAMPLE	5
2. CONTRIBUTION TO THE MEDIA AND SOCIAL NETWORKS	6
3. NEGATIVE EXPERIENCES	10
4. TESTIMONIES	14

TECHNICAL SPECIFICATIONS

Study methods

The data was collected by email, using a self-administered online survey, sent through software that guarantees confidentiality and prevents anyone other than the intended respondent from answering the survey, even if the respondent has forwarded its link.

Technique: survey via email with a self-administered questionnaire lasting approximately 15 minutes.

Study population: all experts in various areas of science and technology contacted by the Science Media Centre Spain to be a source of information from March 2022 to July 2024. (N=1.405).

Sample: 237 people completed the survey. The response rate is 17%. The drop-out rate, one of the main problems with online surveys, is 5.5%.

Survey: included mostly closed questions in which participants selected one or more options. It also included several sections offering the opportunity to elaborate on their negative experiences, as well as to suggest support or protection mechanisms.

Data analysis: Excel and SPSS software were used.

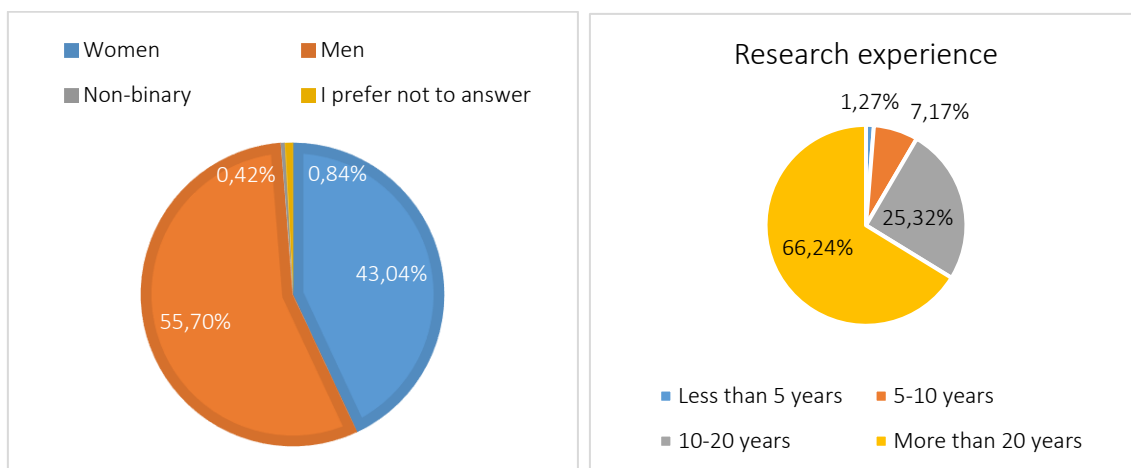
Fieldwork: three waves during June and July 2024.

Scientific direction: Maider Eizmendi Iraola, Ainara Larrondo Ureta and Simón Peña Fernández, from the [Gureiker research group](#) (IT1496-22) of the University of the Basque Country (EHU/UPV).

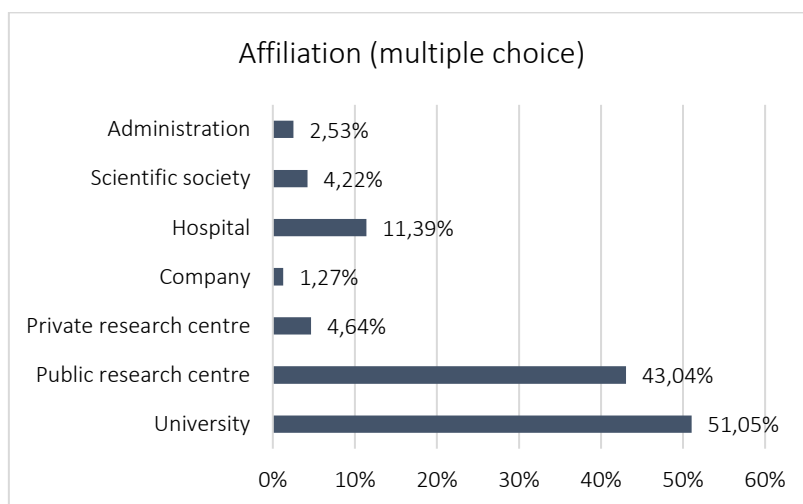
DOI of the full report in Spanish: <https://doi.org/10.58121/mbsx-t287>

1. DESCRIPTIVE ANALYSIS OF THE SAMPLE

Of the 237 completed questionnaires, 102 were completed by women (43.04 %) and 132 by men (55.70 %); one person defined herself as non-binary and two others did not answer. Most respondents have more than 20 years of research experience (66.24 %) and hold permanent positions (78.9 %).



Respondents mostly work in universities (51%) and public research centres (43%), followed by hospitals (11.39%).

