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Health lifestyles in Ukraine

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Summary

Objectives: Several studies have identified negative health lifestyles as a primary determinant of the mortality crisis in Europe's post-communist states, but little is known about Ukraine. In order to address this gap in the literature, this paper provides data on Ukrainian health lifestyles.
Methods: Data were collected by face-to-face interviews in the households (N = 2 400) of a random sample of respondents in Ukraine in November, 2001. The sample was selected using multi-stage random sampling with stratification by region and area (urban/rural). Data were analyzed using logistic regression.
Results: Male gender was found to be the most powerful single predictor of negative health lifestyles as shown in the results for frequent drinking, heavy vodka use at one occasion, smoking, and diet. Males rated their health status better than females, but over one-third of the males and one-half of the females rated their health status as rather bad or bad.
Conclusions: Gender and class differences in health lifestyle practices appear to be key variables, with working-class males showing the most negative practices. The results for health status suggest that the overall level of health in Ukraine is not good.

Keywords: **Health lifestyles – Ukraine.**

This paper examines health lifestyles in Ukraine. This is an important topic because several studies have identified negative health lifestyles as a primary determinant of the mortality crisis in Europe's post-communist states (Adevi et al. 1997; Cockerham 1999). Most research focuses on Russia where the decline in life expectancy continues, or on East European countries like Poland and the Czech Republic that are experiencing improved longevity. However, the situation in the Ukraine has yet to be adequately researched and this paper addresses this gap in the literature.

Ukraine joined Russia and Belarus as the first states to secede from the old Soviet Union in 1991. Today, with 48 million people, Ukraine is the second most populous country among the former Soviet republics. As in Russia, however, the change in political, economic, and social systems did not bring an immediate improvement in the health and life expectancy of the population. Although life expectancy has been better in Ukraine than in Russia, it nevertheless parallels the Russian situation. Ukrainian males, for example, lived an average of 64.6 years in 1979–80, which was 3.2 years more than Russian males with a life expectancy of 61.4 years in 1980. By 2002, male life expectancy had fallen in both countries, with Ukrainian males living to 60.8 years compared to 58.5 years for Russian males. While the Ukrainian male still lived longer than his Russian counterpart, the difference had been reduced to 2.3 years and the average life span for males in both countries was consistently decreasing. Female life expectancy followed a similar pattern with longevity for Ukrainian women falling from 74.0 years in 1979–80 to 72.1 years in 2002 and that of Russia females declining from 73.0 years to 71.9 years in the same period.

Given that the longevity pattern is similar in both countries, we would expect health lifestyles to be similar as well because of the link between lifestyles and life expectancy. The most common forms of health lifestyle practices are positive or negative choices a person makes concerning alcohol use, smoking, diet, exercise, and various other health-related activities (Cockerham 2000a). In the case of

Soz.- Präventivmed. 50 (2005) 264–271
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Russia, several studies have highlighted the negativity of health lifestyle patterns with respect to excessive alcohol consumption, heavy smoking, high-fat diets, and lack of health-promoting exercise (Cockerham 1997; 1999; 2000b; McKee et al. 1998; Palosuo 2000; 2003; Palosuo et al. 1998). These lifestyle practices are particularly characteristic of middle-age, working-class males whose high mortality from heart disease, alcohol poisoning, and alcohol-related accidents are largely responsible for the steep decline in male mortality (Carlson & Vågerö 1998; Chenet et al. 1998; Cockerham 1999; 2000b; Notzon et al. 1998). The goal of this paper is to ascertain whether a similar situation exists in Ukraine.

The few existing comparative studies find that the increase in mortality in both Russia and Ukraine in the 1980s and 1990s is largely due to increases in cardiovascular disease, accidents, and violence, while death rates from cancer declined (Shkolnikov et al. 1999). Cancer mortality had decreased not only among older persons, but also middle-age men. There was some evidence that competing causes of death were an important factor in this outcome – as people whose deaths might have been otherwise caused by cancer had already died from these other causes. Competing risks like heart disease, in turn, have a well-established association with negative health lifestyle practices, especially heavy alcohol use and smoking, poor diets, and a lack of exercise, while accidents and violence are linked to alcohol as well (Cockerham 1999). This situation suggests that a high prevalence of unhealthy lifestyles underlie much of the mortality increase for males in Ukraine. Support for this assertion is found in a survey of smoking in Ukraine in 2000 where some 57% of males and 10% of females were found to be current smokers, with especially high levels of smoking observed for men under age 60 (Gilmore et al. 2001). Other than this study, however, little is known, as previously stated, about Ukrainian health lifestyle practices. Our data should help clarify this situation.

