Premature Mortality in Slovenia in Relation to Selected Biological, Socioeconomic, and Geographical Determinants

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Aim To determine biological (sex and age), socioeconomic (marital status, education, and mother tongue) and geographical (region) factors connected with causes of death and lifespan (age at death, years-of-potential-life-lost, and mortality rate) in Slovenia in the 1990s.

Methods In this population-based cross-sectional study, we analyzed all deaths in the 25-64 age group (N = 14 816) in Slovenia in 1992, 1995, and 1998. Causes of death, classified into groups according to the 10th revision of International Classification of Diseases, were linked to the data on the deceased from the 1991 Census. Stratified contingency-table analyses were performed. Years-of-potential-life-lost (YPLL) were calculated on the basis of population life-tables stratified by region and linearly modeled by the characteristics of the deceased. Poisson regression was applied to test the differences in mortality rate.

Results Across all socioeconomic strata, men died at younger age than women (index of excess mortality in men exceeded 200 for all studied years) and from different prevailing causes (injuries in men aged <45 years; neoplasms in women aged >35 years). For men, higher education was associated with fewer deaths from digestive and respiratory system diseases. The least educated women died relatively often from circulatory diseases, but rarely from neoplasms. Single people died from neoplasms less often. Marriage in comparison with divorce reduced the mortality rate by 1.9-fold in both men and women ($P<0.001$). Mortality rate in both men and women decreased with increasing education level ($P<0.001$). Mortality rate of ethnic Slovenians was half the mortality rate of ethnic minority members and immigrants ($P<0.001$). Analysis of YPLL revealed limited and nonlinear impact of education level on premature mortality. The share of neoplasms was the highest in the cluster of socioeconomically prosperous regions, whereas the share of circulatory diseases was increased in poorer regions. Significant differences were found between individual regions in age at death and mortality rate, and the differences decreased over the studied period.

Conclusion These data may aid in understanding the nature, prevalence and consequences of mortality as related to socioeconomic inequalities, and thus serve as a basis for setting health and social policy goals and planning health measures.

In the field of public health research, the effects of social inequity on health are still controversial. A general rule is that socioeconomically deprived groups of people have the worst health, the worst quality of life regarding health, and the highest rate of premature deaths (1). However, classification of people into socioeconomic groups could also be a consequence as well as a cause of ill health.

The Black Report (2) provides an attempt authorized by a government to explain trends in health inequalities and to relate them to the policies intended to promote and restore health. Deprivation is a direct risk to health, and health risks differ between different groups of people (3,4). Socioeconomic inequalities can be, therefore, defined as differences in the prevalence or incidence of health problems between individual people of higher or lower socioeconomic status (5). Socioeconomically deprived groups are characterized by higher morbidity and mortality rates than those found in the groups of people of better socioeconomic status in Eastern (6) and Western countries alike (7,8). At the same time, health inequalities are constantly changing, driven by the social dynamics of a country, and apparent "anomalies" and "paradoxes" warn against a simplistic view of health inequalities (9).

The reduction of health inequalities depends on understanding demographical and etiological inequalities among individual population groups within a certain place and time. Thus, to contribute to the more detailed understanding of socioeconomic characteristics associated with premature mortality, to identify the most vulnerable groups, and to aid to drafting the national strategy for combating poverty in Slovenia, we decided to investigate the influence of biological, socioeconomic, and geographical factors on the causes of death in our country. No research has yet been carried out in Slovenia linking socioeconomic indicators with the extent and structure of causes of death, except for a preliminary report based on part of the data analyzed here (10).

Further motivation for our work came from the wider issues of health policies and health indicators. After the mid-1970s, a widening mortality gap between Western Europe and the, now former, socialist economies became apparent (11,12). Even though the reasons for this phenomenon were multiple, part of the explanation lay in poorer living conditions and lower access to advanced medical care in countries with socialist economy. This is supported by the fact that the differences in mortality rates between Western and Eastern European countries seem to be decreasing since the 1990s. However, a precondition for valid analysis of such trends is the availability of reliable data. The first analyses of selected health indicators for South-Eastern Europe have shown that considerable improvement is required to establish even a minimum health indicator set with reliable and comparable information (13,14). Hence, our study also attempted to eliminate the existing deficits, at least for vital statistics.

