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Original article

Does parental unemployment affect adolescents' health?

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Purpose: To explore the associations between mother's and father's employment status separately and together and the subjective health of children; and how parental education and financial strain can modify these associations.

Methods: Data were obtained from 2836 respondents aged 14 to 22 years (mean age 17.7 years). Logistic regression models were used with three subjective health indicators: self-rated health, long-standing illness, and health complaints; and ANOVA with one indicator: long-term well-being. Father's and mother's employment status was coded as follows: employed, short-term unemployed (less than one year), long-term unemployed (more than one year), and parental employment status as follows: both employed, one unemployed and both unemployed. All analyses were done separately for males and females.

Results: Father's long-term unemployment was a significant predictor of moderate self-rated health and low long-term well-being among males and females. Mother's long-term unemployment was negatively associated with self-rated health of females and long-standing illness among males. No associations between father's or mother's unemployment and occurrence of health complaints or between short-term unemployment and worse health of children were found. Unemployment of both parents negatively influenced self-rated health of both genders and long-term well-being of females. After including parental education and financial strain in the model, the negative effect of father's and mother's long-term unemployment on health remained significant. However, influence of unemployment of both parents on health disappeared after adjusting for these variables.

Conclusions: Parental long-term unemployment (especially of fathers) is negatively associated with adolescents' subjective health, and this association remains even when the social class and financial strain is taken into account. © 2006 Society for Adolescent Medicine. All rights reserved.

Keywords: Parental unemployment; Subjective health; Adolescence; Financial strain

The family is one of the most important determinants of children's development. With regard to this, a stressful family event might be stressful for children and may, besides other negative consequences, have a negative

impact on their health. One of these stressful family events is parental unemployment. Parental unemployment has been found to have consequences for behavioral problems in children [1,2], poorer self-esteem [3], increased probability of binge drinking [4], depression [5,6], as well as a higher occurrence of physical abuse of children [7,8].

The most often studied negative consequence of unemployment is economic hardship for the family. Not all

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families suffer from poverty as a result of job loss, but most of them perceive financial strain, which leads to family stress. Perceived economic hardship during childhood has been found to be clearly associated with illness later in adulthood [9] and to be related to moderate subjective health of adolescents [10]. Not only health and well-being of children are affected by financial stress. Ortiz and Farrell [11] also found that adolescents' relationship with their unemployed fathers was more negative if their income loss was significant in comparison with those adolescents whose unemployed father's income loss was slight. However, Lundberg [9] suggests that not only economic conditions in childhood, but more importantly problems in family life, particularly conflicts in the family, are important predictors of health in adulthood. Unemployment is often associated with feelings of personal failure, loss of structure in daily routine, loss of social contacts, and decrease in social status. Unemployed individuals have to cope with these stressors and may be less supportive for the needs of children and spouse. According to Christoffersen [7], loss of parental sensitivity could result in personality disorders, psychiatric and medical problems, and self-destructive behavior. In their study, Wicrama et al [12] reported that changes in parental behavior had direct effect on changes in adolescent physical health.

During late adolescence a special consequence of parental unemployment can occur. Faced with parental joblessness, adolescents could have problems imagining their own future work [13]. Moreover, financial hardship limits adolescents' opportunities for further education and job training [14].

Researchers have mostly focused on unemployment of at least one parent, and they do not distinguish between mother's and father's unemployment. However, there is a possibility of different influence of father's and mother's unemployment on children. There is evidence that men usually experience the loss of their job worse than women [15,16]. Waters and Moore [16] suggest three possible explanations: men are relatively more financially deprived than women; women are more likely to turn to an alternative role (e.g., the role of housewife) to remain active during unemployment; and women are more willing to use their social support network as a protective factor during unemployment. The traditional gender role distribution causes men (whose incomes are usually higher than women's) to be perceived as the family breadwinners. On the other hand, besides their full-time jobs, women are perceived as the caregivers. Once unemployed, therefore, women usually become housewives, which is often considered to be a full-time activity [17].