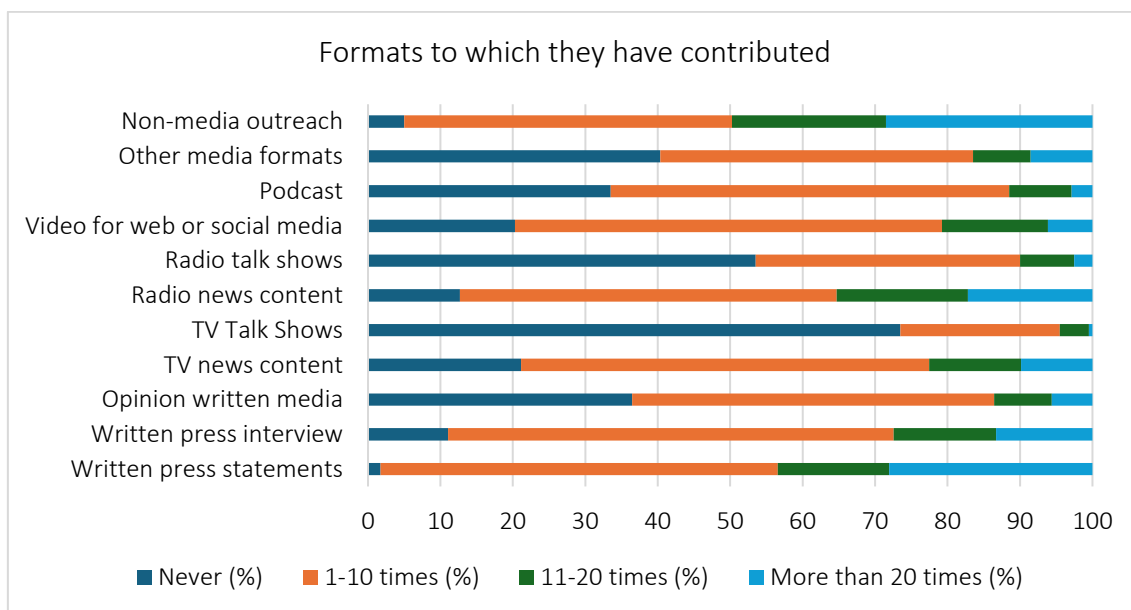


Among the topics that respondents commented on in the media and on social networks in the last five years, covid-19 (26.16%) and climate change (25.32%) stand out.

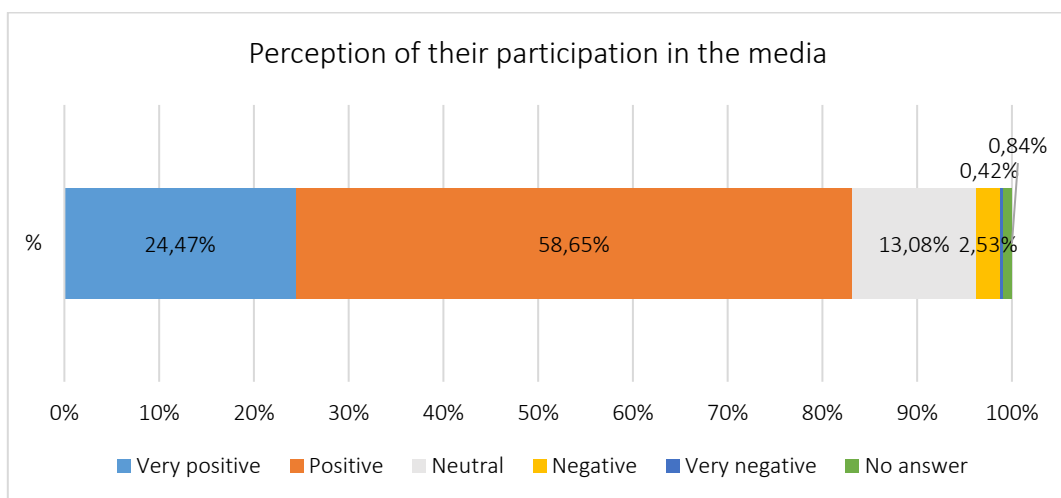
Biomedicine (37.55%) and environmental sciences and technologies (16.46%) are their main research areas.

2. CONTRIBUTION TO THE MEDIA AND SOCIAL NETWORKS

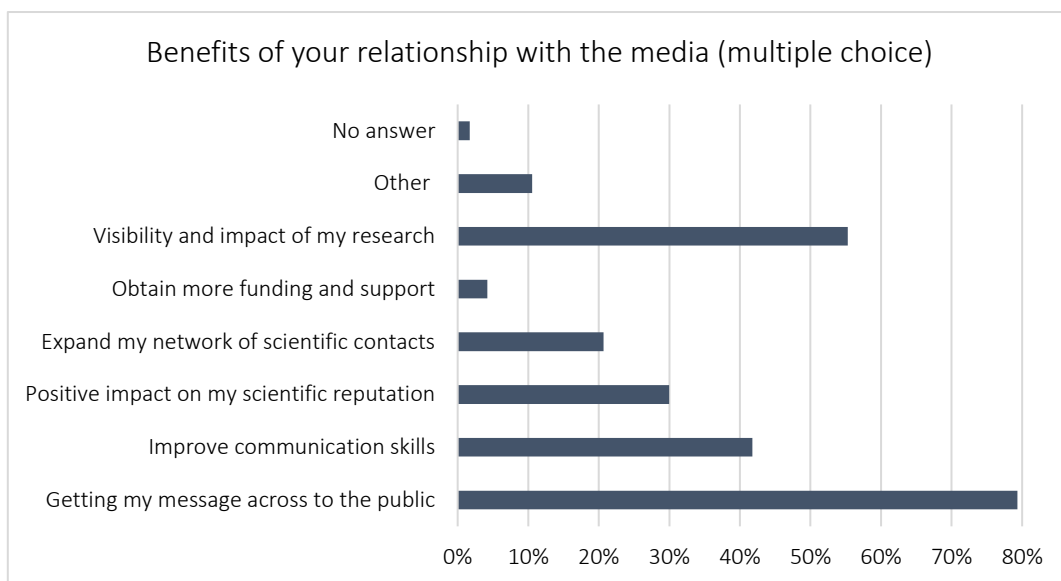
In terms of **media formats**, respondents say that they have mainly contributed to news content over the last five years. They have participated less often in talk shows, where opinion has an important dimension. Podcasting and videos for news websites and social networks are gaining in importance; outreach activities outside media outlets also have considerable weight.



