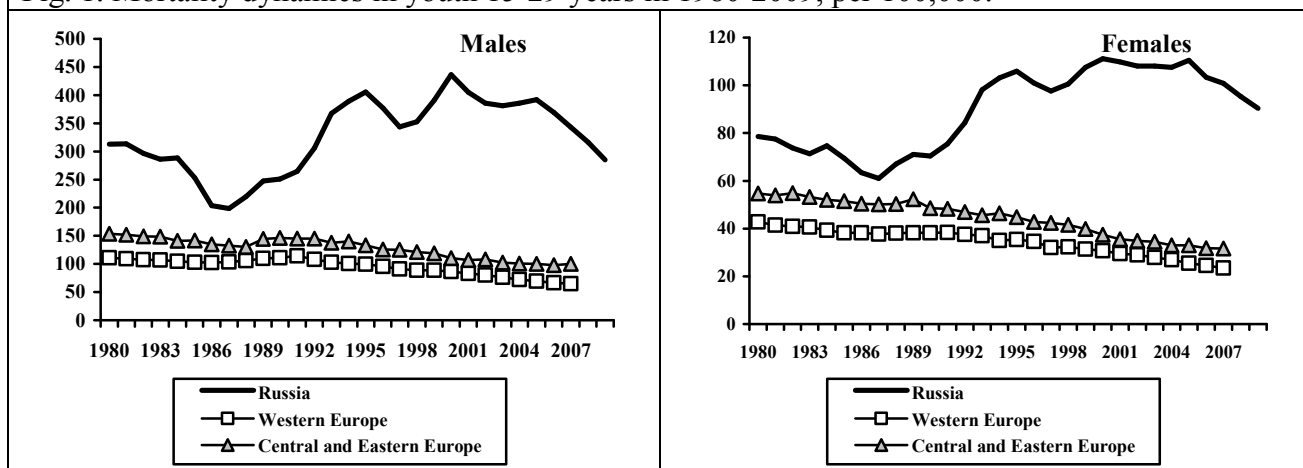


MORTALITY AND SELF-PROTECTIVE BEHAVIOUR AMONG THE RUSSIAN YOUTH

Background.

During the period of economic reforms the least favorable mortality trends in Russia were observed in the young age group of 15-29 years. This age group formed a maximum breakaway gap from the Western European countries as well countries of the Central and Eastern Europe (fig.1). Until 2005, the mortality rates among the Russian youth multiply exceed the rates among their European peers. In comparison with the Western European countries the difference is 5.6 times for males and 4.3 times for females; in comparison with the Central and Eastern European countries the difference is 3.9-3.4 times correspondingly. In 1980, with the soviet era winding up and mortality in Russia considered very unfavorable, difference in mortality rates compared to the Western European countries was by 2.8-1.8 times and with the Central and Eastern European countries – by 2.0-1.4 times correspondingly.

Fig. 1. Mortality dynamics in youth 15-29 years in 1980-2009, per 100,000.



Since 2005 positive trends in mortality and life expectancy growth started to take shape in Russia. During 2006-2009, the life expectancy in males increased by 3.9 years, in females – by 2.3 years.

Objective.

To determine contribution of the youth in positive trends and evaluate role of self-protective behavior within those age groups in the mortality changes.

Materials and methods.

Analysis of mortality in Russia was conducted on the basis of official statistics from the Federal State Statistics Service; analysis of mortality in the European countries was based on the Health for All database. Evaluation of self-protective behavior was implemented using data of 2 sociological surveys conducted by the Center of Sociological Forecasting and Marketing in 2006 and 2010. Surveys are representative for the Russian Federation in general. The surveys were conducted in 18 administrative divisions of the Russian Federation representing all Federal

districts among the young people aged 18-35 years, 1000 respondents altogether. The list of administrative divisions, their representation in sampling and age-sex distribution of respondents for the survey of 2006 and 2010 was the same. However, the share of youngsters with incomplete high professional education in 2010 was higher compared to the survey of 2006 (14.4% against 7.5%) and with high professional education (34.8% against 26.5%) correspondingly.

Results.

The age group of 40-59 years in males and the age group of 50-64 years in females (fig. 2) turned out to provide the main contribution into life expectancy growth in the Russian population during 2006-2009. The share of males 15-29 years added up to 16.0% of life expectancy growth with only 6.4% of growth due to females. The reason is not only relatively low mortality rates in the youth but also mild positive trends in comparison with the older age groups.

