Prehospital Emergency Care ›

Volume 17, 2013 - Issue 3

4,347 Views | 103 CrossRef citations to date | 18 Altmetric

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An Assessment of Depression, Anxiety, and Stress Among Nationally Certified EMS Professionals

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Pages 330-338 | Received 08 Jun 2012, Accepted 06 Dec 2013, Published online: 15 Feb 2013

Cite this article https://doi.org/10.3109/10903127.2012.761307

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Abstract

Objectives. The primary objective of this study was to estimate the prevalence and severity of depression, anxiety, and stress among a cohort of nationally certified emergency medical services (EMS) professionals. The secondary objective was to determine whether there were differences between individuals who were experiencing depression, anxiety, or stress and those who were not. Methods. This was a questionnaire-based, case–control analysis of nationally certified emergency medical technician (EMT)-Basics and paramedics who applied for national recertification in 2009. The three outcome variables of interest included measures of depression, anxiety, and stress, and were assessed using the Depression Anxiety Stress Scale-21

(DASS-21). Descriptive statistics and investigator-controlled backwards-selection logistic regression modeling were utilized to quantify the prevalence of depression, anxiety, and stress and to predict the association of demographic and work–life characteristics with each outcome. Results. A total of 64,032 individuals were eligible to renew their national certification and 34,340 (53.6%) individuals returned a questionnaire. The DASS-21 classified 1,589 (6.8%, 95% confidence interval [CI] = 6.4%–7.1%) EMS professionals as depressed, 1,406 (6.0%, 95% CI = 5.7%–6.3%) as anxious, and 1,382 (5.9%, 95% CI = 5.6%–6.2%) as stressed. Multivariable logistic regression estimates showed that paramedics (odds ratio [OR] = 1.31, 95% CI = 1.22–1.39), those working in county or municipal services (OR = 1.36, 95% CI = 1.16–1.60) or private services (OR = 1.32, 95% CI = 1.14–1.52), and those with ≥16 years of EMS experience (OR = 1.28, 95% CI = 1.01–1.62) had an increased odds of depression. A stepwise increase was found when estimating the effects of self-reported general health on the odds of anxiety (very good, OR = 1.84, 95% CI = 1.53–2.22; good, OR = 3.88, 95% CI = 3.32–4.67; fair/poor, OR = 10.81, 95% CI = 8.14–14.34). Likewise, paramedics (OR = 1.32, 95% CI = 1.23–1.42), those working in a private EMS system (OR = 1.35, 95% CI = 1.16–1.56), and those with ≥16 years of EMS experience (OR = 1.67, 95% CI = 1.28–2.18) had an increased odds of stress. Conclusions. This study was able to estimate the prevalence of depression, anxiety, and stress among a large cohort of nationally certified EMS professionals and identified statistically significant demographic and work–life characteristics that predicted depression, anxiety, and stress. Future research should attempt to follow EMS professionals prospectively to determine specific characteristics associated with occupational traumatic exposure and the development of depression, anxiety, and stress.

Key words: :

emergency medical services | out-of-hospital | depression | anxiety | stress

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