

# Covid-19 Infodemic and Misinformation in the Social Media

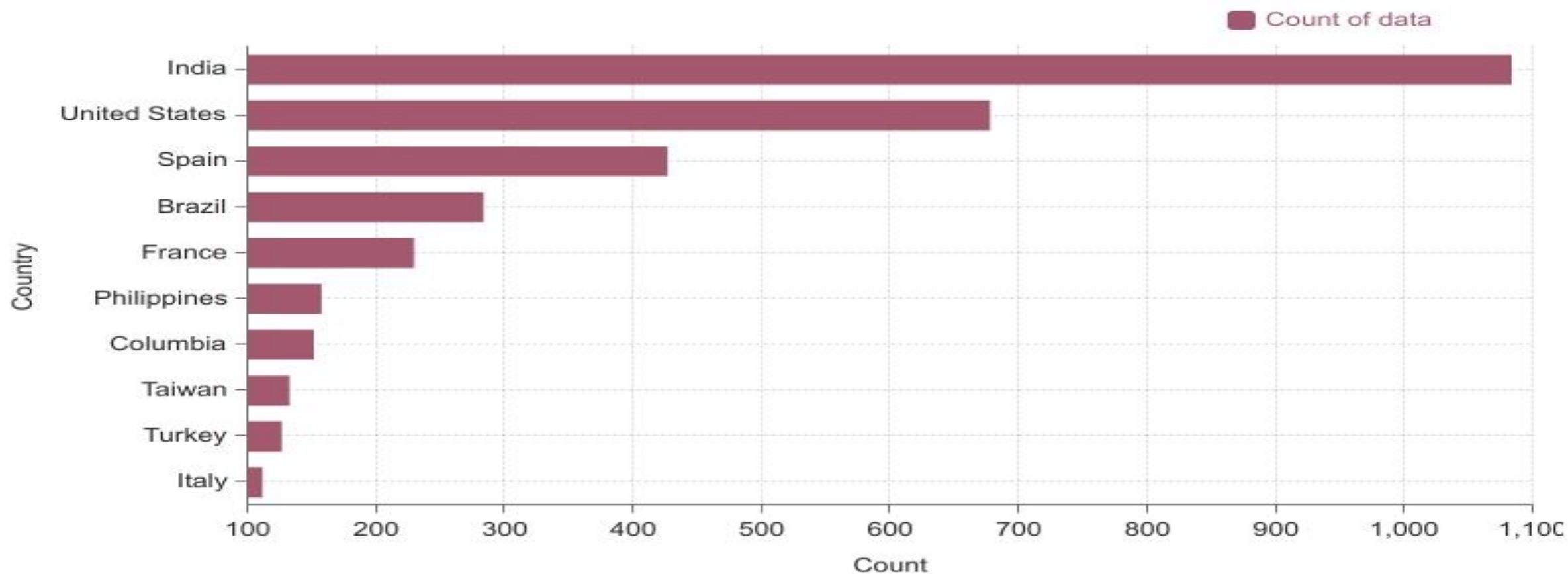
Aleyna ESER

17030411052

# INTRODUCTION

- Besides all useful information about Covid-19, there are also a new mix of misinformation in the social media. For example, when we have spent time online in the past few months, we probably all feel the difficulty of determining what information about the coronavirus vaccine is reliable and what is not.
- As a result of that, in early February 2020, The World Health Organization defined this situation as the over-abundance of information with the term "Infodemic" and Covid-19 was recorded as the first global infodemic.
- In this study, my problem is to make general evaluations about Infodemic and misinformation in the social media during Covid-19.
- The main purpose of the study is to inform users or clients who use social media to follow Covid-19 news and provide some suggestions about this problem for users.
- In this story, the problem is formed around 3 main topics. These are general situation of Turkey, the world and people to this problem.
- Analyzes and visualization of data was done to support the story through Visme tool. These are general situation of Covid-19 Infodemic, Covid-19 misinformation types and topics, through which social media channels and people's attitude to this situation in the social media.
- The time period are divided to collect data such as the first time in 2020 when the disease started to spread, 2021 and May.