Data and Methods

Data were collected by face-to-face interviews in the homes of respondents (N = 2 400) in Ukraine in November, 2001. The survey was conducted by the East Ukrainian Foundation for Social Research. This study is part of a larger project investigating health in the Commonwealth of Independent States (CIS). The research was funded by the Copernicus program of the European Union as part of the Living Conditions, Lifestyles and Health (LLH) Project through a grant provided to the Institute for Advanced Studies, Vienna, Austria. The survey consisted of a representative sample of the national adult Ukrainian population age 18 years and over. The sample was selected using multi-stage random sampling with stratification by region and area (urban/rural). The number of interviews in each area was determined by its population size. There was no over- or under-sampling of subgroups. Persons in the military, prisoners, and the mentally disabled, along with persons institutionalized, hospitalized, and homeless were excluded.

The number of primary sampling units was 136. Within each sampling unit an address was randomly selected as the starting point and participating households were selected utilizing standardized route procedures. Within each household, the adult with the nearest birthday was selected for interview. If after three visits (different times/days), there was no one at home, the next household on the route was selected until 2 400 interviews were completed. Quality control procedures included re-interviewing some respondents in person or by telephone to assess the quality of fieldwork. The percentage of eligible respondents not contacted after three visits was 9% and refusals after contact was 15%. The overall response rate was 76%.

Seven exogenous variables were employed in the analysis. (1) gender, (2) age, (3) marital status, (4) education, (5) disposable income, (6) occupation, and (7) employment status. Seven health lifestyle practices were used as dependent variables and arranged into a dichotomous format. (1) Frequent drinker, which measures the frequency at which the respondent consumes alcoholic drinks, is coded 2–3 times a week, once a week, once a month, once in 2–3 months, less often, and never = 0, and daily, almost daily, and 4–5 times a week = 1. (2) Heavy vodka drinker, measures how much vodka (the drink of preference) a drinker consumes, is coded as less than 100 grams at one occasion = 0, about 100 grams, about 200 grams, about 300 grams, half a liter, and more than half a liter at one occasion = 1. There is no clear consensus in the literature as to the best measure of heavy drinking, but our review of past studies and vodka's high alcohol content (80 proof and higher), suggested a cut-off point of more than 100 grams (approximately 3.5 ounces) per occasion as constituting heavy drinking. Malyutina et al. (2002), for example, used 160 grams consumed at one occasion to measure binge drinking in Russia, so more than 100 grams appears to be a reasonable standard for heavy drinking. (3) Smoking measures use of cigarettes and is coded nonsmoker = 0, smoker = 1. Daily consumption of (4) meat, (5) vegetables, and (6) fruit is coded separately for each food item as seldom, occasionally (once per week), and 2–3 times a week = 0, daily = 1. The data did not include a satisfactory measure of exercise. However, an indicator of general health, (7) health status, is included. Health status is a

Table 1 Distribution of variables among study sample, Ukraine, 2001 (N = 2 400)

Demographic variables	n	%
Country of residence		
Ukraine	2400	100.00
Gender		
female	1469	61.2
male	931	38.8
Age		
18–34	596	24.8
35–59	978	40.8
60 and above	826	34.4
Marital status		
single, divorced, widowed	932	39.3
married	1442	60.7
Education		
primary school or none	283	11.8
unfinished secondary education	152	6.3
secondary education	617	25.7
secondary vocational education	741	30.9
unfinished higher education	118	4.9
higher education	470	19.6
Disposable income		
not enough for nutrition	696	29.0
just enough for food/clothes	1361	56.7
enough to buy TV/fridge, but not car/flat	256	10.7
can purchase expensive goods (car/flat)	27	1.1
Occupation		
agricultural/unskilled worker	485	24.3
skilled worker	637	26.5
office clerk without higher education	270	13.5
manager/professional	554	27.7
top manager	52	2.6
Employment status		
unemployed	1376	57.6
employed	1014	42.4
Lifestyle variables	**n**	**Valid %**
Frequent drinker[a]	122	5.1
Heavy vodka drinker[b]	393	80.7
Smoking[c]	197	11.3
Daily meat consumption[d]	200	8.4
Daily vegetable consumption[e]	1004	42.1
Daily fruit consumption[f]	616	25.9
Health status[g]	1244	53.0