Methods

We performed a population-based cross-sectional study to determine the influence of selected biological (age and sex), socioeconomic (vertical: education and occupation; horizontal: marital status, and mother tongue), and geographical factors on the causes of death and life span in the population aged 25-64 years in Slovenia in 1992, 1995, and 1998. Causes of death were classified according to the 10th revision of the International Classification of Diseases (ICD-10) (15), and life span was measured by age at death, years-of-potential-life-lost (YPLL), and specific mortality rate.

Data collection

Out of the total of 57 340 deaths in Slovenia in 1992, 1995, and 1998, there were 54 419 deaths with properly recorded data. Our analysis focused on deaths in the 25-64 age group

(N = 14 816). Data were gathered by combining the census data with other statistical sources. The data on the cause of death and month and year of death were obtained from the death registration form (DEM-2 form), filed by the Institute of Public Health for each person who dies in Slovenia. The Statistical Office of the Republic of Slovenia linked the cause of death to the data on the deceased from the 1991 Census (sex, age, statistical region of permanent residence before the death, marital status, education, and mother tongue).

The data on occupation (official occupational classification and occupational status from the census and the death registration form) proved inconsistent and were frequently missing. They also either proved uninformative or lead to self-evident conclusions regarding cause of death and mortality rate. Hence, they were dropped from final analyses, and only served for subsample selection in YPLL analysis (excluding the retired from the active population).

The population count for 1992, 1995, and 1998, stratified by statistical region and sex, was obtained from the Central Register of Population, which is maintained by the Ministry of the Interior of the Republic of Slovenia. The population data on marital status, mother tongue, and education were obtained from the 2002 Census provided by the Statistical Office of the Republic of Slovenia.

Variables

Causes of death recorded in 1992 and 1995, when ICD-9 was still in force, were reclassified into corresponding diagnoses from ICD-10. Five leading causes of death were identified, with the remaining various causes classified under the "other" category.

Mother tongue was used instead of declared nationality because it was a more reliable and consistent characteristic. The data were grouped into four categories: Slovene, minority (Italian or Hungarian), former Yugoslavian, and other.

YPLL calculation was based on mortality tables stratified by age, sex, and statistical region for the relevant calendar years (16,17). Since age in these tables was presented in groups, linear interpolation was applied, except for the oldest age group (≥85 years), where linear extrapolation up to the highest observed age at death (102 and 104 for men and women, respectively) was used.

To model mortality rates based on factors other than region, the population count from 1992 by marital status, mother tongue, and education was estimated by linear interpolation from data from the 1991 and 2002 Censuses. The two census databases were made comparable through recalculation by the Statistical Office of the Republic of Slovenia *(http://www.stat.si/eng/)*. Because of known nonlinear trends in various population characteristics since the early 1990s, the same procedure for 1995 and 1998 would introduce too much imprecision for useful modeling.

Statistical analysis

Associations between the analyzed factors and causes of death were analyzed by bivariate contingency tables, stratified by sex, because the fitting of hierarchical loglinear models had showed no statistically significant interaction of the observed associations with age. YPLL and age at death were analyzed with multi-way analysis of variance (ANOVA, general linear model with polynomial contrasts). Because of data collection constraints, Poisson regression was applied only univariately, whereby differences in the mortality rates between regions were tested for all the three studied years. The differences associated with marital status, mother tongue, and education were analyzed only for 1992. Statistical analyses were performed with SPSS for Windows 12.0.2 software (SPSS Inc., Chicago, IL, USA, 2004).