## Number of Fake News In The Top 10 Country

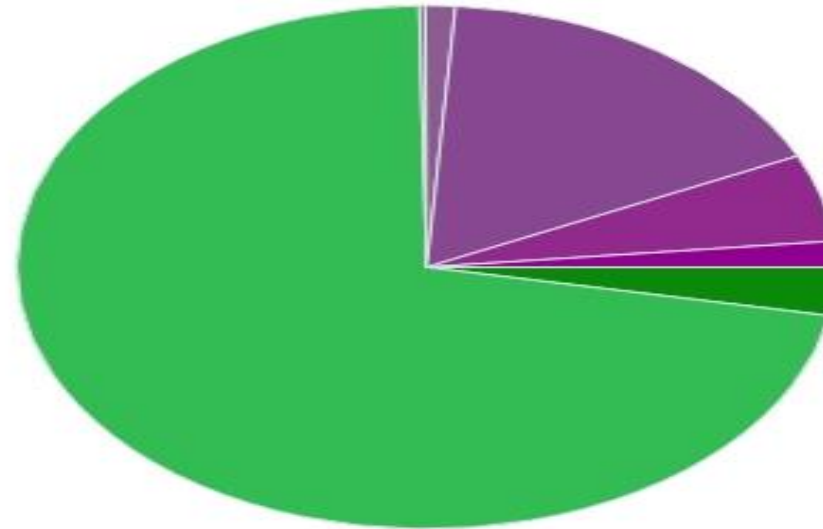


The count of fact check news from the top 10 countries is shown above. It is the visualization of data set of 5182 (N=5182) fact-checked news for COVID-19, collected from 04/01/2020 to 15/05/2020 among 105 countries. India has a maximum number of cases of fake news that is 1083 and then followed by the USA and Spain. Turkey ranks 9th with 126 fake news.

Reference: [https://github.com/Gautamshahi/FakeCovid/blob/master/data/unique\\_country.txt](https://github.com/Gautamshahi/FakeCovid/blob/master/data/unique_country.txt)

## World News Type Reliability Indices

Science	2.98%
MSM	72.10%
Satire	0.24%
Clickbait	1.18%
Political	16.97%
Fake	5.42%
Conspiracy	1.60%



This graph shows the news reliability index that quantifies the relative volume of reliable content with respect to the overall volume of messages pointing to sources of information from 01/04/21 to 13/05/21. Science and MSM are predominant in healthy online discussions. At this time, political and MSM is more dominant than others.

Distinguish classes of information sources into:

- **Reliable**

*MSM:* Recognized and politically unbiased mainstream media.

*Science:* Recognized scientific sources

- **Potentially Unreliable**

*Satire:* Known to use humour and irony to expose and criticize news.

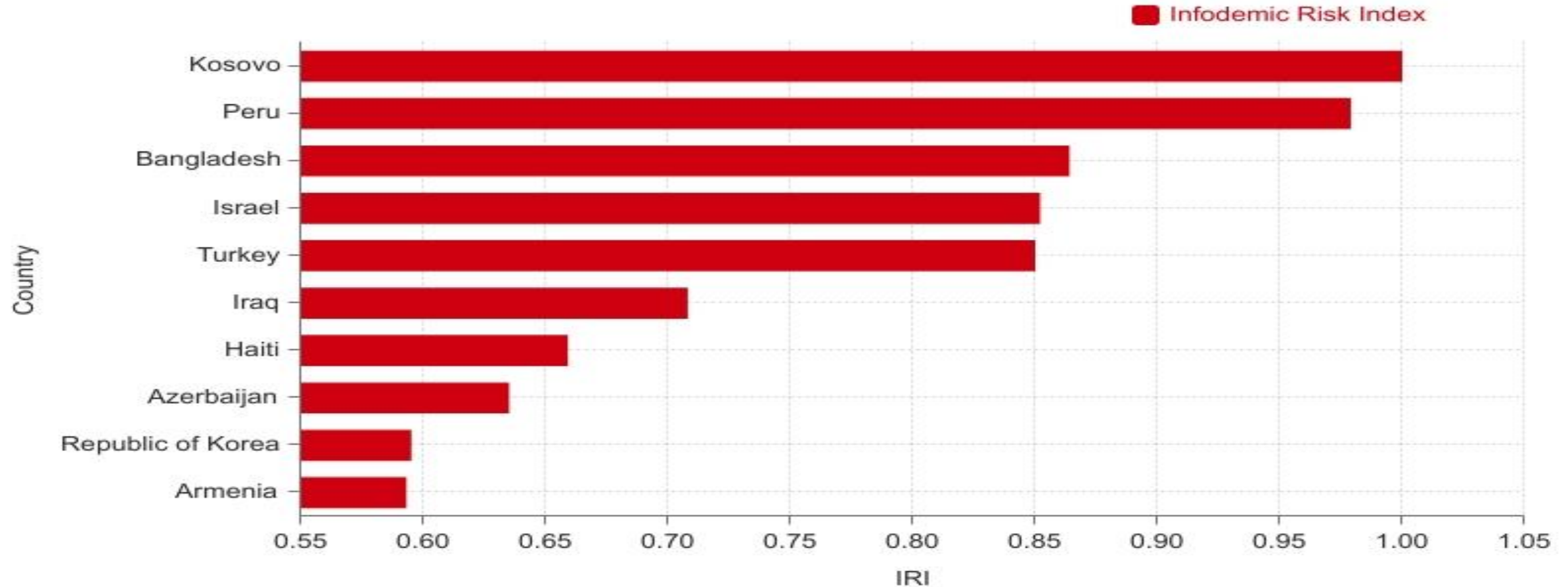
*Clickbait:* Known source of false advertisement designed to attract attention.