The main aim of this article is to explore the effect of parental employment status on their adolescent children's subjective health. Firstly, the article focuses on the influence

of father's and/or mother's employment status (with regard to the length of their unemployment) on children's health. Based on empirical evidence, negative influence of parental unemployment, particularly the father's, on children's subjective health is expected. Secondly, the effects of unemployment of both parents and of one parent on children's health are tested. Those respondents with both parents unemployed are expected to have the worst perception of their health. Finally, the three variables: parents' education, perceived financial stress and family affluence (which can potentially moderate the effect of parental unemployment on children's health) are included in the analyses. Based on the arguments above, we expect the negative influence of parental unemployment to remain also after controlling for these variables. Given the possibility that all these relationships are gender specific, findings are presented for males and females separately.

Methods

Sample and procedure

The total sample for this study consisted of 2836 young people aged 14 to 22 years (45.4% males, 54.6% females).

The study used two data sets. The first were 1992 secondary school students from 24 secondary schools from the Kosice region in Slovakia. Data were collected in the winter of 2002. The sample was stratified by type of school and gender (46.5 % male, 53.5 % female). Respondents completed a questionnaire at school on a voluntary and anonymous basis in the absence of their teachers. A response rate of 97.5% was achieved.

The second data set were the respondents who agreed to participate in the second wave of the longitudinal study "Socioeconomic inequalities in health." The first wave of the study was carried out in 1998 at 31 secondary schools in the Kosice region ($n = 2616$, mean age 14.9 years) [18]. 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 was sent to those who did not reply. We received 844 usable questionnaires (42.7% male, 57.3% female). This represents a response rate of 45.5%. Males from apprentice schools were slightly under-represented. In any case, comparison of participants with nonparticipants showed no significant differences in health status at the time of the first wave.

Family characteristics

Our sample has 98% of respondents living with their parents in one household. The number of household members varies from one to 18, the mean is 4.3 (SD 1.3) and the mode four. Gainfully employed household members range from none to six, the mean is 2.1 (SD .8) and the mode two.

Employment status of parents. Respondents were asked to indicate whether their mother and father were employed or

unemployed, and the duration of their unemployment. The father's and mother's employment status with regard to the length of their unemployment was coded into the following categories: employed/unemployed less than one year/unemployed more than one year. Unemployment longer than one year is usually considered as long-term unemployment, whereas shorter than one year is short-term unemployment. Employment status of both parents is also examined in this study. It is coded as follows: both parents employed/one parent unemployed/both parents unemployed. In the subsequent text the term "parental employment status" is used when referring to the employment status of both parents, and the terms "father's employment status" and "mother's employment status" refer to the father and mother separately.

Parental education. Mother's and father's education levels taken separately were divided into four categories: university, secondary (with leaving certificate), lower apprentice (without leaving certificate), and primary education.

Financial strain

A family's financial situation can be measured using various indicators, among the most objective of which are family income and parental occupation. However, there is evidence that adolescents are not always able to give precise information about their parents' income and occupation [19], and the response rate for these questions was low. For these reasons, indicators concerning possibilities of using money for certain activities or with material wealth are used in recent studies [10,19,20]. There is also evidence that subjective perception of the family's financial situation is more meaningful for children and adolescents than objective income loss [10,20]. For these two reasons, perceived financial stress and family affluence were used in the present study to assess the perceived economic situation of respondents.

Perceived financial stress. The measurement was derived from Hagquist's questionnaire [10]. Questions were adapted to the needs of Slovak adolescents. Respondents were asked if they had wanted to do certain activities in the preceding weeks but had been unable to do them because of lack of money. Four items, namely inability to go to the disco, to do sports, to buy special clothes, or to go out with friends, were used with possible answers yes/no. Each item was used separately in the analyses.

Family affluence. A similar measurement was used as an indicator of consumption and material deprivation by Currie et al [19,21] and Wardle et al [22]. The scale used in the present study is composed of four questions concerning possession of a car, a telephone, or a computer in the family, and the respondents having their own room. Possible answers were: no; yes, one; yes, several, for the first three questions; and no/yes for the last question. Factor analysis

showed low correlation of the last question (Do you have your own room?) with other items. This item was therefore left out of the analyses. Each of the other three items was used separately in the analyses.

Health indicators

According to Hammarstrom and Janlert [23], the most common way to recognize health problems among young people is through self-reported symptoms. Four subjective health indicators were therefore used in this study.