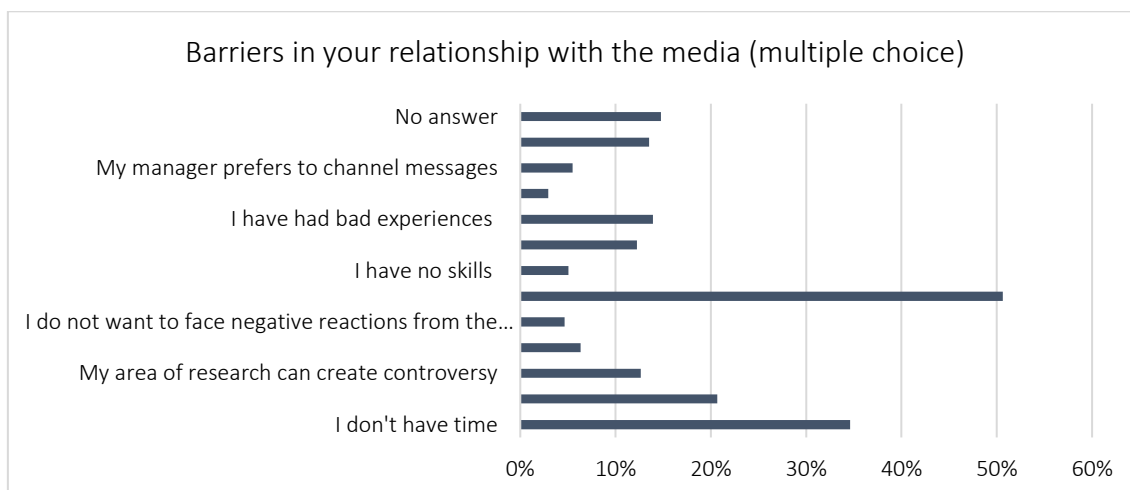
The respondents' **perception of their media involvement** is mostly positive (58.65%), very positive (24.47%) or neutral (13.08%).



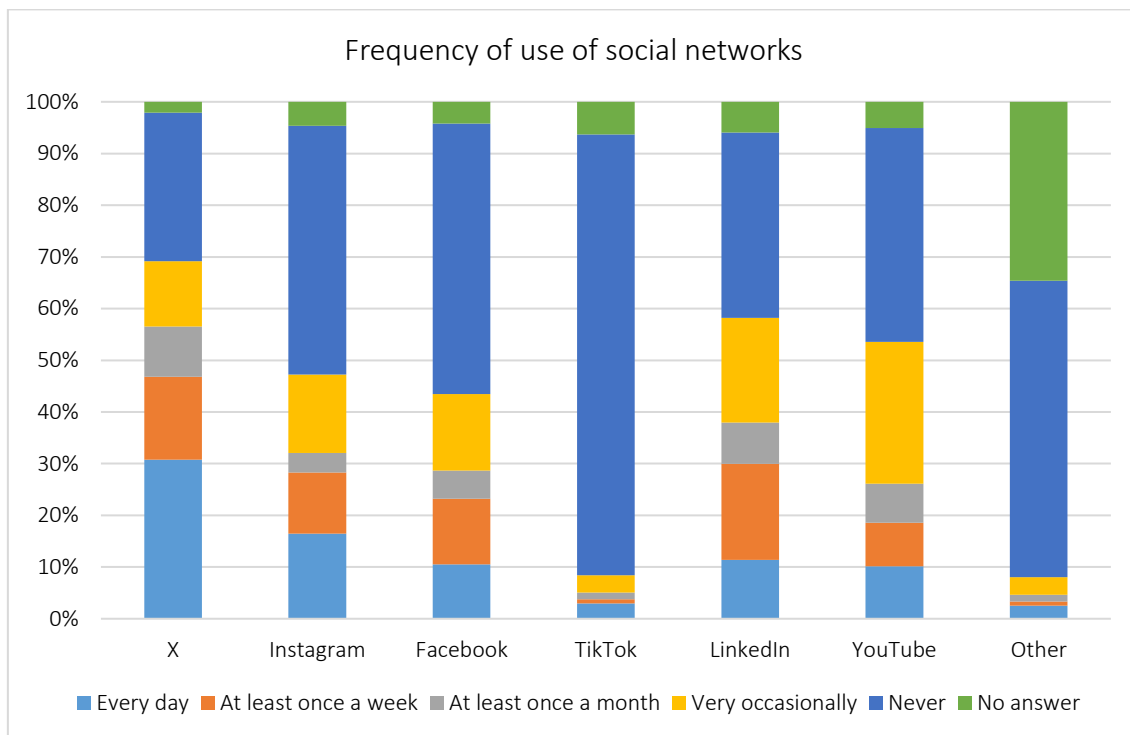
The respondents say the main **benefits of their media involvement** are getting their message across to the public (79.32%), increasing the visibility of their research (55.27%), improving their communication skills (41.77%), enhancing their scientific reputation (29.96%) and expanding their peer network (20.68%). Only 4.22% of respondents believe that speaking to the media has brought them benefits in terms of securing more funding and support.



