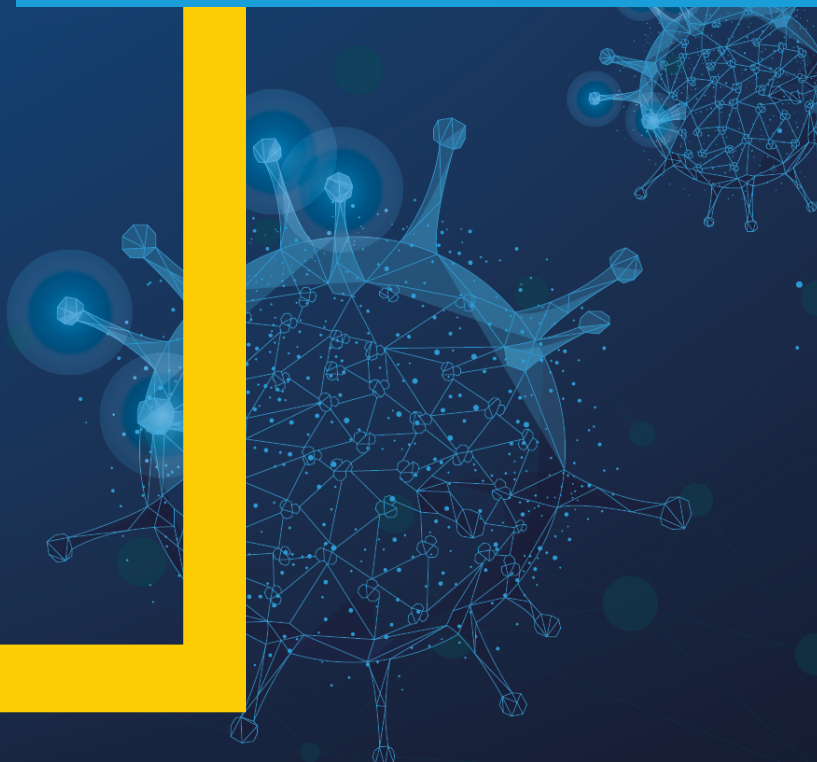




Co-funded by the Horizon 2020 programme
of the European Union

2022

THE ANNUAL REPORT



JITSUVAX

Jiu Jitsu with misinformation

WHAT IS JITSUVAX

JITSUVAX is an EU Horizon 2020 funded project coordinated by the University of Bristol working with five other EU institutions as well as one in Canada. The project will run from April 2021 until March 2025.

The JITSUVAX team consists of psychologists, epidemiologists, behavioural scientists, clinicians and others. Together we are investigating misinformation around vaccines which may lead to people being less likely to accept vaccination. We will be testing ways of combatting this misinformation and helping healthcare professionals to communicate with patients.

WHAT IS MISINFORMATION?

Misinformation is wrong information. It can come from a variety of sources and for a variety of reasons: the common factor is that it can be disproven. Examples can be seen in the [COVID-19 Vaccine Communication Handbook](#) (page 5) where commonly seen misinformation about COVID-19 vaccinations is described and analysed using evidence.

WHAT IS VACCINE HESITANCY?

The World Health Organization (WHO) SAGE Working Group on Vaccine Hesitancy defines vaccine hesitancy as 'delay in acceptance or refusal of vaccination despite availability of vaccination services'. It is a behavioural decision to delay or reject some or all vaccines.

HOW TO COMBAT MISINFORMATION?

The first step is to identify and analyse the anti-vaccination arguments that circulate on social media and elsewhere. We will also develop and trial a questionnaire that measures attitudes and behaviours around vaccination in healthcare professionals. Later steps will include using this questionnaire to measure and compare results across our six countries as well as developing and trialling methods of combatting misinformation, such as trainings, websites, and computer games.

WHY 'JIU JITSU' WITH MISINFORMATION?

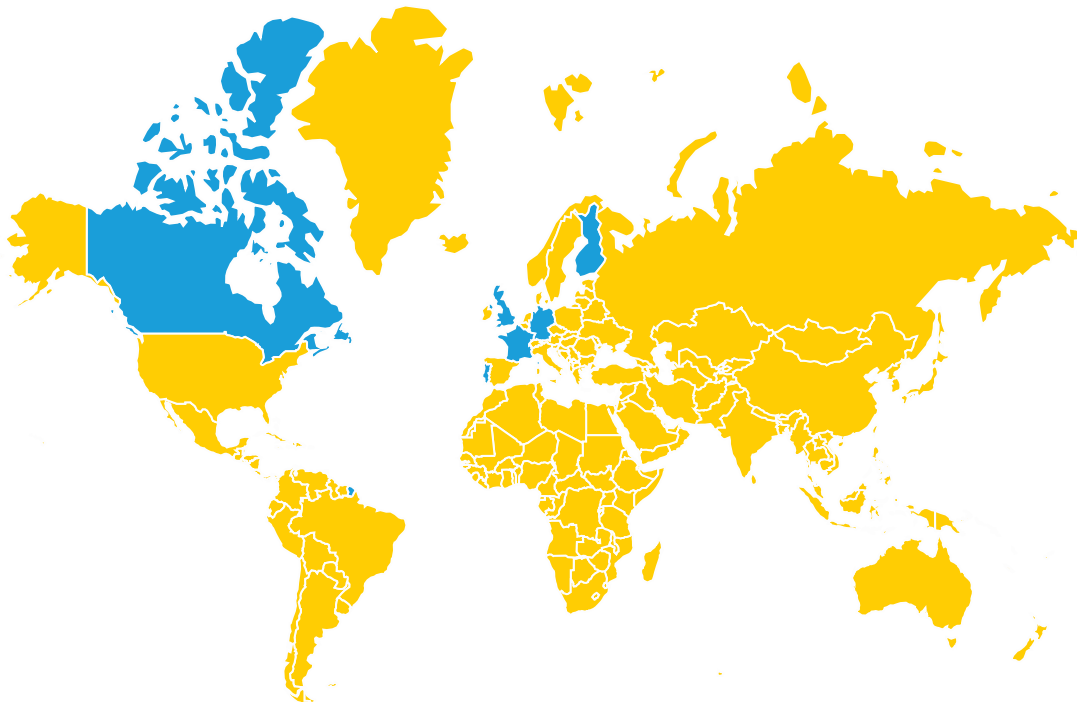
A Jiu Jitsu 'model of persuasion' was described in 2017 in a peer-reviewed paper by Hornsey & Fielding. 'Jiu Jitsu is a martial art that coaches people to use the opponents' force against them, rather than trying to defeat it head-on... It teaches that small or lightweight fighters can win by using leverage, gravity, and momentum to defeat more powerful opponents, in other words, by turning the opponent's power into an asset.' In short, we are trying to find ways of working with people's motivations rather than fighting them.

