

University of Groningen

Unemployment and the health of Slovak adolescents

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Document Version

Publisher's PDF, also known as Version of record

Publication date:

2006

[Link to publication in University of Groningen/UMCG research database](#)

Citation for published version (APA):

Sleskova, M. (2006). *Unemployment and the health of Slovak adolescents*. s.n.

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Data sources

2.1 Study context

This study presents part of the international comparative longitudinal research concerning socio-economic inequalities in health of adolescents. The history of research on inequality in Groningen (the Netherlands) and Kosice (Slovakia) started in 1993 with a study of socio-economic health and health risk behaviour inequalities in Dutch adolescents (Tuinstra, 1998). With the aim of comparing the results of this study with data from Slovakia, as one of the Central European countries, a similar study with comparable indicators as well as a similar study sample was performed in Slovakia in 1997 (Geckova, 2002). In contrast to the results from many Western European countries where no socio-economic health and health risk behaviour inequalities among adolescents were found (West, 1988; Tuinstra, 1998), Geckova (2002) reported the presence of such inequalities in Slovak 15-year-olds. Because this was the first study on inequalities in Slovakia and many questions remained open, new research had to be done, and new data collections were carried out for this purpose in the year 2002. Data from 15 and 17 year-old students were collected at several secondary schools in Kosice. In addition, the second wave of Geckova's study was carried out. Data from 19-year-old secondary school-leavers were obtained. In the present study we focus on one factor of socio-economic status, namely unemployment, and its effect on Slovak youth.

2.2 Data, data collection procedure, samples

This study uses several samples. A brief description of these samples and information about their use in separate chapters of this thesis is provided in Table 1. In the following text, samples are described in chronological order based on the year of data collection. However, the last three samples are those which were most often used for the analyses within this thesis.

Table 1 Basic characteristics of the research samples

	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5
Chapter(s)	7	7	3, 5, 6	3, 5, 6	3,4,5
Sample size	2054	2616	1010	982	844
Data collection					
year	1994/1995	1998	2002	2002	2002/2003
country	NL	SK	SK	SK	SK
Gender					
male	50.2%	52.0%	43.7%	49.5%	42.7%
female	49.8%	48.0%	56.3%	50.5%	57.3%
Age					
mean	16.3	14.9	15.9	17.8	19.6
SD	0.83	0.62	0.63	0.60	0.60
range	14.1–21.8	13.8–17.3	14.0–20.7	15.3–22.9	18.5–21.3
Response rate	95.0%	96.3%	98.2%	96.3%	45.5%

The first sample consisting of secondary school students from the Netherlands (Tuinstra, 1998) is used in chapter 7. Most of the data were collected in November 1994 and January 1995. Participants were students of the 4th grade of secondary schools stratified by gender and the type of school based on the regular Dutch school system. The sample consisted of 2054 respondents aged 14.1 to 21.8 (mean age 16.3; 50.2% males, 49.8% females). This represents a response rate of 95%. Students completed the questionnaire in their classrooms, under the guidance of a research assistant.

The second sample used in this thesis consists of the respondents from the first wave of the longitudinal study 'Socio-economic inequalities in health' performed by Geckova (2002). These data are presented in chapter 7. Data were collected in September and October 1998. Students of the 1st grade at 31 secondary schools in Kosice participated in this study. The sample consists of 2616 Slovak adolescents (52% males and 48% females). A response rate of 96.3% was achieved. The sample of respondents was stratified by type of school, and the proportions of the regular Slovak school system were maintained¹. The respondents completed the questionnaire in their classrooms under the guidance of a researcher. Respondents were aged from 13.8 to 17.3 years and their mean age was 14.9.

A broad data collection was carried out among secondary school students from the Kosice region in Slovakia in the winter of 2002/2003. It comprised the *third and fourth samples*, which are used in chapters 3, 5 and 6. The schools and classes in schools were chosen randomly, stratified by the five

1 After leaving elementary school (9 years' attendance), Slovak adolescents aged around 15 enter one of the four types of secondary schools: 1) Four-year grammar school providing general education and preparation for university study. 2) Four-year specialised secondary school providing usually technical education, after which it is also possible to study at university; however this is a lower level of education than grammar school. 3) Four-year apprentice school providing education for manual occupations. 4) Three or two-year apprentice school providing only basic education for manual occupations.

educational levels of the regular Slovak school system. The *third sample* consists of students from 1st grades of 24 secondary schools. Respondents completed a questionnaire at school on a voluntary and anonymous basis in the absence of their teachers and in the presence of the researcher. In total 1010 questionnaires were collected, representing a response rate of 98.2%. Non-response was mainly due to absence from school. Respondents were aged 14.0–20.7 (mean age 15.9), and 43.5% of them were males. The *fourth sample* consists of 3rd grade students from the same schools. A total of 982 questionnaires were collected, which represents a response rate of 96.3%. Females represented nearly half of the sample (49.5%). Respondents were aged 15.3–22.9 (mean age 17.8).

