

## CUMULATIVE EXPOSURE TO WORK-RELATED INCIDENTS AND CURRENT POSTTRAUMATIC STRESS DISORDER IN NEW YORK CITY'S FIRST RESPONDERS

*L. Geronazzo Alman, S. Shen, C.S. Duarte, P. Wu, E. Lord, L. Amsel, G.J. Musa, J. Wicks, J. Yip, B. Fan, G. Guffanti, C.W. Hoven*

Child & Adolescent Psychiatry, Columbia University, New York, NY, USA

**Introduction:** Several questions still exist in the literature on the relationship between cumulative exposure to work-related incidents and posttraumatic stress disorder (PTSD) in First Responders (FR).

**Objectives:** To address three unanswered questions in the field.

(1) Are different cumulative exposure scoring algorithms similarly related to PTSD?

(2) Is PTSD associated only with incidents rated as severe and traumatic?

(3) Can we identify cut-off scores of cumulative exposure that maximize sensitivity and specificity to predict PTSD?

**Aims:** To better characterize the relationship between cumulative exposure and PTSD in FR.

**Methods:** The association between exposure and PTSD was examined with logistic and linear regression and with receiver operating characteristic analysis in 349 FR.

**Results:**

(1) The strength of the association between PTSD and total cumulative exposure indexes varied across different scoring algorithms.

(2) Compared to total cumulative exposure indexes and to sub-scores of exposure to non-traumatic and/or less severe incidents, sub-scores indexing exposure to severe traumatic events only were more strongly and significantly associated with PTSD.

(3) The use of two cut-off scores maximizes sensitivity and specificity to predict PTSD.

**Conclusion:**

(1) The relationship between current PTSD and cumulative exposure is partially dependent on the approach used to quantify exposure.

(2) Focusing on the assessment of cumulative exposure to severe traumatic events is sufficient to predict PTSD, and might be more useful and effective in research and clinical decision-making.

(3) Sensitivity and specificity of exposure scores might help improve secondary prevention (early detection and effective intervention) of individuals at risk.