Results

After obtaining a summarized age and sex structure of the total sample (Table 1), we per-

Table 1. Number and percentage of deaths by age and sex in Slovenia in 1992, 1995, and 1998

	No. (%) of deaths in year*								
	1992			1995			1998		
Age group (y)	total	men	women	total	men	women	total	men	women
0-24	313 (1.7)	224 (71.6)	89 (28.4)	273 (1.5)	198 (72.5)	75 (27.5)	254 (1.4)	190 (74.8)	64 (25.2)
25-64	5340 (29.2)	3733 (69.9)	1607 (30.1)	4897 (27.2)	3388 (69.2)	1509 (30.8)	4579 (25.3)	3216 (70.2)	1363 (29.8)
≥65	12 616 (69.1)	5453 (43.2)	7163 (56.8)	12 858 (71.3)	5574 (43.4)	7284 (56.6)	13 289 (73.3)	5825 (43.8)	7464 (56.2)
Total	18 269 (100.0)	9410 (51.5)	8859 (48.5)	18 028 (100.0)	9160 (50.8)	8868 (49.2)	18 122 (100.0)	9231 (50.9)	8891 (49.1)

*In the total columns, the percentage in parentheses is the proportion of deaths in the given age group in the entire population for the given year; for men and women, the percentage in parentheses is the proportion of deaths of people of the respective sex within the given age group for the given year.

formed the analysis of cause of death and mortality rate for each of the studied factors.

Age and sex

In the analyzed population group aged 25 to 64 years, men had considerably higher mortality than women (Table 1). Specific mortality rate was also much higher for men than for women, with the index of excess mortality for men exceeding 200 in all age groups (Figure 1). For the deaths in the whole 25-64 age group, the index was 234, 225, and 233, in 1992, 1995, and 1998, respectively.

The structure of the causes of deaths changed with age. The main causes of death in men aged 25-44 years were injuries, most often caused by traffic accidents. For men, the probability of dying from neoplasms or circulatory diseases increased with age, whereas the probability of dying from other causes decreased. Neoplasms, particularly cervical and breast cancer, became more frequent cause of death in women aged 35-44 years. Injures were relatively rare, whereas circulatory diseases prevailed as a cause of death in both men and women aged 55-64 years. In general, the distribution of causes of death was similar in all three observed years (Figure 2).

Marital status

Single men and women died less frequently from neoplasms and more frequently from injuries and poisonings or respiratory system diseases (Table 2). Additionally, single men aged 25 to 64 died of circulatory diseases less frequently than

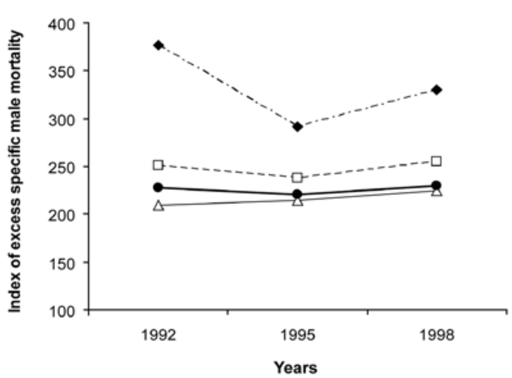

Figure 1. Index of excess specific mortality of men in Slovenia for the studied years for different age groups. Age-specific mortality of women equals 100. Symbols and lines denote age groups: closed diamonds with dash-dot line – 25-34 y; open squares with dashed line – 35-44 y; open triangles with thin solid line – 45-54 y; closed circles with thick solid line – 55-64 y.

