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2024

THE ANNUAL REPORT

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Jitsu VAX

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 be spread 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 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 state of indecision regarding a vaccination decision or a behavioural decision to delay or reject some or all vaccines.

HOW TO COMBAT MISINFORMATION?

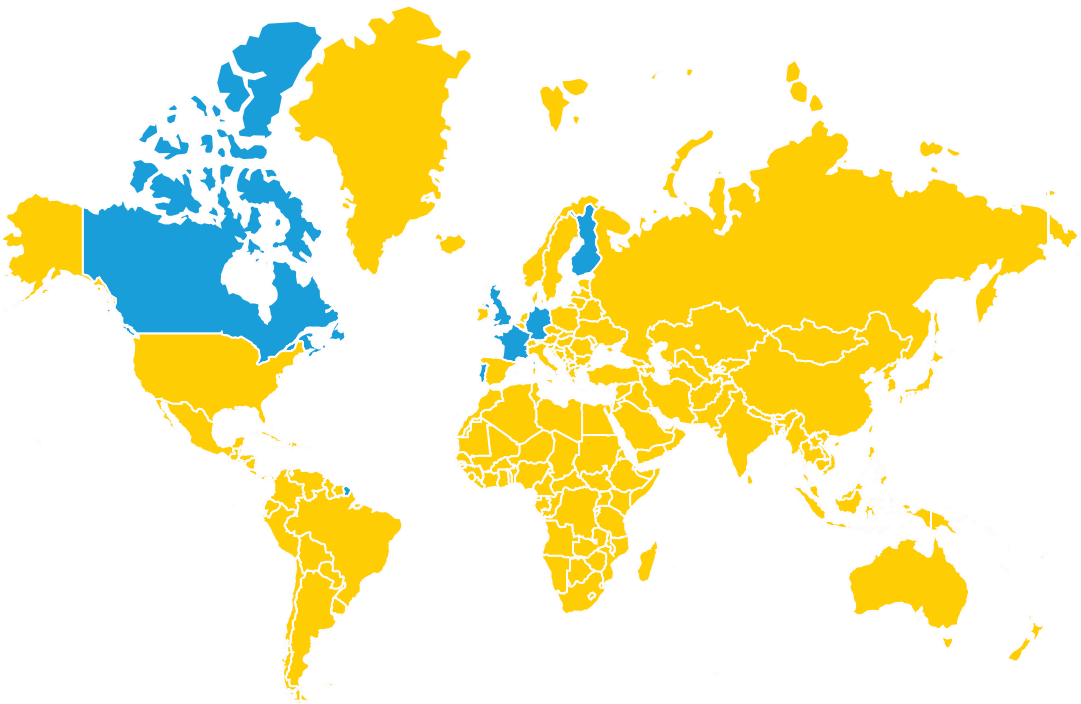
The first step was to identify and analyse the anti-vaccination arguments that circulate on social media and elsewhere. We also developed and validated a questionnaire that measures attitudes and behaviours around vaccination in healthcare professionals. Later we used our findings to develop interventions such as a website, a communication technique and games. We designed these interventions specially to prepare healthcare professionals for conversations with vaccine hesitant patients.

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. The word "jiu jitsu" derives from the Japanese "Jū" meaning "gentle" and "Jutsu" meaning "art"; essentially, jiu jitsu is the "gentle art". 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.

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. The resources 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-19 would be hugely important in any discussion about vaccinations. The project includes tackling misinformation about vaccinations against COVID-19 as well as many other diseases such as measles, whooping cough and flu.

TEAM 1/2

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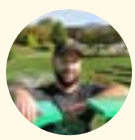
Neonatologist, specialized in vaccine hesitancy and motivational interviewing



DAVID ROY RECH//

Scientific research assistant, PhD in microbiology

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Research Assistant, Nurse Educator and Consultant (Vaccine Programming), MIPH, RN

NEW PARTNERS

Center for Health Policies and Services (CHPS)

The Foundation Center for Health Policies and Services (CHPS) is a Romanian independent, non-for-profit, non-governmental organisation set up in December 1999 as the spin-off Public Health Program of the Open Society Foundation Romania. The CHPS' activity focuses on the improvement of the health system functions and outcomes, evidence and knowledge generation to inform policy-makers and stakeholders, encouragement of social dialogue, patient empowerment and community participation, and the promotion of healthy lifestyles—all aiming at contributing to improve health systems' performance and population health. The partnership between JITSUVAX and CHPS in Romania focuses on field testing the empathetic refutational interview as a means to address vaccine hesitancy among healthcare professionals and patients.