Self-rated health is the one item scale widely used in health studies, because it is generally accepted as a good predictor of mortality and morbidity [24,25]. Respondents assessed their health using the five-point scale. "Excellent" and "very good" health ratings were combined into one group, and "good," "fairly good," and "bad" ratings were considered as a second group, so that in this study the term "moderate health" is used when referring to good, fairly good, and bad ratings.

Occurrence of *long-standing illness* was measured by the simple question "Do you have any long-standing illness (more than three months)?" using the dichotomous answer yes/no. Versions of this question are often used in subjective health research [26–28]. The question assesses merely the occurrence of long-standing illness, and not the extent to which it is serious and restricts daily life.

Long-term well-being was measured on a seven-point scale consisting of stylized faces. Respondents rated their feelings about their life in the past year. The faces were coded into numbers, with number one meaning the best well-being and number seven the worst. The scale was used to assess socio-emotional health in addition to global and physical health measured by other indicators. This simple scale may provide a better representation of respondents' feelings than would similar verbal scales [29]. In previous researches the test-retest reliability of this scale was .70 and median validity coefficient was .82 [29].

Health complaints experienced during the previous month were recorded using the Slovak version of the Dutch questionnaire VOEG [30,31]. This shortened version consisted of 13 items. A three-point scale (never, less than three times, three and more times) was used in response to each item in our study. For dichotomization, the frequency "more than three times" was used as the cutoff point. The average number of experienced complaints varied from 0 to 13. In this study, a dichotomization was used—no or one health complaint versus two or more health complaints.

Statistical analysis

The analyses were all done using the statistical software package SPSS version 10.1 (SPSS Inc., Chicago, Illinois). Logistic regression models were used with three dependent variables (moderate self-rated health, occurrence of long-standing illness, and occurrence of two or more health

complaints) and ANOVA for one dependent variable (long-term well-being). Firstly, associations of father's, mother's and parental employment status with all health indicators within males and within females were explored. Secondly, potentially confounding variables (parental education, perceived financial stress of respondents, and family affluence scale) were included into the models using the stepwise method. All models were adjusted for the age of respondents.

Results

Table 1 shows the descriptive characteristics of the sample.

Logistic regression models were used to examine the relative effects of father's, mother's, and parental employment status on three health indicators. The results are presented in Table 2. In model 1 father's employment status and in model 2 mother's employment status was included. Model 3 examines the effect of employment status of both parents on children's health. All models were adjusted for age of respondents.

Self-rated health

The results of logistic regression indicate that father's employment status is a significant predictor of self-rated health among both males and females. The odds ratio for moderate self-rated health was 2.32 (95% confidence interval [CI] 1.58–3.4) for males with long-term unemployed fathers compared with those with an employed father. Among females, the odds ratio for moderate self-rated health for those with their father unemployed more than one year compared with an employed father was 1.53 (95% CI 1.06–2.22). Mother's employment status increased the risk of moderate self-rated health only among females. Females whose mothers had been long-term unemployed reported moderate health 1.48 (95% CI 1.11–1.98) times more often than females whose mothers were employed.

Unemployment of both parents had a significant negative effect on self-rated health of males (odds ratio [OR] 2.21, 95% CI 1.25–3.91) and females (OR 1.67, 95% CI 1.04–2.68). Unemployment of one parent was not a significant predictor of self-rated health.

Long-standing illness

Having the mother unemployed more than one year increased the risk of occurrence of long-standing illness among males (OR 1.49, 95% CI 1.06–2.11). No significant effect of mother's or father's employment status on occurrence of long-standing illness was found among females (Table 2). Unemployment of one or both parents was not associated with long-standing illness (Table 2, model 3).

