Reviewer’s report

Title: The socio-demographic patterning of sexual risk behaviour: a survey of young men in Finland and Estonia

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Reviewer: Kristi Rüütel

Reviewer’s report:

Dear Editor-in-Chief,

The article by Minna Nikula, Mika Gissler, Vesa Jormanainen, Made Laanpere, Heikki Kunnas, Elina Haavio-Mannila and Elina Hemminki “The socio-demographic patterning of sexual risk behaviour: a survey of young men in Finland and Estonia” addresses an interesting area of behavioral research, factors related to sexual risk behaviours and risk factors for sexually transmitted infections. Authors provide data which is regionally important and important to those with closely related research interests. The results are also important from practical point of view as they provide some guidance for planning public health interventions.

I do have some comments and recommendations the authors could consider in order to make the article more informative and substantial.

Minor Essential Revisions

Authors refer in the methods section that a more detailed description of the surveys has been presented previously. Yet I’d suggest elaborating the methods section more because currently the description of sampling methods does not provide good enough understanding of the sample. The authors state that in Finland approximately 85% of all men in each age cohort enter into military service, while less than 10% opt for non-military service and they consider the high response rate in Finland as one of the strengths of the study. At the same time they state that the majority of those entering into military service are 18–19 years old and from the additional file 2 it can be further seen that 60% of the participants in Finland were 18–19 years old. Therefore the differences in the age-groups between the samples in Finland and Estonia are major – in Estonia only 16% were 18–19 years old and the age ranges are more evenly distributed. Because of these reasons it remains unclear why the age adjustment was performed for the Estonian data using Finnish men as a reference population? In this type of study I would use age adjustment for Finnish and Estonian men separately – for example adjusting the age of the Estonian participants to the to the total sample.

The main results are very reasonable and affirm our current knowledge (unprotected intercourse in a steady relationship is logical – people in steady
relationships may use other means to prevent unwanted pregnancies). The likelihood of self-reported STIs increased statistically significantly in the older age – older people have been exposed longer, and life-time prevalence can be higher in older age groups). How about data from Finland where only 10% of participants were aged 21 years and older? How representative do the authors consider the young men who enter military service later than others to be compared to the rest of young men in their age-group? The limitations for Estonian sample are somewhat better described compared to the Finnish sample.

The article needs some language corrections before being published. Some of the terms used by authors may not be universally understood (for example „study brigade”).

Table 1 is confusing. If all Estonians aged 19–25 years report 3% lifetime STI prevalence (crude) then how Estonian E and Estonian R separately report respectively 7% and 8%? The same for “sexually active”, and “condom use, last intercourse”.

Table 2 – would the results be different if multiple life-time partners were checked for all four factors simultaneously – age, education, relationship status and first sex<15 (in case all these were included in the same regression model)

Table 4 – some data seems to be missing.

From supplementary file it seems as if in Estonia people who had not started sexual life yet were categorized under “other type of partnership”. Was it so?

In the current wording the following two statements seem somewhat contradictory with regards to the “sexual relationship outside of steady dating”:

1) However, surprisingly, in Estonia, relationship status did not correlate with the reporting of multiple lifetime-partners. One explanation for our finding could be the higher tolerance for casual sexual contacts outside a long-term partnership, which has also been previously observed in Estonia

2) Estonians were less likely to approve of a sexual relationship outside of steady dating, that their average age of sexual debut was 1–1.5 years older than in Finland, that the average number of lifetime partners was lower

Discretionary Revisions

In the introduction authors say that “Estonian HIV prevalence is estimated to be 1.3%, which is over ten times the Finnish rate of 0.1%. The youth aged under 25 have increasingly been affect by Chlamydia in Finland and by HIV in Estonia”. One could argue that the HIV-epidemic in Estonia is driven by injection drug use and even though the first wave of the bridging population – sexual partners of injecting drug users – are increasingly affected, I would not compare HIV-prevalence rates in Estonia and in Finland in the context of general population sexual behavior. This is a subject authors could further elaborate on in discussion section focusing on possible risks for wider HIV-spread from risk
groups to general heterosexual population.

Even though it is not possible to analyze it for Estonian data it would be interesting to know about Finland whether the condom use at last intercourse was different based on the type of the partner. The fact that a person is in a steady relationship does not mean they had last sex with steady partner and therefore knowing whether the condom use patterns were different not only based on relationship status but also based on the type of last partner would help us to understand the possible risks. Finland also had a question about prostitute as a last partner. As authors discuss about potential links in the epidemiological development of STIs because of the geographical closeness and increasing cross-border traffic between the two countries it would be good to provide data to support these arguments.

The question of sex between men should not be left out. Nowadays many young men are engaging in sex with men which increases their risk for HIV and sexually transmitted infections and therefore I’d recommend analyzing data also based on sexual orientation.

The issue on ethnicity as a possible factor for risk behaviors is an interesting one. Yet most of the Russian speaking men aged 19–25 in Estonia have been born in Estonia and therefore it is not very surprising that there are no major differences between two ethnic groups. Ethnicity can even be a confounder because considering Estonia’s historical background it can be very significantly linked to educational and employment related issues.

**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Needs some language corrections before being published

**Statistical review:** Yes, but I do not feel adequately qualified to assess the statistics.

**Declaration of competing interests:**

I currently work in National Institute of Health Development, Estonia, which employers have collected the Estonian data. I myself have not been part in the design and data collection of this study.