THE RELATIONSHIP BETWEEN CONSPIRACY BELIEFS AND VACCINE HESITANCY: THE MEDIATION ROLES OF SUBJECTIVE MENTAL DISTRESS AND EMOTIONAL CLIMATE OF ANXIETY

VIRTUAL COVID CONFERENCE – UNIVERSITY OF SUSSEX

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Conspiracy beliefs

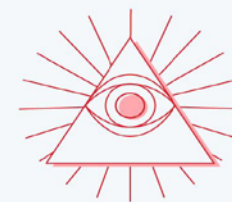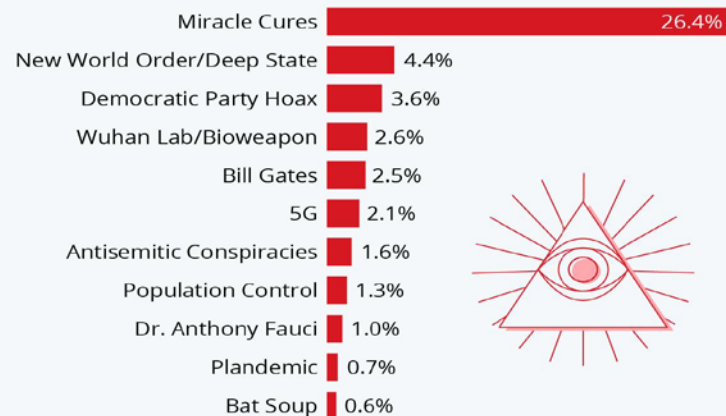At times of crisis ➔ prone to embrace conspiracy theories

> simplified explanations of highly uncertain events

The role of conspiracy beliefs in generating anxiety ➔ Mental health

Anxiety & vaccine hesitancy ➔ may work in both directions

The Most Common Coronavirus Conspiracies

Share of Covid-19 misinformation in the media identified as the following conspiracy theories*

Miracle Cures	26.4%
New World Order/Deep State	4.4%
Democratic Party Hoax	3.6%
Wuhan Lab/Bioweapon	2.6%
Bill Gates	2.5%
5G	2.1%
Antisemitic Conspiracies	1.6%
Population Control	1.3%
Dr. Anthony Fauci	1.0%
Plandemic	0.7%
Bat Soup	0.6%

* 1.1 million misinformation articles were detected between Jan 01 and May 26, of which 46% (522,472) were conspiracy theories.
Source: Cornell University via The New York Times

statista

Aim of the study

People's adherence to conspiracy beliefs about the pandemic → higher levels of self-reported mental distress

Mental distress → vaccine hesitancy

Mental distress → play a mediation role

1) Subjective individual-level anxiety

2) Collective-level anxiety (online discussions)

Two levels: self & collective

Mental distress

+

+ / -

COVID-19 conspiracy beliefs

Vaccine hesitancy

+
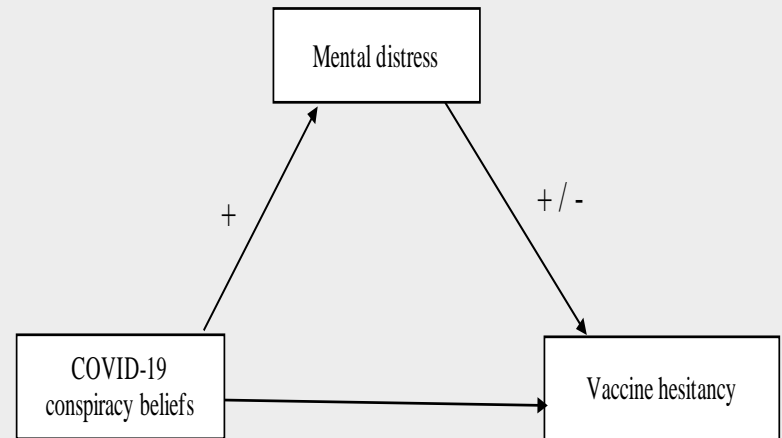
Study 1: Nationally representative survey