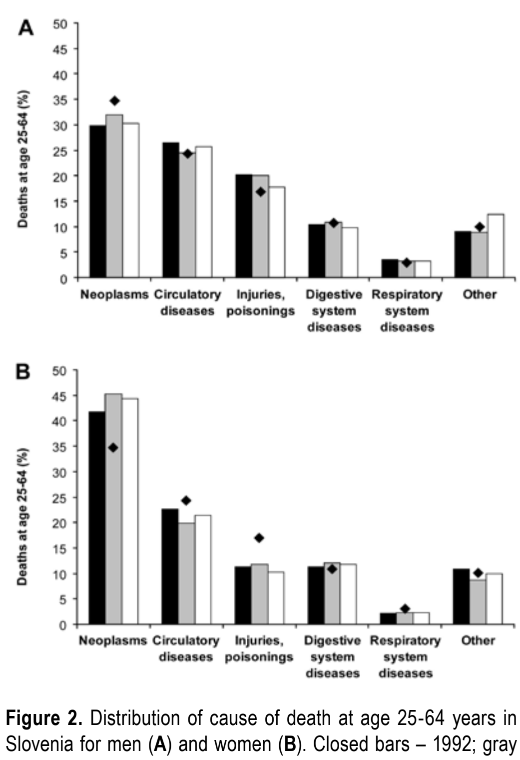

Figure 2. Distribution of cause of death at age 25-64 years in Slovenia for men (**A**) and women (**B**). Closed bars – 1992; gray bars – 1995; open bars – 1998. Diamonds indicate grand mean over all years and both sexes.

Table 2. Association between marital status and cause of death for the deceased aged 25-64 years Slovenia, stratified by year and sex*

	Cause of death											
	neoplasms		circulatory diseases		injuries and poisonings		digestive system diseases		respiratory system diseases		other	
Marital status	men	women	men	women	men	women	men	women	men	women	men	women
Single:												
1992	–	–	–		+	+				+	+	+
1995	–		–		+				+		+	+
1998	–	–	–		+	+			+	+	+	+
Married:												
1992	+	+	+		–							
1995	+		+		–							
1998	+		+		–						–	–
Widowed:												
1992				+		–		+	+			
1995								+				
1998							+	+				
Divorced:												
1992												
1995												
1998												

*Plus sign indicates significantly higher, and minus sign indicates significantly lower proportion then in the population for the given sex in the given year; empty cell indicates no significant difference in proportion; statistical testing based on contingency tables and Pearson residuals.

men who were or had been married. At the same time, marriage was associated with increased risk of death from neoplasms, particularly for men (especially death from lung cancer). There was also pronounced premature mortality for men from circulatory system diseases, especially ischemic heart disease.

As expected, mortality rates by marital status also showed significant differences for both men and women (P<0.001 for comparison with the divorced, who were taken as the baseline). Marriage proved to be a strong protective factor in the sense of lower mortality rate for both men and women (estimated 1.86 times for men and 1.88 times for women). Being single was also associated with lower mortality rate, even though to a lesser extent for women (estimated 1.30 times vs 1.46 times for men). On the other hand, mortality rate for the widowed exceeded that for the divorced by an estimated factor of 1.48 for women and 1.90 for men.

Education and mother tongue

The association between education level and cause of death showed different mortality patterns in men and women (Table 3). For men, higher educational level was associated with lower share of deaths from digestive system and respiratory system diseases, whereas the lowest educational level was associated with increased share of respiratory system diseases. Women with high-school or higher level of education died more often from neoplasms and injuries and poisonings, whereas the least educated women (with unfinished elementary school) died relatively frequently from circulatory diseases, but rarely from neoplasms.

There was a clear association between education level and mortality rate in both men and women. If vocational school was taken as the baseline, the estimated mortality rate for those with high school education was not significantly lower (by estimated factor of 1.08 for men, P = 0.141; and by estimated factor 1.03 for women, P = 0.759). However, the estimated mortality rate for those with college or university level of education was significantly lower (by estimated factor of 1.72 for men, P<0.001; and by estimated factor of 1.40 for women, P = 0.009), whereas for those with elementary school education it was higher (by estimated factor 1.74, P<0.001 for both men and women) and for unfinished elementary school it was the highest (by estima-

Table 3. Association between education level and cause of death for the deceased aged 25-64 years in Slovenia, stratified by year and sex*