JITSUVAX

Jiu Jitsu with misinformation

WHERE IS JITSUVAX BASED?

The individual groups are based at the [University of Bristol](#) and the [University of Cambridge](#) in the UK, the [Turun yliopisto](#) in Finland, the [L'Observatoire Régional de la Santé](#) in France, the [Universität Erfurt](#) in Germany, the [Universidade de Coimbra](#) in Portugal and the [Université de Sherbrooke](#) in Canada.



HOW WILL THE RESULTS BE USED?

We will develop training procedures, websites and guidance documents that can be used to help healthcare workers fight misinformation around vaccines. These will be shared widely and freely across Europe and beyond using existing healthcare networks.

IS THIS JUST ABOUT COVID?

No – the project was designed before anyone had heard of COVID-19. However as the project plan was developed COVID-19 also hit and it became apparent that Covid would be hugely important in any discussion about vaccinations. The project includes tackling misinformation about vaccinations against COVID-19 as well as many diseases such as measles, whooping cough and flu.

TEAM 1/2



STEPHAN LEWANDOWSKY //

Professor of Cognitive Science



EMMA ANDERSON //

Psychologist and research fellow



DAWN HOLFORD //

Senior research associate



GINNY GOULD //

Research Project Manager helping to coordinate the JITSUVAX research



HARRIET FISHER //

Research fellow



ADAM FINN //

Professor of Paediatrics



MARION RODERICK //

Use consistent icons and style to maintain the uniformity of the design



MICHELLE BARDEN //

Doctoral student



FERNANDA RODRIGUES //

Professor of Paediatrics, Director of the Emergency Service and Infectious Diseases Unit



ANGELO FASCE //

Postdoctoral researcher, Faculty of Medicine



SANDER VAN DER LINDEN //

Professor of Social Psychology



BARBARA CZEKAJ //

Research Coordinator



JON ROOZENBEEK //

Postdoctoral researcher, Social Decision-Making Lab

TEAM 2/2



**ANNA
SOVERI//**

Associate Professor
(docent) of cognitive
psychology, Department
of Clinical Medicine



**LINDA
KARLSSON//**

Psychologist and
postdoctoral
researcher, Department
of Clinical Medicine



**OTTO
MAKI//**

Doctoral student, Depart
ment of Clinical Medicine



**UNIVERSITY
OF TURKU**



**CORNELIA
BETSCH//**

Professor of health
communication



**FREDERIKE
TAUBERT//**

Psychologist and doctoral
student



**PHILIPP
SCHMID//**

Psychologist and
postdoctoral researcher



**PIERRE
VERGER//**

Director of the
Southeastern Regional
Health Observatory,
epidemiologist



**AMANDA
GARRISON//**

Epidemiologist and
postdoctoral researcher



**LISA
FRESSARD//**

Research fellow



**Université de
Sherbrooke**



**ARNAUD
GAGNEUR//**

Neonatologist,
specialized in vaccine
hesitancy and
motivational interviewing



**DAVID ROY
RECH//**

Scientific research
assistant, PhD in
microbiology

WHAT IS THE COVID-19 VACCINE COMMUNICATION HANDBOOK?

Members of the JITSUVAX team were instrumental in producing the COVID-19 Vaccination Communication Handbook. This handbook is for journalists, doctors, nurses, policy makers, researchers, teachers, students, parents – in short, it's for everyone who wants to know 1) more about the COVID-19 vaccines, 2) how to talk to others about them, 3) how to challenge misinformation. This handbook is self-contained but additionally provides access to a "wiki" of more detailed information. There are now 27 wiki pages providing detailed information for each chapter of the handbook. The handbook will be updated with new findings from the JITSUVAX Project. It thus serves as an additional communication tool to share key findings.

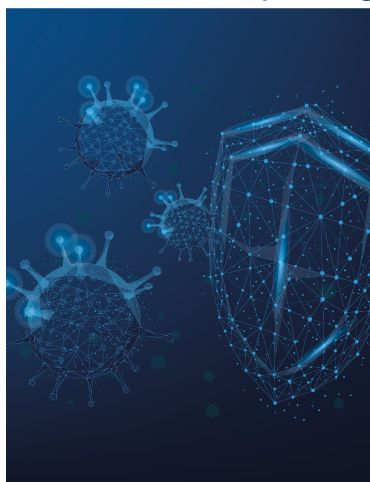
14

Languages

English - Croatian - French -
German - Greek - Italian -
Japanese - Polish - Portuguese -
Serbian - Spanish - Swedish -
Thai - Finnish

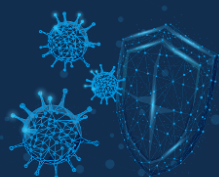
"COVID will not be the last pandemic. Research is a very important source of advice that is not always sufficiently heard. The book provides an excellent basis for future communication in such severe crises"

Prof. Dr. Markus Bühner
President of the German Society for Psychology



**The COVID-19 Vaccine
COMMUNICATION
HANDBOOK**

A practical guide for improving vaccine
communication and fighting misinformation



"Vaccine hesitancy is one of the biggest threats to global health. The COVID-19 Vaccine Communication Handbook is a highly valuable resource on how to address this threat during a pandemic."

Prof. Dr. Marylyn M. Addo
Head of Infectious Diseases, I.
Department of Medicine, University
Medical Center, Hamburg-Eppendorf

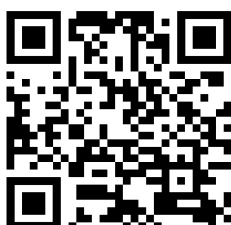
"The COVID-19 Vaccine Communication Handbook is an excellent guide for improving vaccine communication and fighting misinformation."

Prof. Dr. Alain Fisher
President of the French Vaccine Strategy
Policy Board

"Vaccine acceptance requires tailored communication approaches. The COVID-19 Vaccine Communication Handbook provides very useful guidance on the do's and don'ts of effective communication during the pandemic."

Dr. Christina Leuker
Head of the Risk & Science
Communication Unit, Robert Koch-
Institute

Go to the Handbook!