Mirela Mustață

Dana Fărcășanu

Iulia Vișinescu

CHPS
Center for Health Policies and Services

Institute for Developmental and Strategic Analysis (IRSA)

The Institute for Developmental and Strategic Analysis is a private, non-profit organisation that engages in basic and applied research as well as providing temporary consultation for governmental and non-governmental organisations and companies. It includes several generations of researchers and helps young graduates and doctoral students promote and advance their careers. The Institute works in the field of social sciences but also adopts a multi-disciplinary approach, albeit most of its members hold a sociological professional background. The topics of IRSA's publications and research areas generally (but not always) derive from the sociology of knowledge and social studies of science and technology. The partnership between JITSUVAX and IRSA aims at widening the geographical aspect of the project, thus considering the differences between Eastern and Western Europe in terms of vaccine hesitancy from a sociological perspective.

Frane Adam

Martina Plantak

Marusa Gorisek

IRSA
inštitut za razvojne in strateške analize

4 YEAR OVERVIEW

WHAT WAS JITSUVAX DOING FROM 2021-2024?

The WHO has identified healthcare 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 neutralising misinformation among HCPs and enabling them to communicate more effectively with patients.

JITSUVAX addressed the first four steps of the project from 2021-2024:

STEP 1

Measuring Vaccine Hesitancy

- Validating the measures to assess vaccine hesitancy among HCPs
- Measuring vaccine hesitancy among HCPs in 5 European countries

STEP 2

Identifying attitudinal roots

- Conducting a systematic review to develop a taxonomy of roots
- Validating the taxonomy with text modeling
- Validating the taxonomy in a sample of unvaccinated individuals
- Designing a website to communicate the taxonomy to the public

STEP 3

Identifying difficulties for HCPs and testing refutations

- Identifying challenging anti-vaccination arguments
- Designing sophisticated refutations of anti-vaccination arguments
- Testing effectiveness of refutations in experimental settings
- Conducting a train-the-trainer workshop on how to refute arguments

STEP 4

Designing interventions

- Designing and evaluating gamified inoculation intervention
- Training HCPs in the Empathetic Refutational Interview (ERI) approach
- Testing effectiveness of ERI in field studies
- Testing effectiveness of ERI in a large-scale quantitative experiment

2021-2024

STEP 1

Measuring Vaccine Hesitancy

- Validating the measures 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 **Pro**fessionals **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, within the JITSUVAX project, this tool has been adapted to be applicable in an international context and validated in Finland, France, Germany, and Portugal. In the validation process, data from a total of 2,748 HCPs were collected. The results showed that the adapted tool reliably measured the vaccine-confidence factors and predicted vaccination behaviours in each country. Having a tool that can be used internationally enables comparison between countries as well as investigation of which country characteristics contribute to HCPs' vaccine confidence. A short version of the tool has also been created, providing a more time- and cost-effective tool for busy HCPs.

2021-2024

STEP 1

Measuring Vaccine Hesitancy

- Measuring vaccine hesitancy among HCPs in four 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 France, Germany, Portugal, and Finland.

UPDATE 2024

The developed instrument was administered to HCPs through an electronic survey together with other measures. Approximately 2,800 HCPs – including general practitioners, paediatricians, and gynaecologists – responded to our survey. While most HCPs held positive attitudes to vaccines and vaccine-related work, we found a general trend of HCPs in Portugal and Finland being slightly more positive compared to those in France and Germany. HCPs with more positive vaccine attitudes were more likely to report that they actively recommend vaccines to their patients.

We also investigated how the HCPs' vaccination attitudes are related to the degree to which they recommend vaccines, their attitudes toward COVID-19-vaccine mandates and their attitudes toward complementary and alternative medicine (CAM). When it comes to attitudes to mandates, the results showed the HCPs were mostly positive toward COVID-19 vaccines being mandatory for HCPs, whereas attitudes to COVID-19 vaccine mandates for the public were divided. HCPs were more positive towards vaccine mandates in countries that had already implemented such mandates. Regarding endorsement of CAM, we observed associations with lower frequency of vaccine recommendation, lower self-vaccination rates, and being more open to patients delaying vaccination, with these relationships being mediated by distrust in vaccines. Even though these associations were present in all the participating countries, their effect sizes and prevalence were larger in Germany and France, which could be due to greater integration of CAM in their respective healthcare systems.

These results provide important information that can help health authorities take measures to ensure active endorsement of vaccinations among HCPs and, ultimately, high vaccine uptake among the public.

IRSA REPORT

IRSA's report deals with the COVID-19 pandemic and vaccination uptake from internationally comparative and sociological points of view. The report also presents two case studies (Slovenia and Croatia), and explores the processes of vaccination, media and political responses to the pandemic and the specific political context.

