Where have all the conscripts gone?

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The study published by Saely et al. reported Body Mass Index, blood pressure and serum cholesterol in Swiss conscripts [1]. Swiss conscripts data is valuable because this is the only source of clinical measurements covering almost the entire Swiss male population of the respective year of birth. It is thus important and deserving to exploit and publish this data. However, as in other large data sets, there are inherent limitations which should be carefully verified and considered before drawing conclusions. When publishing conscript data, a crucial issue is the question as to what extent the results can be generalised, i.e., how representative the sample was for the entire Swiss population of the same age. Unfortunately the authors deprive the reader of the needed information. They only mention, without giving a reference, that 95% of Swiss men participate in regular conscription. Overall 144,325 Swiss men aged 19 between 2004 and 2007 were registered by the Swiss Federal Statistical Office (birth years 1985–1988, 2004: 34,778, 2005: 35,765, 2006: 35,908, 2007: 37,874) [2]. The 95% mentioned are probably an underestimation. A comparison of conscripts (42,000) with the total of Swiss men aged 19 years (42,732) of 1987 suggests that over 98% participated in conscription [3].

Thus, one would expect at least 137,000 (95%) persons to be included in the study by Saely et al. However, the study size was only about 70% of this (101,844 conscripts), and only 56,784 of these were actually examined, i.e., less than 40% of the original population.

The authors do not mention this huge discrepancy. Can we assume that the described patterns do not arise from higher exclusion rates in those unfit for military service, obese, being recruited in certain regions/conscription centres or from variations between conscription years (i.e., when persons postponed the conscription)? Serious selection bias arising from a differential inclusion/exclusion of certain groups can produce misleading results. It is therefore necessary that the authors do their best to discuss and test for potential bias and trace the "lost" 40,000 conscripts.

Authors’ reply

Whereas practically all young men undergo conscription, complete data sets are not available for all examined men. Our main analysis addresses the respective associations of Body Mass Index, blood pressure and serum cholesterol in young Swiss men: an analysis on 56,784 army conscripts. Swiss Med Wkly. 2009;139:518–24.


References


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