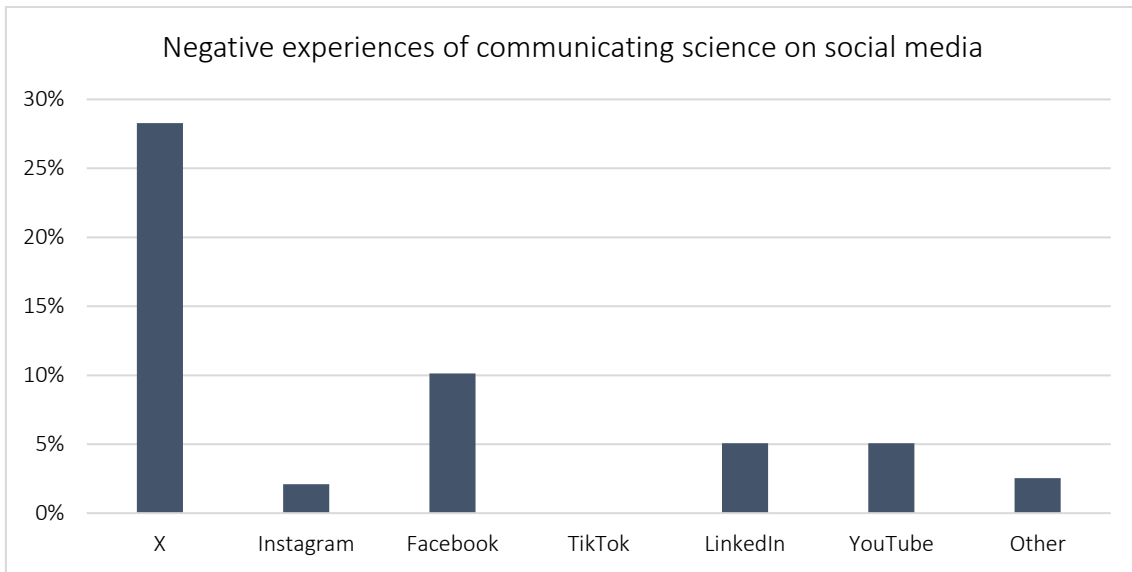
In terms of **obstacles to media participation**, the most common responses were fear of misrepresentation of their message (50.63%), lack of time (34.60%), fear of making a scientific mistake in public (20.68%), controversy in their area (12.66%) and not knowing how to reach the media (12.24%).



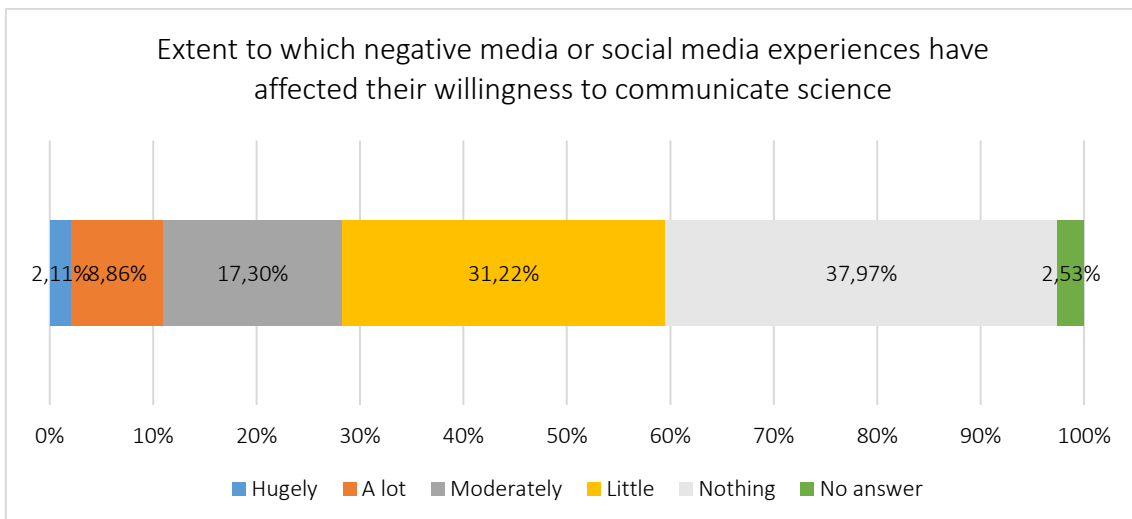
Regarding **their use of social networks**, respondents say the platform they use most regularly is X (formerly Twitter); 30.80 % use it daily and 16.03 % use it at least once a week. Instagram is the second most used network daily; however, the percentage that does not use it is considerable (48.10%). While its use is occasional, 58.23% use LinkedIn and 53.59% use YouTube.