18707

Downloads
of English version

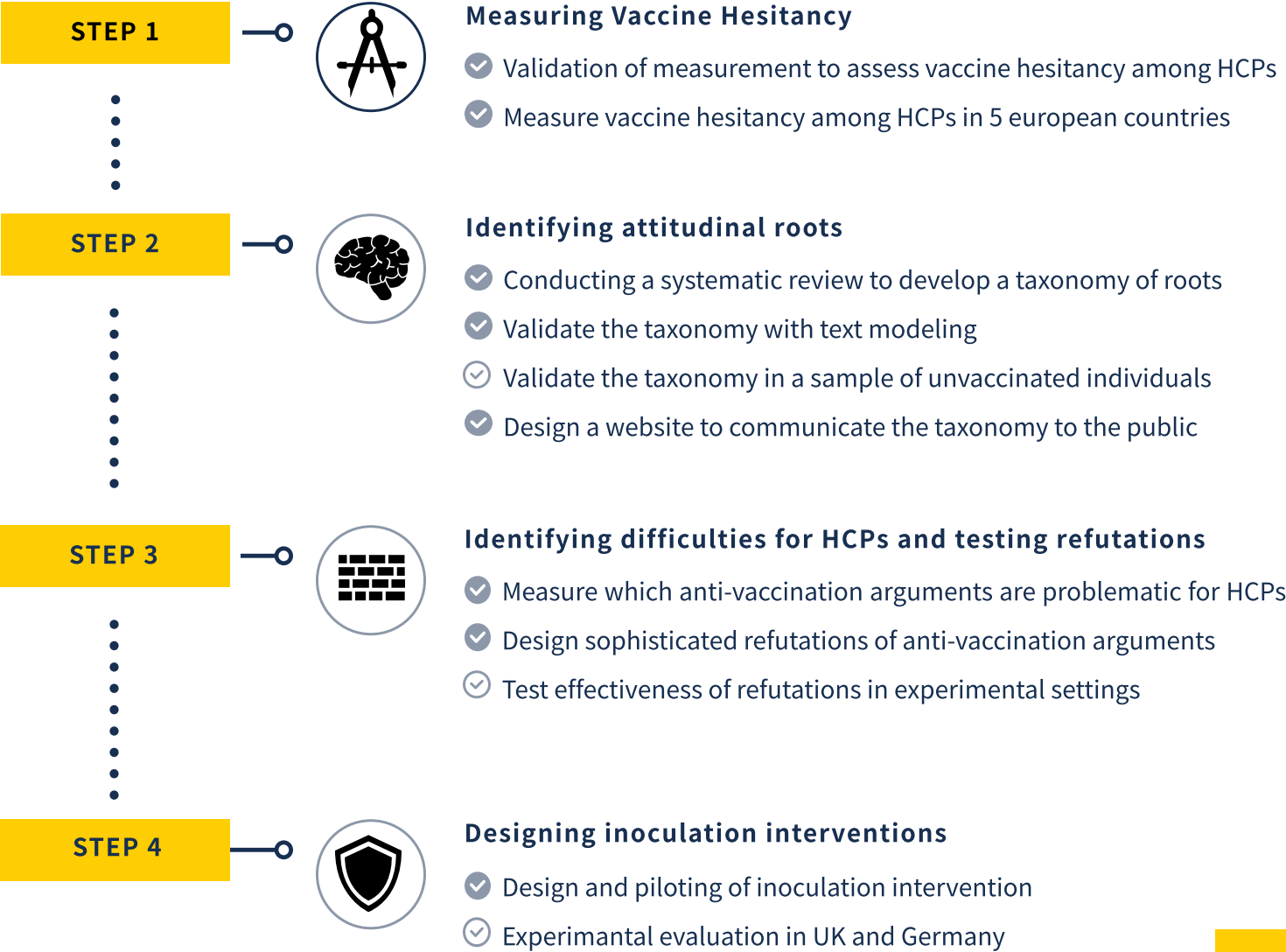
4 YEAR OVERVIEW

WHAT WAS JITSUVAX DOING IN 2021/2022?

The WHO has identified Health Care Professionals (HCPs) as the most trusted influencers of vaccination decisions. JITSUVAX leverages those insights to turn toxic misinformation into a potential asset based on two premises:

- 1. The best way to acquire knowledge and to combat misperceptions is by employing misinformation itself, either in weakened doses as a cognitive “vaccine”, or through thorough analysis of misinformation during “refutational learning”.
- 2. HCPs form the critical link between vaccination policies and vaccine uptake. The principal objective of JITSUVAX is to leverage misinformation about vaccinations into an opportunity by training HCPs through inoculation and refutational learning, thereby neutralizing misinformation among HCPs and enabling them to communicate more effectively with patients.

JITSUVAX addressed the first four steps of the project in 2021/2022:



2021/2022



STEP 1



Measuring Vaccine Hesitancy

- ✓ Validation of measurement to assess vaccine hesitancy among HCPs



HCPs can have doubts about certain vaccines and their safety, just like any of us, and this can affect how they discuss and recommend these vaccines to their patients. To measure these doubts and the factors that contribute to them, partners from France and Canada created a tool to ask professionals about their confidence in vaccines, perceptions of vaccine risks, the usefulness of vaccines, their trust in public health authorities, their role in improving collective immunity, and the difficulties related to vaccination, among other questions. This tool, known as the Pro-VC-Be (Health **P**rofessionals **V**accine **C**onfidence and **B**ehaviors), was statistically validated to show that these determinant factors accurately predicted behaviors related to self-vaccination and patient recommendations in HCPs. Now, this tool is being adapted and validated in several other European countries to provide a common, international measurement for vaccine confidence in HCPs. The adapted Pro-VC-Be survey has already been disseminated among HCPs in participating countries, and data analysis for its international validation is just beginning. A short-version of the original Pro-VC-Be has also been shown to accurately predict vaccination behaviors, providing a more time- and cost-effective tool for busy HCPs.

2021/2022



STEP 1



Measuring Vaccine Hesitancy

- ✔ Measure vaccine hesitancy among HCPs in 5 european countries



Receiving a vaccine recommendation from an HCP is often reported by laypeople as an important reason for why they got vaccinated. HCPs thus play a key role in increasing and maintaining vaccine uptake in the general population. How actively HCPs recommend vaccinations can depend on a variety of factors, such as their attitudes to the benefits and safety of vaccines, their trust in health authorities, or their confidence in discussing vaccine-related issues with patients.

Within the JITSUVAX project, we use the instrument developed within the project to assess factors affecting HCPs’ recommendation behaviors in a systematic and culturally aware manner across the five participating European countries: the UK, France, Germany, Portugal, and Finland. The assessment provides important information that can help health authorities take measures to ensure active endorsement of vaccinations among HCPs and, ultimately, high vaccine uptake.

The cross-cultural approach also allows us to investigate the degree to which cultural factors that differ between countries, such as vaccination mandates or social cohesion, are related to HCPs vaccine attitudes and recommendation behaviors. Recently, data collections were successfully completed in all countries with a total of approximately 3700 HCPs—including nurses, general practitioners, pediatricians, and gynecologists—having responded to our survey, and data analysis is about to begin.