[a]: Frequent = daily, almost daily and 4–5 times a week; non-frequent = all others
[b]: Heavy ≥ 100 grams at one occasion; non-heavy = all others
[c]: Smoker = cigarette use ; nonsmoker = all others
[d]: Daily = daily consumption; non-daily = all others
[e]: Daily = daily consumption; non-daily = all others
[f]: Daily = daily consumption; non-daily = all others
[g]: Satisfied = self-report as good/rather good; dissatisfied = self-report as bad / rather bad

subjective self-ranking of one's own health and is coded bad and rather bad = 0, quite good and good = 1. Table 1 shows the distribution of the independent and dependent variables in the analysis.

Multivariate analysis, adjusting for demographic co-variates, was performed using logistic regression. This procedure is employed when the dependent variable is nominal and the independent variables are continuous, discrete, categorical, or a mix. The advantage of logistic regression is that it provides the probability of a discrete outcome for each dependent variable, rather than predicting the effects of several continuous variables on a single dependent variable, as is done in multiple regression. The discrete outcome provided for our analysis is the probability of participation (yes/no) in a particular health lifestyle practice for each case analyzed. Logistic regression does not produce negative predicted probabilities. Rather, it predicts the probabilities of participating in a specific health lifestyle practice, even though the practice itself may be either positive/healthy (e. g. fruit consumption) or negative/unhealthy (e. g. smoking). The statistics presented are the odds ratios, which express the direction and magnitude of the relationship between the independent and dependent variable. The 95% confidence intervals associated with the odds ratios are also reported.

Results

The main results for health lifestyle practices are shown in Tables 2, 3 and 4. (All odds ratios were calculated but only the relevant results are reproduced in tables.)

Alcohol and tobacco

The analysis shows that males and persons with lower status occupation were significantly more likely to consume alcohol frequently. The odds ratios predict males being nearly 13 times (OR = 12.73) more likely to drink frequently than females. Results suggest that most persons in higher status occupations are less likely to drink frequently than those in lower status occupations. In addition, males were over four times (OR = 4.34) more likely than females to be heavy vodka drinkers. Higher educated persons appear more likely to smoke. However, the most dramatic finding for smoking is that males were nearly 17 times (OR = 16.67) more likely than females to be smokers. When it comes to drinking alcohol and smoking, these data show an enhanced pattern of negative health lifestyles for Ukrainian males as compared to females.

Daily consumption of meat, vegetables and fruits

Males are shown to be significantly more likely to eat meat daily and females are more likely to consume fruit daily. Persons with higher levels of disposable income also appear more likely to consume meat daily. Neither gender eats vegetables significantly more than the other. The only variable significant in relation to the daily consumption of vegetables was marital status in that married people were about 1.4 times (OR = 1.36) more likely to eat vegetables daily than the unmarried. Younger people and persons in

Table 2 Odds ratios of selected health variables according to gender, Ukraine, 2001 (N = 2 400)

Health variables (see definitions Table 1)	Gender		Adjusted OR*	95 % CI**
	Male	Female		
Non-frequent drinker (n = 2 276)	827	1449	1.00	–
Frequent drinker (n = 122)	103	19	12.73	6.65 – 24.39
Non-heavy vodka drinker (n = 94)	54	40	1.00	–
Heavy vodka drinker (n = 393)	331	62	4.34	2.32 – 8.11
Nonsmoker (n = 1 545)	284	1261	1.00	–
Smoker (n = 197)	157	40	16.67	10.48 – 26.54
Non-daily meat consumer (n = 2 185)	812	1373	1.00	–
Daily meat consumer (n = 200)	111	89	1.62	1.08 – 2.41
Non-daily vegetable consumer (n = 1 380)	533	847	1.00	–
Daily vegetable consumer (n = 1 004)	389	615	0.89	0.73 – 1.10
Non-daily fruit consumer (n = 1 763)	690	1073	1.00	–
Daily fruit consumer (n = 616)	228	388	0.78	0.62 – 0.99
Dissatisfied with self-reported health status (n = 1 102)	331	771	1.00	–
Satisfied with self-reported health status (n = 1 244)	580	664	2.03	1.62 – 2.53