Table 1
Descriptive characteristics of the sample

| | |
|--|-----------------|
| Gender | |
| Male | 45.5% |
| Female | 54.6% |
| Age | |
| Mean age | 17.68 (SD 1.61) |
| Father's employment status | |
| Employed | 86.7% |
| Unemployed < 1 year | 4.3% |
| Unemployed > 1 year | 9.0% |
| Mother's employment status | |
| Employed | 81.0% |
| Unemployed < 1 year | 4.9% |
| Unemployed > 1 year | 14.2% |
| Parental employment status | |
| Both employed | 72.9% |
| One unemployed | 22.4% |
| Both unemployed | 4.7% |
| Father's education | |
| Primary | 1.4% |
| Apprentice school | 35.9% |
| Secondary school | 42.4% |
| University | 20.3% |
| Mother's education | |
| Primary | 3.8% |
| Apprentice school | 24.0% |
| Secondary school | 55.4% |
| University | 16.8% |
| Financial stress (not enough money to) | |
| Go to the disco (% yes) | 26.4% |
| Do sports (% yes) | 25.5% |
| Buy certain cloths (% yes) | 53.9% |
| Go out with friends (% yes) | 34.9% |
| Family affluence scale (does your family have a) | |
| Car (% no) | 32.6% |
| Phone (% no) | 5.8% |
| Computer (% no) | 40.1% |
| Health status | |
| Moderate self-rated health | 35.2% |
| Having a long-standing illness | 30.9% |
| Two or more health complaints | 54.8% |
| Long-term well-being (mean) | 2.69 (SD 1.28) |

Health complaints

No significant associations between father's, mother's, or parental employment status and the number of health complaints were found either among males or among females (Table 2). This health indicator was therefore excluded from further analysis.

Long-term well-being

Results of ANOVA with long-term well-being as dependent variable and father's and mother's employment status as independent variables are presented in Table 3. Both in males and in females, father's long-term unemployment was a significant factor in predicting children's well-being. Children whose father had been unemployed more than one year had worse health in comparison with those whose father was employed ($p \leq .01$ among males, $p \leq .001$

Table 2
Influence of employment status (ES) of parents on moderate self-rated health, long-standing illness and occurrence of health complaints (results of logistic regression)

| | | Moderate self-rated health OR (95% CI) | | Long-standing illness OR (95% CI) | | Two or more health complaints OR (95% CI) | |
|---------|-------------|---|-------------------------------|--------------------------------------|-----------------|--|-----------------|
| | | Males | Females | Males | Females | Males | Females |
| Model 1 | Father's ES | | | | | | |
| | E | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| | U < 1 year | .76 (.37–1.56) | 1.24 (.76–2.01) | 1.01 (.50–2.02) | 1.55 (.95–2.51) | .89 (.48–1.63) | 1.05 (.64–1.72) |
| | U > 1 year | 2.32 ^a (1.58–3.40) | 1.53 ^a (1.06–2.22) | 1.35 (.89–2.04) | 1.07 (.73–1.57) | 1.04 (.71–1.51) | .87 (.60–1.27) |
| Model 2 | Mother's ES | | | | | | |
| | E | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| | U < 1 year | .68 (.37–1.26) | 1.03 (.63–1.68) | .70 (.37–1.34) | 1.26 (.78–2.06) | 1.07 (.65–1.78) | 1.32 (.79–2.19) |
| | U > 1 year | 1.38 (.99–1.94) | 1.48 ^a (1.11–1.98) | 1.49 ^a (1.06–2.11) | 1.19 (.88–1.60) | 1.20 (.87–1.66) | 1.13 (.84–1.53) |
| Model 3 | Parental ES | | | | | | |
| | Both E | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| | One U | 1.20 (.90–1.61) | 1.23 (.95–1.59) | 1.20 (.89–1.62) | 1.12 (.86–1.46) | 1.17 (.89–1.52) | 1.03 (.80–1.34) |
| | Both U | 2.21 ^a (1.25–3.91) | 1.67 ^a (1.04–2.68) | 1.57 (.86–2.87) | 1.49 (.92–2.39) | 1.07 (.61–1.87) | 1.16 (.71–1.91) |

E = employed; U = unemployed.

Adjusted for age.

^a Significant difference ($p \leq .05$).

among females). No significant association between mother's unemployment and well-being were found among either males or females.

Among females, long-term well-being was significantly worse for those with both parents unemployed ($p \leq .05$) and one parent unemployed ($p \leq .01$) in comparison with those whose both parents were employed. No similar associations among males were found (Table 3, model 3).