2021/2022

STEP 2



Identifying attitudinal roots

- ✔ Conducting a systematic review to develop a taxonomy of roots
- ✔ Validate the taxonomy with text modeling



We have developed a psychologically informed classification of arguments expressing opposition toward vaccines to guide the training materials and investigations to be developed during the next 3 years of the JITSUVAX project. Our "taxonomy" encompasses 11 well-established psychological traits or “attitude roots”, such as conspiracist ideation, fear and phobias, worldview and politics, and religious concerns, which motivate the endorsement of 62 thematic groups of anti-vaccination arguments.

The taxonomy has been validated through 3 methodological approaches: a systematic review of 152 scientific articles, from which we extracted 2,066 arguments to analyze the linguistic content and thematic spectrum of each attitude root; a second study based on a sample of 585 journalistic texts, in which we tested a computational model capable of predicting the attitude roots of a given anti-vaccination argument; and a third study involving 1,250 participants from the British general population, in which we validated the associations of the attitude roots, both among them and with respect to other relevant psychological variables. These results have been very positive, so the taxonomy has proven to be an excellent tool for studying anti-vaccination arguments circulating in online and offline communication channels.

2021/2022



STEP 2



Identifying roots of non-vaccination

- ✓ Design a website to communicate the taxonomy to the public



The spread of vaccine misinformation is a threat to the success of many immunisation programmes. Effectively rebutting such misinformation requires an approach that goes beyond addressing flaws in the arguments, by also considering the attitudinal roots (the underlying psychological attributes driving a person’s belief) of opposition to vaccines. We conducted a systematic literature review and thematic analysis of anti-vaccination arguments, and developed a hierarchical taxonomy of more than 600 debunked anti-vaccination arguments that identifies common and recurring themes and relates these themes to eleven attitudinal roots. These themes, roots and rebuttals are now featured on the website <https://jitsuvax.info/welcome/>

2021/2022

STEP 3



Identifying difficulties for HCPs and testing refutations

- ✓ Measure which anti-vaccination arguments are most problematic
- ✓ Design sophisticated refutations of anti-vaccination arguments



HCPs are in an excellent position to speak with patients about their vaccination decisions. Training HCPs to refute misleading anti-vaccination arguments that patients may raise can help to increase their confidence in having such conversations. The JITSUVAX members are designing and testing an “empathetic refutation technique”, which involves affirming the patient and refuting common misconceptions, as a training tool for HCPs.

We have measured in a large-scale, cross-national survey of HCPs which anti-vaccination arguments found in the JITSUVAX taxonomy were difficult for HCPs to tackle. In parallel, we collected data from 1,250 UK participants that indicated which arguments the public found more persuasive. These steps helped us to select arguments to focus on.

The team crafted customised refutations for the selected anti-vaccination arguments, which are delivered as part of fictional scenarios of a HCP interacting with a patient or a member of the public. We will test the selected refutations in separate experiments with HCPs and with members of the public. This will show how well HCPs adapt to the empathetic refutation technique and how effective it is at reducing individuals’ support for anti-vaccination arguments. These experiments will run from June onwards in the UK and Finland.

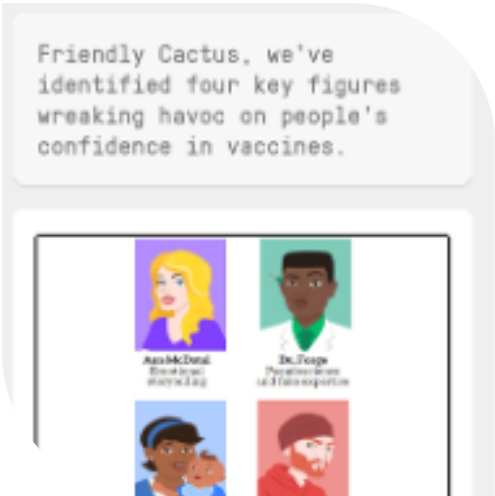
2021/2022

STEP 4



Designing inoculation interventions

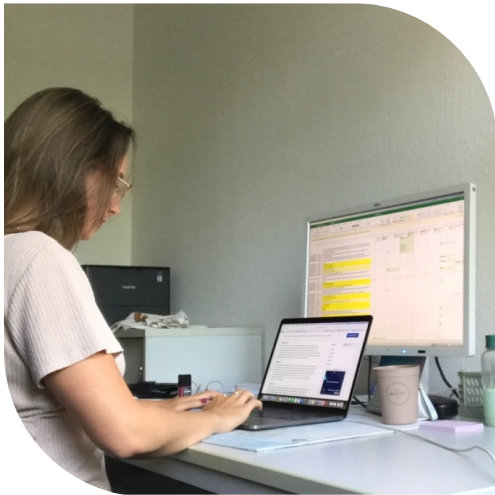
- ✓ Design and piloting of inoculation intervention



Vaccine misinformation is a significant problem that can contribute to vaccine hesitancy and reduced vaccination rates. Researchers have therefore focused on how to reduce susceptibility to misinformation at scale. We designed a 10-minute online game that seeks to improve people’s ability to recognise manipulation strategies commonly used in vaccine misinformation such as the use of emotionally manipulative language, fake expertise, the naturalistic fallacy, and conspiracism. Over the course of four levels, players learn how these strategies are used and how to refute them. We have completed three randomised controlled studies to test whether playing the game improves people’s recognition of manipulation strategies in vaccine-related social media content. We found that people who play the game become significantly better at recognising these strategies, become more confident in their assessment, and are less willing to share vaccine misinformation with others in their network.

DOCTORAL STUDENTS AT WORK IN JITSUVAX

FREDERIKE TAUBERT



As vaccinations are a simple way to protect people from serious infections, rising vaccine hesitancy is a threat to the global health. One cause of this hesitancy can be found in the spread of conspiracy theories related to vaccines. Therefore, within my PhD project I want to investigate why people refuse vaccinations, how this vaccination hesitancy is related to conspiracy theories and how the influence of conspiracy theories can be weakened to increase the willingness to vaccinate. My PhD project will include different methods like reviews, surveys, and experiments. Some of them are already in process while others are just being planned. I already studied the literature of this topic and plan to write a review about the current state of research. This work will give an overview about the prevalence of vaccination-related conspiracy theories, their consequences, and interventions. For a second study, I analyse data about the reason why people reject the COVID-19 vaccine. Moreover, I collected data to investigate the reasons why some doctors do not recommend the covid vaccine. Finally, I plan to evaluate interventions which should reduce the influence of conspiracy theories.

