

# Study shows veterans psychologically impacted by Boston Marathon Bombing

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According to a new study, many Boston-area military veterans diagnosed with post-traumatic stress disorder (PTSD) experienced flashbacks, unwanted memories and other psychological effects as a result of the Boston Marathon Bombing in April 2013. The study raises awareness of the effects that tragic events such as terror attacks and mass shootings have not only those directly affected but also on those with PTSD and other preexisting psychological conditions. The researchers urge healthcare systems to be prepared in the future to treat individuals who were either directly or indirectly affected by such tragedies.

Led by researchers at Boston University School of Medicine (BUSM) and the U.S. Department of Veteran's Affairs National Center for PTSD in Boston, this study is published online in the *Journal of Traumatic Stress*.

PTSD is a psychiatric disorder defined by serious changes in cognitive, emotional, behavioral and psychological functioning that can occur in response to a psychologically traumatic event. Previous studies have estimated that approximately eight percent of the U.S. population will develop PTSD in their lifetime. That number is significantly greater among combat veterans where as many as one out of five suffer symptoms of the disorder.

Using data from an ongoing study of Boston area veterans diagnosed with PTSD, the researchers conducted 71 telephone interviews within one week of the bombing. Because the researchers had symptom data

from participants approximately two months before the bombing, they were able to compare those levels with results from the interview one-week after the bombing.

Of those interviewed, 38 percent reported that they were emotionally distressed by the bombing and the subsequent lockdown of Boston and other communities. A majority of those participants said that the bombing caused them to experience flashbacks and the re-emergence of unwanted memories relating to their own past traumas.

"The effects felt by the veterans were likely due to thematic similarities between the Marathon explosions and the veterans' own traumatic combat experiences, especially for those deployed to recent conflicts characterized by attacks involving improvised explosive devices," said Mark Miller, PhD, associate professor at BUSM and a clinical research psychologist in the National Center for PTSD at the VA Boston Healthcare System who served as the study's principal investigator.

There was not a significant change of symptoms between the pre and post-event data across the sample as a whole. However, for those who reported being personally affected, there was a strong correlation between distress at the time of the bombing and change in the severity of PTSD symptoms. According to the researchers, this change was primarily attributable to increases in intrusion and avoidance symptoms.

"This study highlights the fact that tragic local and national events of this type can have a significant impact on the health and wellbeing of individuals already suffering with PTSD," said Miller. "It is crucial that relevant healthcare organizations understand this phenomenon and be prepared in the wake of tragedy to care not only for those who are directly impacted, but also for those with preexisting [psychological conditions](#), including our nation's [veterans](#) with PTSD."

Provided by Boston University Medical Center

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