	Cause of death											
	neoplasms		circulatory diseases		injuries and poisonings		digestive system diseases		respiratory system diseases		other	
Education level	men	women	men	women	men	women	men	women	men	women	men	women
Unfinished elementary school:												
1992												
1995		–		+		–			+			
1998		–		+	–		+	+	+			
Elementary school:												
1992						–						
1995								+				
1998					+					+		
Vocational school:												
1992				–						–		
1995		+										
1998								–				
High school:												
1992									–			
1995		+			+	+	–	–	–			–
1998		+	+				–		–			–
College or university:												
1992			+	–		+	–		–			
1995				–		+	–		–			
1998		+		–				–	–			

*Plus sign indicates significantly higher and minus sign significantly lower proportion then in the population for the given sex in the given year; empty cell indicates no significant difference in proportion; statistical testing based on contingency tables and Pearson residuals.

ted factor of 2.44 for men and 2.66 for women, $P<0.001$ for both).

We did not find significant differences in the distribution of causes of death according to mother tongue, but we did find significant differences in the mortality rate. In comparison with members of ethnic minorities, who were taken as the baseline, and immigrants from other parts of former Yugoslavia, who did not substantially differ in mortality rate from the minorities, ethnic Slovenians had significantly lower mortality rate (by estimated factor of 2.26 for men and 2.53 for women, $P<0.001$ for both). The analysis also showed that mortality rate was significantly higher for the "other" group ($P<0.001$ for both men and women), but this group was small and extremely heterogeneous.

Geographical region

Following the methodology of the Institute for Economic Research in Ljubljana, the Urban Planning Institute of the Republic of Slovenia, and the Faculty of Economics in Ljubljana, the 12 statistical regions of Slovenia were grouped into three clusters according to developmental opportunities: (i) *prosperous regions*, with positively assessed developmental potential – Osrednjeslovenska, Obalno-kraška, Gorenjska, Dolenjska, and Goriška; (ii) *stagnant regions*, with some positively assessed developmental potential – Savinjska, Podravska, Koroška, and Notranjsko-kraška; and (iii) *regions with poor socioeconomic conditions*, with limited developmental potential – Spodnjeposavska, Pomurska, and Zasavska. There were differences between clusters of regions in causes of death at age 25-64 years (Figure 3). For both men and women, the share of neoplasms was the highest (up to 1/2 for women and 1/3 for men) in the most prosperous regions. Conversely, the share of circulatory diseases (and digestive system diseases for women) was higher (by <5%) in the stagnant regions and regions with poor socioeconomic conditions.

The differences between the regions in age at death and mortality rate were very large and did not correspond simply to the abovementio-

