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## Background

Smoking is one of the major public health problems worldwide. The prevalence of adult smoking in Russia is very high: more than two thirds of Russian men and about 25 % of women are daily smokers (McKee et al, 1998). Less is known about adolescent smoking.



## Aim

To estimate the prevalence of adolescent smoking in a disadvantaged area in Northwest Russia.

## Methods

Of the 229 pupils who were eligible to participate in the study, 188 schoolchildren from all three schools in two most disadvantaged districts in Arkhangelsk (figure 1) aged 14-17 years filled in an anonymous questionnaire in the classroom about their smoking habits and knowledge on smoking and its effects on health. The rest of pupils were absent at school for the unknown reasons.

Thus, response rate was 82%.



Figure 1. Map of Arkhangelsk

## Results

### Prevalence of adolescent smoking

Altogether, 57,3 % of boys and 47,4 % of girls ever smoked (figure 2). And 48 % of boys and 38 % of girls smoke daily.

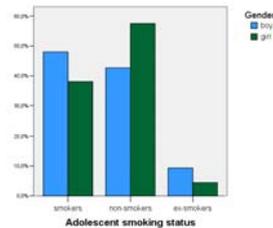


Figure 2. Prevalence of adolescent smoking from the disadvantaged areas in Arkhangelsk

Mainly, both boys and girls initiate smoking at the age of 11-15 (figure 3).

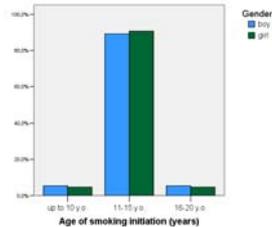


Figure 3. Age of adolescent smoking initiation from the disadvantaged areas in Arkhangelsk

Among smokers, 11,0 % of boys and 4,0 % of girls smoke more than 20 cigarettes a day (figure 4). On average, boys smoke 6-10 cigarettes a day while girls smoke 4-8 cigarettes a day.

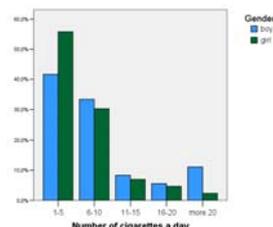


Figure 4. Number of daily adolescent cigarettes consumption from the disadvantaged areas in Arkhangelsk

### Reasons for adolescent smoking

The main reported reasons for smoking initiation were "curiosity", "coping with stress", "facilitation of conversations" and that "smoking makes look older". The least popular answer was that smoking was prestigious. Among non-smokers, the most popular reasons for not smoking were: "smoking is dangerous to health", "do not want to be like

others", "do not like how it smells/testes", "my parents do not allow me to smoke" and "no money to buy cigarettes".

### Adolescent knowledge about effects of smoking

Lung cancer, lung diseases, different cancers, bronchitis, dental diseases, and cardiovascular diseases were mentioned as direct effects of smoking. Decrease of lifespan, infertility, birth defects, memory problems were mentioned by only few responders.

## Discussion

In our study the prevalence of adolescent smoking in a disadvantaged area in Arkhangelsk is higher than in a central part of the city (42.0 % vs 28.2 %) (Skvortsova et al, 2007). Boys predominated in being smokers than girls as it has been shown in another Russian research (Skvortsova et al, 2007). Every tenth boy and twenty-fifth girl smoke 20 and more cigarettes a day. So, it is possible to assume that they have the generated nicotinic dependence despite young age. Good self-estimation and perception that tobacco smoking is harmful to health are related with not being a current smoker among adolescents.

The study had several limitations. First, findings are based on self-reports by adolescents without clinical measurements (for example, level of blood or urine cotinine). Moreover, some of pupils who were absent at school during study may have been different from the school attended pupils. Thus, given that self-reported data has been previously shown to underestimate the real prevalence of smoking, the current situation in Arkhangelsk require immediate attention of the public health authorities.

## Conclusion

The prevalence of adolescent smoking in the study area is very high in both genders. The observed prevalence of smoking in girls is substantially higher than smoking in adult women in Russia in general indicating a considerable problem for women's health in the future.

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