Adjusted effect of parents' unemployment on children's subjective health status

The effects of father's, mother's and parental employment status on their children's health adjusted for father's

Table 3
Influence of employment status (ES) of parents on long-term well-being (result of ANOVA)

| | | Long-term well-being | | | |
|---------|-------------|----------------------|-------------------|---------|-------------------|
| | | Males | | Females | |
| | | B | p Value | B | p Value |
| Model 1 | Father's ES | | | | |
| | E | Ref. | | Ref. | |
| | U < 1 year | .039 | .838 | .156 | .308 |
| | U > 1 year | .375 | .002 ^a | .564 | .000 ^a |
| Model 2 | Mother's ES | | | | |
| | E | Ref. | | Ref. | |
| | U < 1 year | .019 | .908 | .276 | .051 |
| | U > 1 year | -.060 | .564 | .163 | .080 |
| Model 3 | Parental ES | | | | |
| | Both E | Ref. | | Ref. | |
| | One U | .151 | .076 | .204 | .012 ^a |
| | Both U | .009 | .959 | .517 | .001 ^a |

E = employed; U = unemployed.

Adjusted for age.

^a Significant difference ($p \leq .05$).

and mother's education, perceived financial stress, and family affluence were explored (Table 4).

Self-rated health

The father's employment status remains a significant factor in predicting males' self-rated health even when controlled for father's education, perceived financial stress, and family affluence. The negative effect of father's long-term unemployment was slightly reduced after including these variables in the model, but remained significant. However, among females, the negative association of father's long-term unemployment with self-rated health disappeared after adjusting for father's education, perceived financial stress, and family affluence. Mother's long-term unemployment was positively associated with moderate self-rated health among females also after adjusting for mother's education (OR 1.35, 95% CI 1.00–1.82). This association disappeared when the other two variables were included in the model (Table 4).

The negative effect of unemployment of both parents on self-rated health among males remained significant after adjusting for parental education, but disappeared when financial stress and family affluence were included in the model (Table 4).

Long-standing illness

Odds ratios for occurrence of long-standing illness among males with mother's employment status, mother's education, perceived financial stress, and family affluence in the model are presented in Table 4. The negative impact of mother's long-term unemployment on the occurrence of long-standing illness among males remains significant after adjusting for other variables.

Table 4
Adjusted OR (95% CI) for self-rated health and long-standing illness among children based on employment status (ES) of parents*

| | Moderate self-rated health OR (95% CI) | | Long-standing illness OR (95% CI) |
|---|--|-------------------------------|-----------------------------------|
| | Males | Females | Males |
| Father's employment status | | | |
| Father's ES and father's education | | | |
| E | 1.00 | 1.00 | Not analyzed |
| U < 1 year | .81 (.39–1.67) | 1.10 (.67–1.79) | |
| U > 1 year | 2.16 ^a (1.45–3.21) | 1.34 (.91–1.98) | |
| Father's ES, education and financial stress | | | |
| E | 1.00 | 1.00 | |
| U < 1 year | .79 (.38–1.63) | 1.02 (.62–1.68) | |
| U > 1 year | 2.05 ^a (1.37–3.08) | 1.26 (.85–1.87) | |
| Father's ES, education, financial stress and family affluence | | | |
| E | 1.00 | 1.00 | |
| U < 1 year | .77 (.37–1.60) | .94 (.57–1.56) | |
| U > 1 year | 2.00 ^a (1.30–3.00) | 1.10 (.73–1.65) | |
| Mother's employment status | | | |
| Mother's ES and mother's education | | | |
| E | Not analyzed | 1.00 | 1.00 |
| U < 1 year | | .94 (.57–1.54) | .73 (.38–1.39) |
| U > 1 year | | 1.35 ^a (1.00–1.82) | 1.62 ^a (1.13–2.31) |
| Mother's ES, mother's education and financial stress | | | |
| E | | 1.00 | 1.00 |
| U < 1 year | | .93 (.56–1.53) | .71 (.37–1.35) |
| U > 1 year | | 1.29 (.95–1.75) | 1.61 ^a (1.12–2.32) |
| Mother's ES, mother's education, financial stress, family affluence | | | |
| E | | 1.00 | 1.00 |
| U < 1 year | | .90 (.55–1.50) | .70 (.37–1.35) |
| U > 1 year | | 1.21 (.89–1.64) | 1.65 ^a (1.14–2.38) |
| Parental employment status | | | |
| Parental ES and parental education | | | |
| Both E | 1.00 | 1.00 | Not analyzed |
| One U | 1.16 (.87–1.56) | 1.10 (.84–1.44) | |
| Both U | 1.84 ^a (1.01–3.37) | 1.45 (.88–2.40) | |
| Parental ES, parental education and financial stress | | | |
| Both E | 1.00 | 1.00 | |
| One U | 1.13 (.83–1.54) | 1.03 (.79–1.35) | |
| Both U | 1.77 (.96–3.26) | 1.41 (.85–2.35) | |
| Parental ES, parental education, financial stress, family affluence | | | |
| Both E | 1.00 | 1.00 | |
| One U | 1.11 (.81–1.51) | .97 (.73–1.28) | |
| Both U | 1.77 (.95–3.29) | 1.28 (.76–2.14) | |