An analysis of basic data regarding the pandemic and the relative numbers of infections and deaths shows a clear division between Eastern and Central European countries, as the former show a much higher relative number of deaths than the latter. There is also a similar geographical division in COVID-19 vaccination uptake, notably in the uptake of booster shots. The reasons for this are multifaceted and complex. In the literature, several explanations can be found for the lower vaccine uptake in Eastern Europe, such as vaccine availability, exposure to misinformation, lower trust in institutions and scientists, and even a shared post-communist legacy. However, none of these explanations can fully account for the differences in the international comparison.

Data on levels of trust in legal systems, political institutions and scientists in individual countries clearly correlate with the percentage of the population vaccinated against COVID-19, especially when considering booster vaccination. Countries with lower levels of trust in political institutions and the healthcare system have a smaller share of people vaccinated against COVID-19. However, while some countries with higher levels of COVID-19 vaccine hesitancy do appear to have lower levels of scientific literacy and more challenging attitudes towards science and scientists, we were unable to identify a clear geographical division in terms of COVID-19 vaccine uptake. Similar conclusions can be made about the impact of people's satisfaction with the measures their governments took to address the pandemic. These data only offer limited explanations and show some indirect connections that could influence the vaccination rates. In other words, factors such as trust in institutions, attitudes towards science and scientists, scientific literacy and satisfaction with national measures do play a role in vaccine uptake, but it is hard to determine how strong this role is and in which way they are impacting one another.

The report was completed in April 2024 and is accessible on the JITSUVAX website.

