

Summary of: Is there a differential in the dental health of new recruits to the British Armed Forces? A pilot study

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FULL PAPER DETAILS

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Background and aim Figures from the British Defence Dental Services reveal that serving personnel in the British Army have a persistently lower level of dental fitness than those in the Royal Navy or the Royal Air Force. No research had been undertaken to ascertain if this reflects the oral health of recruits joining each Service. This study aimed to pilot a process for collecting dental and sociodemographic data from new recruits to each Service and examine the null hypothesis that no differences in dental health existed. **Method** Diagnostic criteria were developed, a sample size calculated and data collected at the initial training establishments of each Service. **Results** Data for 432 participants were entered into the analysis. Recruits in the Army sample had a significantly greater prevalence of dental decay and greater treatment resource need than either of the other two Services. Army recruits had a mean number of 2.59 (2.08, 3.09) decayed teeth per recruit, compared to 1.93 (1.49, 2.39 $p < 0.01$) in Royal Navy recruits and 1.26 (0.98, 1.53 $p < 0.001$) in Royal Air Force recruits. Among Army recruits 62.7% were from the two most deprived quintiles of the Index of Multiple Deprivation compared to 42.5% of Royal Naval recruits and 36.6% of Royal Air Force recruits. **Conclusion** A significant difference in dental health between recruits to each Service does exist and is likely to be a reflection of the sociodemographic background from which they are drawn.

EDITOR'S SUMMARY

Oral health is intimately connected with socio-economic status and so it may not be entirely surprising that recruits to the British Armed Forces reflect this association to the same extent as might any other cohorts selected by social strata in other fields, but the demonstrable differences remain striking. As far as the tri-services are concerned, from an epidemiological viewpoint as well as from a personal oral healthcare perspective the convenience of the sample is considerable as the individuals are all examined and treated under the same conditions which permits comparisons and allows cross-reference.

The Army in particular has long been central to the monitoring of oral health in the UK. Famously, it was the discovery during recruitment of troops to serve in the Boer War that so few of them had good oral health that led the ministry of defence to put pressure on

the ministry of health which in turn led to the establishment of the then School Dental Service in the early years of the last century, notably under the auspices of George Cunningham. It was the inability of the men to bite through the tough consistency of the dried rations issued for consumption in the field that led to the rejection of so large a number of potential soldiers and in many ways this theme of poor oral health leading to problems on active service is reflected in this current paper.

The extent to which the forces might provide a reflection of the oral health of the nation was graphically illustrated in the screening by the BDA Museum at a recent BDA conference of a 1940s educational film made by an army unit stressing the value of good oral hygiene. A sergeant major with a squad of 100 men assembled on a parade ground progressively dismissed those who had had treatment, those who were either

receiving or who were due to receive treatment and those with complete dentures (a frighteningly large number given that they were all young men) until just one single man remained; at 1% caries free it remains a remarkable testament to the improvement of oral health in the years since then.

The full paper can be accessed from the *BDJ* website (www.bdj.co.uk), under 'Research' in the table of contents for Volume 211 issue 9.

Stephen Hancocks
Editor-in-Chief

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IN BRIEF

- Gives the reader a contemporary picture of the dental health of a population not routinely sampled by current epidemiological surveys in the UK.
- Shows for the first time a systematic difference in the socioeconomic backgrounds of recruits to each single Service.
- Further contributes to the evidence base that dental decay experience is associated with deprivation.

COMMENTARY

Since 1990, the size of the British Armed Forces has been reduced substantially. All the men and women currently serving in the Royal Navy and Royal Air Force would not fill all the seats at Wembley Stadium. Numbers in the Army have fallen proportionately less but there has been a rise in the number of soldiers deployed on operations outside the United Kingdom. Because oral pain can degrade military performance, it affects not only the individual concerned but also those he/she is working with. Furthermore, as this paper points out, accessing emergency dental care when operating in remote areas is difficult.

In an ideal world all military personnel would be orally healthy before they were deployed away from military bases or ships. However, due to time constraints, those with significant amounts of untreated oral disease are often not rendered orally 'fit' before they are deployed. Ideally, recruits would not be permitted to complete recruit training until they had achieved this status and would then be regularly checked to ensure that it was maintained.

Twenty years ago, when I was a dentist in the Armed Forces, this ideal was not achieved. It seems that is still not being achieved and confirms a long suspected truth that recruits to the Army have worse oral health than those to the Royal Navy and Royal Air Force. The authors of the paper attribute this to the socio-economic background of recruits. This may be

only part of the picture. Most trades within the Royal Navy and Royal Air Force require some academic qualifications and subsequent technical training. It was noticeable that recruits to the Royal Air Force who joined to be drivers, cooks and anti-aircraft gunners usually had fewer academic qualifications and had poorer oral health. A relatively small proportion of Army recruits receive technical training and many become infantrymen or join 'non-technical' regiments and corps. To some extent it is co-incidental that they are more likely to come from lower socio-economic groups as the problem is in part related to the educational level required for 'non-technical' roles.

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AUTHOR QUESTIONS AND ANSWERS**1. Why did you undertake this research?**

The involvement of the UK's Armed Forces in theatres of conflict around the globe during the last decade has been both well documented and extensively covered in the media. The problems associated with dental disease in a deployed military population are well known and although some evidence existed concerning the differences in dental health between each of the Services, very little research had been undertaken to quantify these differences or assess if they were present in recruits on joining. This study was undertaken as part of the Masters in Public Health and was chosen to provide some baseline evidence to help inform the development of an oral health strategy for the British Defence Dental Services.

2. What would you like to do next in this area to follow on from this work?

Using the methodology piloted in this study, we would look to undertake parallel work looking at recruit dental health in other Army initial training centres to establish a comprehensive picture of recruit dental health in the Army. We hope to utilise this information to develop and implement a tailored oral health strategy to be rolled out across each of the three Services.