The fifth sample is used in chapters 3 to 5. It consists of the respondents who agreed at baseline in 1998 to participate in the second wave of the longitudinal study 'Socio-economic inequalities in health'. Those respondents who agreed to participate in the second wave (N=1850) received a questionnaire by mail during December 2002 together with a stamped return envelope. One reminder, the same questionnaire with a stamped return envelope, was sent to those who did not reply. In total, we received 844 usable questionnaires, representing a response rate of 45.5%. To compare respondents and non-respondents several analyses were performed. Girls were over-represented in the response group (57.3%) compared with the non-response group (46.5%; $p \leq 0.01$). In the response group more grammar school students (29.3% versus 19.2%) and fewer apprentice students (25.5% versus 39.1%) took part in the second wave of the study. With regard to health status, students who participated at the age of 19 had statistically significantly worse mental health and vitality at the age of 15, and a higher number of physical complaints. However, these differences were trivial in size according to Cohen's thresholds (0.13, 0.18 and 0.14 respectively).

Several demographic characteristics of the samples are described in the appropriate chapters. Here we provide information about the prevalence of unemployed parents in the samples used (Table 2). For Sample 5 the percentage of unemployed school-leavers is also provided.

Table 2 Percentage of unemployed parents and school-leavers in our samples

		Sample 1	Sample 2	Sample 3	Sample 4	Sample 5
Parents	father	3.8%	11.1%	13.6%	12.4%	12.7%
	mother	3.6%	19.4%	18.9%	18.5%	19.7%
School leavers		----	-----	----	----	21.3%

2.3 Measures and statistical analyses

2.3.1 Measures

This section presents an overall picture of central variables and statistical analyses used within this thesis.

The central dependent variables are the indicators of subjective health status of the respondents. The concept of health is very broad and a wide range of different definitions exists. Probably the best known definition of health is the one proposed by the WHO: '*Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity*'. In line with this definition, there is a new trend in current literature to shift away from the disease model of health and incorporate health, fitness and well-being in the measurement scales of health status (Bowling, 2002). In this study we do not pay attention to all aspects of health, but we try to include at least some of them, including physical and mental health and well-being. In the following chapters, indicators of general health (*self-rated health*), physical health (*long-standing illness, VOEG health complaints*), psychological well-being (*SF 36 - vitality, SF 36 - mental health, GHQ-12, long-term well-being*) as well as self-esteem (*RSE*) will be used to assess the health status of young people.

The independent variables used in this study include the indicators of perceived financial situation of the respondents and indicators of parents' social support. A brief outline of these dependent and independent variables is presented in Table 3. Information about the origin of the measurement, the number of items and a short description of the measurement is provided. Some questionnaires are fully presented in the Appendix.

2.3.2 Statistical analyses

In our study several statistical methods are used for analysing the data. They were applied using the statistical software package SPSS version 10.1. Further details of the analyses can be found in the 'Statistical analyses' sections of the separate chapters.

Gender and age differences, described in chapter 3, were tested with chi-square statistics for dichotomous and ANOVA for continuous variables. ANOVA was also used with Scheffe post hoc tests in chapter 4 to compare the financial situation and social contacts between unemployed, employed and studying youth. To assess the effect of unemployment on health, regression analyses were used. Logistic regression was used for the dichotomised categorical health measures (*chapters 5, 6 and 7*) and General Linear Models (GLM) for continuous health measures (*chapters 4 and 5*). In chapter 4 the adjusted R^2 is also presented.

Table 3 Brief summary of measurements used within this study

The name of the instrument (question)	Source	Number of items	Short description
Health			
Self-rated health	SF 36 (Ware & Sherbourne, 1992)	1	Widely-used question assessing general health
Vitality	SF 36 (Ware & Sherbourne, 1992)	4	Questions focusing on energy and fatigue
Mental health	SF 36 (Ware & Sherbourne, 1992)	5	Questions focusing on psychological distress and well-being
Long standing/ serious illness*	Derived from Glendinning et al., 1992	1	Widely-used question for measuring the occurrence of long-standing illness
VOEG	Slovak version of the Dutch questionnaire VOEG	13	Health complaints experienced during the previous month
(Questionnaire on Self-Perceived Health)*	(Jansen & Sikkel, 1994)		
Long-term well-being*	Andrews, 1996	1	Seven-point scale consisting of stylised faces to express the feelings about life in the past year
GHQ-12	General Health Questionnaire (Goldberg & Williams, 1998)	12	Measuring psychological well-being
RSE	Rosenberg Self-esteem scale (Rosenberg, 1965)	10	Measure of global self-esteem in adolescents
Financial situation			
Perceived financial stress*	Derived from Hagquist, 1998	4	Measure of inability to do certain activities due to lack of money
Family affluence scale*	Derived from Currie et al., 2000	4	Indicator of consumption and material deprivation of the family
Worries about finances*	Derived from Hagquist, 1998	1	Measuring worries about lack of finances in the future
Social support			
Parental support*	Derived from Turner and Marino, 1994	12	Measuring the support experienced from mother and father
Loneliness*	Derived from Currie et al., 2000	1	Measures how often the respondent feels lonely
Evenings spent with friends	Derived from Currie et al., 2000	1	Number of evenings usually spent with friends during the week
Number of friends	In addition to previous indicators of social support.	1	Number of good friends

* Questions from the measure can be found in the appendix

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