

HOW WOULD A POST-VIRUS CHRONIC FATIGUE SYNDROME AFFECT THE PERFORMANCE OF WORKERS THAT FELL ILL FROM COVID-19?

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SHORT COMMUNICATION

Abstract In this paper, it is considered how a post-virus chronic fatigue syndrome affect the performance of workers that fell ill from COVID-19.

The Chronic Fatigue Syndrome (CFS) is the most serious syndrome that falls into the category of the Psychosocial risk factors in the workplace. It constitutes a clinical condition which is characterized by weakness and fatigue (physical, mental) that exhaust the patient. This condition, that has a similar appearance as the flu or the common cold and is expressed with characteristic signs and symptoms, lasts more than 6 months and makes the employee ineffective and potentially prone to accidents. In order for the CFS to be diagnosed, the patient must display at least 4 or more of the following symptoms for a duration of more than 6 months:

- Short-term memory loss and heavy concentration impairment
- Sore throat or pain with pharyngitis
- Irritated lymph nodes in the neck or armpits
- Muscle weakness and pain
- Joint pain without any signs of inflammation like swelling or erythema
- Severe headaches which can be presented in different ways or types
- Sleep does not rest the patient, resulting in impairment of his ability to function properly
- Every physical effort results into fatigue establishment that lasts for more than a day

CFS affects everyone with different gravity and so it can be expressed as: **Moderate:** The employee is self- sufficient and able to take care of himself, but will need some days off work. **Intermediate:** His mobility is restricted and his symptoms may vary, while he possibly displays sleep disorders and is in need of afternoon rest. **Severe:** The worker is able to complete simple everyday habits, but his mobility and ability to focus are severely restricted.

Virus infections and tiresome hospitalization have been associated with the activation of CFS. According to many researchers, it is expected that COVID-19 (SARS-CoV-2) could possibly lead to similar outcomes, since it has been shown that even though this virus primarily constitutes a respiratory syndrome, it is accordingly resulting into a multi- systemic pathology. Already, from the coronavirus of SARS in 2002-03, there have been records of CFS appearance and sleep disorders in people that had been infected and hospitalized, even 8 years after their recovery, according to a research that was conducted and published by Harvey Moldofsky et al in 2011, from the University of Toronto [1]. Similar conclusions with physical and mental decline, while also resulting in CFS appearance, were derived from the Dubbo study in 2006, which was conducted in the University of Sidney, Australia, while also from the 110-person 2005 UK study from the University of Hong Kong [2]. It's important to note the fact that, while suffering from SARS -CoV-2, there have already been recorded cases of manifestation of symptoms in the Central Nervous System (CNS), which could lead to combined occurrence of CFS with Myalgic Encephalomyelitis (ME), according to researchers, like Charles Shepherd, an expert in ME Association UK [3]. Avindra Nath from NIH has also recently announced that during being affected by SARS-CoV-2, multiple symptoms that have appeared, both in the Central Nervous System (CNS) and the Peripheral Nervous System (PNS), could support the later appearance of CFS. The high amount of people between ages of 18 to 50 that have been affected by COVID-19 and the researches that show that the gravity of the disease increases the danger of post-virus syndromes like CFS, lead to the assumption that this high number of young people being hospitalized and that constitute an active workforce , will return with a decline in their productivity in the immediate and possibly the ultimate future. The fatigue that follows hospitalization is very experientially unpleasant to the person, with decline in his quality of life. Combined with lack of information on the subject, the person can be lead to isolation and despair. Interventions that can lead to relief and gradual reintegration after being affected by CFS, should aim in changes in his way of life. Such interventions that are being suggested are:

- Psychotherapy and Counseling
- Supporting Medication and avoidance of substances and smoking
- Physical Therapy, mostly for the cardiovascular and respiratory systems, as well as for mobility
- Improvement of his physical condition through customized and progressively systematic exercise
- Diet control
- Other forms of alternative therapy: acupuncture, tai chi, massage, yoga etc

What are the responsibilities of the employee and the employer in this case?

The employee is responsible for informing either the employer or the occupational doctor (if there is one) of his condition. Sometimes it can be quite difficult and he will have to calculate his personal profit or possible loss (from wage loss). In the event that he does inform, they must both see the necessary adjustments of the program and the working pattern. Many people that suffer from CFS choose the 'rhythm technique' so that they can control their everyday activities. The rhythm technique is performed through the following steps:

- They take small resting periods and in scheduled times during the day
- They acknowledge which of their activities (physical, mental, emotional) drain their energy

- They adopt a most realistic and manageable way of performing every action with minimum effort (baseline)
- When this manageable way is settled, they can increase the effort up to 10% each time, so that a new baseline is set, and so on

According to “Equality Act 2010” of ACAS.UK [4], the employers are required to make the necessary adjustments and changes to the facilities and the work itself, wherever and however it is needed. In case of an employee with CFS, it usually concerns:

- Changes in the working hours (decrease of working hours)
- Flexible schedule (for example, the start/ end of working schedule, especially in acute episodes, work from home, sharing of responsibilities with a co-worker)
- Changes in goals or in the work rate for the avoidance of outbreaks
- Allowance of absence time for therapy appointments
- Changes in workspace and in the working environment
- More frequent and larger breaks
- The existence of a quiet place where the employee can take brief rests without being interrupted

In conclusion, the rehabilitation and reintegration in the everyday activities is linearly related with the gravity of the disease, and the according time will be required for its readjustment. The measures concern interventions in the lifestyle and working patterns and place, immediately and progressively after leaving the hospital and when return to occupational activities [Fig .1].