*Political:* Known politically biased media.

*Fake:* Known to spread fake news and hoaxes.

*Conspiracy:* Known to spread false narratives and conspiracy theories.

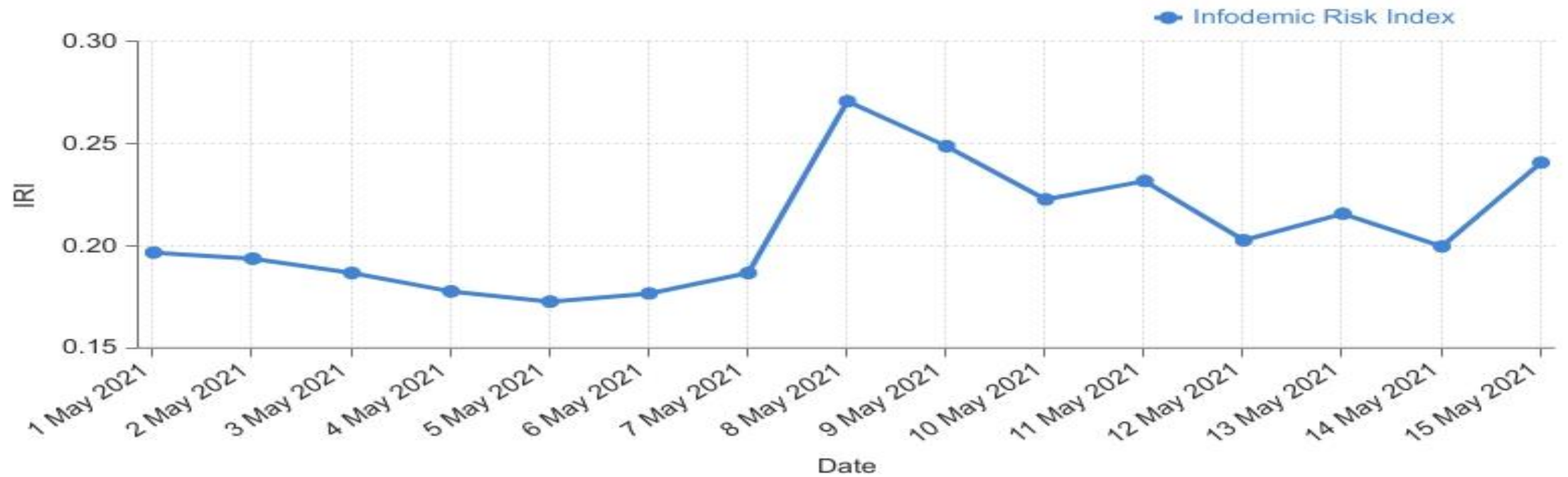
## Infodemic Risk Index Of The Top 10 Country



The graph shows Infodemic Risk Index among the top ten countries which estimate the chance that a user in a social media platform is pointed to potentially unreliable sources of misinformation or disinformation about COVID-19 on May 13, 2021. At this time, the rate of a person encountering misinformation on social media in Turkey is 0.850.