2021/2022

DOCTORAL STUDENTS AT WORK IN JITSUVAX

MICHELLE BARDEN



Human Papillomavirus (HPV) causes genital and oropharyngeal cancers in both genders. The school-based immunisation programme was extended to include boys in 2019. The WHO recommends coverage of 90%; however, the UK uptake rate has been consistently lower than this, with rates lower in boys. Social media use, particularly TikTok, for this age group is estimated to be 75%, with only 30% reporting checking across sites for information validation. There is a recognised paucity of research in the UK into the psychological determinants of HPV vaccine hesitancy and the impact of social media use.

With prior research focusing on parents' knowledge, specifically parents of females, there is no psychometric measure available to explore the determinants in adolescents themselves and whether misinformation on TikTok influences adolescent HPV vaccine confidence. Research into Twitter has reported misinformation as negatively impacting parental HPV vaccine attitudes. Using a Public and Patient Involvement approach, in collaboration with Generation R, the study is currently creating a psychometric measure of adolescent HPV vaccine hesitancy based on Betsch et al.'s 5Cs model of vaccine hesitancy.

Using the data from the survey, the research will then test co-created TikTok intervention videos as a way to combat the negative influences of misinformation on HPV vaccine confidence, comparing scientific correction with the use of humour-based messaging utilising psychological refutation techniques. Initial focus groups conducted with adolescents (N=10) indicated that measures should prioritise virus and vaccine knowledge that may become misinformation and confirmed the regular use of TikTok by this age group.

DOCTORAL STUDENTS AT WORK IN JITSUVAX

OTTO MÄKI



Anecdotal testimonies are highly persuasive in affecting people’s vaccine attitudes and can even in some cases override more reliable scientific evidence about the safety of vaccines. Since anti-vaccination activist often use anecdotal accounts of alleged vaccine adverse events to spread fear amongst the public, we wanted to test whether positive vaccine anecdotes could instead be used to promote vaccines. Our goal was to investigate whether utilizing pro-vaccine anecdotes in vaccine promoting interventions would lead to better intervention outcomes than presenting statistical interventions. Moreover, we planned to examine whether tailoring interventions to match a person’s format preference (statistical vs. anecdotal vaccine information) would result in better intervention outcomes than a one-size-fits-all approach. We conducted two online experiments—one for COVID-19 and one for influenza vaccines—in which we measured participants’ format preference, presented them with either a statistical or an anecdotal intervention, and measured their vaccine attitudes and vaccination intentions before and after the intervention materials. This allowed us to test the extent to which the intervention changed people’s attitudes and intentions concerning the COVID-19 and influenza vaccinations. The experiments have already been conducted and the data has been analyzed. Our team is currently working on summarizing and publishing the results.

2021/2022

SCIENTIFIC OUTPUT DURING THE FIRST YEAR

The team has published over 20 articles in peer-reviewed journals such as Nature Reviews Psychology and Expert Review of Vaccines. A full list is provided on the following two pages. The team has given over 37 scientific talks at various psychological and medical conferences, expert pannels and NGO meetings. A full list can be accessed on the Jitusvax [homepage](#).

20
peer-reviewed articles

REVIEWS

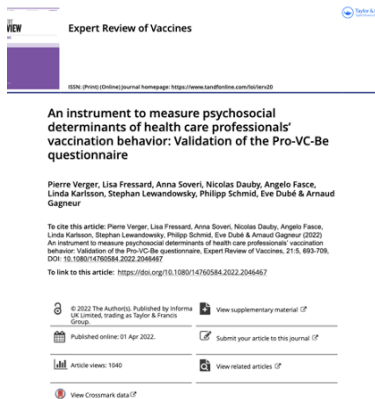
The psychological drivers of misinformation belief and its resistance to correction

Litvak K. K. Eckers¹, Stephan Lewandowsky^{1,2}, John Cook³, Philipp Schmidt⁴, Lisa K. Feeney⁵, Nicola Brando⁶, Pasquale Annunzio⁷, Emily A. Wagner⁸ and Michelle A. Amazeen⁹

Abstract Misinformation has been identified as a major contributor to various contemporary events ranging from elections and referendums to the response to the COVID-19 pandemic. Not only can belief in misinformation lead to poor judgments and decision-making, it also exerts a lingering influence on people's reasoning about it has been connected—an effect known as the continued influence effect. In this Review, we describe the cognitive, social and affective factors that lead people to form or maintain misinformation beliefs, and the psychological barriers to knowledge revision after misinformation has been corrected, including theories of continued influence. We discuss the effectiveness of both pre-emptive (prebunking) and reactive (debunking) interventions to reduce the effects of misinformation, as well as implications for information consumption and practitioners in various areas including journalism, public health, legal medicine and education.

Misinformation—what we define as any information that turns out to be false—presents an inevitable challenge for human cognition and social cooperation because it is a consequence of the fact that people frequently act on information for. However, this fact is insufficient to explain the rise of misinformation, and its subsequent influence on memory and decision-making is a major challenge to the scientific community. Misinformation has been identified as a contributor to various contemporary events, ranging from elections and referendums to public health emergencies and the global an information deficit model when responding to misinformation. Misinformation has been identified as a major contributor to various contemporary events, ranging from elections and referendums to public health emergencies and the global an information deficit model when responding to misinformation. Misinformation has been identified as a major contributor to various contemporary events, ranging from elections and referendums to public health emergencies and the global an information deficit model when responding to misinformation.

The psychology and history of misinformation can be traced back to the early 20th century, when it was first identified as a major contributor to various contemporary events, ranging from elections and referendums to public health emergencies and the global an information deficit model when responding to misinformation. Misinformation has been identified as a major contributor to various contemporary events, ranging from elections and referendums to public health emergencies and the global an information deficit model when responding to misinformation. Misinformation has been identified as a major contributor to various contemporary events, ranging from elections and referendums to public health emergencies and the global an information deficit model when responding to misinformation.



An instrument to measure psychosocial determinants of health care professionals' vaccination behavior: Validation of the Pro-VC-Be questionnaire

Pierre Verger, Lisa Fressard, Anna Soveri, Nicolas Dauby, Angelo Fasce, Linda Karlsson, Stephan Lewandowsky, Philipp Schmidt, Eve Dubé & Arnaud Gagneur

To cite this article: Pierre Verger, Lisa Fressard, Anna Soveri, Nicolas Dauby, Angelo Fasce, Linda Karlsson, Stephan Lewandowsky, Philipp Schmidt, Eve Dubé & Arnaud Gagneur. An instrument to measure psychosocial determinants of health care professionals' vaccination behavior: Validation of the Pro-VC-Be questionnaire. *Expert Review of Vaccines*, 21:5, 603-705, DOI: 10.1080/1476584.2022.2046467

To link to this article: <https://doi.org/10.1080/1476584.2022.2046467>

© 2022 The Author(s). Published by Informa UK Limited, trading as Taylor & Francis Group

Published online: 01 Apr 2022.