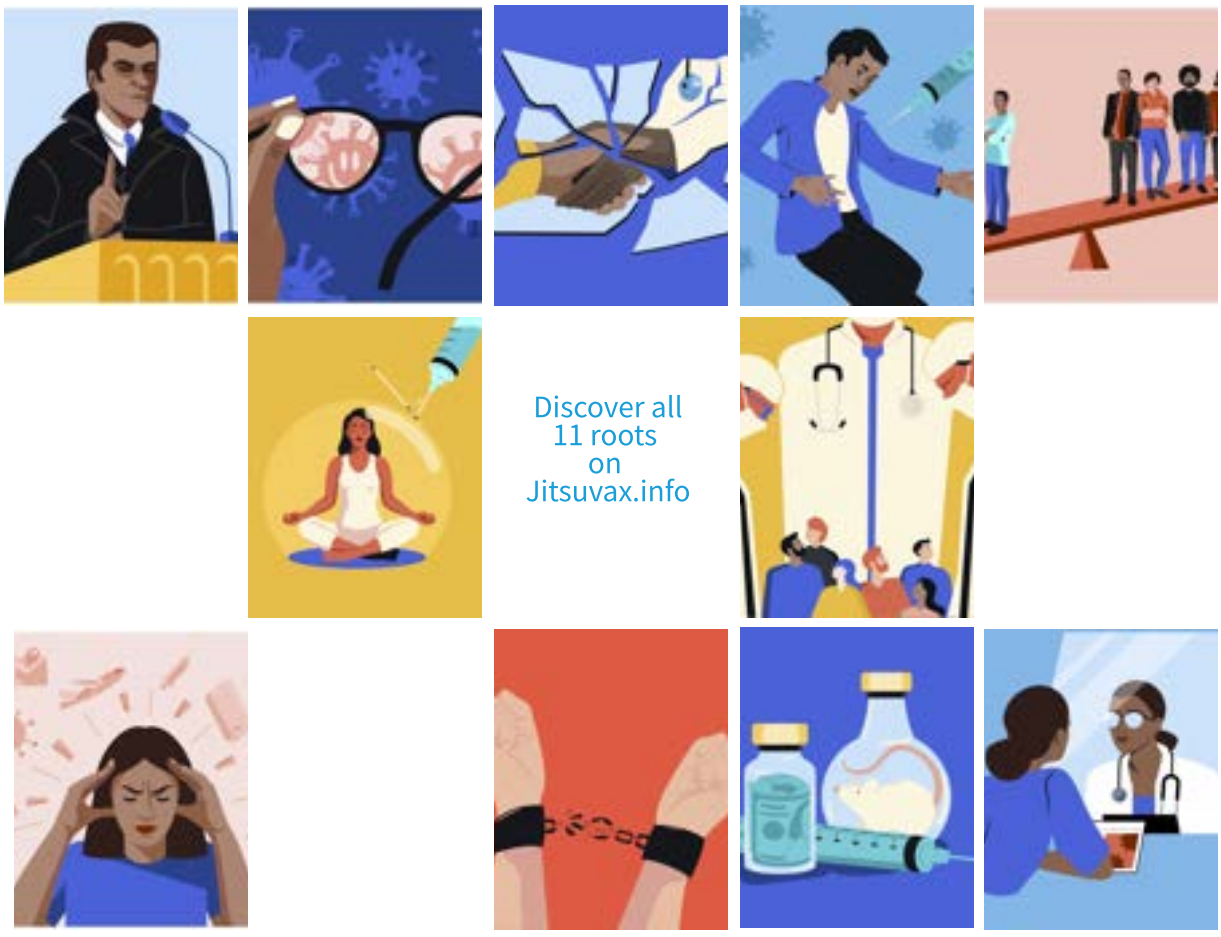
2021-2024

STEP 2

Identifying attitudinal roots

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

We have developed a psychologically informed classification of arguments expressing opposition towards vaccines to guide the development of the training materials and investigations 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 analyse 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 UK's 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.



Discover all 11 roots on Jitsuvax.info

2021-2024

STEP 2

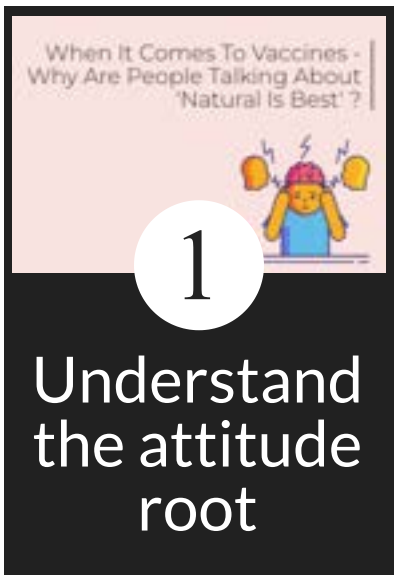
Identifying roots of non-vaccination

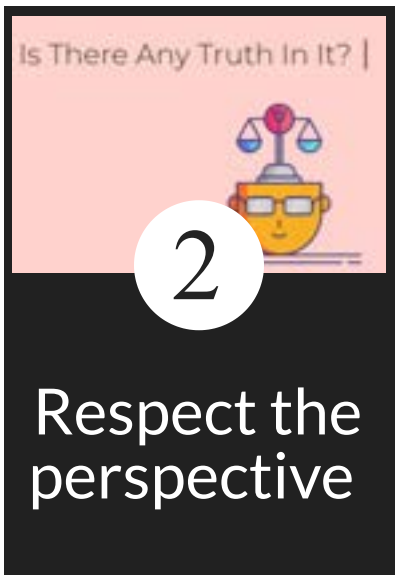
- Designing a website to communicate the taxonomy to the public

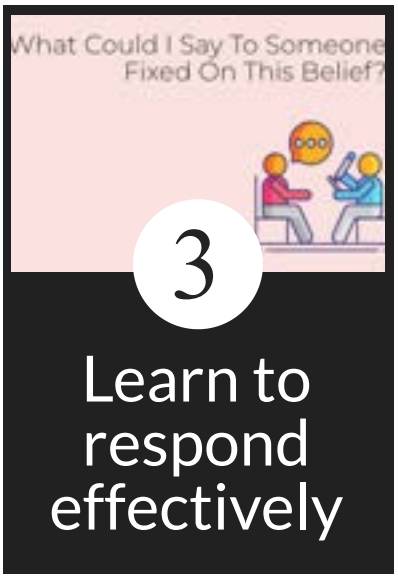
The spread of vaccine misinformation is a threat to the success of many immunisation programmes. Effectively rebutting such misinformation requires an approach that goes beyond addressing flaws in the arguments, by also considering the attitudinal roots (the underlying psychological attributes driving 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 11 attitudinal roots. These themes, roots and rebuttals are now featured on the website https://jitsuvax.info.

UPDATE 2024

You can visit the website for answers to specific anti-vaccination arguments and use those answers in your conversations. Within this site, the arguments that people make against vaccination are given as 'themes', which are then grouped by attitude roots. For each theme there is a description of the theme and the underlying attitude root. There is also a 'Is there any truth in it?' section in which the kernels of facts that often underlie misinformation can be found. Finally, there is a section giving the 'refutation' or suggesting how to refute or respond to the theme.
The website is available in English, French, Spanish, German and Romanian.







JITSUVAX.INFO

The Learning Resource

WHAT IS JITSUVAX.INFO?

Recently, there have been many new approaches to counter misinformation in public debates, for example on social media. But how do you counter misinformation in a face-to-face conversation without jeopardising the relationship? Jitsuvax.info gives an overview of the 11 main psychological reasons (so-called attitude roots) why people believe in misinformation about vaccination. In addition, the site offers guidance on what to say when confronted with misconceptions or anti-vaccination arguments in a conversation. In short, you will find examples of responses to over 60 anti-vaccination arguments that may arise in conversations with patients, colleagues or friends.