Reference: <https://covid19obs.fbk.eu/#/>

## World Infodemic Risk Index



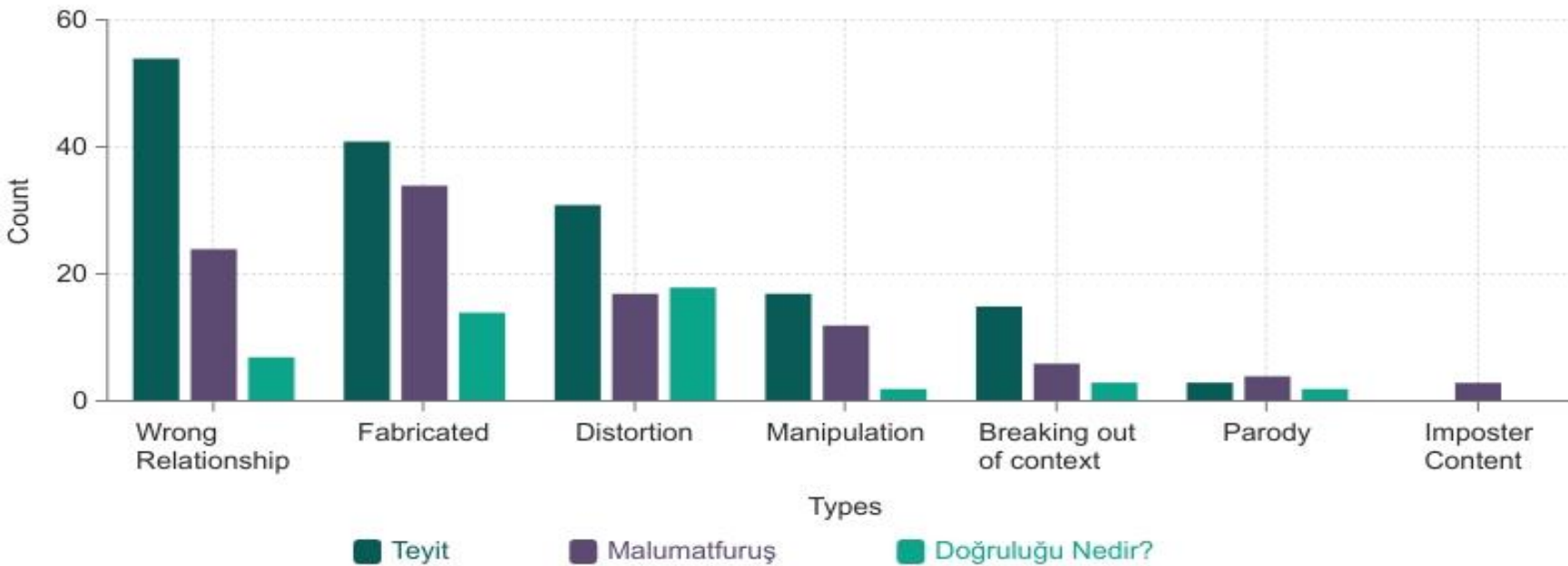
The graph shows World's 15-day infodemic risk index that estimate the chance that a user in a social media platform is pointed to potentially unreliable sources of misinformation or disinformation about COVID-19 from 01/05/21 to 15/05/21. In this range, World's maximum Infodemic risk ratio is 0.271 on May 8 and is in the low/medium-risk group.

Low Risk: values between 0 and 0.25  
Low/Medium Risk: values between 0.26 and 0.5  
Medium/High Risk: values between 0.51 and 0.75  
High Risk: values between 0.76 and 1