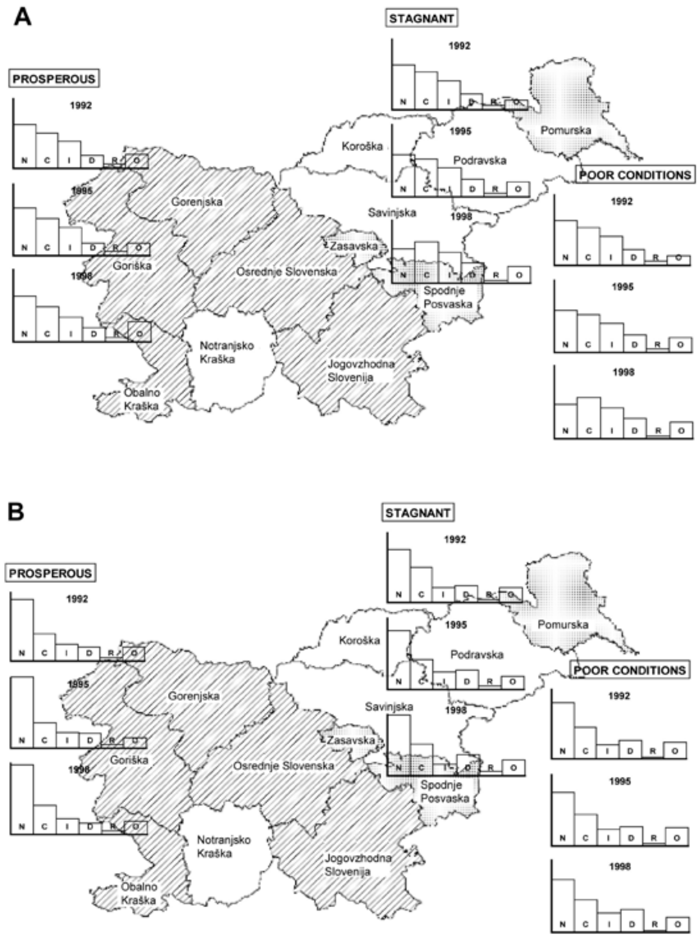

Figure 3. Distribution of cause of death by clusters of Slovenian regions for men (**A**) and women (**B**). Clusters of regions are defined by the Institute for Economic Research in Ljubljana, the Urban Planning Institute of the Republic of Slovenia, and the Faculty of Economics in Ljubljana on the basis of developmental opportunities: prosperous regions with positively assessed developmental potential (Prosperous, 5 regions); stagnant regions with some positively assessed developmental potential (Stagnant, 4 regions); regions with poor socioeconomic conditions with limited developmental potential (Poor Conditions, 3 regions). Abbreviations: N – neoplasms; C – circulatory diseases; I – injuries and poisonings; D – digestive system diseases; R – respiratory system diseases; O – other; the length of vertical axis in bar charts denotes 50%.

ned clusters of regions (Table 4). Life expectancy was increasing for both men and women (by about 0.2 years per year for men and 0.4 years per year for women, on average), and the difference between the most and the least favorable regions seemed to be decreasing. For men, the difference in average age at death dropped by 1.7 years between 1992 and 1998; for both men and women, there were no regions with mortality rate significantly above average in 1998, unlike in 1992 and 1995.

Years-of-potential-life-lost

We opted for modeling only for the deaths at age 25-64 years, stratified by sex, whereby all the retired were excluded from the sample on the basis of occupation status data. Since 84% of the retired population died at age 55-64 years, they were excluded because our analysis was focused on the active population. Exclusion of the retirees also changed the distribution of YPLL from extremely right-skewed (exponential-like) to close to normal, which allowed us to use the general

Table 4. Age at death of men and women in Slovenia and differences between Slovenian regions with respect to age at death and mortality rate

		Age at death in region (mean, y)			Regions with mortality rate*	
Year	Mean (median) age at death in Slovenia (y)	lowest	highest	difference	above average	below average
1992:						
men	66.3 (68)	Zasavska (63.8)	Goriška (70.0)	6.2	Zasavska, Spodnjeposavska, Dolenjska	Obalno-kraška, Osrednjeslovenska
women	74.8 (79)	Zasavska (73.7)	Goriška (77.1)	3.4	none	Osrednjeslovenska
1995:						
men	66.8 (68)	Dolenjska (65.0)	Notranjsko-kraška (69.3)	4.3	Pomurska, Dolenjska	Obalno-kraška, Osrednjeslovenska, Goriška
women	75.4 (79)	Koroška (73.9)	Goriška (78.8)	5.0	Zasavska	Goriška, Gorenjska Osrednjeslovenska
1998:						
men	67.0 (69)	Dolenjska (65.3)	Notranjsko-kraška (69.8)	4.5	Spodnjeposavska, Pomurska	none
women	76.1 (78)	Koroška (75.0)	Notranjsko-kraška (78.4)	3.3	Spodnjeposavska, Pomurska	none

*Regions in cells are listed from the greatest to the smallest difference from the average mortality rate. Statistical significance was tested with univariate Poisson model, with baseline category set to the region with mortality rate closest to the overall mortality rate for the given year and sex.

linear model. The sub-sample (n = 7192) consisted of 5166 men and 2026 women.

Because of increasing life expectancy, we included year of death among the predictors. Marital status was excluded because only single people can get married and only married people can get divorced or widowed. Therefore, the divorced and the widowed had higher average age at death and hence lower average YPLL with respect to the other two groups. The single had the lowest average age at death and highest average YPLL (in our sample, all these differences were in the expected direction and significant at $P<0.001$ for both men and women).