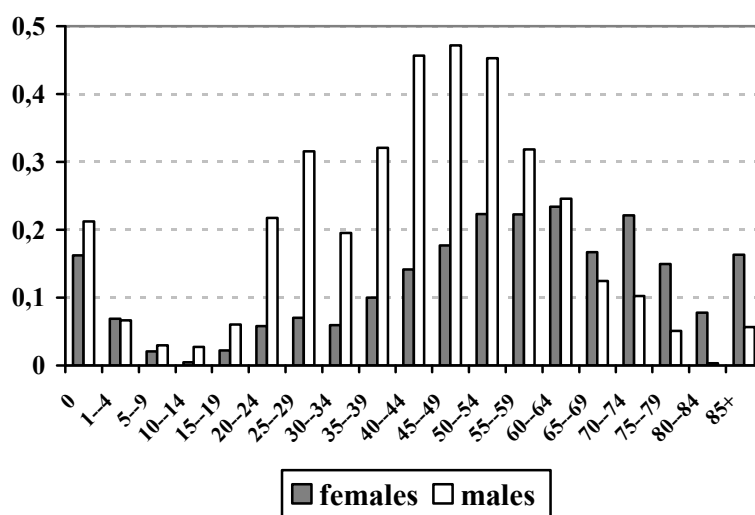


Fig. 2. Contribution of certain age groups into life expectancy growth during 2006-2009 years.

The youth includes several age groups with different both rates of mortality and trends of mortality (fig. 3).