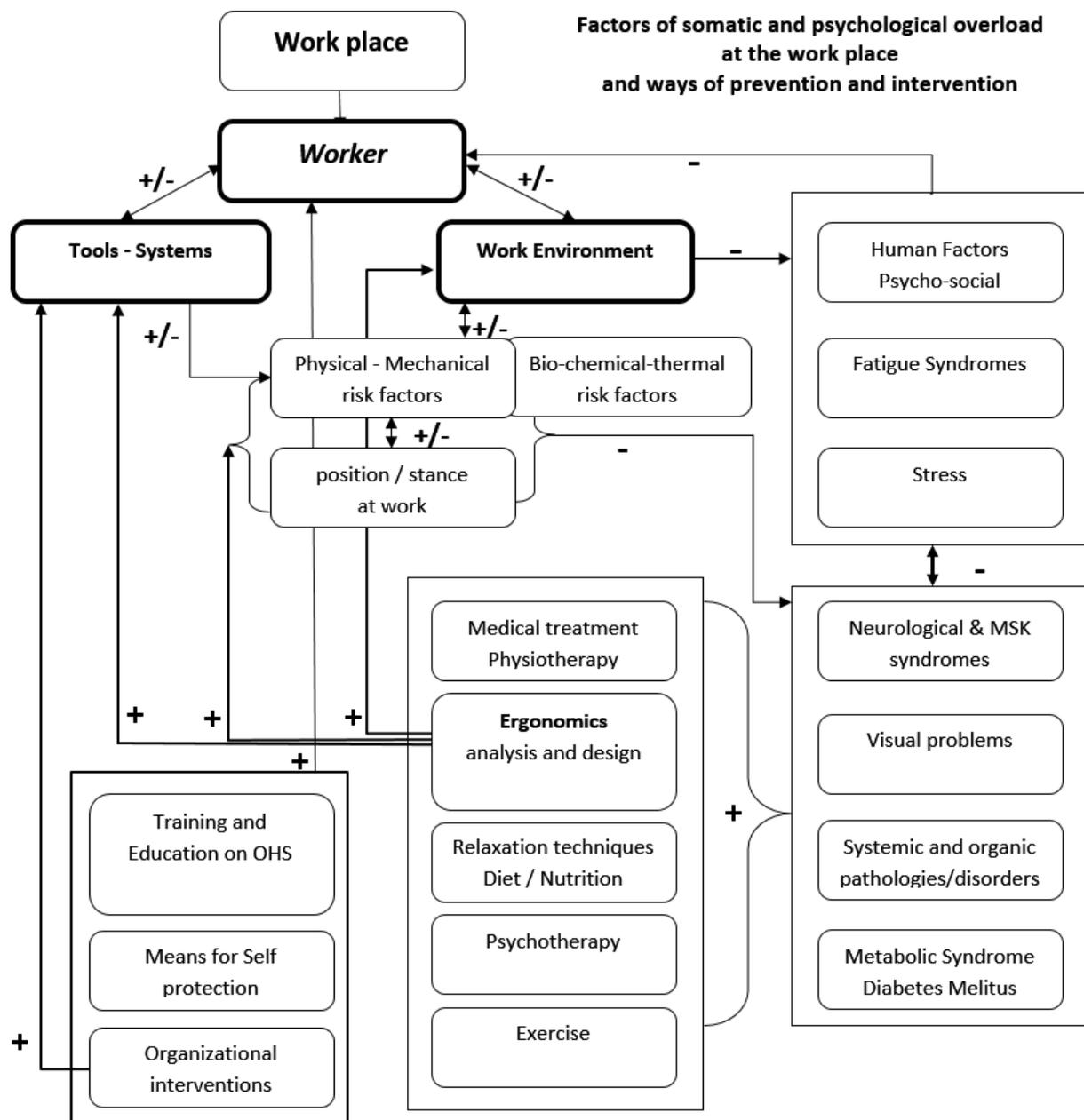


Figure 1. Factors of somatic and psychological overload at the work place and ways of prevention and intervention, a) (+) means positive effect of the factor or the intervention/correction, on the following step at the diagram. And b) (-) the opposite. For (+/-) we assume, if (+) then a), if (-) then b).

References

- [1] Moldofsky H., Patcai J., 2011, Chronic widespread musculoskeletal pain, fatigue, depression and disordered sleep in chronic post-SARS syndrome; a case-controlled study, *BMC Neurology*, 11(1):37.
- [2] Simons L.A., McCallum J., Simons J., Powell I., Ruys J., Heller R. and Lerba C., 1990, The Dubbo Study: An Australian Prospective Community Study of the Health of Elderly, *Aust N Z J Med*, 20(6):783-9

IETI Transactions on Ergonomics and Safety

<http://ietl.net/TES>

2020, Volume 4, Issue 1, 9-13, DOI: 10.6722/TES.202010_4(1).0003

- [3] ME Association, <https://www.meassociation.org.uk/tag/dr-charles-shepherd/>
- [4] 'Equality Act 2010' of ACAS.UK, <https://www.acas.org.uk/reasonable-adjustments>