

Fit for the frontline? New study identifies the hearing requirements of British soldiers

9 July 2014

University of Southampton researchers, with assistance from the Ministry of Defence, have conducted the first study to identify the hearing requirements of British soldiers fighting on the frontline.

The study, which provides an important and novel insight into the frontline experiences of British infantry personnel, identified 17 'auditory tasks', such as '[hearing](#) grid references' and 'locating enemy movement in maize fields', carried out on operational duties abroad.

By identifying these tasks, researchers will be able to develop a new auditory fitness for duty test to determine the impact of [hearing loss](#) among infantry personnel and ensure that personnel are given appropriate training and equipment before deployment.

Zoë Bevis, from the University's Institute of Sound and Vibration Research (ISVR) and study co-author, says: "This new information allows us to better understand the challenges faced by our frontline soldiers.

"As well as identifying the auditory tasks, we also came across other interesting opinions during the study. Soldiers felt that they couldn't hear as well when they were performing several tasks at once, for instance listening to a radio while looking out for a signal, or when they are in a very stressful environment, such as enemy contact in combat.

"Those comments emphasise how important it is for the infantry to hear important signals whilst maintaining their situational awareness. Participants felt their hearing played a fundamental part in their safety and their ability to carry out the job expected of them."

The study, which is published in *Noise and Health* journal, consisted of 16 focus groups involving 80 British army personnel. The focus groups included

open-ended questions about the auditory tasks performed on operational duty; these tasks were divided into subthemes of sound detection, speech communication and sound localisation.

Analysis of 1,177 individual comments resulted in two main themes (1) the auditory tasks personnel were expected to perform and (2) situations where personnel felt their hearing ability was reduced. Researchers also outlined attitudes to hearing health, noise exposure and [hearing protection](#).

Zoë adds: "We know that infantry personnel are at increased risk of [hearing impairment](#) due to the nature of their job. With this new information, we can develop methods to assess whether hearing impaired soldiers can perform the frontline auditory tasks necessary for their safety and effectiveness."

The opinions and attitudes documented in this study will help researchers to gain a real insight into the challenging environments faced by infantry personnel fighting on the frontline. The information can be used to aid the continuing development of communication equipment, hearing protection, training programmes and measures of auditory fitness.

The study also provides a model for job analysis that is transferable to many fields of work-related fitness for duty – for example respiratory fitness standards for policemen or eyesight checks for [air traffic controllers](#).

More information: 'Fit for the frontline? A focus group exploration of auditory tasks carried out by infantry and combat support personnel'

Provided by University of Southampton

APA citation: Fit for the frontline? New study identifies the hearing requirements of British soldiers (2014, July 9) retrieved 12 November 2019 from <https://medicalxpress.com/news/2014-07-frontline-requirements-british-soldiers.html>

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