

MEETING ABSTRACT

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# Self-selection in a randomized trial of web-based primary and secondary prevention alcohol brief intervention

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How much a randomized controlled trial (RCT) sample is representative/differs from its declared source population is a challenging question, with major implications with regard to generalizability of results. The question is crucial for freely available web-based interventions tested in RCTs.

We compared participants in a primary/secondary prevention web-based alcohol brief intervention RCT to its source population. There is a mandatory army recruitment process in Switzerland at age 19 for men. Between 8.2010 and 7.2011, 12,564 men attended two recruitment centers (source population) and were asked to answer a screening questionnaire on substance use; of the 11,819 (94%) who completed it, 7,034 (56%) agreed to participate in a cohort with regular assessments. In 2012, irrespective of their drinking, cohort participants were invited to the RCT; 1,549 agreed to participate. Using chi-square and t-test, we compared screening data of RCT participants to other members of the source population with respect to weekly alcohol use, maximum number of drinks/occasion, Alcohol Use Disorders Identification Test (AUDIT), prevalence of binge drinking ( $\geq 6$  drinks per occasion at least monthly), unhealthy alcohol use ( $>210$ g of ethanol/week and/or  $\geq 1$  binge episode/month), and abstinence.

RCT participants ( $n=1,549$ ) drank less than other members of the source population ( $n=10,270$ ): they reported a mean (SD) of 6.2(8.1) vs 7.4(10.7) drinks/week,  $t=5.2$ ,  $p<.0001$ ; 9.7(7.7) vs 10.3(9.1) maximum number of drinks/occasion,  $t=2.6$ ,  $p=.009$ ; and 6.6(4.4)

vs 7.2(4.9) AUDIT scores,  $t=4.7$ ,  $p<.0001$ . The prevalence of binge drinking was lower among RCT participants (36.7% vs 43.9%,  $\chi^2=28.8$ ,  $p<.0001$ ), as was unhealthy alcohol use (37.1% vs 44.1%,  $\chi^2=27.5$ ,  $p<.0001$ ) and abstinence (7.8% vs 9.7%,  $\chi^2=5.8$ ,  $p=0.016$ ). RCT participants differed from other members of the source population: they reported less drinking and lower levels of consequences or risk, but were also less likely to be abstainers, indicating that the self-selection applies to both ends of the drinking spectrum.

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