## Self-reported Auditory Problems Are Associated with Adverse Mental Health Outcomes and Alcohol Misuse in the UK Armed Forces

Authors : Fred N. H. Parker, Nicola T. Fear, S. A. M. Stevelink, L. Rafferty

**Abstract :** Purpose Auditory problems, such as hearing loss and tinnitus, have been associated with mental health problems and alcohol misuse in the UK general population and in the US Armed Forces; however, few studies have examined these associations within the UK Armed Forces. The present study examined the association between auditory problems and probable common mental disorders, post-traumatic stress disorder and alcohol misuse. Methods 5474 serving and ex-service personnel from the UK Armed Forces were examined, selected from those who responded to phase two (data collection 2007-09) and phase three (2014-16) of a military cohort study. Multivariable logistic regression was used to examine the association between auditory problems at phase two and mental health problems at phase three. Results 9.7% of participants reported ever experiencing hearing problems alone, 7.9% reported tinnitus within the last month alone, and 7.8% reported hearing problems with tinnitus. After adjustment, hearing problems with tinnitus at phase two was associated with increased odds of probable common mental disorders (AOR = 1.50, 95% CI 1.09-2.08), post-traumatic stress disorder (AOR = 2.30, 95% CI 1.41-3.76), and alcohol misuse (AOR = 1.80, 95% CI 1.28-2.96) at phase three. Tinnitus alone was associated with probable post-traumatic stress disorder (AOR = 1.80, 95% CI 1.03-3.15); however, hearing problems alone were not associated with any outcomes of interest. Conclusions The association between auditory problems and mental health problems and mental health problems emphasizes the importance of the prevention of auditory problems in the Armed Forces: through enhanced audiometric screening, improved hearing protection equipment, and greater levels of utilization of such equipment.

Keywords : armed forces, hearing problems, tinnitus, mental health, alcohol misuse

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