Reference: <https://covid19obs.fbk.eu/#/>



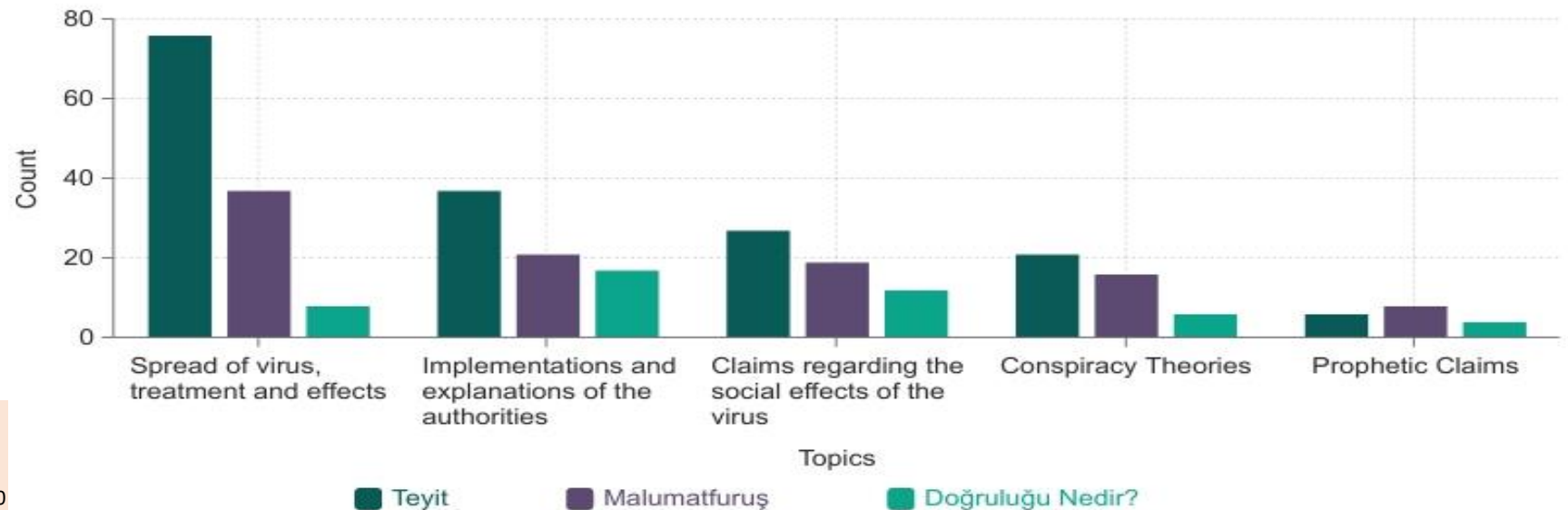
## Types Of Misinformation About Covid-19



Between January and June 2020, according to a review of 307 content flagged as false by three verification platforms in Turkey, 29 percent were “Distortion”, 28 percent “Wrong Relationship”, 21 percent “Fabricated”, 10 percent manipulated photographs, videos and information, 8 percent of them are in the "Breaking out of context" type. Parody and Imposter Content is 4 percent.

According to the examination of 315 misinformation issues published in Turkey in the first 5 months of the pandemic, it was determined that 38 percent were related to the characteristics, spread, treatment and effects of the virus. The second most common misinformation issue is related to the implementations and explanations of the authorities with 24 percent. The social effects of the epidemic have also been among the frequently studied misinformation topics with 18 percent. Conspiracy theories and prophetic claims (20 percent) followed these issues.

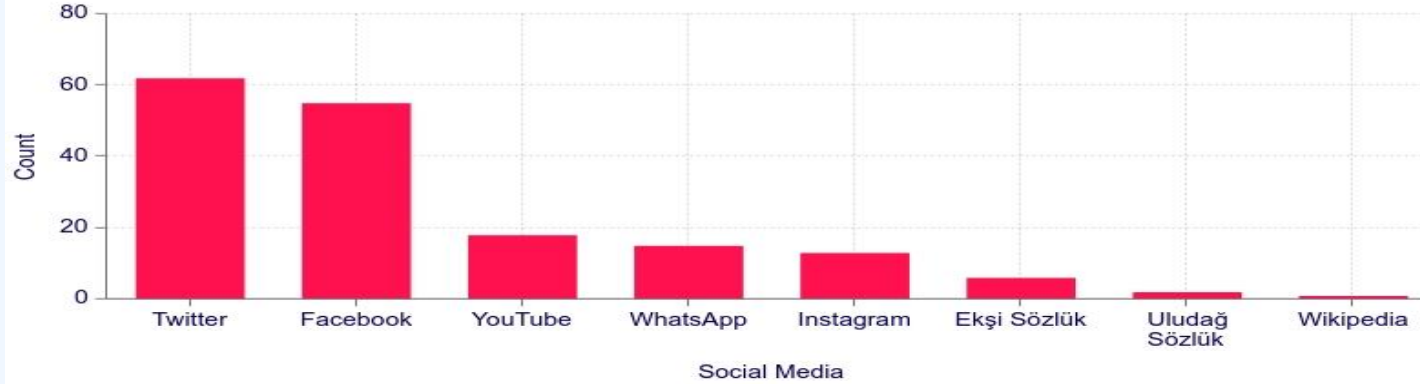
## Topics Of Misinformation About Covid-19



