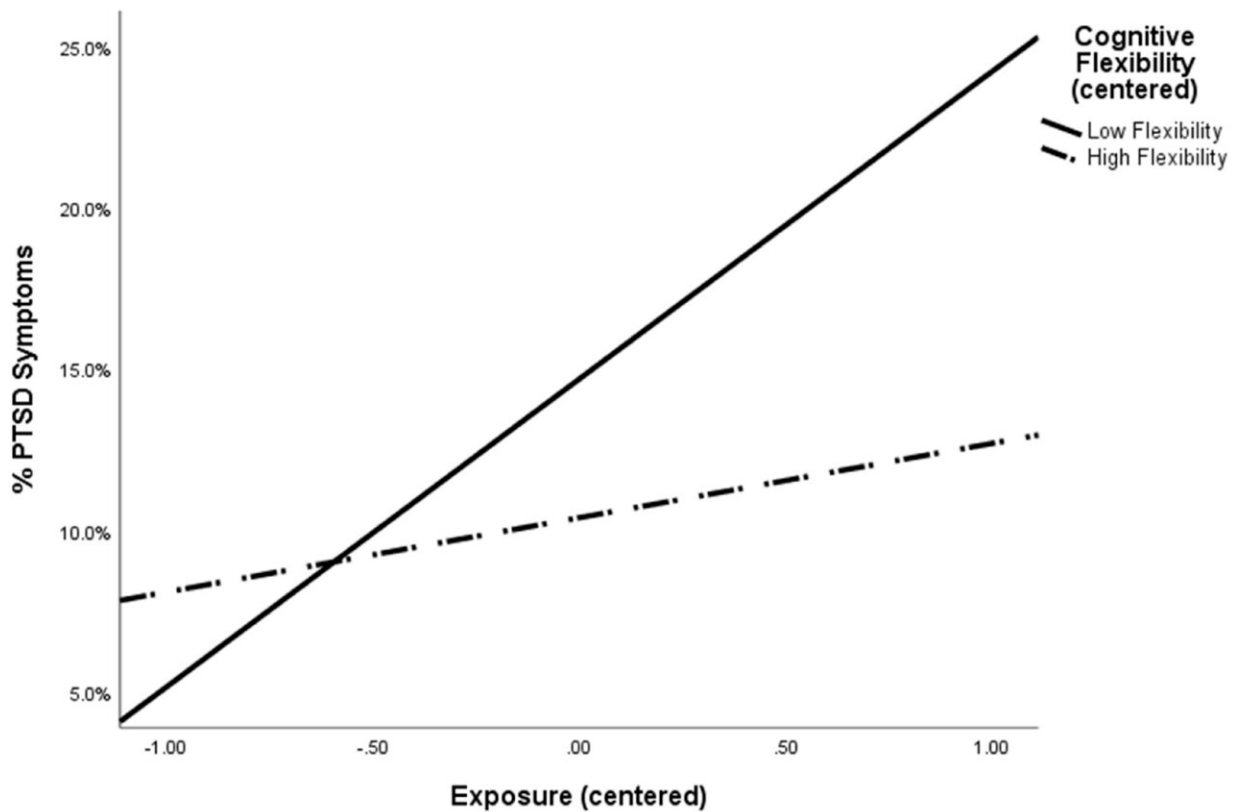


# Cognitive flexibility moderates teacher stress, shows study

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*Note.* PTSD symptoms scores represent percentage of symptoms reported (sum of reported symptoms divided by the maximal possible score on the PTSD scale).

The interactive effect of school-related stress exposure and cognitive flexibility on PTSD symptoms in educators. Credit: *Scientific Reports* (2023). DOI: 10.1038/s41598-023-31743-0

As part of their work, educators are often exposed to various stressful events, including violence between students or towards teachers, sexual assault and suicidal behavior, as well as death or illness of students or their family members.

Studies have shown that work-related stressful events can increase the risk of developing [post-traumatic stress disorder](#) (PTSD) symptoms among [first responders](#) (such as soldiers, firefighters, [police officers](#), etc.) and [mental health professionals](#), but only a few studies have examined the consequences of exposure to [stress](#) among schoolteachers.

In general, one of the main consequences of exposure to stressful events on a daily basis is the development of symptoms such as unwanted memories, avoidance, difficulty sleeping and concentrating, negative beliefs towards the world, and mood swings. These symptoms may have a decisive effect on teachers' level of functioning and mental and physical health, making it difficult for them to deal with students, parents, and other staff members. This can be reflected in the teachers' frequent absence from school, difficulty staying focused during class, impatience with students and their needs, and difficulty accommodating even minor routine deviations.

A series of studies led by Prof. Einat Levy-Gigi, a psychologist and neuroscientist from the Faculty of Education at Bar-Ilan University, shows that cognitive flexibility is an important tool that helps us deal with the consequences of continuous exposure to stress. Cognitive flexibility expresses the ability to update beliefs, perceptions, and behaviors according to the demands of a changing reality.

In the context of the school setting, this can be expressed, among other things, in the ability to alter teaching methods according to the needs of students and in the ability to offer content that may be of interest to different groups at different times or, alternatively, to know when to act

harshly and when to demonstrate a softer and more considerate attitude, when to raise one's voice and when to maintain restraint.

In previous studies among first responders, it was similarly found that cognitive flexibility helps protect against negative consequences of exposure to stress and trauma and may lead to optimal functioning even when the reality is challenging and complex.

A recently published study in *Scientific Reports*, led by Levy-Gigi and her partners, Orly Harel and Alla Hemi, examined for the first time the interactive effect of exposure to stress in the [school setting](#) and cognitive flexibility on the tendency to develop post-traumatic symptoms among education and teaching staff.

One hundred fifty education and teaching personnel (85% women and 15% men with an average age of 43 and average teaching experience of 13 years) volunteered to participate in the study and underwent an assessment of their exposure to stress, their cognitive flexibility, their ability to cope and their level of post-traumatic symptoms.

Analysis of the data showed that teachers are indeed exposed to high levels of stress in their work and that these events lead to the development of post-traumatic symptoms. At the same time, there is great variation in the level of symptoms—while some teachers showed low or moderate levels, others exhibited high levels.

Follow-up analyses showed that cognitive flexibility can explain this variation since it moderated the relationship between exposure to school-related stress and the severity of post-traumatic symptoms. Therefore, among teachers with low cognitive flexibility, a distinct positive relationship was found between continuous exposure to stress and increased post-traumatic symptoms.

On the other hand, among teachers with high cognitive flexibility, no similar relationship was found. This group maintained a low level of symptoms regardless of the number of stressful events to which they were exposed. These findings are consistent with those of similar studies conducted among first responders.

The results emphasize the importance of cognitive flexibility as a protective factor against the harmful effects of exposure to stress within the school framework. According to the researchers, awareness of the essential role of cognitive [flexibility](#) as a protective factor for educators may be a breakthrough in improving teachers' well-being and developing adaptive coping that will enable optimal functioning at school.

Follow-up studies conducted at the Laboratory for Trauma Coping and Growth led by Prof. Levy-Gigi showed that an intervention that combines [artificial intelligence](#) and cognitive exercise significantly improves [cognitive flexibility](#) and may lead to significant relief of symptoms and improvement of daily functioning among various populations that experience stress as part of their daily routine.

**More information:** Orly Harel et al, The role of cognitive flexibility in moderating the effect of school-related stress exposure, *Scientific Reports* (2023). [DOI: 10.1038/s41598-023-31743-0](https://doi.org/10.1038/s41598-023-31743-0)

Provided by Bar-Ilan University

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