* Enter method was used to include the following variables in the models: parental education, perceived financial stress and family affluence.

E = employed; U = unemployed.

Adjusted for age.

^a Significant difference on the level $p \leq .05$.

Long-term well-being

Table 5 shows results of ANOVA with long-term well-being and father's employment status adjusted for father's education, perceived financial stress, and family affluence. Neither among males ($p \leq .05$) nor among females ($p \leq .001$) did any of the confounding variables modify the negative impact of fathers' long-term unemployment on the children's long-term well-being.

Among females, the negative association between long-term well-being and unemployment of both parents

remained significant ($p \leq .05$) after adjusting for parental education and financial stress, but disappeared after adjusting for family affluence.

Discussion

Parental unemployment was negatively associated with children's subjective health in several health indicators used in the present study. Similar results have been found in other studies. Reinhardt Pedersen and Madsen [32] found in-

Table 5
Adjusted significance for long-term well-being among children based on employment status of parents*

| | Long-term well-being | | | |
|---|----------------------|-------------------|---------|-------------------|
| | Males | | Females | |
| | B | <i>p</i> Value | B | <i>p</i> Value |
| Father's employment status | | | | |
| Father's ES and father's education | | | | |
| E | Ref. | | Ref. | |
| U < 1 year | .024 | .900 | .089 | .563 |
| U > 1 year | .348 | .005 ^a | .459 | .000 ^a |
| Father's ES, father's education and financial stress | | | | |
| E | Ref. | | Ref. | |
| U < 1 year | .028 | .884 | .011 | .943 |
| U > 1 year | .303 | .014 ^a | .404 | .001 ^a |
| Father's ES, father's education, financial stress, family affluence | | | | |
| E | Ref. | | Ref. | |
| U < 1 year | .023 | .903 | .010 | .950 |
| U > 1 year | .271 | .032 ^a | .395 | .002 ^a |
| Parental employment status | | | | |
| Parental ES and parental education | | | | |
| Both E | Not analyzed | | Ref. | |
| One U | | | .110 | .187 |
| Both U | | | .395 | .013 ^a |
| Parental ES, parental education and financial stress | | | | |
| Both E | | | Ref. | |
| One U | | | .053 | .528 |
| Both U | | | .335 | .035 ^a |
| Parental ES, parental education, financial stress, family affluence | | | | |
| Both E | | | Ref. | |
| One U | | | .043 | .610 |
| Both U | | | .311 | .053 |

* Enter method was used to include the following variables in the models: parental education, perceived financial stress and family affluence scale.

E = employed; U = unemployed.

Adjusted for age.

^a Significant difference on the level $p \leq .05$.

creased frequency of psychosomatic symptoms, chronic illness, and reduced well-being among children (aged 2–17) whose parents were both unemployed more than six months in comparison with those children with at least one employed parent. These associations remained also after adjusting for socioeconomic status, family type, and native country of parents. Negative impact of parental unemployment on depression has also been confirmed in several studies. Sund et al [6] compared depression among adolescents aged 12 to 14 years whose mother or father was out of work with those whose parents were working. They found that both fathers' and mother's unemployment had a significant effect on their children's depression. Katliala-Heino et al [5] found a relationship between parents' unemployment and occurrence of depressive symptoms among their 14- to 16-year-old children. No significant effect of mother's unemployment on self-rated health, well-being, and psychosomatic symptoms was found by Piko and Fitzpatrick [17].