For both men and women, the selected model was statistically significant ($P<0.001$), although it explained relatively little variance, 5% for men and 11% for women. For both men and women, year of death, which accounted for the general increasing trend in lifespan, was a highly significant predictor ($P<0.001$). Among the two socioeconomic factors, only educational level was statistically significant for men ($P = 0.002$), whereas mother tongue ($P = 0.723$) and interaction between education and mother tongue ($P = 0.116$) were not. For women, the results were very similar ($P = 0.249$ for mother tongue), although education proved only marginally significant ($P = 0.055$) and its effect significantly differed with respect to mother tongue ($P = 0.002$ for interaction).

The general shape of the association between educational level and YPLL was tested by polynomial contrasts of order up to 4 (because of 5 levels of the variable), and for both men and women only the quadratic contrast was significant ($P = 0.001$ and $P = 0.035$ for men and women, respectively). This corresponds with the observation that in the active population excluding the early retired, the average YPLL tended to be the lowest for the deceased with either the lowest (unfinished elementary school) or the highest (college or university degree) educational level. Admittedly, the trend according to mother tongue varied and was linearly decreasing for ethnic Slovenian women (ie, the more educated they were, the younger they died).

All statistical conclusions were the same when we modeled age at death instead of YPLL. Hence, the association of educational level and mother tongue with YPLL and age at death together was shown by plotting the estimated marginal means from the model with corresponding standard errors (Figure 4).

Discussion

When age and sex as biological factors are included in explanatory models, their effects generally lower the estimated influence of other factors on (in)equality in health. Of course, the majority of deaths occurring each year are concentrated in older age groups, which makes it even more difficult to estimate reliably the effect of socioeconomic factors on mortality at the age below 65. Nevertheless, sex differences in mortality rates and causes of deaths can be at least partly attributed to different lifestyles. Thus, one can speak about female as opposed to male diseases and causes of death (18), and our results are in accord with that.

Our results regarding the impact of marital status on mortality were in line with the conjecture that stable partnership generally acts as protective factor regarding health through emotional support and direct and indirect benefits of social networks. However, the whole issue is much more complex and incorporates various gender roles within and outside partnership (19), as indicated by our findings that the active male population was at pronounced risk of death from neoplasms or circulatory diseases, and that mortality rate for single men did not differ from that for the married men, whereas mortality rate for single women was higher than that for married women. Nevertheless, termination of partnership because of divorce or death of the partner inevitably incurred higher risk in terms of disease-specific mortality (due to digestive system diseases for women) and/or mortality rate in general.

As expected, education was strongly associated with cause of death. However, the form of the association was quite different for men and women. Similarly to marital status, it showed the impact of different lifestyles on mortality. The finding that mortality rate was inversely related to education level in the active population provided clear evidence of social stratification corresponding to education level. Social stratification based on mother tongue and associated nationality was not reflected in the causes of death of the active population, but it was reflected in the mortality rate.

Our analysis of YPLL should be taken as a complement to the investigation of premature

