Mental health support to staff in a major hospital in Milan (Italy) during the COVID-19 pandemic: a framework of actions

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To the Editor,

As of 31 March 2020, more than 100 000 cases of coronavirus disease 2019 (COVID-19) have been confirmed in Italy.[1] Progressive mitigation measures have been introduced by the Italian government since 9 March 2020 to undermine and break the virus transmission chain. However, the COVID-19-associated hospitalisation rate in Lombardy, the epicentre of the outbreak, has risen since the late days of February 2020, by 30% each day, and it is only very recently that it slowed down to 5% daily, which still translates to 500 new patients every day who are in absolute need of hospital care. This has put enormous pressure on healthcare providers and hospitals, up to the point where departments and daily shifts have been assigned in either of the following two categories: COVID-19 and non-COVID-19. In Policlinico, one of the most relevant university hospitals in Milano, the entire organisation has been transformed in less than 2 weeks, moving from 900 inpatient beds with 18 intensive care to 110 intensive and subintensive beds and more than 200 COVID-19 beds, thus completely reorganising the wards.

Health workers and emergency medical technicians are at a high risk of developing post-traumatic stress disorder (PTSD) and other psychiatric disorders[2 3] in standard operating

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conditions, and the risk increases during natural disasters.[4] Early evidence suggests that the COVID-19 outbreak may cause adverse psychological reactions in healthcare workers. Liu et al[4] reported psychological distress (15.9%), anxiety (16%) and depressive symptoms (34.6%) in 4679 doctors and nurses in 348 Chinese hospitals during the COVID-19 outbreak. Immediate/rapid measures implemented by the hospital's administrators may be a protective factor in these cases.[5–7]

The COVID-19 pandemic has peculiar characteristics that push the human mind, including those of doctors and nurses, into the uncertainty zone, given the speculations on the mode and rate of virus transmission, highly infectious nature and rapid spread of the disease and difficulties in making previsions of pandemic end, absence of specific therapies and vaccine, high infection rate of COVID-19 in health personnel and moral injury. Healthcare personnel might not feel well-equipped in treating patients and may feel overwhelmed by the discrepancy between patient needs and ventilators available during peaks. Stressors are also linked to continuous and unannounced organisational changes, with respect to work spaces and colleagues, to ensure that the hospital is able to handle the sudden surge in the number of people in need of hospitalisation or intensive care and quickly adapt to new competencies; for instance, in the event of shortage of personnel, personnel may be shifted from their specialties to the emergency department or to COVID-19 wards. Stress and trauma are repeated day after day when going back to work, and some describe it similar to a feeling of descending to hell on a daily basis.

Moreover, most aspects of social closeness typical of Italian culture and relevant for our strategies of resilience and grief have been wiped out by the risk of diffusion and the strict isolation rules. Patients admitted to the hospital somehow 'disappear' from their families for 2 or 3 weeks or may even die without any further direct

contact. Seeing so many people not in contact with their family for such a long time, or even dying alone, poses a really hard emotional impact on health personnel. In addition, health workers may themselves be experiencing emotional isolation from their family, on account of the fear of bringing home the virus, thus do not have enough time to spend with their relatives and children, facing difficulties in sharing the experiences they are living at work and feeling apprehensive about what will happen after the pandemic ends.

To face the psychological pressure during the COVID-19 outbreak in China, Chen et al[8] reported that an intervention plan was developed at the Second Xiangya Hospital, based on online courses, a hotline supporting team and group activities to relieve stress. The plan had to be retailored because of initial staff reluctance to participate.

Intervention plans need to be modulated according to the specific COVID-19 pandemic variables and different staff needs and preferences, with the possibility to shift rapidly between different levels of support and intensity. This is even more true considering that the conditions under which the hospital staff had been working made the screening for potential mental health problems difficult. Thus, to promote a wide stress-relieving strategy in Policlinico, various evidence-based stress reduction interventions were chosen and organised in a modular system that could be accessed flexibly and on the widest possible scale. Priority was given to interventions easily deliverable over the intranet or accessible by phone at the health worker's convenience. A rest place immediately outside the COVID-19 area for easy access to water, nuts and dehydrated fruit at the end of the shift was created, with nutritional tips to avoid dehydration during work shifts and support healthy nutrition. Information on strategies to reduce stress and foster psychological flexibility, messages of support by patients, carers and prominent national actors and actresses (#you are not alone), and

mindfulness exercises were posted on the intranet. An easy-to-access psychological hotline and access to psychopharmacological and psychiatric support were also offered. Previous experiences (groups and debriefing in one of the intensive care wards) were continued and potentiated.