11

Attitude roots

Conspiracist ideation - Distrust - Religious concerns - Worldview and politics - Fear and Phobia - Moral Concerns - Reactance - Distorted risk perception - Perceived self-interest - Epistemic relativism

The roots are the result of an extensive study by the JITSUVAX team, who created a 'taxonomy' of arguments against vaccination.

There are two ways you can make use of this website.

First, you can familiarise yourself with the 11 attitude roots that predispose people to believe in misinformation about vaccination. This provides the basis for giving more tailored responses in conversations.

Second, you can look on the site for answers to specific misinformation and use those in your conversations. Within this site, the arguments that people make against vaccination are featured as 'themes', which are then grouped by attitude roots.

Go to the website!

More than 42,000

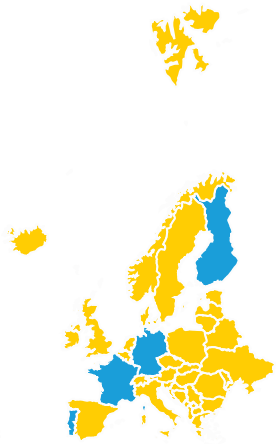
Visits of Jitsuvax.info

2021-2024

STEP 3

Identifying difficulties for HCPs and testing refutations

- Identifying challenging anti-vaccination arguments



By addressing patients' questions regarding vaccines, doctors can help to inform patients about vaccination. It is crucial to comprehend the challenges that doctors face when addressing the various issues that may arise. Using data gathered as part of a cross-sectional, cross-national questionnaire, we looked into how difficult doctors perceived it to refute various anti-vaccination arguments from patients. Physicians in four European countries—Finland, Germany, France, and Portugal (total n = 2,718)—rated the difficulty of rebutting 33 different arguments that were selected to represent 11 different psychological attitude roots. Participants believed it to be the most challenging to refute claims based on "religious concerns" and "reactance", whereas claims based on patients' erroneous perceptions of the risks of disease and vaccinations were thought to be the simplest to respond to.

2021-2024

STEP 3

Identifying difficulties for HCPs and testing refutations

- Designing sophisticated refutations of anti-vaccination arguments
- Testing effectiveness of refutations in experimental settings

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.

UPDATE 2024

The JITSUVAX members have designed and tested a new technique called the “empathetic refutational interview” (ERI), which involves (1) eliciting the patient’s concerns, (2) expressing empathy with the patient by affirming their basic values and attitude root, (3) refuting common misconceptions, and finally (4) providing factual information. HCPs can use this technique to guide their conversations about vaccines with patients. The team tested the ERI procedure in separate experiments with 2,545 members of the public in the UK and US, and with 321 HCPs from the UK and Finland. These experiments featured the affirmations and refutations developed for the JITSUVAX website in step 2. Our experiments showed that the ERI approach received more support and trust from members of the public compared to basic factual rebuttals. The ERI approach was also preferred by HCPs compared to a factual approach, and HCPs who read about it were more likely to adopt affirmations in their approach to hypothetical patients who opposed vaccines.

2021-2024

STEP 3

Identifying difficulties for HCPs and testing refutations

- Conducting a train-the-trainer workshop on how to refute arguments

Trainers for Motivational Interviewing:

Patrick Berthiaume (left)

Arnaud Gagneur (right)

We conducted a three-day workshop in Coimbra (Portugal) in 2023. Researchers from JITSUVAX and guests from interested health institutes (e.g., from the Robert Koch-Institute) were trained to conduct motivational interviewing and refutational interviewing, thus enabling them to train others. While the refutational interviewing is a new method developed by JITSUVAX members, the motivational interviewing is an existing empirically-validated tool for HCP-to-patient interaction that is predicated on the patient's internal motivation. The workshop used simulation exercises to teach the two approaches and to provide feedback. The feedback was used to further optimize the new empathetic refutational interview approach. The primary goal of the workshop was to enable trainers to train motivational interviewing and empathetic refutational interviewing to other. This will be essential for future field studies in the JITSUVAX project.

"I really appreciated the opportunity to learn about motivational interviewing and refutational interviewing in the context of vaccine hesitancy from the most renowned experts in the field. Their rich and extensive experience in conversations with vaccine hesitant patients and all the compelling examples were inspiring. It both helped me to develop more empathy with patient anxieties and worries and made me more confident in my ability to actually lead these conversations myself. I would recommend this training to all public health professionals who seek guidance on how to improve their communication about vaccines."

Dr. Julia Neufeind Team Lead for a team working on communication & vaccine demand. Immunization Unit at the German National Public Health Institute, the Robert Koch Institute

2021-2024

STEP 4

Designing interventions

- Designing and evaluating gamified 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.