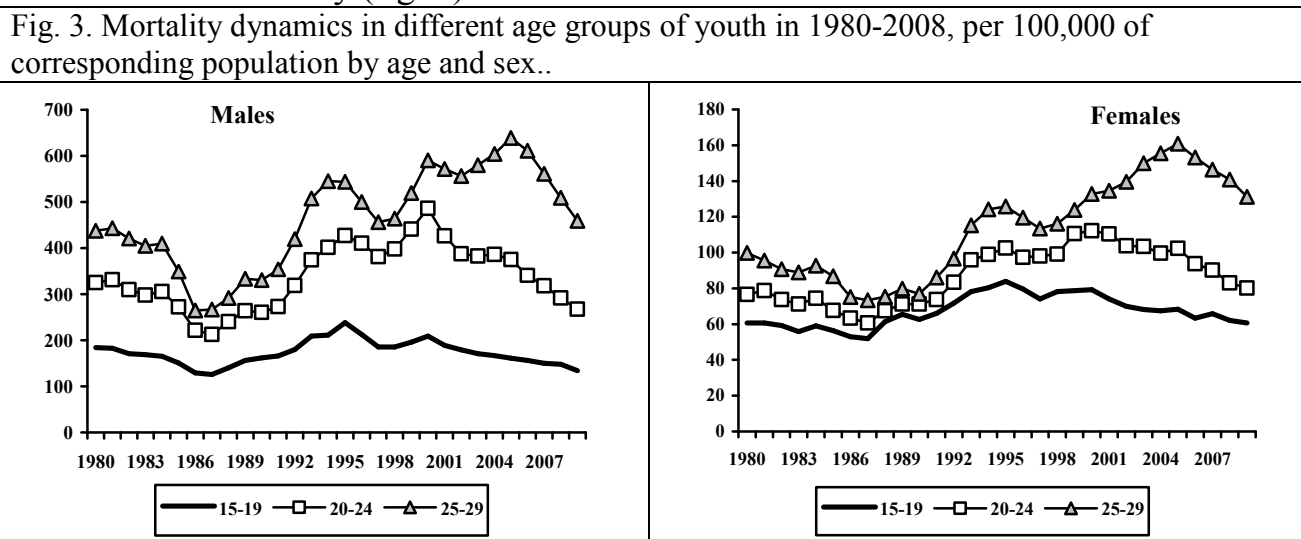


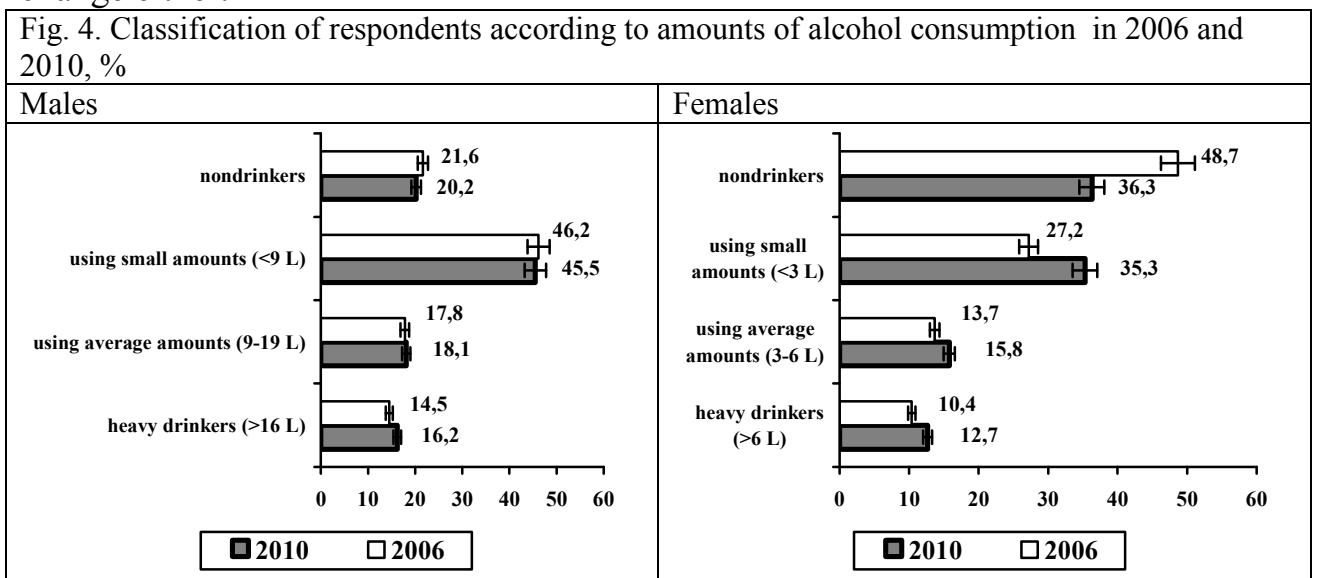
Fig. 3. Mortality dynamics in different age groups of youth in 1980-2008, per 100,000 of corresponding population by age and sex..

The older the age the higher mortality rates and more unfavorable trends. Minimal rates of mortality were among the 15-19 year old. Almost in the middle of 1990s some positive trends started to develop. As a result, till the year 2000, mortality rates in boys of 15-19 years achieved the similar rates of the 1980s and girls of the same aged reached the soviet period mortality rates by 2008. For the age group of 20-24 years, the rates of mortality were higher with a positive trend starting to evolve only after 2000. So, males reached the mortality rates of 1980 by 2008, while females still excess of mortality rates by about 4%. In the age group of 25-29 years, the mortality rates during the period of economic reforms were maximal in comparison with the other youth age groups. Current rates of mortality excess rates of 1980 by about 5% in males and by 32% in females.

The youth mortality is mainly defined by self-protective behavior compared to other age groups. Therefore, evaluation of behavior shifts in alcohol consumption, smoking, dietary habits, and recreation was conducted in 2006 and 2010.

