

# Distress and resilience of healthcare professionals during the COVID-19 (coronavirus) pandemic

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<b>Registration date</b> 01/04/2020	<b>Overall study status</b> Completed	<input type="checkbox"/> Statistical analysis plan <input checked="" type="checkbox"/> Results
<b>Last Edited</b> 19/07/2022	<b>Condition category</b> Other	<input type="checkbox"/> Individual participant data

## Plain English summary of protocol

### Background and study aims

COVID-19 is a condition caused by the coronavirus (called SARS-CoV-2) that was first identified in late 2019. This virus can infect the respiratory (breathing) system. Some people do not have symptoms but can carry the virus and pass it on to others. People who have developed the condition may develop a fever and/or a continuous cough among other symptoms. This can develop into pneumonia. Pneumonia is a chest infection where the small air pockets of the lungs, called alveoli, fill with liquid and make it more difficult to breathe.

In 2020, the virus has spread to many countries around the world and neither a vaccine against the virus or specific treatment for COVID-19 has yet been developed. As of March 2020, it is advised that people minimize travel and social contact, and regularly wash their hands to reduce the spread of the virus.

Groups who are at a higher risk from infection with the virus, and therefore of developing COVID-19, include people aged over 70 years, people who have long-term health conditions (such as asthma or diabetes), people who have a weakened immune system and people who are pregnant. People in these groups, and people who might come into contact with them, can reduce this risk by following the up-to-date advice to reduce the spread of the virus.

Despite containment measures, the virus spread exponentially. On March 11, 2020, the World Health Organization announced a pandemic. In Europe, the first clusters appeared on the 22nd of February 2020 in Northern Italy and soon the health system in Northern Italy could not cope with the massive amount of new patients with respiratory failure needing invasive ventilation support. The long-working hours, need for "hard triage" for ventilation support and the strong restrictions in daily life implemented by the government had serious effects on healthcare workers and the general population.

Front-line healthcare workers directly involved in the diagnosis, treatment and care of COVID-19 patients are despite getting infected and are under particular risk of developing psychological distress and other mental health symptoms. A recent study from China showed a high

prevalence of mental health symptoms among healthcare professionals, including depression, insomnia, anxiety or trauma stress disorder (Lai et al., 2020), similar to those found in military personnel after having been at war. Feelings of vulnerability to disease, concerns about spread of the virus to family members or friends, need for self-isolation and changes in the work sense of coherence are purported to play a role in the development of such symptoms. These negative stress outcomes can impact not only on the wellbeing of health professionals, but also on their ability to care effectively for others (Barnett, et al., 2007). Additionally, they affect all healthcare workers, irrespective of culture. On the other hand, individuals with a strong sense of coherence are less prone to burn-out and are mentally healthier. Moreover, adopting resilience-enhancing strategies may improve day-to-day performance at work and at home.

This study investigates the relationship between work sense of coherence and individual resilience on healthcare professionals' mental health during this COVID-19 pandemic. No other study addresses this gap in knowledge.

1. Is there a relationship between individual resilience and work sense of coherence and the development of anxiety, depression and traumatic stress disorder in frontline health care personnel during the pandemic outbreak?
2. Does contamination anxiety and COVID-19 anxiety differ over time, across countries in frontline health care personnel?
3. How does resilience and work sense of coherence influence the development of anxiety, depression and traumatic stress disorder in these health care workers during the pandemic outbreak?

Who can participate?

Healthcare professionals, >18 years of age, willing to participate.

What does the study involve?

Healthcare professionals will be asked to fill in a number of online questionnaires at three timepoints during a six-month period.

What are the possible benefits and risks of participating?

None anticipated.

Where is the study run from?

Department of Anaesthesia and Pain Medicine, Inselspital, Bern University Hospital, Bern (Switzerland). Data will be collected from hospitals in Europe, USA, and New Zealand.

When is the study starting and how long is it expected to run for?

April 2020 to May 2021 (updated 05/01/2021, previously: January 2021)

Who is funding the study?

Department of Anaesthesia and Pain Medicine, Inselspital, Bern University Hospital, Bern (Switzerland)

Who is the main contact?