Data: N = 1865 in Italy; quota sampled cohort of Italian adults; gender, age, and income; the start of the COVID-19 vaccination campaign
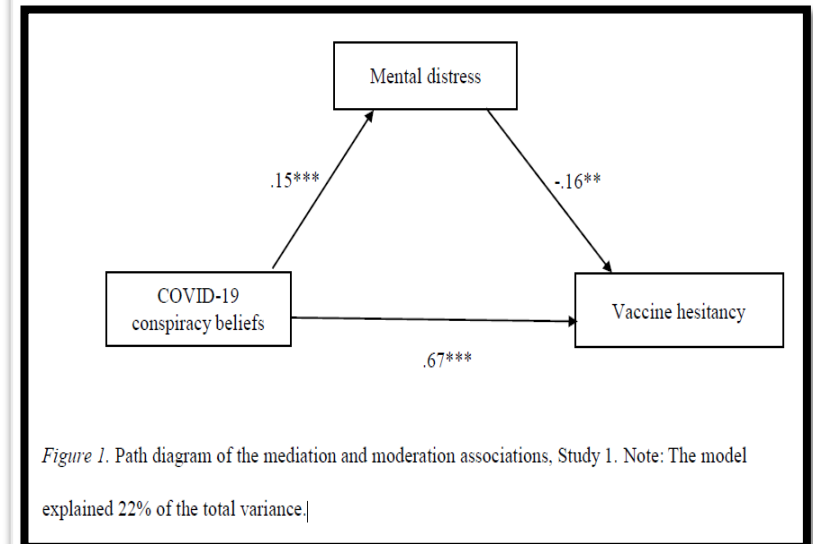
Measures

1) Coronavirus conspiracy beliefs: Six items (e.g., COVID-19 disease is a typical flu, which is intentionally presented as being excessively dangerous)

2) Mental distress: Four items (e.g., since the beginning of the COVID-19 pandemic, how often you have suffered from "sleep problems" and "anxiety attacks"?)

3) Vaccine hesitancy: Two items (e.g., If the COVID vaccine were now available in Italy, how much would you want to get vaccinated?" [reverse coded])

Figure 1. Path diagram of the mediation and moderation associations, Study 1. Note: The model explained 22% of the total variance.

Study 2: Twitter data

Data:

- A list of 18 hashtags addressing either mistrust the vaccination campaign (including its safety) or the government's management of the crisis
- 153,483 tweets from the Twitter historical archive
- Indicators → dictionary-based approach as implemented in the Linguistic Inquiry and Word Count method (LIWC)

Measures:

- **COVID-19 conspiracy beliefs:** "reduce the population," "biological weapon," "normal flu," and "laboratory-made"
- **Emotional climate of anxiety**: "I need let myself go," "jobless," and "anxious of contagion"
- **Vaccine hesitancy:** "I won't get vaccinated," "I refuse to get vaccinated," and "I don't intend to get vaccinated"
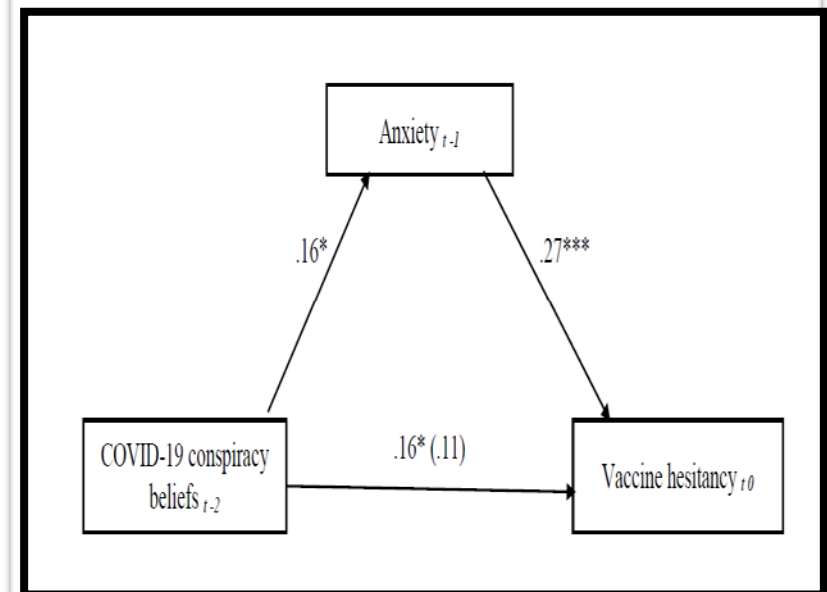
General discussion

Conspiracy beliefs → vaccine hesitancy

The type of anxiety → a distinct mediating role

Practical implications

Higher levels of subjective pandemic-related mental distress → negatively associated with vaccine hesitancy

Anxiety climates as a by-product of anti-vaccine online discussions → positively associated with vaccine hesitancy

Adopting public health messages → seek explanations to highly uncertain and critical events

Designing educational interventions → how social media interactions can accelerate emotional feedback loop and emotional contagion

Thank you!

Collaborators

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- **Maria Paola Paladino**
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- **Davide Morselli**
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