Loss of employment is a very stressful life event, followed by many changes in the family. For this reason, short-term unemployment is also expected to affect chil-

dren's health. However, Jones [14] suggests that actual crisis might be positive for the family, as it can bring the family together, and only later chronic stress causes family conflicts. Our findings seem to support this hypothesis, because short-term unemployment of father and mother was not a predictor of children's subjective health using any of the four health indicators.

Financial stress is often considered as the most important consequence of unemployment with regard to the health of the unemployed individual or the family members. However, our results show that even after controlling for financial stress, the father's and/or mother's long-term unemployment was negatively associated with children's self-rated health, occurrence of long-standing illness, and long-term well-being. The only exception is self-rated health among females. Our results indicate that the financial situation of the family with jobless parents is not the only negative consequence of unemployment. Family conflicts caused by unemployment and lack of emotional support from parents are probably more important determinants of children's health than economic strain. In line with this,

Sweeting and West [33] suggest the possibility that family life represented by family structure, culture, and conflicts may be a more important determinant of health during adolescence than material factors. However, the negative associations between unemployment of both parents and adolescents' health disappeared after adjusting for parental education and financial strain in our study, which indicates that in cases where both parents are unemployed, financial stress is a more important factor in predicting children's health than unemployment itself. On the other hand, it is rather difficult to distinguish between the stress caused by economic hardship and stress caused by other factors of unemployment. As Conger et al [34,35] demonstrated, economic pressure, marital conflicts, and emotional distress interact. Economic pressure increases the probability of emotional distress, which in turn increases the risk of marital conflicts. Further work should therefore be directed towards deeper understanding of the mechanism of unemployment and its effect on the family.

There are several limitations of the present study. The primary limitation is the lack of more detailed information about parental unemployment. We do not have information about possible maternity leave of mothers, retirement, or invalidity of parents. All these types of employment status were considered as unemployment. Because maternity leave or retirement can be experienced differently from involuntary unemployment, respondents who are in these types of employment status could to some extent modify our results. This has to be taken into account in interpreting the results of our study. The second limitation is the use of indicators of the family's economic situation. In line with Currie et al's suggestions [19], subjective indicators were used as a possible substitute for traditional socioeconomic status measures (e.g., parental education, parental occupation). Their use in socioeconomic inequalities research is relatively new and needs further verification. Thirdly, the design of the study does not allow conclusions as to whether worse health is the result or the cause of parental unemployment, or is associated with variables increasing the chance for unemployment. This has been studied for example by Kuhlthau and Perrin [36] and Smith et al [37].

Despite these limitations, the present study contributes to the understanding of associations between parental unemployment and children's subjective health. It shows that parental and, in particular, fathers' long-term unemployment is negatively associated with their children's health and this association remains even when it is controlled for financial strain. Because it is possible that this result is influenced by the cultural environment and typical gender role distribution in Slovakia, studies from other cultures or cross-cultural comparisons will be necessary to give a more precise view on parental unemployment and its influence on adolescents.