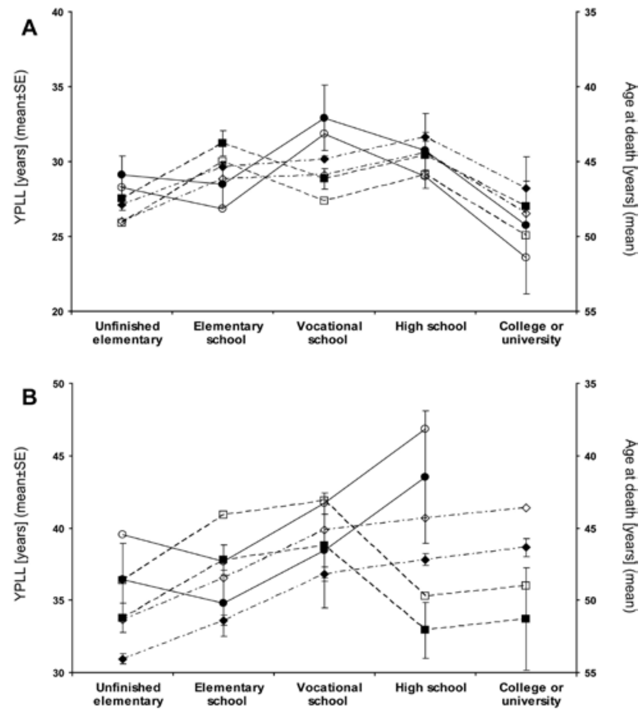

Figure 4. Estimated marginal means of years of potential life lost for men (**A**) and women (**B**) in Slovenia according to educational level and mother tongue. Closed symbols with error bars – years of potential life lost (YPLL); open symbols without error bars – age at death; symbol shape and line style denote mother tongue: diamonds with dash-dot line – Slovenian; squares with dashed line – minority and former Yugoslavia; circles with solid line – other. Model details and statistical testing are described in the YPLL subsection of the Results section. The second y-axis shows age at death, to which only the symbols denoting mean values apply, not the estimated standard errors.

mortality in Slovenia in 1998 by Šelb Šemrl and Šešok (20), as well as to the report on causes of death and mortality indices in Slovenia in 2001 by Zadnik and Šelb (21). It is also related to the wide biostatistical field of relative survival, which is undergoing rapid development (22,23). Furthermore, interpretation of YPLL in population studies is problematic since different calculation methods correspond to different underlying value scales of age at death (24). However, even the basic method of calculating YPLL that we used, which weights each year of potential life lost equally, emphasizes deaths at younger age, hence it is informative for a study focusing on premature mortality. Another problem with analyzing YPLL for the entire population of the deceased is that complex models with many interaction terms are required to get beyond trivial findings, but with increasing complexity the model-building decisions become more arbitrary, while less obvious artifacts can still contaminate the results. Bearing that in mind, our decision to study only the deaths at the age of 25-64, stratified by sex, with the retired population excluded from the sample, proved to be a reasonable compromise. The relatively low proportion of variance explained by the model is in agreement with the notion that basic socioeconomic factors do influence lifespan, but the actual lifespan of an individual is, of course, a complex result of a huge number of factors and events.

The findings regarding cause of death should be viewed in the light of the fact that the overall probability of dying equals certainty, and that the sum of the causes of death is always 100%. Unavoidably, each important drop in a certain cause of death leads to an increase in another. Hence, every rise in one cause of death is not necessarily a reason for alert. It can merely be a logical consequence of increased life expectancy, which brings increased chances of death due to old-age diseases. However, this effect was not pronounced in our analysis, which is focused on premature mortality, ie, deaths at age <64 years. Nevertheless, the observed variations between years may reflect changes in death-cause determination and/or reporting practice rather than (or at least, in addition to) actual changes in mortality causes.

In any case, by linking different databases, useful information can be obtained about various dimensions of health and disease. Direct findings are not only related to the prevalence of health conditions, but can provide important foundations for establishing socioeconomic diagnoses, ie, for determining health condition of general population and the related socioeconomic factors. With such analyses, we obtain information about the nature, prevalence, and consequences of health problems.

Our study represents a pioneering effort in Slovenia in terms of exhaustive coverage of deceased individuals, as well as in terms of scope of the research questions. Further analyses are planned, as well as periodic upgrading of the database. Our long-term aim is continued monitoring of the associations between causes of death and the selected factors, since a longitudinal approach is required to reliably assess the contribution of social class at different stages of life on mortality (25).

Our findings may serve as the basis for setting policy priorities and planning policy measures and health care services in general. Learning about individual causes of death and their relative significance also allows us to monitor the evolution of public health. We hope that this and other similar analyses of the connections between socioeconomic determinants and health indicators will contribute to the planning and designing of national programs to improve the health of the population of Slovenia, as well as of other countries. Slovenian experiences might provide valuable solutions for other new European Union member states and other countries in Europe still undergoing transition (26).

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