# SOCIAL MEDIA PLATFORMS OF COVID-19 MISINFORMATION

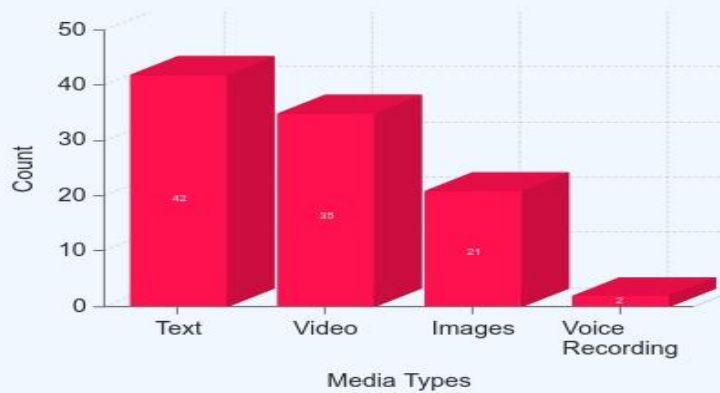


## Social Media Platforms Where Covid-19 Misinformation Spread



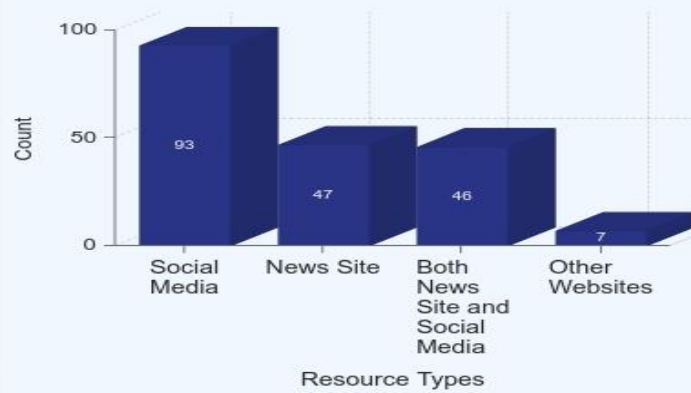
- When 100 (n=100) false news about Covid-19 examined March 16–June 15, 2020, 62 news were posted on Twitter, and Facebook ranks second with 55 news. 18 false news were posted on Youtube and also 15 out of 100 false news were posted on WhatsApp. Instagram ranked 5th with 13 news. While 6 false news were published in Ekşi Sözlük, 2 false news were published in Uludağ Sözlük and 1 in Wikipedia.

## Media Types of Covid-19 Misinformation



- When 100 (n=100) false news about Covid-19 examined March 16–June 15, 2020, 42 news of it were shared as text, 35 as video, 21 as false news image and 2 as false news audio recording.

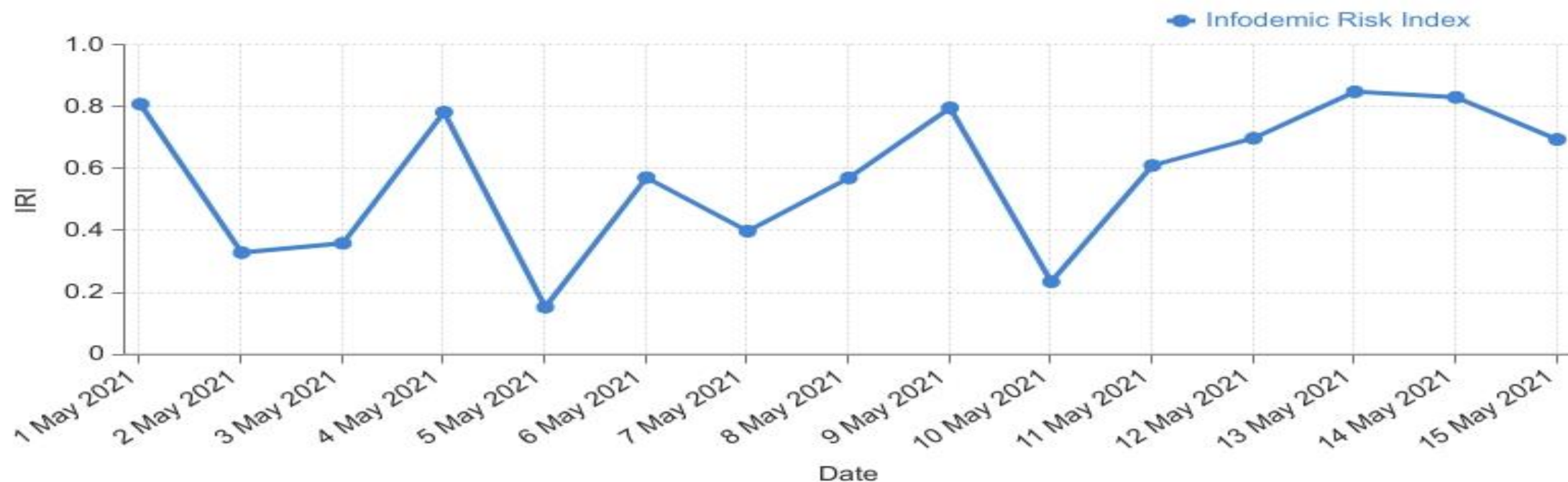
## Resource Types of Covid-19 Misinformation