Article views: 1540

View Crossmark data

Taylor & Francis

How to Combat Health Misinformation: A Psychological Approach

Jon Roosenbeck, PhD¹ and Sander van der Linden, PhD¹

¹Department of Psychology, School of the Biological Sciences, University of Cambridge, Cambridge, UK

Corresponding Author: Jon Roosenbeck, Department of Psychology, University of Cambridge, Downing Street, Cambridge CB3 9BS, UK. Email: jrr20@cam.ac.uk

12 American Journal of Health Promotion 34(2)

vaccine misinformation, such as the false belief that vaccines are linked to the development of autism in children, has contributed to some parents opting out of childhood vaccinations.¹ The spread of misinformation poses a challenge to other public health diseases as well. To give some examples, misinformation about autism and available treatments can contribute to opportunity costs and direct harm for people with autism and those around them.² Exposure to misinformation about a vaccine can influence people's self-reported decision to purchase them.³ And, starting in the 1950s, major tobacco companies have sought to undermine, deny, or discredit scientific evidence of the dangers of smoking tobacco products through aggressive marketing and public relations campaigns,⁴ and finally with some success: a study in which participants were shown YouTube videos containing misleading information about tobacco products showed that people who watched such a video subsequently had more positive attitudes towards such products than a control group.⁵

Given the scope of the problem, researchers have proposed and developed a variety of approaches to reduce the spread of and susceptibility to health-related misinformation.^{6,7} Such solutions can be technological (such as developing automated fact-checking methods),⁸ educational,⁹ legislative,¹⁰ and psychological.¹¹

In this article, our focus is on the latter. We will discuss 3 high-profile psychological solutions used to combat the spread of health misinformation: post-hoc correction of misinformation or "debunking"; pre-emptive people to be resistant of accuracy in "accuracy prompts" (sometimes called "accuracy nudges" or "accuracy prompts") and pre-emptively building resistance against false exposure to misinformation through psychological inoculation, also known as "prebunking".

Figure 1. Optimized debunking strategies^{14(a)}.

An optimal debunking strategy outperformed a less detailed debunking strategy in terms of reducing misperceptions.¹⁴ In light of these insights, a broad spectrum of researchers have recently emphasized an array of "debunking best practices," which summarize the available literature and provide practical guidance on how to combat misinformation about health-related issues such as COVID-19 vaccines.^{15,16} Figure 1 shows an infographic from the *American Journal of Health Promotion* explaining how to optimize effective debunking for health practitioners.

Nonetheless, there are still several limitations to debunking. First, people's memories rarely reach the same number of people as the misinformation. For example, recent estimates show that the cost-



37
scientific talks



Fearing the disease or the vaccine: The case of COVID-19

Linda K. Karlsson^{1,2}, Anna Soveri^{1,2}, Stephan Lewandowsky^{1,2}, Linnea Karlsson^{1,2}, Hans Karlsson^{1,2}, Sara Noh^{1,2}, Max Karvits^{1,2}, Mikael Lindblom^{1,2}, Jan Antfolk^{1,2}

¹Department of Psychology, The Swedish Institute for Health Sciences, Stockholm, Sweden

²Department of Psychology, The Swedish Institute for Health Sciences, Stockholm, Sweden

³Department of Psychology, The Swedish Institute for Health Sciences, Stockholm, Sweden

⁴Department of Psychology, The Swedish Institute for Health Sciences, Stockholm, Sweden

⁵Department of Psychology, The Swedish Institute for Health Sciences, Stockholm, Sweden

⁶Department of Psychology, The Swedish Institute for Health Sciences, Stockholm, Sweden

⁷Department of Psychology, The Swedish Institute for Health Sciences, Stockholm, Sweden

⁸Department of Psychology, The Swedish Institute for Health Sciences, Stockholm, Sweden

⁹Department of Psychology, The Swedish Institute for Health Sciences, Stockholm, Sweden

¹⁰Department of Psychology, The Swedish Institute for Health Sciences, Stockholm, Sweden

¹¹Department of Psychology, The Swedish Institute for Health Sciences, Stockholm, Sweden

¹²Department of Psychology, The Swedish Institute for Health Sciences, Stockholm, Sweden

¹³Department of Psychology, The Swedish Institute for Health Sciences, Stockholm, Sweden

¹⁴Department of Psychology, The Swedish Institute for Health Sciences, Stockholm, Sweden

¹⁵Department of Psychology, The Swedish Institute for Health Sciences, Stockholm, Sweden

¹⁶Department of Psychology, The Swedish Institute for Health Sciences, Stockholm, Sweden

PUBLICATIONS

2022

Verger, P., Botelho-Nevers, E., Garrison, A., Gagnon, D., Gagneur, A., Gagneux-Brunon, A., Dube, E.
Vaccine hesitancy in health-care providers in Western countries: a narrative review.
[published here](#) Expert Review of Vaccines, March 2022.

Ward JK, Gauna F, Gagneux-Brunon A, Botelho-Nevers E, Cracowski JL, Khouri C, Launay O, Verger P, Peretti-Watel P.
The French health pass holds lessons for mandatory COVID-19 vaccination.
[published here](#) Nat Med. 2022 Feb, Vol 28, No. 2, pages 232-235.

Karlsson, Linda C., Anna Soveri, Stephan Lewandowsky, Linnea Karlsson, Hasse Karlsson, Saara Nolvi, Max Karukivi, Mikael Lindfelt, Jan Antfolk,
The behavioral immune system and vaccination intentions during the coronavirus pandemic
[published here](#) Personality and Individual Differences, Feb 2022.

Van der Linden, Sander.
Misinformation: susceptibility, spread, and interventions to immunize the public.
[published here](#) Nature Medicine, Feb 2022.

Newman, Devora, Lewandowsky, Stephan and Mayo, Ruth
Believing in nothing and believing in everything: The underlying cognitive paradox of anti-COVID-19 vaccine attitudes
[published here](#) Personality and Individual Differences, Vol 189, 2022.

Roozenbeek, Jon, and Sander van der Linden
How to Combat Health Misinformation: A Psychological Approach
[published here](#) American Journal of Health Promotion, Vol 36, No. 3, 2022.