* Odds ratio from multiple logistic regression model adjusted for all other variables in table.
** 95 % confidence Interval.

higher status occupations were also significantly more likely to eat meat daily, while females, those with higher levels of disposable income, and the married were significantly more likely to eat fruit daily (partly not shown in the tables).

Self-reported health status

Ukrainian males rated their health significantly higher that than females, with males some two times (OR = 2.03) more likely to rank their health better than females. An examination of the responses shows 36.3 % of males and 53.7 % of females rate their health bad/rather bad. Not so surprisingly, younger persons also ranked their health significantly higher than older persons, and those with greater disposable income also offered more favorable evaluations of their own health. Persons who were employed likewise ranked their health status significantly better than the unemployed.

Discussion

The most important results in our study of health lifestyles in Ukraine are those pertaining to alcohol and smoking, along with self-reported health status. Earlier in this paper it was pointed out that the key variables in the negative health lifestyles of Russians were gender (male), age (middle-age), and class (working-class). These variables best identified the population group whose high mortality for heart disease and alcohol-related causes were most responsible for the sustained increases in premature deaths. Behind this downturn in longevity, which a few Eastern European countries – showing more positive health lifestyles – have escaped, were highly negative health lifestyle practices that included excessive drinking and smoking (Cockerham 1999). In comparing the Ukrainian situation to that of Russia, the question to be examined by this paper was whether or not the two countries are similar in such practices since they have similar patterns of life expectancy.

These data suggest this is indeed the case with respect to gender and to a lesser extent with class. Gender produced the most powerful outcomes that Ukrainian males drank and smoked significantly more than females. Smoking, in particular, is something men, not women, do. But they also drink alcohol significantly more as well. It is therefore not surprising that males die at earlier ages from heart disease and alcohol-related problems in Ukraine as they do in Russia. Since the lower-ranked occupations in this study were unskilled/skilled workers, the results for occupation show working-class respondents with less positive health lifestyles than those in higher social strata as determined by occupational prestige. Age was not statistically significant on most measures, but this may have been due to the concentration of older respondents in the sample.

As for self-reported health status, Ukrainian males rank their health significantly better than females. An earlier study by Gilmore, McKee, and Rose (2002) found that Ukrainians tended to rate their health poorly. Some 25 % of the adult males and 43 % of the females in this study reported their health as poor or very poor. Gilmore et al. (2002) noted that these results were worse than levels recorded in other studies in Russia and Western Europe. Gilmore et al. also observed that in almost all studies, including their own, men rate their health better than women and this is especially

Soz.- Präventivmed. 50 (2005) 264–271

Table 3 Odds ratios of selected health variables according to education, Ukraine, 2001 (n = 2 340)

