# Capturing Emotions and Sentiment About COVID-19 & Vaccinations

Insights & Feelings – Expert IQ Report

As the distribution of COVID-19 vaccines expands around the world, the pandemic remains a popular, yet divisive topic of discussion on Twitter. The following Expert IQ Report has been developed by expert.ai and Sociometrica using expert.ai natural language understanding capabilities to analyze a sample of around 262,664 tweets posted between April 15 and May 31, 2021. The analysis identifies the vaccines that were most discussed online and captures the emotions, behavioral traits and trends expressed about them.

It's Time to Start Being Optimistic About COVID-19

Emotions expressed towards COVID-19 pandemic on Twitter between April 15 and May 31, 2021

optimistic 51%
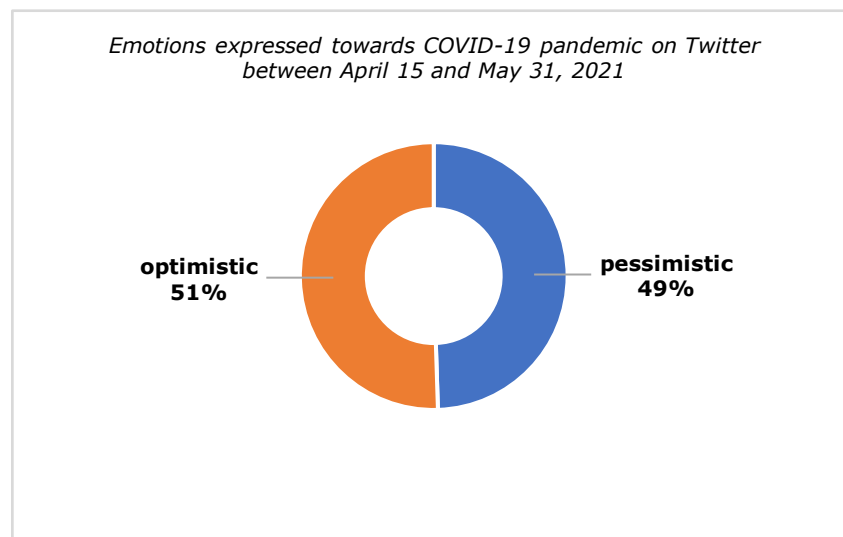
pessimistic 49%

With good news about vaccines beginning to arrive, positive emotions outnumber pessimistic emotions when it comes to the COVID-19 pandemic for the first time. With 51% of the total number of emotions recorded, positive emotions narrowly prevailed over negative emotions (49%).

However, looking at the map of individual emotions, "fear" is prevalent, representing 15.2% of total emotions, followed by two distinctly positive emotions: "success" (6.6%) and "hope" (5.7%). Other positive emotions that round out the top positions are those around confidence in returning to normal and effectiveness of vaccines. Also noteworthy is the sentiment of health fanaticism (3.0), indicating the focus on health that arose in the wake of the pandemic. Following "fear," other negative emotions included "anxiety" and "sadness."
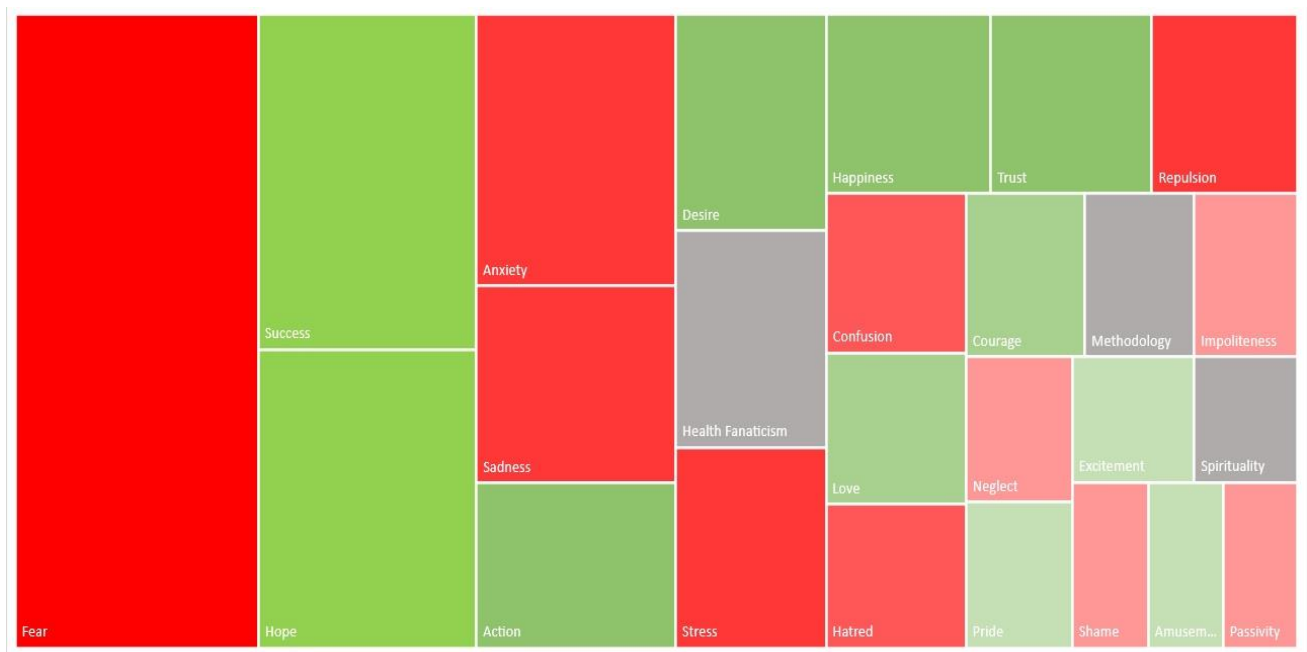