Despite being effective communication tools, social networks have become spaces of hostility. 28.27% of the researchers surveyed say they had a negative experience on X, and the percentage of people who say they experienced repeated negative experiences stands out—the same is true on Facebook, although less repeatedly.



37.97 % of respondents say that negative experiences with the media or on social networks have not affected their willingness to communicate about science. However, 59.49 % say it did, and more than 28% say that impact was significant (moderately, a lot, very much).



3. NEGATIVE EXPERIENCES

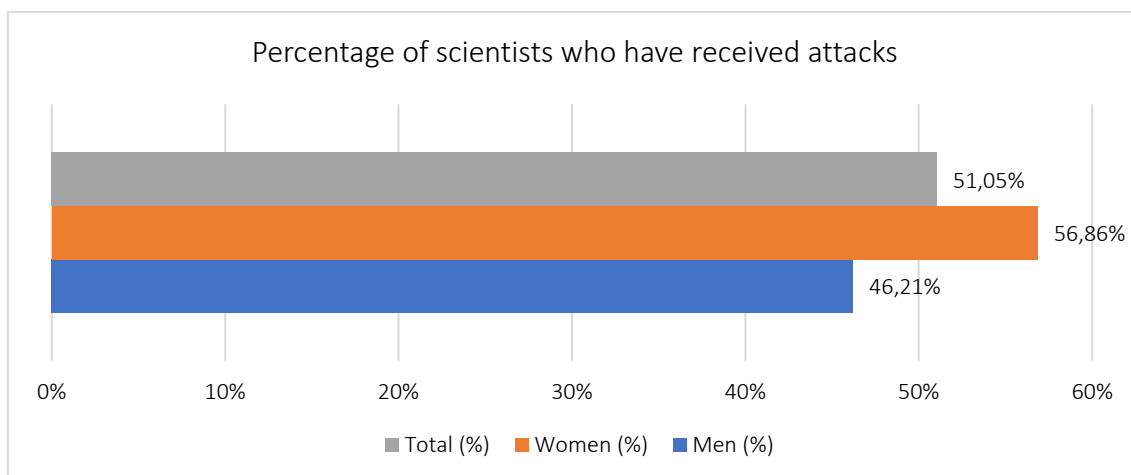
The negative experiences of male and female researchers after talking about science in the media were studied through an analysis of the descriptive variables of the sample.

The study analyses the following experiences:

- Insults.
- Comments on physical appearance.
- Comments on origin, ethnicity, ideology, religion or beliefs.
- Comments on sexual orientation or gender identity.
- Comments on professional capacity.
- Comments on professional integrity.
- Publication of personal data for the purpose of creating harm.
- Intense and repetitive contact with specific individuals or groups.
- Threats of physical or sexual violence.
- Death threats.
- Any other negative experiences.

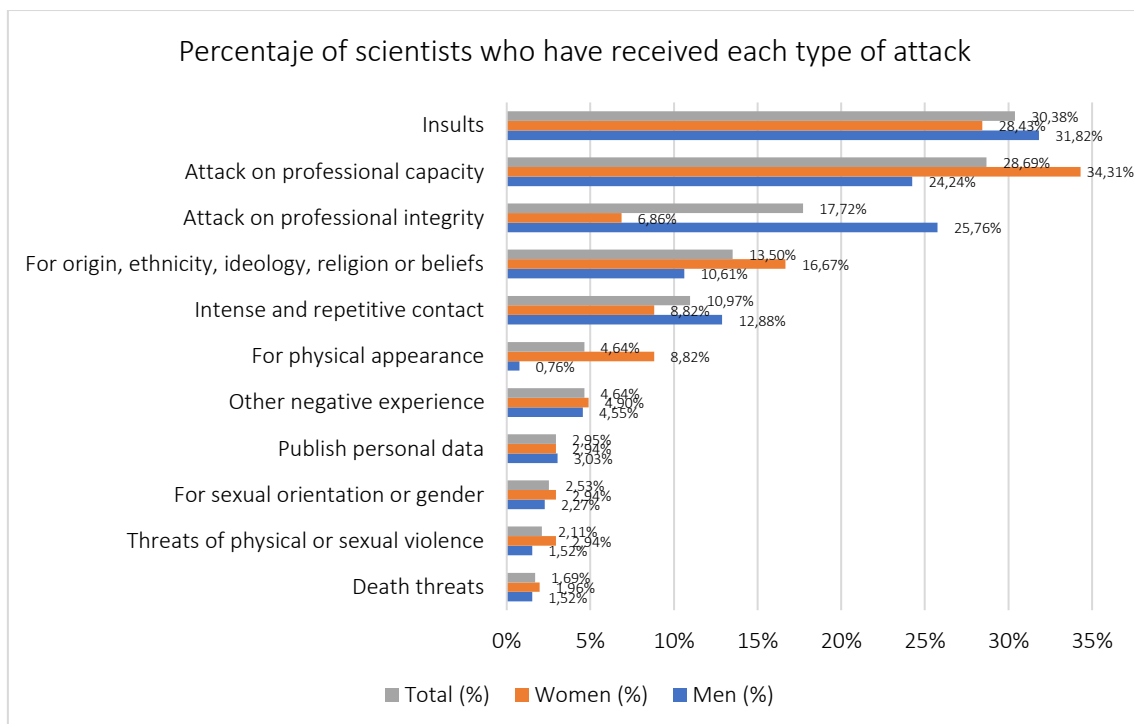
The results paint a hostile reality. **51.05% of scientists admit to having suffered an attack after talking about science in the media in the last five years.**