Verger, Pierre, Fressard, Lisa, Soveri, Anna, Dauby, Nicola, Fasce, Angelo, Karlsson, Linda, Lewandowsky, Stephan, Schmid, Philipp, Dube, Eve and Gagneur, Arnaud
An instrument to measure psychosocial determinants of health care professionals' vaccination behavior. Validation of the Pro-VC-Be questionnaire
[published here](#) Expert Review of Vaccines

Vivion, Maryline, Elhadji Anassour Laouan Sidi, Cornelia Betsch, Maude Dionne, Eve Dubé, S. Michelle Driedger, Dominique Gagnon, et al
Prebunking Messaging to Inoculate against COVID-19 Vaccine Misinformation: An Effective Strategy for Public Health
[published here](#) Journal of Communication in Healthcare

2021

Ecker, Ullrich K. H., Stephan Lewandowsky, John Cook, Philipp Schmid, Lisa K. Fazio, Nadia Brashier, Panayiota Kendeou, Emily K. Vraga, and Michelle A. Amazeen
The Psychological Drivers of Misinformation Belief and Its Resistance to Correction
[published here](#) Nature Reviews Psychology, Vol 1, No. 1, 2021.

Fasce, Angelo, Jesús Adrián-Ventura, Stephan Lewandowsky, and Sander van der Linden
Science through a Tribal Lens: A Group-Based Account of Polarization over Scientific Facts
[published here](#) Group Processes & Intergroup Relations

PUBLICATIONS

Fong, Amos, Jon Roozenbeek, Danielle Goldwert, Steven Rathje, and Sander van der Linden
The Language of Conspiracy: A Psychological Analysis of Speech Used by Conspiracy Theorists and Their Followers on Twitter
[published here](#) Group Processes & Intergroup Relations, Vol. 24, No. 4, 2021.

Freeman, Daniel, Bao Sheng Loe, Ly-Mee Yu, Jason Freeman, Andrew Chadwick, Cristian Vaccari, Milensu Shanyinde, Victoria Harris, Felicity Waite, Laina Rosebrock, Ariane Petit, Samantha Vanderslott, Stephan Lewandowsky, Michael Larkin, Stefania Innocenti, Andrew J Pollard, Helen McShane and Sinéad Lambe
Effects of Different Types of Written Vaccination Information on COVID-19 Vaccine Hesitancy in the UK (OCEANS-III): A Single-Blind, Parallel-Group, Randomised Controlled Trial
[published here](#) The Lancet Public Health, Vol 6, No. 6, 2021.

Freeman, Daniel, Sinéad Lambe, Ly-Mee Yu, Jason Freeman, Andrew Chadwick, Cristian Vaccari, Felicity Waite, Laina Rosebrock, Ariane Petit, Samantha Vanderslott, Stephan Lewandowsky, Michael Larkin, Stefania Innocenti, Helen McShane, Andrew J. Pollard and Bao Sheng Loe
Injection Fears and COVID-19 Vaccine Hesitancy
[published here](#) Psychological Medicine

Kerr, John R, Claudia R Schneider, Gabriel Recchia, Sarah Dryhurst, Ullrika Sahlin, Carole Dufouil, Pierre Arwidson, Alexandra LJ Freeman, and Sander van der Linden
Correlates of Intended COVID-19 Vaccine Acceptance across Time and Countries: Results from a Series of Cross-Sectional Surveys
[published here](#) BMJ Open, Vol 11, No. 8, 2021.

Roozenbeek, Jon, Sander van der Linden
Inoculation Theory and Misinformation
[published here](#) Practitioner manual for NATO's Strategic Communications Centre of Excellence, October 2021

Lewandowsky, Stephan, and Sander van der Linden
Countering Misinformation and Fake News Through Inoculation and Prebunking
[published here](#) European Review of Social Psychology, Vol 32, No. 2, 2021.

Verger, Pierre, Dimitri Scronias, Yves Fradier, Malika Meziani, and Bruno Ventelou
Online Study of Health Professionals about Their Vaccination Attitudes and Behavior in the COVID-19 Era: Addressing Participation Bias
[published here](#) Human Vaccines & Immunotherapeutics, Vol 17, No. 9, 2021.

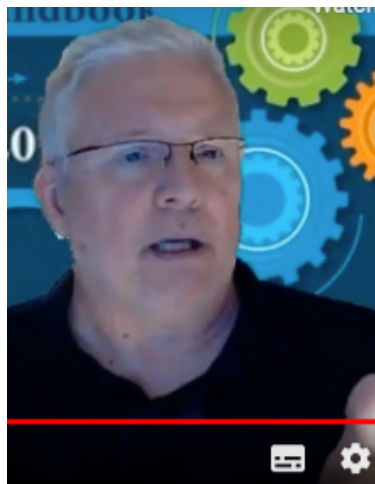
Yousuf, Hamza, Sander van der Linden, Luke Bredius, G.A. (Ted) van Essen, Govert Sweep, Zohar Preminger, Eric van Gorp, Erik Scherder, Jagat Narula, and Leonard Hofstra
A Media Intervention Applying Debunking versus Non-Debunking Content to Combat Vaccine Misinformation in Elderly in the Netherlands: A Digital Randomised Trial
[published here](#) EClinicalMedicine, Vol 35, 2021.

2021/2022

MEDIA OUTPUT DURING THE FIRST YEAR

The team was part of television, radio and newspaper interviews, wrote opinion pieces and participated in podcasts and all over Europe. The media output adds up to 76 pieces in the first year of Jitsuvax. A selection of media pieces is provided on the following two pages.

76
Media pieces



ALJAZEERA **LIVE**

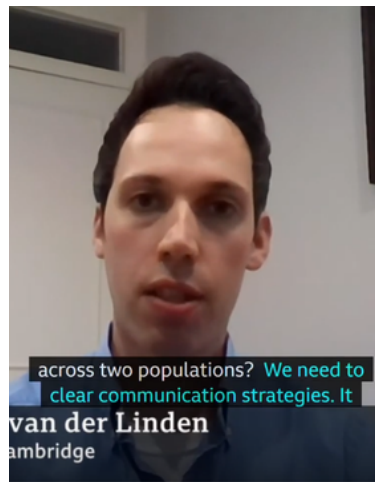
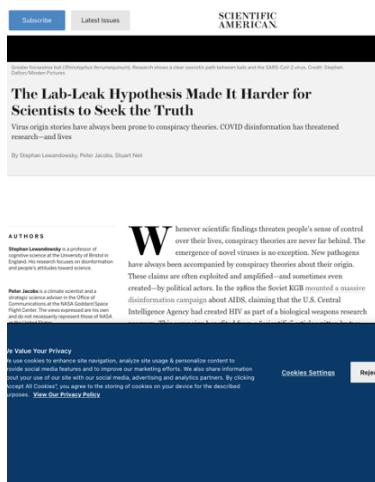
OPINION
Opinions | Health

How to fight COVID vaccine misinformation?