- Among a total of 100 (n=100) false news investigated regarding Covid-19 news, 93 news were published from social media and 47 from news sites, and also the number of false news published on both news sites and social media is 46. The remainder posted from other websites.



## Turkey Infodemic Risk Index



The graph shows Turkey's 15-day infodemic risk index that estimate the chance that a user in a social media platform is pointed to potentially unreliable sources of misinformation or disinformation about COVID-19 from 01/05/21 to 15/05/21. In this range, Turkey's maximum Infodemic risk ratio is 0.850 on May 13 and is in the high-risk group.

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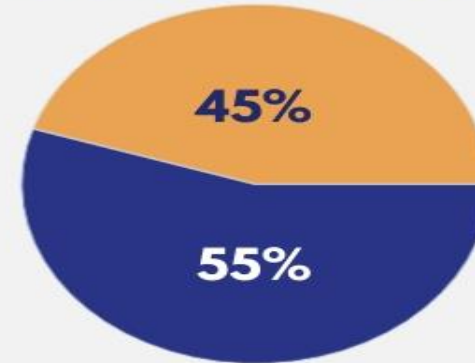
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# PEOPLE'S ATTITUDE TO COVID 19 MISINFORMATION



Question:

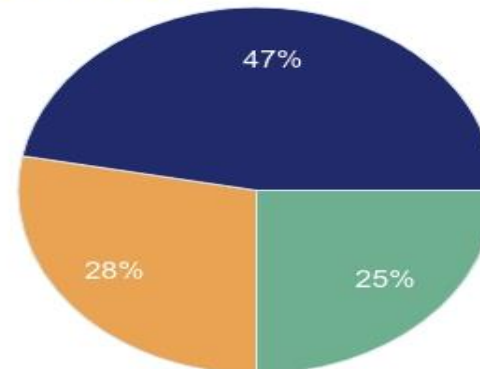
**Can people distinguish between true and false news about the Covid-19 pandemic?**



According to the question asked to 800 (N=800) citizens on January 27, 2021, more than half of the citizens have difficulty in distinguishing which of the information they encounter about this epidemic is correct or which is wrong.

- I have trouble distinguishing between true and false news
- I have no trouble distinguishing between true and false news

## Following the news about Covid-19 in the social media



According to the question asked to 800 (N=800) citizens on January 27, 2021, the society says that they follow this type of news less than the first days of the pandemic. One fourth of the citizens stated that they followed the news about the epidemic as on the first day, and the other quarter stated that they followed the news more than before, although it was almost a year.

# RESULT

- As a result of my investigations, the main reasons of this problem are the social panic, the uncertainty of the disease and people's anxiety and panic triggered by Covid 19 in digital environment.
- I can give some advices for users to fight this problem.
- ❖ The first advice is that fake news spreads faster than real news, so social media users should avoid from publishing Covid-19 related news if they are unsure of its accuracy.
- ❖ The users must build resistance to misinformation and verify its accuracy using verification platforms.
- ❖ Also, the users should follow the news published by official institutions or by social media platforms under the name of Covid-19.
- As a result of this study, to the audience who use social media platforms for Covid19 news, I gave general information about Covid19 Infodemic and misinformation, I supported these by visualized data and also informed about the reasons and the advices to be taken.