for cocaine dependence. Further studies are required in this field to come to more reliable conclusions.

**Disclosure:** No significant relationships.
**Keywords:** substance use disorder; cocaine; valproate

## Rehabilitation and Psychoeducation / Posttraumatic Stress Disorder

### EPP0351

### Risk and Resilience in Trajectories of Post-Traumatic Stress Symptoms among First Responders after the 2011 Great East Japan Earthquake: a 7-year prospective cohort study

F. Van Der Does[1]*, T. Saito[2], M. Nagamine[3], N. Van Der Wee[1], J. Shigemura[2], T. Yamamoto[2], Y. Takahashi[2], M. Koga[2], H. Toda[2], A. Yoshino[2], E. Vermetten[1] and E. Giltay[1]

[1]Leiden University Medical Center, Psychiatry, Leiden, Netherlands; [2]School of Medicine, National Defense Medical College, Psychiatry, Tokorozawa, Japan and [3]National Defense Medical College Research Institute, Behavioral Science, Tokorozawa, Japan
*Corresponding author.
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**Introduction:** First responders to disasters are at risk of developing post-traumatic stress disorder (PTSD). The trajectories of post-traumatic stress symptom severity differ among individuals, even if they are exposed to similar events. These trajectories have not yet been reported in non-Western first responders.
**Objectives:** We aimed to explore post-traumatic stress symptom severity trajectories and their risk factors in first responders to the 2011 Great East Japan Earthquake (GEJE)— a historically large earthquake that resulted in a tsunami and a nuclear disaster.
**Methods:** 56 388 Japan Ground Self-Defense Force (JGSDF) personnel dispatched to the GEJE were enrolled in this seven-year longitudinal cohort study. PTSD symptom severity was measured using the Impact of Event Scale-Revised (IES-R). Trajectories were identified using latent growth mixture models (LGMM). Nine potential risk factors for the symptom severity trajectories were analyzed using multinomial logistic regression.
**Results:** Five symptom severity trajectories were identified: "resilient" (54.7%), "recovery" (24.5%), "incomplete recovery" (10.7%), "late-onset" (5.7%), and "chronic" (4.3%). The main risk factors for the four non-resilient trajectories were older age, personal disaster experiences, and working conditions. These working conditions included duties involving body recovery or radiation exposure risk, longer deployment length, later or no post-deployment leave, and longer post-deployment overtime.
**Conclusions:** The majority of first responders to GEJE were resilient and developed few or no PTSD symptoms. A substantial minority experienced late-onset and chronic symptom severity trajectories. The identified risk factors can inform policies for prevention, early detection, and intervention in individuals at risk of developing symptomatic trajectories.

**Disclosure:** No significant relationships.
**Keywords:** Trajectory Analysis; Post-traumatic stress disorder; First responders; Natural disaster

### EPP0352

### Protective effects of glucocorticoid receptor antagonist Mifepristone on fear memory extinction impairment in a rat model of PTSD

Y.-P. Liu[1]* and C.-C. Lin[2]

[1]Cheng Hsin General Hospital, Psychiatry, Taipei, Taiwan and [2]Academia Sinica, Genomics Research Center, Taipei, Taiwan
*Corresponding author.
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**Introduction:** Central glucocorticoid receptor (GR) has been found to play an important role in the interpretation of cognitive abnormalities of posttraumatic stress disorder (PTSD), particularly focused on the extinction failure of fear memory. Potential of using GR antagonist as a pharmacological agent to prevent PTSD-related fear memory disruption is worth investigating.
**Objectives:** We aimed to examine whether GR antagonist Mifepristone (RU486) administered before single prolonged stress (SPS) can prevent rats from fear memory extinction impairment.
**Methods:** In the present study, SPS was employed in rats to induce a rodent model of PTSD. 60 minutes before SPS, RU486 (20 mg/kg) was administered by intraperitoneal injection. Seven days after SPS, rats received a protocol of behavioral testing to measure their abilities of specific fear memory (by a cue-dependent fear conditioning paradigm) and nonspecific spatial memory (by T-maze). Neurochemically, we measured plasma corticosterone with or without dexamethasone suppression, activation ratio of GR and levels of norepinephrine, dopamine, and serotonin in amygdala, paraventricular nucleus, dorsal and ventral hippocampus.
**Results:** Our results found that RU486 exerted protective effects on SPS-induced fear extinction impairment. Corticosterone of SPS-RU486 rats was less suppressed by dexamethasone. GR became less activated in dorsal hippocampus of SPS-RU486 rats.
**Conclusions:** The findings supported the utility of GR antagonism in preventing the development of PTSD.

**Disclosure:** No significant relationships.
**Keywords:** extinction; fear memory; glucocorticoid receptor; prevention

### EPP0354

### Using virtual reality to develop emotional intelligence

K. Maslova[1]*, A. Gasimov[1] and A. Konovalova[1,2]

[1]Lomonosov Moscow State University, Faculty Of Psychology, Moscow, Russian Federation and [2]I.M. Sechenov First Moscow State Medical University, Department Of Pedagogy And Medical Psychology, Moscow, Russian Federation
*Corresponding author.
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**Introduction:** The development of emotional intelligence is an urgent issue of teaching people in our time. The use of a virtual reality (VR) systems for the development of emotional intelligence is a problem of modern pedagogy.
**Objectives:** The research is aimed at studying interrelations of the level of development of emotional intelligence the manifestations of the ability to perceive and identify emotional expression demonstrated by a virtual avatar in VR CAVE system. The research is