Health variables (see definitions Table 1)		Education					
		Primary school or none	Unfinished secondary	Secondary education	Secondary vocational	Unfinished higher education	Higher education
Non-frequent drinker (n = 2 276)		269	144	576	703	113	454
Frequent drinker (n = 122)		13	8	41	38	5	16
	Adjusted OR*	1.0	0.86	1.05	1.13	0.39	0.50
	95 % CI**		0.31–2.46	0.44–2.51	0.46–2.80	0.04–3.43	0.15–1.61
Non-heavy vodka drinker (n = 94)		7	4	25	27	10	21
Heavy vodka drinker (n = 393)		21	25	132	116	15	84
	Adjusted OR*	1.0	2.36	1.08	1.04	1.02	1.13
	95 % CI**		0.39–14.28	0.30–3.82	0.28–3.88	0.09–12.08	0.24–5.19
Nonsmoker (n = 1 545)		233	97	358	490	66	287
Smoker (n = 197)		11	12	50	53	15	56
	Adjusted OR*	1.0	3.02	4.32	3.80	9.91	4.57
	95 % CI**		1.01–9.01	1.69–11.00	1.49–9.73	2.41–40.74	1.68–12.46
Non-daily meat consumer (n = 2 185)		275	145	573	677	100	399
Daily meat consumer (n = 200)		7	7	40	61	18	65
	Adjusted OR*	1.0	1.32	1.22	1.40	4.50	1.40
	95 % CI**		0.36–4.86	0.42–3.56	0.48–4.10	1.23–16.40	0.45–4.39
Non-daily vegetable consumer (n = 1 380)		181	95	352	416	71	254
Daily vegetable consumer (n = 1 004)		100	56	259	322	47	213
	Adjusted OR*	1.0	1.10	1.19	1.18	1.24	1.21
	95 % CI**		0.69–1.74	0.83–1.72	0.8 –1.71	0.62–2.45	0.78 – 1.89
Non-daily fruit consumer (n = 1 763)		228	117	452	545	80	330
Daily fruit consumer (n = 616)		54	34	159	189	38	135
	Adjusted OR*	1.0	1.22	1.32	1.16	1.94	1.40
	95 % CI		0.71–2.09	0.86–2.03	0.74–1.80	0.92–4.10	0.83 – 2.33
Dissatisfied with self-reported health status (n = 1 102)		211	88	296	301	36	161
Satisfied with self-reported health status (n = 1 244)		65	60	306	424	81	299
	Adjusted OR*	1.0	1.48	1.46	2.32	1.99	3.85
	95 % CI**		0.90–2.43	0.98–2.20	1.53–3.50	0.96–4.15	2.37 – 6.24

* Odds ratio from multiple logistic regression model adjusted for all other variables in table.
** 95 % confidence Interval.

Soz.- Präventivmed. 50 (2005) 264–271

Table 4 Odds ratios of selected health variables according to disposable income, Ukraine, 2001 (n = 2 340)

Health variables (see definitions Table 1)		Disposable income			
		Not enough for nutrition	Just enough for food/clothes	Enough for TV/fridge	Enough for expensive goods
Non-frequent drinker (n = 2 276)		665	1297	237	24
Frequent drinker (n = 122)		30	64	18	3
	Adjusted OR*	1.0	0.88	1.08	2.67
	95 % CI**		0.52–1.49	0.47–2.49	0.28–25.11
Non-heavy vodka drinker (n = 94)		17	58	17	0
Heavy vodka drinker (n = 393)		69	235	65	6
	Adjusted OR*	1.0	1.10	0.99	2.2×10^8
	95 % CI**		0.52–2.30	0.38–2.55	–
Nonsmoker (n = 1 545)		492	873	140	11
Smoker (n = 197)		46	121	21	5
	Adjusted OR*	1.0	1.18	1.14	3.24
	95 % CI**		0.72–1.92	0.52–2.50	0.55–18.89
Non-daily meat consumer (n = 2 185)		672	1266	183	16
Daily meat consumer (n = 200)		18	90	70	10
	Adjusted OR*	1.0	1.93	8.18	33.45
	95 % CI**		1.08–3.43	4.26–15.71	9.73–115.00
Non-daily vegetable consumer (n = 1 380)		444	773	123	9
Daily vegetable consumer (n = 1 004)		247	580	131	17
	Adjusted OR*	1.0	1.24	1.77	2.80
	95 % CI**		1.00 – 153	1.24 – 2.55	0.92–8.60
Non-daily fruit consumer (n = 1 763)		545	1006	157	11
Daily fruit consumer (n = 616)		145	343	97	15
	Adjusted OR*	1.0	1.22	2.07	3.16
	95 % CI**		0.95–1.57	1.40–3.06	1.07–9.33
Dissatisfied with self –reported health status (n = 1 102)		416	610	54	2
Satisfied with self-reported health status (n = 1 244)		270	717	199	25
	Adjusted OR*	1.0	1.16	2.19	12.13
	95 % CI**		0.93–1.46	1.44–3.32	1.47–99.85

* Odds ratio from multiple logistic regression model adjusted for all other variables in table.
** 95 % confidence Interval.

the result in studies in the former Soviet republics. This is common even though males typically live much less longer than females in these countries.