ACCEPTANCE AND COMMITMENT THERAPY-BASED BOOKLET TO FOSTER PSYCHOLOGICAL FLEXIBILITY

Acceptance and commitment therapy (ACT) is a mindfulness-based cognitive–behavioural therapy based on a theory of cognitive functioning called relational frame theory (RFT).[9] According to the ACT and RFT conceptualisations, cognition and language are the source of psychological suffering: the same tools we use to solve everyday problems can trap us in the quicksand of suffering. Research shows that ACT can be effective with adults in clinical, as well as non-clinical settings, and in patients with PTSD and chronic medical conditions.[10] In addition, it has been proven effective when delivered indirectly with books or via web or apps. The main goal of ACT is to improve psychological flexibility: the ability to keep in touch with our own thoughts and emotions and to behave effectively according to what is important in our life. ACT protocols target six core processes: defusion, acceptance, self-as-a-context, present moment, values and committed action.

After interviewing key role personnel by phone to identify and target most common thoughts and emotions they were fighting with under such stressful conditions, an ACT-based psychoeducation booklet was designed and made available over the hospital intranet. The script targeted all six ACT processes normalising experienced thoughts and emotions, putting them in a defusion perspective, promoting acceptance and valued action. Thoughts and emotions were presented following an RFT framework. The basic premise of RFT is that the core of human language and cognition is a network of mutual relations called relational

frames. Thus, putative thoughts were presented, for example, in a frame of coordination with emotions, or in opposition with idealised past or future events, or in comparison with other experiences. In RFT terms, language is the whole set of symbols that human use, manipulate and react to and act on, and includes not only words, but also images, sounds, facial expressions and gestures. Therefore, vignettes were also used to offer perspective and promote transformation of stimulus functions of cognitive networks that at the end of the shift could otherwise evoke difficult emotions. By providing such a context at the end of the booklet, patterns of committed action that promote self-care and prosocial behaviours were suggested.

MINDFULNESS EXERCISES

Mindfulness-based interventions have been proven effective as a work-related stress reduction practice to promote well-being in healthcare personnel,[11] even when delivered in the form of brief protocols.[12] To offer healthcare staff options compatible with very high workloads, a selection of mindful practices of variable duration, ranging from 1 to 20 min, were posted in a specific intranet section. Each track was available as a text and audio file to be selected and practised at the convenience of the health worker. A brief rationale to mindfulness practices was also provided at the beginning of the related intranet section.

PHONE HOTLINE

A team of more than 70 psychotherapists volunteered in shifts scattered all over the week to offer telephone support when requested by the health worker. They were selected on the basis of their clinical experience after a call by the authors to the Istituto Europeo per lo Studio del Comportamento Umano, a non-profit association, and other colleagues from various hospital departments and wards (ie, child and adolescent neuropsychiatry, family consultation clinic,

occupational medicine and others). An online training was organised to standardise the intervention and to share interview content. Training video and instructions were also sent via email. In addition, the authors coordinated with the psychotherapists, who were under constant supervision of the authors.

Health workers accessed the hotline sending an email of request to a back office team of six psychologists who managed all the applications, linking health workers to psychotherapists. The six psychologists were purposely chosen to strengthen the empathic tone of messages via email or replies by phone. To consider different intervention methods, a default option procedure was also adopted[13]: psychotherapists directly contacted health workers with coordinating functions to offer the support service, always leaving the choice to decline the proposal. To nudge access to the hotline, QR codes were placed on the leaflets announcing the service and posted close to time recorder machine, and 'mailto' links were sent in text messages. Both QR codes and links generated a preformatted email message with the relevant information to be filled for the contact. All staff who became COVID-19 positive were also proactively called and received the same support, while isolated at home. In the phone call, a psychotherapist oriented the person to her/his personal resilience strategies and to the materials posted on the intranet. When needed, a second call was agreed between the psychotherapist and staff. If additional psychotherapeutic support was needed, COVID-19 positive staff was referred to the psychological services of the Policlinic Hospital.