Neutral, positive or negative: what is the sentiment towards vaccines?

In the analysis of 98,980 tweets posted in English from April 16 to 30, 2021, the sentiment expressed towards vaccines was mostly neutral (45.7%), while negative sentiment (29.8%) was just slightly higher than positive sentiment (24.5%).

This trend continued from May 1st to 15, 2021 in a sample of 101,411 tweets in English, where the dominant sentiment was neutral (39.1%), followed by negative sentiment at 28.5% and positive sentiment at 22.5%.

During the final period considered for this analysis (May 16 to May 31, 2021), the overall sentiment expressed in a sample of 50,824 tweets became more positive (39.7%) compared to neutral (28.2%) and negative sentiment (22%).

Note: Totals may not add up to 100% as tweets do not all transmit sentiment.

Sentiment trend towards vaccines captured on Twitter between April 15 and May 31, 2021
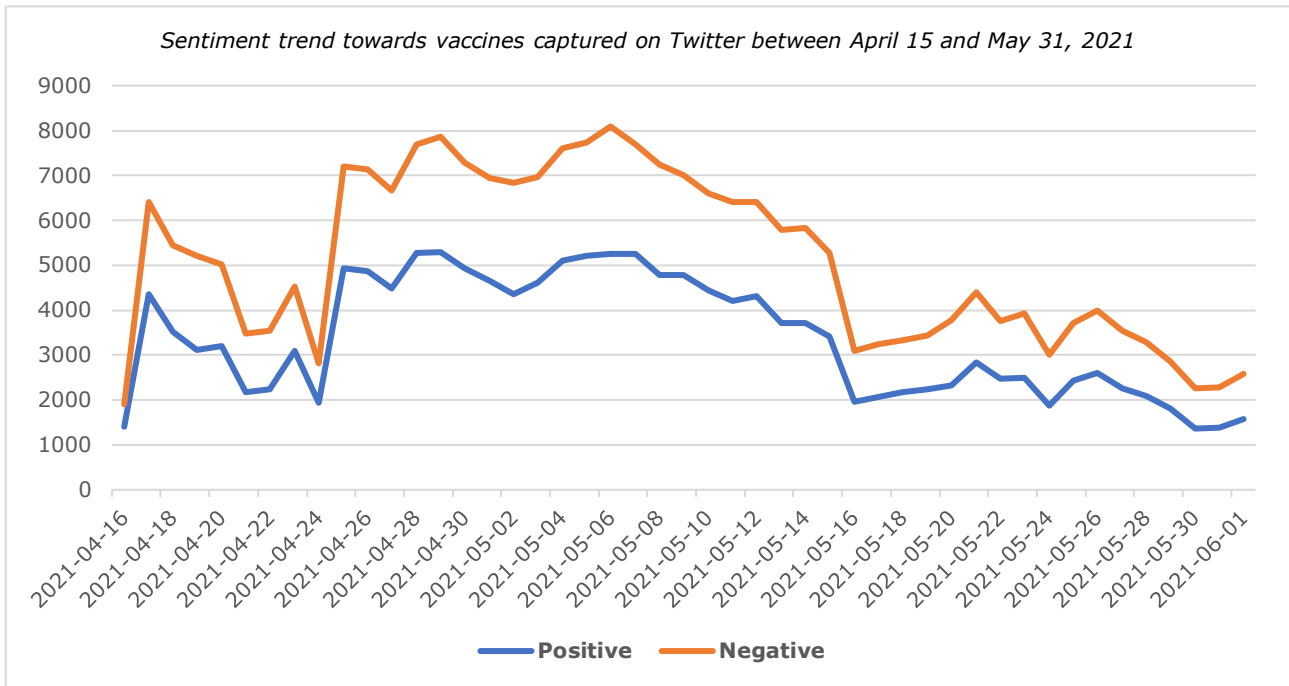
Vaccines: People Emotions Index