UPDATE 2024

We designed a 10-minute online game that seeks to improve HCPs' ability to respond to anti-vaccination arguments. Over the course of three levels, players are confronted with common arguments which are based on three psychological attitude roots of non-vaccination. These attitude roots and their related anti-vaccination arguments were previously identified by JITSUVAX members. We have completed three randomised controlled studies to test whether playing the game improves HCPs' ability to identify the attitude root of an anti-vaccination argument and their ability to respond to that argument. In addition, we measured whether the game increases the willingness to talk to hesitant patients and whether the game inoculates against new anti-vaccination arguments. We found that HCPs who play the game show a higher willingness to talk to hesitant patients and that the game inoculates against anti-vaccination arguments. Internal meta-analyses indicate small effects of the intervention game on knowledge about the attitude roots and ability to respond to anti-vaccination arguments. In the third randomised controlled study, we further tested a second version of the game which additionally contained short feedback at the end of the game. The results showed that the game with feedback leads to a higher knowledge about the attitude roots compared to the game without feedback.

2021-2024

STEP 4

Designing interventions

- Training HCPs in the Empathetic Refutational Interview approach

Screenshots of a demonstration video showing captioned scenes for the four steps of the ERI

The team has field tested the empathetic refutational interview (ERI) in training workshops that teach HCPs how to use the approach. In 2023 and 2024, 113 HCPs in the UK and Germany received ERI training, and an additional 22 in the UK took part in a "train the trainers" ERI workshop preparing them to deliver their own training sessions based on the ERI approach. The training workshops were designed to introduce the ERI and the jitsuvax.info website in an interactive way and to allow HCPs to practise using the approach in scenario-based role plays. In general, HCPs' confidence in vaccine communication and preparedness to refute anti-vaccination arguments from patients improved after training. Feedback from the training was extremely positive, with all HCPs agreeing that they found the session useful.

In 2024, the team will be working in partnership with the UK Health Security Agency and National Health Service England in the London region to conduct and evaluate a series of ERI workshops for HCPs, public health authorities, and local government public health teams.

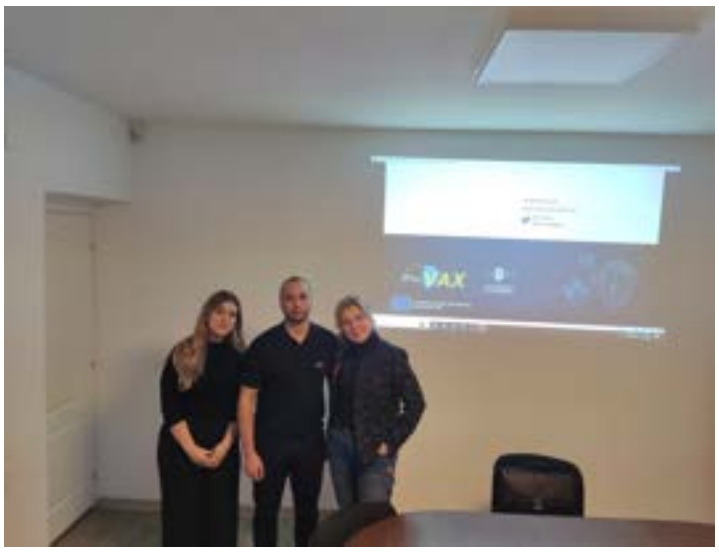
"It helped me reevaluate my approach to discussing vaccines and I feel fairly confident to train/share my knowledge gained with others."
Practice nurse and midwife, trainee in "train the trainers" workshop

2021-2024

STEP 4

Designing interventions

- Testing effectiveness of Empathetic Refutational Interview in field studies



Train the trainers of the Romanian field test in Bucharest

The objectives of field testing the empathetic refutational interview (ERI) were to answer the two following research questions:
- Can training healthcare professionals in using the ERI effectively overcoming vaccine hesitancy in the field?
- What does ERI add to motivational interviewing (MI) and conventional interviews?

To answer these questions, the JITSUVAX team trained HCPs to conduct the MI or the ERI in Romania (GPs) and France (residents in family medicine). Training in the ERI technique was carried out by trainers who attended the train-the-trainers workshops in Coimbra. The effectiveness of the conversations between trained HCPs and patients is assessed using quantitative and/or qualitative methods, in order to measure the immediate impact on patients' vaccine confidence and their willingness to get vaccinated following HCPs recommendations, as well as the general assessment and potential difficulties experienced by the trained HCPs. The quantitative components of these studies include a control group, in order to quantify the effects of MI and ERI on patients' vaccination acceptance.