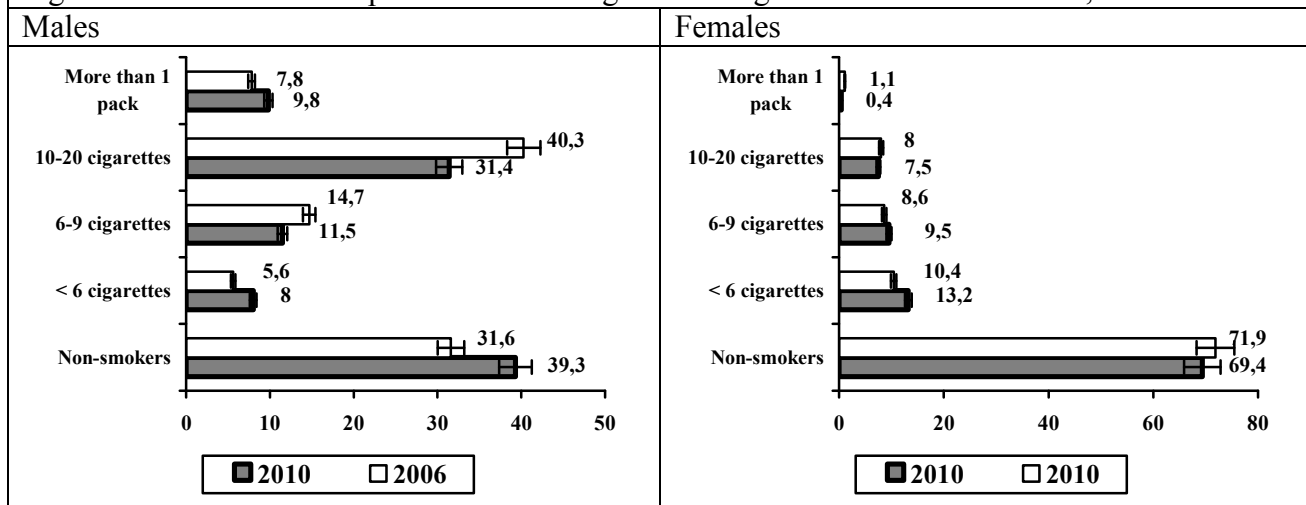
Data on alcohol consumption (liters of absolute alcohol per capita) were calculated on the basis of answers about preferred drinks, amounts and frequency of consumption. According to the amounts of alcohol consumption we divided respondents into several categories: nondrinkers, consuming small amounts (<9 liters in males and <3 liters in females), consuming average amounts (9-16 liters in males and 3-6 liters in females) and heavy drinkers (>16 liters in males and >6 liters in females).

During 2006-2010, per capita alcohol consumption in males decreased from 8.8 to 8.3 liters and increased in females – from 2.2 to 2.5 liters. Taking into account statistical error this only shows that there was no shift in alcohol consumption. Classification of respondents according to the amounts of alcohol consumption didn't change either.



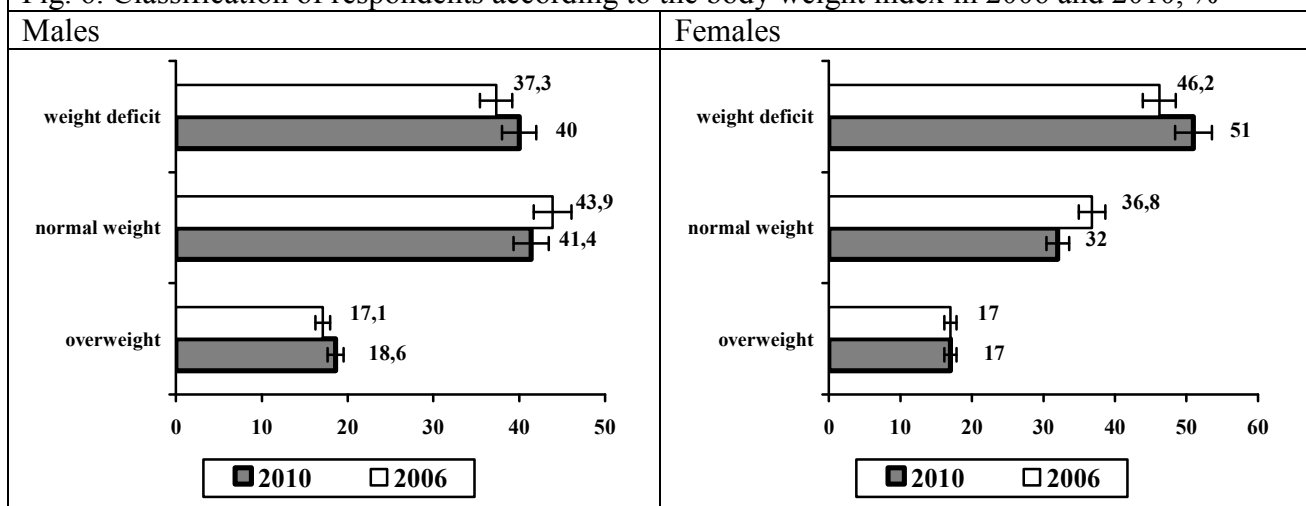
The average number of cigarettes per day decreased in males from 9.3 to 8.3, while in females it hardly changed – 2.4 in 2006 and 2.3 in 2010. In males, positive shifts were related to the increased number of non-smokers and decreased share of heavy smokers (from 19 to 20 cigarettes a day). However, the positive trends didn't affect the risk group of hose smoking more than one pack of cigarettes daily.