The pandemic created a toxic legacy of misinformation and conspiracy theories that has mobilised opposition to vaccinations.

Stephan Lewandowsky
Chair in Cognitive Science, University of Bristol

Philipp Schmid
Psychologist and postdoctoral researcher at the University of Erfurt, Germany.



MEDIA PIECES

Philipp Schmid discusses effective strategies in dealing with science deniers from a psychological perspective (in German) for the Skepcon YouTube channel.

Effektive Strategien im Umgang mit Wissenschaftsleugnern - Eine psychologische Perspektive

Dated: 12/02/2022

Cornelia Betsch is on a panel discussing vaccination mandates with Federal President Frank-Walter Steinmeier on Phoenix TV (in German).

Impfpflicht: Diskussion mit Bundespräsident Frank-Walter Steinmeier Phoenix

Dated: 12/01/2022

Sander van der Linden explains how psychological inoculation works in 'The best way to deal with Covid myths this Christmas? Pre-bunk rather than debunk'

Article: The Guardian

Dated: 23/12/2021

We have to work with empathy and respect says Philipp Schmid

Article: Wissenschaftskommunikation (available in English)

Dated: 22/12/21

Jon Roozenbeek and Sander van der Linden discuss how 'prebunking' can fight fast-moving vaccine lies

Article: The PBS

Dated: 11/06/2021

Convincing friends or relatives who have not yet been vaccinated against the coronavirus can be tricky. Philipp Schmid and others give tips on how to structure the conversation in '#Faktenfuchs: How do I speak to vaccine skeptics?'

BR24 news website (available in English)

Dated: 9/12/2021

Hardcore vaccine refuseniks could need deradicalising like terrorists says Stephan Lewandowsky

Article: The Independent

Dated: 9/12/2021

Stephan Lewandowsky writes about tackling COVID disinformation with empathy and conversation

The Conversation

Dated: 9/12/2021

Anna Soveri talks about how compulsion may reduce the confidence of vaccine hesitant people in the authorities for MustRead Akatemia (in Finnish).

Article

Dated: 3/12/2021

Anna Soveri is interviewed for Hufvudstadsbladet (in Finnish) to discuss how of the 1-2% of people who refuse all vaccines in Finland most are not generally against vaccination but worry about side effects or do not consider themselves to be at risk from the disease.

[Interview]

Dated: 30/10/2021

Philipp Schmid and Stephan Lewandowsky write about how to fight Covid vaccine misinformation in this article for Al Jazeera

Article: Al Jazeera

Dated: 22/10/2021

MEDIA PIECES

Anna Soveri talks on radio and TV about why younger adults are more likely than older to refuse vaccines (in Finnish)

[Radio][TV]

Dated: 01/10/2021

Das Ende der Pandemie? A podcast (in German) with Cornelia Betsch and Stephan Lewandowsky

[Podcast]

Dated: 18/09/2021

Anna Soveri is interviewed about vaccine attitudes in Finland

[Interview]

Dated: 25/08/2021

What to do if you have vaccination skeptics in your circle of friends and family? Psychologist Philipp Schmid gives tips on how to convince without patronizing (available in English).

Article

Dated: 17/08/2021

An article co authored by Stephen Lewandowsky asks why many conservatives have a difficult relationship with science.

Article: The Conversation

Dated: 09/08/2021

Stephan Lewandowsky and others look at how to trash confidence in a COVID-19 vaccine: Brexit edition

The Bulletin

Dated: 05/08/2021

Fernanda Rodrigues and other paediatricians advocate for more scientific information on vaccination of healthy children in a statement from the Portuguese Society of Pediatrics says an article in Diário de Notícias (available in English)

Article: Diário de Notícias

Dated: 04/08/2021

In Der Tagesspiegel Cornelia Betsch explains why many are still hesitant to get vaccinated and how that could be changed (available in English)

Article

Dated: 12/07/2021

Arnaud Gagneur writes about what to say to a friend who doesn't want the vaccine in the New York Times.

Article: The New York Times

Dated: 20/05/2021

The Cambridge team's work is featured in Do people believe Covid myths? In The Guardian

Article: The Guardian

Dated: 16/05/2021

Stephan Lewandowsky is part of a team whose work on how to fight vaccine scepticism is reported in The Guardian

Article: The Guardian

Dated: 12/05/2021

Stephan Lewandowsky co-authors an article on how the lab-leak hypothesis made it harder for scientists to seek the truth in the Scientific American

Article: The Scientific American

Dated: 01/03/2021

COOPERATIONS

RELATED PROJECTS

Other current EU-funded projects that share the mission of JITSUVAX are listed below.

Several of these related projects (including JITSUVAX) have joined forces in working groups. These working groups aim to coordinate potential synergies and share experiences and insights. The working groups are:

Communication and engagement

Working towards coordinated and consistent messaging

Training

Coordinating sharing of new training materials and tools

Dissemination of research

Curating public-facing outputs

Policy relevant outputs

Coordinating policy-relevant material and links to external bodies



Furthermore, the following joint actions are already taking place:

Joint workshop proposal submitted to European Public Health Conference, led by EuroHealthNet and including representatives from IMMUNION, JITSUVAX, ViVi/SEKI, Coalition for Vaccination and ECDC.

JITSUVAX are coordinating a Comment for the Lancet 'How to prepare COVID-19 vaccine programmes for the third pandemic winter: A call for action', which is being co-signed by members from multiple groups and affiliations.

JITSUVAX representative will join IMMUNION workshop for HCPs in June.

CONTACT

HOW TO REACH THE TEAM?



VISIT THE WEBSITE

The JITSUVAX homepage can be found at <https://sks.to/jitsuvax>
We provide output, current developments and further contact details on that page.



FOLLOW OUR TWITTER ACCOUNT

The JITSUVAX twitter account can be followed by searching for @jitsuvax at Twitter.com You want to know first if something new was published? Go there!



FOLLOW TEAM MEMBERS ON TWITTER

Several team members have their own Twitter account.
Copy paste all of them if you want to reach out to the team!
Let us know what you are working on!

@Sander_vdLinden

@roozenbot

@CorneliaBetsch

@PhilippMSchmid

@FasceAngelo

@missmbn

@adamhfinn

@dlholf

@LindaCeKarlsson

@annasoveri

@STWorg

contact us: jitsuvax@bristol.ac.uk

 @jitsuvax