These studies began in France in July 2023 and in Romania in January 2024. Both are currently underway. In France, we collected information from general medical interns to assess the impact of the training courses in MI and ERI, and also from patients before and after a consultation (a control group without specific training was also included). A second wave of investigation, which began in January 2024, is underway to expand the observations in the ERI group. In Romania, we recruited physician-nurse pairs to form three groups: ERI, MI, and control. Again, we gathered information from physicians before and after their respective training courses, and from patients before and after a consultation in which the subject of vaccination was raised. We will also conduct semi-structured interviews with the participating physicians. The results of these two field tests will be available before summer 2024.

2021-2024

STEP 4

Designing interventions

- Testing effectiveness of Empathetic Refutational Interview in a large-scale quantitative experiment

Screenshots of a video used in the study

To further investigate the effectiveness of the empathetic refutational interview (ERI), we conducted a large-scale quantitative experiment. For this preregistered study, we collected data from a large representative UK sample (N = 1,700) in February 2024. Participants were randomly assigned to one of six conditions and watched a 90 second long video presenting a conversation about the measles, mumps and rubella vaccination between a mother and a paediatrician using either ERI, the well-established motivational interviewing (MI), or no specific communication technique (control).

The results show that participants in the ERI and MI conditions reported higher trust and would more often recommend the paediatrician to friends more often than participants in the control group. Further, participants in the ERI condition would more often recommend their friend to vaccinate their children compared to participants in the other groups.

In conclusion, watching short interactions using an empathetic communication technique (ERI, MI) increased patients' vaccination intentions and strengthened their trust in doctors. This illustrates the usefulness of such empathy-based techniques in conversations with vaccine hesitant patients. Further, the results strengthen previous evidence showing that the novel ERI is a promising intervention in promoting informed vaccination decisions.

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. 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 evaluated interventions.

UPDATE 2024

In a recent study, I have analysed the association of belief in COVID-19-related conspiracy theories and physicians' own vaccination status and their recommendation behaviour. Moreover, I will collect experimental data to investigate the impact of vaccine-related conspiracy theories shared by physicians on peoples' vaccination intention. Additionally, this experiment will test the effectiveness of rebuttals from a physician compared to rebuttals from lay people. Finally, I plan to evaluate two interventions which could reduce the influence of conspiracy theories.

DOCTORAL STUDENTS AT WORK IN JITSUVAX

OTTO MÄKI

UNIVERSITY OF TURKU

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 activists often use anecdotal accounts of alledged vaccine adverse events to spread fear amongst the public, I wanted to test whether positive vaccine anecdotes can instead be used to promote vaccines. I investigated whether utilising pro-vaccine anecdotes in vaccine-promoting interventions would lead to better intervention outcomes than presenting statistical interventions. Moreover, I examined 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.

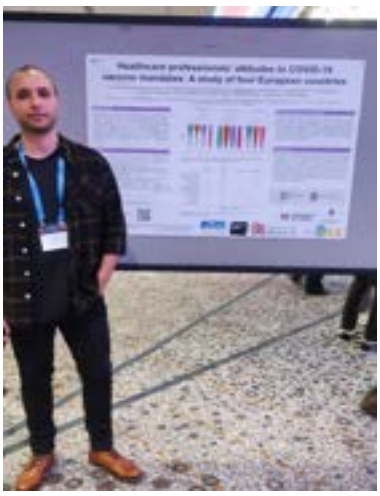
UPDATE 2024

In another study, I utilized clustering algorithms to identify distinct COVID-19 and influenza vaccine hesitancy subgroups and then described their unique characteristics from a health communication point of view. In a third study, I investigated how HCPs learned to use ERI techniques after having read short ERI exemplifications.

SCIENTIFIC OUTPUT

The team has published 49 articles in peer-reviewed journals such as Nature Reviews Psychology and Expert Review of Vaccines. A selection is provided on the following page. The team has given over 60 scientific talks at various psychological and medical conferences, expert panels and NGO meetings. A full list can be accessed on the Jitsuvax homepage.

49
peer-reviewed articles



>60
scientific talks

PUBLICATIONS
-selection-

Holford, D., Schmid, P., Fasce, A., & Lewandowsky, S. (2024). The empathetic refutational interview to tackle vaccine misconceptions: Four randomized experiments. Health Psychology. https://doi.org/10.1037/hea0001354

Fasce, A., Schmid, P., Holford, D. L., Bates, L., Gurevych, I., & Lewandowsky, S. (2023). A taxonomy of anti-vaccination arguments from a systematic literature review and text modelling. Nature human behaviour, 7, 1-19. https://doi.org/10.1038/s41562-023-01644-3