The prevalence is high and affects women more than men. **Of the men surveyed, 46.21% say they have been attacked in some way, while the percentage of women is 56.86%.**



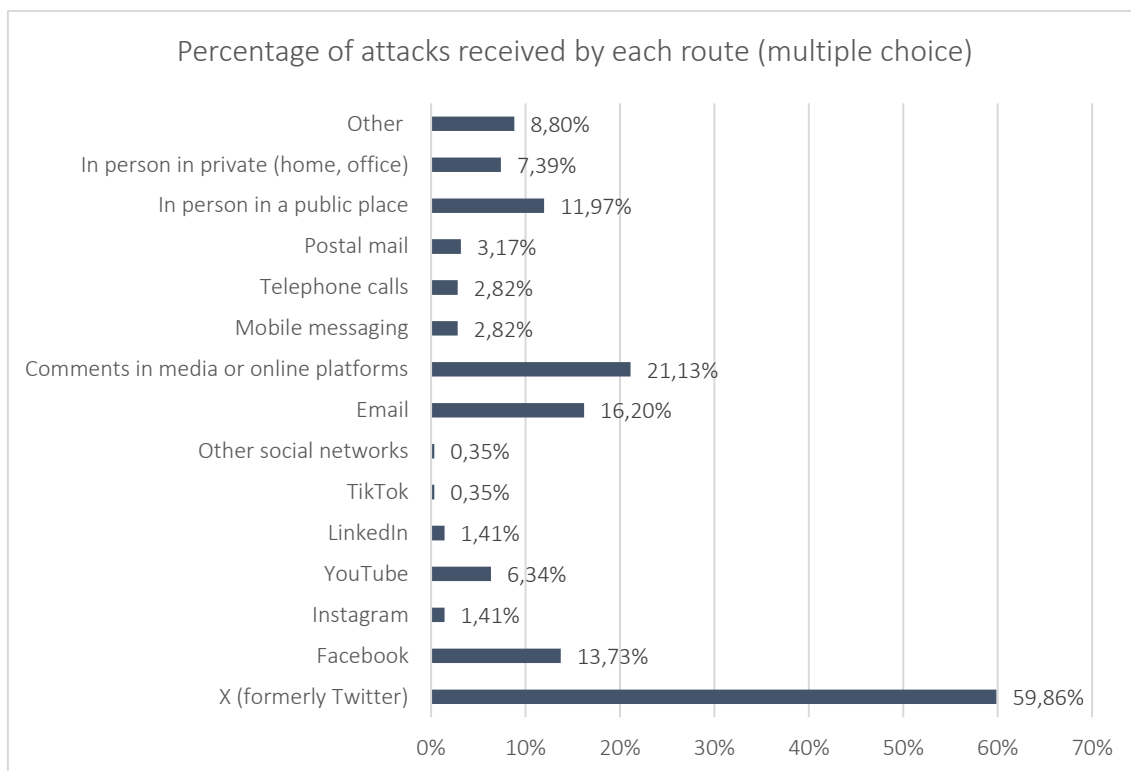
Insults, comments about researchers' professional capacity and integrity are the most prevalent and repeated attacks. They are followed by comments on their origin, ethnicity, ideology, religion or beliefs, intense and repetitive contact, comments about their physical appearance, publication of personal data and comments about their sexual orientation or gender identity. A much smaller percentage of scientists surveyed also report more serious forms of attack: threats of physical and sexual violence, as well as death threats.

Gender stereotypes are seen to influence the negative comments received by both men and women. For example, **more than one in three female scientists received comments about their scientific ability, with a percentage difference of more than 10 points compared to men.** Meanwhile, **men receive more comments about their professional integrity, with a difference of 18.9 percentage points compared to women.**