Our findings are not only consistent with those of Gilmore and her colleagues, but show self-reported health status to be even worse. Over one-third (36.3%) of males and more than one-half (53.7%) of females rate their health rather bad or bad. Since self-ratings of health have been found to be valid indicators of a respondent's health status, these results suggest that the overall level of health in Ukraine is not good. With over half of all women reporting poor health, it is important to recognize that the health of women in Ukraine is a serious problem, although females continue to outlive males by a wide margin (Abbott 2002). The tendency of males in the former Soviet Union, Ukrainian or otherwise, to rate their health better than females despite their much shorter lives, illustrates this problem. Women apparently report worse self-rated health because they have much greater morbidity (Abbott 2002). The gender gap in mortality in Ukraine in 2002 is 11.3 years in favor of females (72.1 years for females versus 60.8 years for males). This is one of the highest gender gaps in mortality in the world. While the association between lessened life expectancy and negative health lifestyles for males is clear, the causes of health disadvantages for females need further research.

Zusammenfassung

Gesundheitsrelevanter Lebensstil in der Ukraine

Fragestellung: Mehrere Studien haben den negativen gesundheitsrelevanten Lebensstil als wichtigste Determinante der Mortalitätskrise in den europäischen postkommunistischen Ländern ermittelt, jedoch weiss man wenig über die Ukraine. Um dieser Lücke in der Literatur zu begegnen, will dieser Artikel Daten zu gesundheitsrelevanten Lebensstilen in der Ukraine liefern.

Methoden: Die Daten wurden durch persönliche Interviews (N = 2 400) in Haushalten einer Zufallsstichprobe in der Ukraine im November 2001 gesammelt. Die Auswahl der Untersuchungsgruppe erfolgte mittels eines mehrstufigen randomisierten Samplingverfahrens, stratifiziert nach Region und geographischer Lage (Stadt/Land). Die Daten wurden mit dem logistischen Regressionsverfahren analysiert.

Ergebnisse: Männliches Geschlecht wurde als die stärkste Prädiktorvariable für einen negativen gesundheitsrelevanten Lebensstil gefunden wie anhand der Ergebnisse für regelmässigen Alkoholkonsum, starkes Wodkatrinken während einer Gelegenheit, Rauchen und Ernährungsgewohnheit gezeigt werden kann. Männer stuften ihren Gesundheitsstatus besser ein als Frauen, aber über ein Drittel der Männer und mehr als die Hälfte der Frauen stuften ihn als schlecht bis sehr schlecht ein.

Schlussfolgerungen: Geschlechter- und Klassenunterschiede erscheinen als Schlüsselvariablen für gesundheitsrelevante Lebensstil-Praktiken, wobei Männer aus der Arbeiterklasse die negativsten Praktiken aufzeigten. Die Ergebnisse zum Gesundheitsstatus deuten an, dass der allgemeine Gesundheitszustand in der Ukraine nicht gut ist.

Résumé

Santé et modes de vie en Ukraine

Objectifs: Plusieurs études ont identifié des styles de vie négatifs comme déterminants principaux de l'accroissement de la mortalité dans les états post-communistes d'Europe, mais la situation en Ukraine est peu décrite dans la littérature. Afin de combler ce manque, cet article présente des données sur les modes de vie en Ukraine.

Méthodes: Les données ont été rassemblées au cours d'entretiens individuels à domicile d'un échantillon aléatoire de répondants en Ukraine (N = 2 400, Novembre 2001). L'échantillon a été choisi au moyen d'un échantillonnage aléatoire en grappe, stratifié selon la région et la zone (urbaine/rurale).

Résultats: Etre un homme est le prédicteur unique le plus important d'un mode de vie négatif, comme par exemple la consommation fréquente d'alcool et de grandes quantités de vodka en une fois, le tabagisme et l'alimentation inadéquate; les hommes se sont estimés en meilleure santé que les femmes. Mais plus d'un tiers des hommes et la moitié des femmes ont jugé leur état de santé plutôt mauvais ou mauvais.

Conclusions: Le sexe et la classe sociale sont des déterminants importants des pratiques de santé, les ouvriers ayant les pratiques les plus négatives. Les résultats montrent qu'en général l'état de santé de la population ukrainienne n'est pas bon.

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