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

Submission date
01/04/2020

Recruitment status
No longer recruiting

Registration date
01/04/2020

Overall study status
Completed

Last Edited
19/07/2022

Condition category
Other

[X] Prospectively registered
[X] Protocol
[_] Statistical analysis plan
[X] Results
[_] 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?
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Contact information

Type(s)
Scientific

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Additional identifiers

Protocol serial number
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)
Approved 01/04/2020, Gesundheits- und Fürsorgedirektion des Kantons Bern, Kantonale Ethikkomission für die Forschung Bern (Ethics Committee of the Canton of Bern, Murtenstrasse 31, 3010 Bern, Switzerland; +41 31 633 7070; info.kek.kapa@gef.be.ch), ref: Req-2020-00355

Primary study design
Observational

Study design
Mixed-methods observational

Study type(s)
Other

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

Key secondary outcome(s)
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.

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

Healthy volunteers allowed
No

Age group
Adult

Lower age limit
18 Years

Sex
All

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
United Kingdom

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 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

ROR
https://ror.org/01q9sj412

Funder(s)

Funder type
Hospital/treatment centre

Funder Name
University Hospital of Bern

Results and Publications

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). 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?
Results article	Work-related sense of coherence results	16/05/2022	21/06/2022	Yes	No
Results article		30/06/2022	19/07/2022	Yes	No
Protocol article	protocol	31/07/2020	04/08/2020	Yes	No

Participant information sheet	Participant information sheet	11/11/2025	11/11/2025	No	Yes
Preprint results	psychological health results	07/06/2022	21/06/2022	No	No