Dr Alexander Fuchs, alexander.fuchs@insel.ch

## Contact information

Type(s)

Scientific

**Contact name**

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**Contact details**

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**Additional identifiers****EudraCT/CTIS number**

Nil known

**IRAS number****ClinicalTrials.gov number**

Nil known

**Secondary identifying numbers**

DARVID1

**Study information****Scientific Title**

Distress And Resilience of healthcare professionals during the COVID-19 pandemic

**Acronym**

DARVID

**Study objectives**

1. COVID-19 anxiety and contamination anxiety do not remain stable over time, across countries, and relate to the proximity with infected patients.
2. There is a relationship between individual resilience and work sense of coherence and the development of mental symptoms in front liners during pandemic outbreaks

**Ethics approval required**

Old ethics approval format

**Ethics approval(s)**

**Study design**

Mixed-methods observational

**Primary study design**

Observational

**Secondary study design**

Qualitative research

**Study setting(s)**

Internet/virtual

**Study type(s)**

Other

**Participant information sheet**

[https://psyunibe.qualtrics.com/jfe/form/SV\\_3WYgbkLWqiDPDG5](https://psyunibe.qualtrics.com/jfe/form/SV_3WYgbkLWqiDPDG5)

**Health condition(s) or problem(s) studied**

Individual resilience and work sense of coherence and the development of mental symptoms during a pandemic scenario

**Interventions**

Matched longitudinal internet-based survey with pre-existing, validated self-questionnaires (Work-SoC, PHQ-9, IES-6, PVD, SFI, CD-RISC 10), at 3 time periods of 2 weeks over 6 months, with the option to prolong depending on the development of the pandemic.

Semi-structured interviews with focus groups after the last period of the survey.

**Intervention Type**

Other

**Primary outcome measure**

COVID-19 Anxiety (adapted SARS-Anxiety-Scale) at 3 time periods of 2 weeks over 6 months

**Secondary outcome measures**

At 3 time periods of 2 weeks over 6 months:

1. Contamination anxiety (PVS)
2. Anxiety to get infected at work measured with a single generated Item («I am afraid I will become infected with COVID-19 while on the job») on a visual analog scale from «0 = Not at all» to «10 = Extremely»
3. Depression (PHQ-9)
4. Traumatic Stress (IES-6)
5. Work Coherence (Work-SoC)

Qualitative measures:

6. Influence of resilience and work sense of coherence on the development of anxiety, depression and trauma stress disorder in frontliners during pandemic outbreak measured using structured interview.

**Overall study start date**

15/03/2020

**Completion date**

01/05/2021

## Eligibility

**Key inclusion criteria**

1. Healthcare professionals
2. >18 years of age
3. Willing to participate

**Participant type(s)**

Health professional

**Age group**

Adult

**Lower age limit**

18 Years

**Sex**

Both

**Target number of participants**

400

**Total final enrolment**

520

**Key exclusion criteria**

Does not meet inclusion criteria

**Date of first enrolment**

02/04/2020

**Date of final enrolment**

16/04/2020

## Locations

**Countries of recruitment**

Australia

Austria  
Belgium  
Brazil  
Bulgaria  
Croatia  
Cyprus  
Czech Republic  
Denmark  
Finland  
France  
French Southern Territories  
Germany  
Greece  
Ireland  
Isle of Man  
Israel  
Italy  
Lebanon  
Liechtenstein  
Lithuania  
Luxembourg  
Malta  
Netherlands  
New Zealand  
Norway  
Portugal

Slovakia

Slovenia

South Africa

Spain

Sweden

Switzerland

Türkiye

United Kingdom

United States of America

**Study participating centre**

**Bern University Hospital**

Department of Anaesthesiology and Pain Therapy

Inselspital

Freiburgstrasse 8-10

Bern

Switzerland

3010

## **Sponsor information**

**Organisation**

University Hospital of Bern

**Sponsor details**

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**Sponsor type**

Hospital/treatment centre

**Website**

<http://www.anaesthesiologie.insel.ch>

**ROR**

<https://ror.org/01q9sj412>

## Funder(s)

**Funder type**

Hospital/treatment centre

**Funder Name**

University Hospital of Bern

## Results and Publications

**Publication and dissemination plan**

Publication of results in the dedicated journals - first trimester 2021.

**Intention to publish date**

31/03/2021

**Individual participant data (IPD) sharing plan**

The datasets generated during and/or analysed during the current study are available from the corresponding author on reasonable request. Dr. Phil. Sandra Abegglen ([sandra.abegglen@psy.unibe.ch](mailto:sandra.abegglen@psy.unibe.ch)). Both qualitative and quantitative data are expected to be available as from March 2021, for a period of 10 years. Data originating from questionnaires will be stored in a secure online site accessible to the investigators only. All researchers will comply with the Data Protection Act and the Swiss Law for Human Research. All data will be destroyed 10 years after the end of the project.

**IPD sharing plan summary**

Available on request

**Study outputs**

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
<a href="#">Protocol article</a>	protocol	31/07/2020	04/08/2020	Yes	No
<a href="#">Preprint results</a>	psychological health results	07/06/2022	21/06/2022	No	No
<a href="#">Results article</a>	Work-related sense of coherence results	16/05/2022	21/06/2022	Yes	No
<a href="#">Results article</a>		30/06/2022	19/07/2022	Yes	No