We also examined the emotions surrounding each of the five main vaccines discussed on Twitter. Although not used in Western countries, the Sputnik vaccine registers a very high level of positive emotion and is associated with a perception of success and superiority. It must be noted that the Sputnik vaccine has been promoted extensively on Twitter.

The Pfizer, Moderna and AstraZeneca vaccines are also associated with "success," at equal levels (10.4% for each), while "anxiety" is expressed around J&J and AstraZeneca (respectively at 11.5% and 10.9%). The greatest trust is attributed to Moderna (4.6%); it is always in first place around emotions associated with the correctness of the method and it is the preferred vaccine by those inspired by health fanaticism.
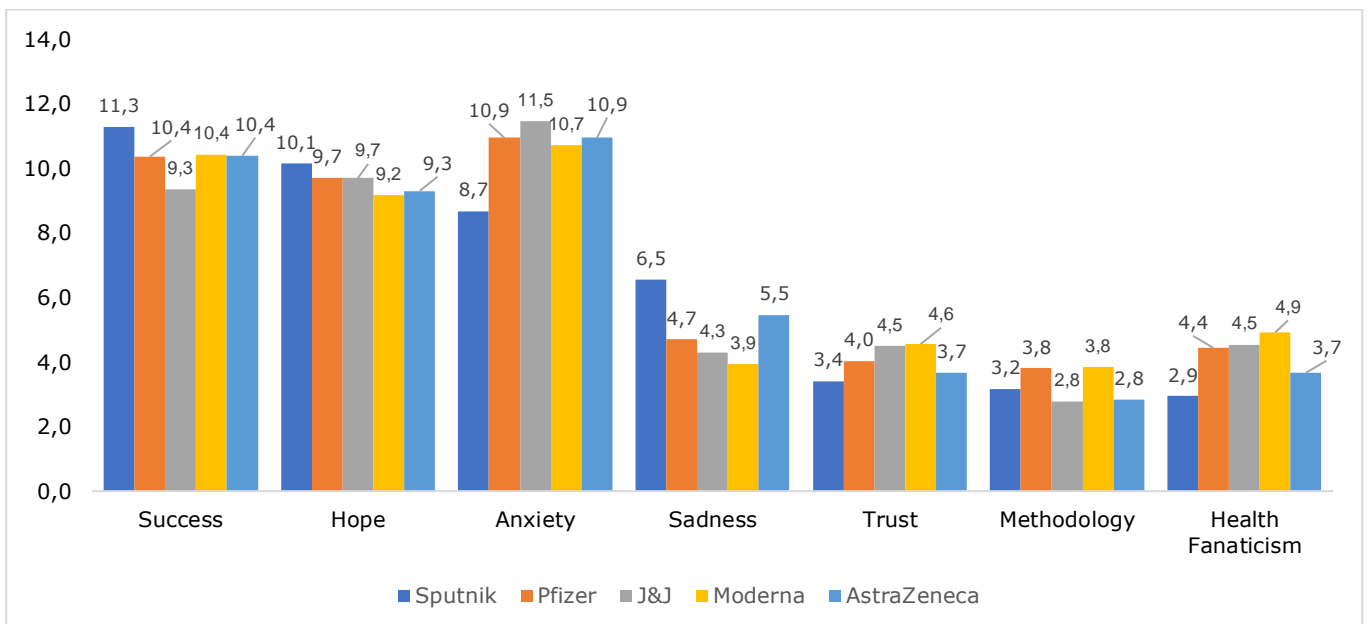
Pro-vax vs No-vax

Comparing the emotions of those who are in favor of vaccines to those who are against, we find that "fear" prevails in both cases. However, when it comes to other emotions, there is a clear difference between the two. For No-vaxers, negative feelings prevail while Pro-vaxers are associated with more positive emotions — both in a general sense and regarding overall progress around COVID-19.