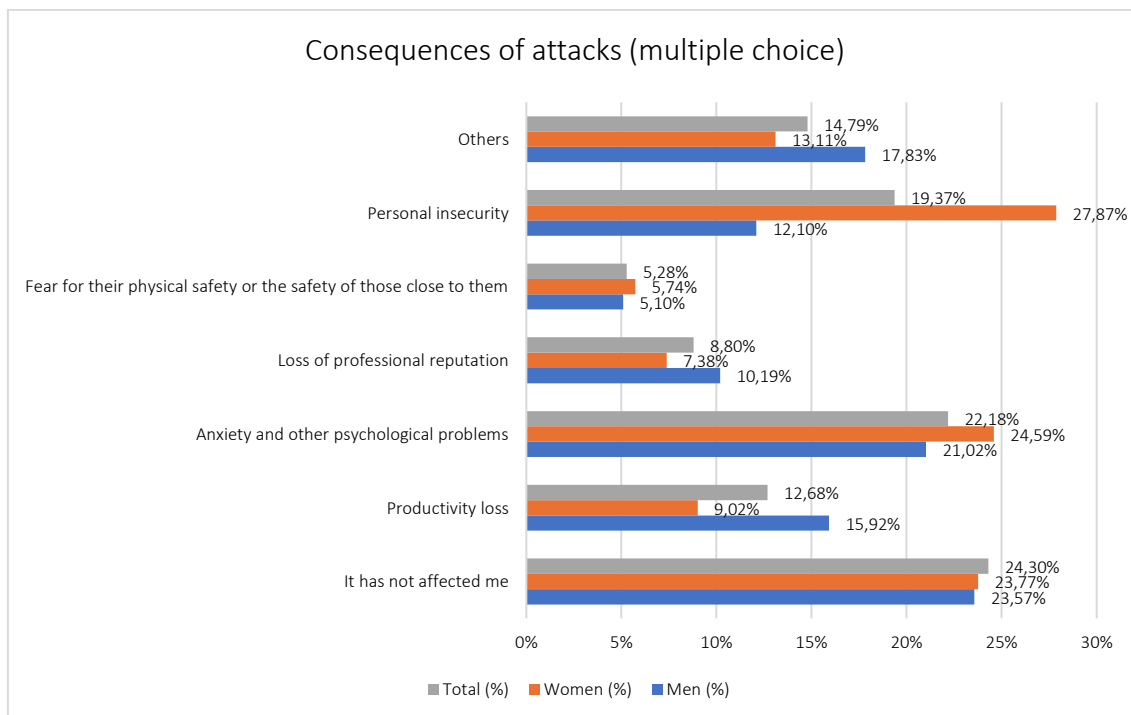


In **terms of the respondents' research areas**, the prevalence of attacks is high in social sciences, biosciences and biotechnology, biomedicine, and environmental sciences and technologies. When analysing the data according to the **topics they have discussed**, the proportion is high among those who spoke about covid-19, virology, vaccines, infectious diseases as well as social and economic inequalities.

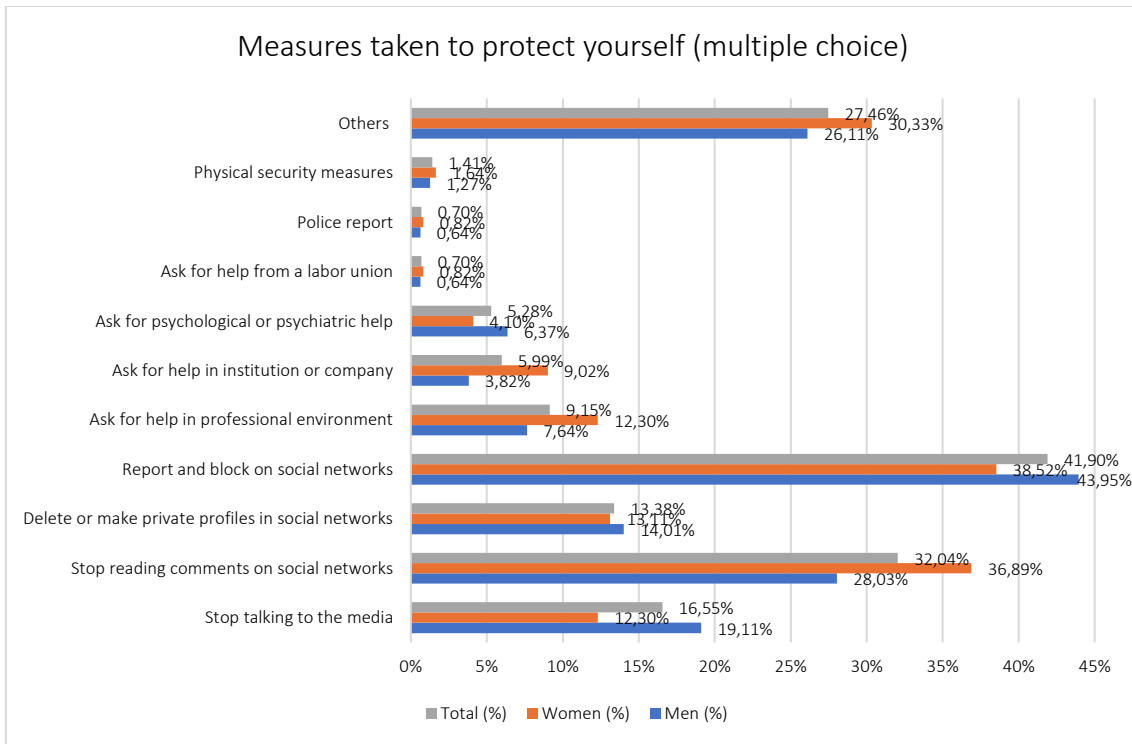
The main avenue of attack is X, followed by comments in the media and in-person.