Garrison, A., Karlsson, L., Fressard, L., Fasce, A., Rodrigues, F., Schmid, P., ... & Verger, P. (2023). International adaptation and validation of the Pro-VC-Be: measuring the psychosocial determinants of vaccine confidence in healthcare professionals in European countries. Expert Review of Vaccines, 22(1), 726-737. https://doi.org/10.1080/14760584.2023.2242479

Karlsson, L. C., Garrison, A., Holford, D., Fasce, A., Lewandowsky, S., Taubert, F., ... & Soveri, A. (2023). Healthcare professionals' attitudes to mandatory COVID-19 vaccination: Cross-sectional survey data from four European countries. Human Vaccines & Immunotherapeutics, 19(2), 2256442. https://doi.org/10.1080/21645515.2023.2256442

Fasce, A., Karlsson, L., Verger, P., Mäki, O., Taubert, F., Garrison, A., ... & Soveri, A. (2023). Endorsement of alternative medicine and vaccine hesitancy among physicians: A cross-sectional study in four European countries. Human Vaccines & Immunotherapeutics, 19(2), 2242748. https://doi.org/10.1080/21645515.2023.2242748

Holford, D., Schmid, P., Fasce, A., Garrison, A., Karlsson, L., Taubert, F., ... & Soveri, A. (2024). Difficulties faced by physicians from four European countries in rebutting antivaccination arguments: a cross-sectional study. BMJ Public Health, 2(1). https://doi.org/10.1136/bmjph-2023-000195

Betsch, C., Schmid, P., Verger, P., Lewandowsky, S., Soveri, A., Hertwig, R., ... & Garrison, A. (2022). A call for immediate action to increase COVID-19 vaccination uptake to prepare for the third pandemic winter. nature communications, 13(1), 7511. https://doi.org/10.1038/s41467-022-34995-y

MEDIA OUTPUT

The team was part of television, radio and newspaper interviews, wrote opinion pieces and participated in podcasts all over Europe. The media output adds up to over 100 pieces in the first three years of Jitsuvax. A selection of media pieces is provided on the following page.

>100
Media pieces

MEDIA PIECES

Dawn Holford explains the ERI approach to vaccine conversations
Article: How to have better conversations about vaccines
Dated: 5/3/2024

Stephan Lewandowsky and Sander van der Linden write about the impact of disinformation in Scientific American
Article: Disinformation Is the Real Threat to Democracy and Public Health
Dated: 30/1/2024

Philipp Schmid talks on effective strategies to combat science denialism on the podcast propwatch.org.
[Interview]
Dated: 26/04/2023

Stephan Lewandowsky on how misinfo harms — and how you can fight back. On CBC News: The National.
[Interview]
Dated: 13/03/2023

Jon Roozenbeek, Sander van der Linden and Stephan Lewandowsky explaining prebunking
Article: Fighting fake news: Is it possible to 'inoculate' users against misinformation before they see it?
Dated: 28/08/2022

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

Jon Rooozenbeek and Sander van der Linden discuss how 'prebunking' can fight fast-moving vaccine lies
Article: The PBS
Dated: 11/06/2021

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

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 already took place:

JITSUVAX coordinated a Comment for Nature Communication, which was co-signed by members from multiple groups and affiliations.

JITSUVAX representatives joined several IMMUNION workshops for HCPs in 2022.

See some further insights on the next page.

COOPERATIONS

Joint actions

In a workshop collaboration between JITSUVAX and Vax-Trust, Anna and Linda gave a presentation about the ERI. Pia Vuolanto, the PI of the VaxTrust project, also talked about results of their project. Workshop in Ostrobothnia in May 2023

Joint symposium with members of IMMUNION at the 18th European Pharmaceutical Students' Association Autumn Assembly (EPSA) in Athens in November 2022

General Assembly of the Standing Committee of European Doctors (CPME) in Brussels in March 2022

Comment

https://doi.org/10.1038/s41467-022-34995-y

A call for immediate action to increase COVID-19 vaccination uptake to prepare for the third pandemic winter

Cornelia Betsch, Philipp Schmid, Pierre Verger, Stephan Lewandowsky, Anna Soveri, Ralph Hertwig, Angelo Fasce, Dawn Holford, Paul De Raeve, Arnaud Gagneur, Pia Vuolanto, Tiago Correia, Lara Tavoschi, Silvia Declich, Maurizio Marceca, Athena Linos, Pania Karnaki, Linda Karlsson & Amanda Garrison

Check for updates

CONTACT

HOW TO REACH THE TEAM?

VISIT THE WEBSITE

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

FOLLOW OUR X ACCOUNT

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

FOLLOW TEAM MEMBERS ON X

Several team members have their own X 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
@adamhfinn
@dlholf
@LindaCeKarlsson
@annasoveri
@STWorg

2024

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