Among these groups, there is a feeling that it will be difficult to emerge from the pandemic and that the vaccines are unreliable. If we look at individual emotions, we see that "sadness," "hatred" and "impoliteness" are prevalent among No-vaxers and "hope," "trust" and "courage" are prevalent among Pro-vaxers.
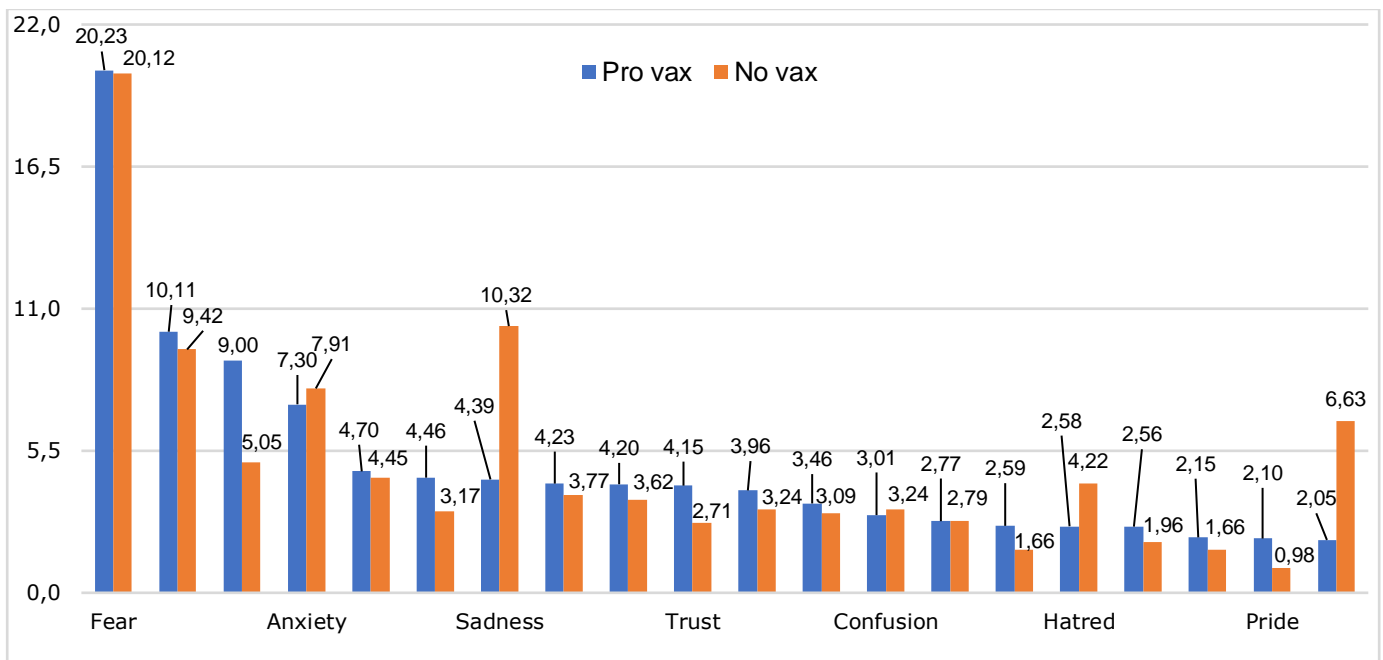
* The index of emotions is calculated using the following methodology: From each comment, expert.ai technology extracts one or more emotions regarding the main topic of the analysis (COVID-19, vaccines). Emotions are distributed in around 80 categories that represent the most natural and widespread emotions, such as: joy, fear, anxiety, etc. Each emotion is given a value from 1 to 100, where 100 is the maximum value. As a result, a synthetic index of the emotional strength of each topic is then calculated.

*While the data collected and analyzed with our AI-based platform has been checked with Sociometrica, the unique intent of our analysis is to **offer insights on the AI-based Natural Language capabilities in analyzing a massive amount of content from social streams***.

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