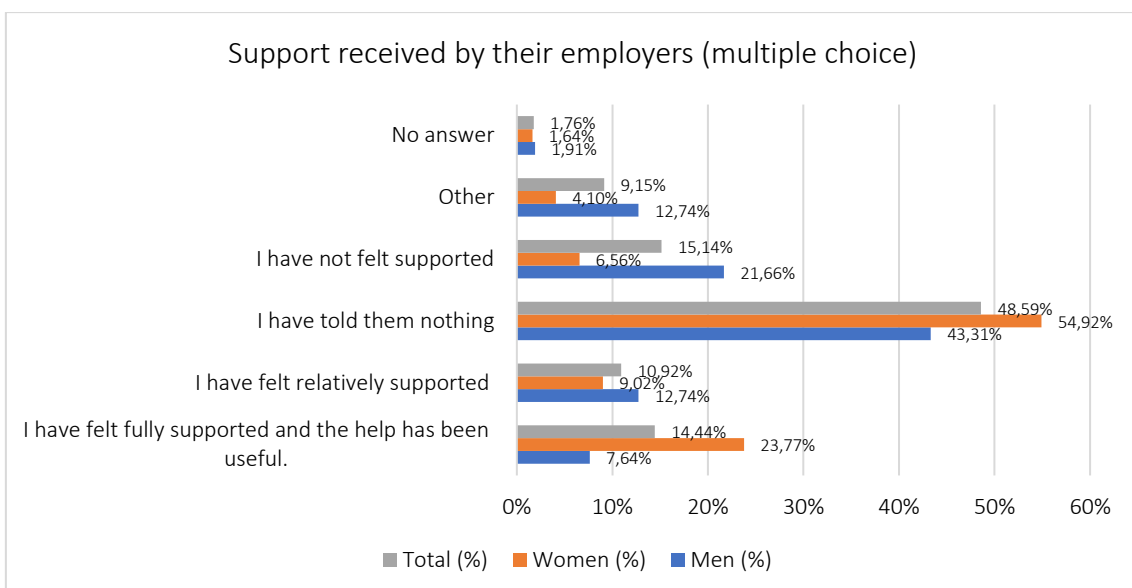
In terms of the **consequences of the attacks**, a large percentage of the total reported no impact at all. **Men are more likely to report loss of productivity, while women are more likely to report anxiety and personal insecurity.**



Regarding the **measures adopted**, the most frequent are related to the management of social networks. In **16.55% of the cases of negative experiences, the consequence was to stop talking to the media**. The percentage of cases in which those affected seek help is low and limited to the most serious experiences.



Regarding the **support received by their employers**, almost half of respondents say they did not report the attacks to their institutions.



4. TESTIMONIES

This section collates **representative testimonies about the negative experiences recalled by respondents**, leaving out identifying details:

“They don't like research on issues that may affect their commercial interests and that they don't control.”

“I was constantly receiving emails slandering and insulting me.”

“It is very common that, when an issue can be interpreted in ideological and/or religious terms, for example, people resort to quick, direct insults, without any nuance.”

“The most frequent negative comments were insults about my physical appearance or my ability as a scientist.”

“I [received] comments in which my work has been ridiculed or invalidated (...) I have also seen how our results have been misrepresented to support racist ideas that have nothing to do with the conclusions we have reached.”

“I was identified by anti-vaccine groups, and they attacked my profile. I removed myself from all social media.”

“I was insulted, and they questioned the legitimacy of the process through which I got my [research] scholarship.”

“On social networks, they said the results [from our research] are false and that the government pays us to say certain things.”

Below are respondents' **proposals to help researchers in their relationship with the media and social networks**.

Respondents say that **institutions should encourage and support communication work**:

“I think the importance of outreach should be talked about more, it should feel like a normal function of research staff.”

“The solution is to communicate more [often], so that the scientist/communicator who is exposed is not the only person carrying that message.”

Respondents ask institutions for **training and information on science communication:**

“We could all do with a workshop to teach us the best strategies to communicate better and to avoid (or minimise) all these problems.”

“There should be a committee, or professionals trained to help us learn how to communicate science, and to teach us how to deal with negative situations in every institution.”

“Increased support from the institution by qualified staff with experience in science communication and outreach.”

“It would be good to receive information and training beforehand in order to have the tools to deal with the situation in the best way.”

They call for **protection mechanisms against attacks and for institutions and companies to get involved.**

“Universities and public research centres encourage their researchers to do science outreach, but in my experience, if there is a problem of harassment or insults, suddenly they disengage and leave the researcher to fend for himself. So, it seems that institutions are there for the good of outreach but not for the bad.”

“There must be strong legal backing from institutions. These are threats received by a public official carrying out his duties, this increases the seriousness of the facts and must be asserted.”

“The support of your centre is very important, so you don’t lose legitimacy.”

“There is a contradiction: we are asked to speak to the media, but our interventions are not valued, and when we are attacked, the institution washes its hands of us.”

“The institutions in which scientists work, when threats are public, should express their condemnation on an individual and global basis.”

“The institution should have a unit dedicated to this issue, to help.”

“I believe that protocols should be put in place by institutions to protect their staff who communicate science. In a situation where the harasser works for a scientific institution, protocols for action should be established to settle responsibilities and establish sanctions that discourage undesirable behaviour, bearing in mind that freedom of expression does not allow insults or slander.”

Respondents also see a need for **channels to report their negative experiences**:

“These are not usually known among professors and researchers. Little is said about them. And it is not brought to the attention of the academic authorities. Maybe some advice or indications on what to do when you receive insults and similar mails, which are usually mere annoyances.”

“It is important to make it public and to have consequences for those who do it.”

They propose **extreme caution on social networks**:

“It is important not to abuse social media, which are not the only information channels. A lot of content is nothing more than unverified statements from people who have opinions on everything and stem from disinformation (populists or influencers).”

“I suppose that on social media, scientific institutions and associations do not intervene unless they are directly challenged. Obviously, they cannot answer for the opinions that every one of their staff members may have, but when a strictly scientific/technical opinion is given, they should do so.”

“We should have more institutional support in case of attacks on social media.”

They also call on the media to take control measures both on their social media profiles and on their own websites to avoid this type of situation:

“The media should also take a stand and implement means to monitor such responses and mitigate possible negative effects.”