One of the authors developed the phone call interview based on exploratory calls with key hospital personnel. A protocol for psychological support was designed for a 30 min single consultation. It consisted of active empathetic listening, normalisation of symptoms and reorientation to own personal resilience resources and values; interviews were also aimed at identifying effective coping

strategies to better deal with stress arousal. Further sessions could be agreed on request with the therapist.

CONCLUSIONS

Maintaining mental health in hospital staff is crucial to help them operate under the high-pressure conditions experienced during the COVID-19 pandemic, and actions are needed also in a prevention perspective, given the proportion of medical staff that showed symptoms of mental health disorders at the end of the emergency period in China.[4] However, in view of the exceptional circumstances under which hospitals are operating, what is the best evidence-based approach to maintain mental health in hospital staff remains unclear.[8] All known psychological support models, elaborated for acute emergencies, at a smaller scale and with different characteristics, to be implemented for a short duration of any traumatic episode are probably unfit to deliver prompt and system-wide interventions when resources may be limited, compromised or inaccessible, in a scenario in which COVID-19 prevalence and pressure may differ between sites, evolve very quickly, and screening for mental health issue could be difficult. Only close to the end of the pandemic wave, when emergency conditions were less demanding, it was possible for the Occupational Medicine Department, responsible for mental as well as general health checks to hospital workers, to elaborate on a testing protocol, which is still ongoing at the time of writing of the paper.

The modular evidence-based approach adopted at the Policlinico is embedded in, and flexibly responds to, the individual and social culture and context which, according to a recent editorial by *The Lancet Psychiatry*[14] '… should also be considered when devising plans for delivering mental health care in disaster settings, but are rarely discussed in calls to action during emergencies'. In addition it can be rapidly scaled and tuned in other regions with different COVID-19 prevalence.

As of today, the programme is in its early stages and data on its effectiveness are scarce and incomplete. Continuous and immediate feedback from addressees is needed to progressively adjust it: direct calls to nursing coordinators during the first week of programme implementation allowed us to find more effective communication tools (ie, WhatsApp informal group chats) in addition to the traditional intranet channel to inform about the programme and nudge participation. In the earliest days of COVID-19, given the numbers of health workers involved to cope with the pandemic, the continuous reorganisation of the wards and the occasional shortage in personal protection equipment, support at distance seemed a viable, flexible and rapidly deliverable solution at individual convenience. Thus the reported model leveraged on the internal resources available and a network of psychotherapists who volunteered to support staff. Given that mental exhaustion and exposure to moral trauma have raised awareness in health workers about the need for psychological support in such types of emergency situations and the changes in the Italian pandemic scenario, other different options, such as 'face-to-face' contact for small groups in large rooms with a psychotherapist, using adequate measures of protection, might be considered and tested in future.

Though empirically grounded in available evidence, trial-and-error learning is expected in this phase to help inform and shape best practices and modulate them according to the varying COVID-19 pressure in different sites. Rapid, though inevitably incomplete, worldwide sharing of models and even partial data are nevertheless essential to learn in face of the rapid diffusion of the virus and increasing number of hospital interventions.

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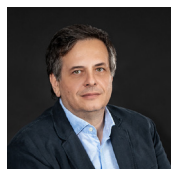
Giovambattista Presti graduated from the Medical School of the University of Catania in 1987 and obtained his specialization in Medical Psychology at the University of Milan in 1991. He obtained his PhD in Behavior Analysis at IULM University in Milan in 2010. Since 2013, he has been an Associate Professor of Psychology at the University of Enna 'Kore', Department of Human and Social Sciences, where he coordinates the undergraduate program in Psychology, the PhD program in Social Inclusions in Multicultural Context, and the post-grad courseware on Behavior Analysis and Autism. He is currently a peer-reviewed ACT (Acceptance and Commitment Therapy) trainer and the Director of the Kore University BEhavioral Lab (KUBE Lab). He has served as President of the Association for Contextual Behavioral Sciences (ACBS) and as Treasurer of the European Association for Behavior Analysis (EABA). In addition, he is also the President of the Italian Professional Association of Behavior Analysts (SIACSA), Vice President of the Italian Association for Behavior Analysis (ABAIT) and Vice President of the Italian Institute for Behavioral Studies (IESCUM). His main research interests include relational frame theory, language, post-traumatic stress disorders in non-accompanied migrants and ACT treatment, and applied behavior analysis interventions in individuals with autism spectrum disorder (ASD).