Fig. 5. Classification of respondents according to smoking habits in 2006 and 2010, %



During 2006-2010, the share of the youth with normal weight slightly decreased (within the limits of statistical error). In males it was due to the increased share of overweight and those with weight deficit, in females – due to the increased share of weight deficit.

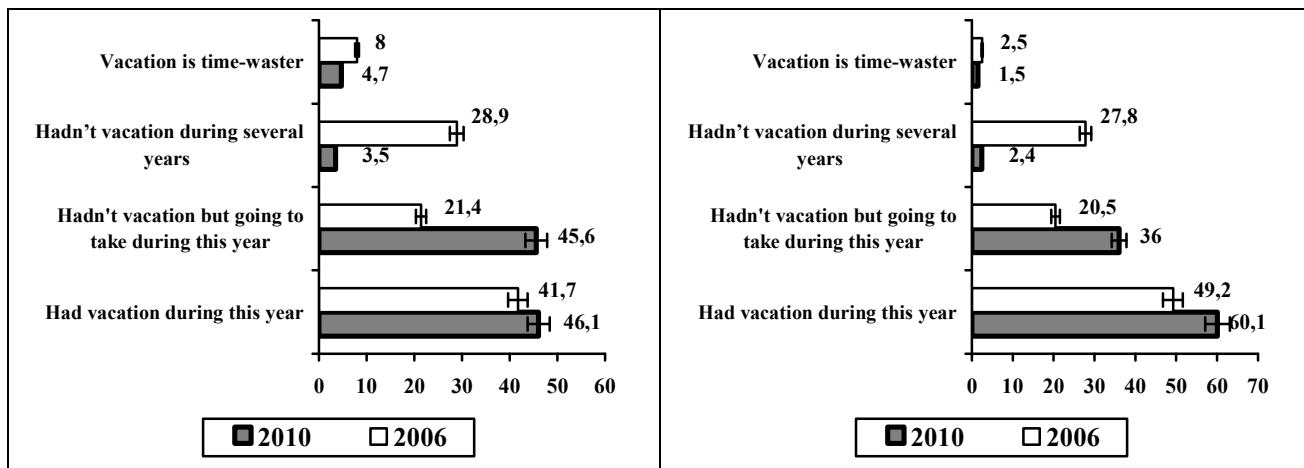
Fig. 6. Classification of respondents according to the body weight index in 2006 and 2010, %



Attitude to recreation changed considerably in 2006-2010: the number of those who did not have vacation during several years or consider vacation time-wasting increased by several times. Such changes affected mainly men as rejection of vacation is more widely spread among males.

Fig. 7. Classification of respondents according their attitude to recreation in 2006 and 2010, %

Males	Females
-------	---------



Readiness to change lifestyle primarily depends upon specific behavioral features. As to psychoactive substances (alcohol and tobacco), high dependency from those substances strongly affects readiness to lifestyle. The higher the level of alcohol consumption or tobacco use, the more reluctant respondents to change their behavior.

Table 1

Readiness to reduce daily number of cigarettes depending on frequency of smoking, %

	Males			Females		
	Yes	No	It isn't harmful to my health	Yes	No	It isn't harmful to my health
<6 cigarettes	73.5	5.9	20.6	81.4	4.3	14.3
6-9 cigarettes	59.2	20.4	20.4	73.1	9.6	17.3
10-20 cigarettes	64.2	22.4	13.4	62.5	30.0	7.5
> 1 pack	61.0	14.6	24.4	50.0	50.0	-
Total	54.2	18.0	27.8	42.9	13.4	43.8

Conclusions

Currently, the rates on mortality among the Russian youth are multiply higher the same rates among the peer groups in Europe including both countries of the Western Europe and countries of the Central and Eastern Europe as well. Although, at the end of the Soviet period the rate difference was twice lower.

During 2006-2009, reduction in mortality rates had nothing to do with the improved lifestyle. It was solely due to other factors.

Health loss risk groups among the youth are vast:

- due to alcohol consumption – 16.1% of males and 12.7% of females;
- due to smoking – about 10% of males and 0.5% of females;
- extreme body weight deficit or obesity 5-10% of the youth;
- not having vacation for several years – 7% in males and 4% in females.

Those risk groups are characterized by minimal readiness to change their behavior mainly in term of using psychoactive substances – alcohol and tobacco.