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References

- [1] Isaranurug S, Nitirat P, Chauytong P, et al. Factors relating to the aggressive behavior of primary caregiver toward a child. *J Med Assoc Thai* 2001;84:1481–9.
- [2] Harland P, Reijneveld SA, Brugman E, et al. Family factors and life events as risk factors for behavioural and emotional problems in children. *Eur Child Adolesc Psychiatry* 2002;11:176–84.
- [3] Christoffersen MN. A follow-up study of long-term effects of unemployment on children: loss of self-esteem and self-destructive behaviour among adolescents. *Childhood* 1994;2:212–20.
- [4] Lundborg P. Young people and alcohol: an econometric analysis. *Addiction* 2002;97:1573–82.
- [5] Katliala-Heino R, Rimpela M, Rantanen P, et al. Adolescent depression: the role of discontinuities in life course and social support. *J Affect Disord* 2001;64:155–66.
- [6] Sund AM, Larsson B, Wichstrom L. Psychosocial correlates of depressive symptoms among 12–14-year-old Norwegian adolescents. *J Child Psychol Psychiatry* 2003;44:588–97.
- [7] Christoffersen MN. Growing up with unemployment: a study of parental unemployment and children's risk of abuse and neglect based on national longitudinal 1973 birth cohorts in Denmark. *Childhood* 2000;7:421–38.
- [8] Lindell C, Svedin CG. Physical child abuse in Sweden: a study of police reports between 1986 and 1996. *Soc Psychiatry Psychiatr Epidemiol* 2001;36:150–7.
- [9] Lundberg O. The impact of childhood living conditions on illness and mortality in adulthood. *Soc Sci Med* 1993;36:1047–52.
- [10] Hagquist CEI. Economic stress and perceived health among adolescents in Sweden. *J Adolesc Health* 1998;22:250–7.
- [11] Ortiz LP, Farrell MP. Father's unemployment and adolescent's self-concept. *Adolescence* 1993;28:937–49.
- [12] Wicrama KA, Lorenz FO, Conger RD. Parental support and adolescent physical health status: a latent growth-curve analysis. *J Health Soc Behav* 1997;38:149–63.
- [13] Schliebner CT, Peregoy JJ. Unemployment effects on the family and the child: interventions for counselors. *J Couns Dev* 1994;72:368–72.
- [14] Jones LP. The effect of unemployment on children and adolescents. *Child Youth Serv Rev* 1988;10:199–215.
- [15] Artazcoz L, Benach J, Borrel C, et al. Unemployment and mental health: understanding the interactions among gender, family roles and social class. *Am J Public Health* 2004;94:82–8.
- [16] Waters LE, Moore KA. Predicting self-esteem during unemployment: the effect of gender, financial deprivation, alternate roles and social support. *J Employ Counsel* 2002;39:171–89.
- [17] Piko B, Fitzpatrick KM. Does class matter? SES and psychosocial health among Hungarian adolescents. *Soc Sci Med* 2001;53:817–30.
- [18] Madarasova Geckova A, Zezula I, van Dijk JP, et al. Socio-economic inequalities in health among Slovak adolescents. *Soc Prev Med* 2004;49:26–35.
- [19] Currie C, Hurrelmann K, Settertobulte W, et al. Health and health behaviour among young people. Health behaviour in school-aged children: a WHO cross-national study (HBSC). International report. WHO Policy Series: Health policy for children and adolescents Issue 1. Copenhagen, Denmark, 2000.
- [20] Lempers JD, Clark-Lempers D, Simons RL. Economic hardship, parenting, and distress in adolescence. *Child Dev* 1989;60:25–39.

- [21] Currie CE, Elton RA, Todd J, et al. Indicators of socioeconomic status for adolescents: the WHO Health Behaviour in School-aged Children Survey. *Health Educ Res* 1997;12:385–97.
- [22] Wardle J, Robb K, Johnson F. Assessing socioeconomic status in adolescents: the validity of a home affluence scale. *J Epidemiol Community Health* 2002;56:595–9.
- [23] Hammarstrom A, Janlert U. Nervous and depressive symptoms in a longitudinal study of youth unemployment—selection or exposure? *J Adolesc* 1997;20:293–305.
- [24] Mathews S, Manor O, Power C. Social inequalities in health: are there gender differences? *Soc Sci Med* 1999;48:49–60.
- [25] Sadava SW, O'Connor R, McCreary DR. Employment status and health in young adults: economic and behavioural mediators? *J Health Psychol* 2000;5:549–60.
- [26] Macintyre S, Graeme F, Hunt K. Do women 'over-report' morbidity? Men's and women's responses to structured prompting on a standard question on long standing illness. *Soc Sci Med* 1999;48:89–98.
- [27] Glendinning A, Love JG, Hendry LB, et al. Adolescence and health inequalities: extensions to MacIntyre and West. *Soc Sci Med* 1992;35:679–87.
- [28] Rahkonen O, Arber S, Lahelma E. Health inequalities in early adulthood: a comparison of young men and women in Britain and Finland. *Soc Sci Med* 1995;41:163–71.
- [29] McDowell I, Newell C. *Measuring Health—A Guide to Rating Scales and Questionnaires*. New York, NY: Oxford University Press, 1996.
- [30] Jansen ME, Sikkel D. Verkorte versie van de Statistiek Langdurige aandoeningen bij de bevolking (Shortened version of the chronic disease statistics) 1991, 1992. In: *Vademecum of Health Statistics of The Netherlands*. Den Haag, Netherlands: Central Bureau of Statistics, 1994.
- [31] Geckova A, Tuinstra J, Pudelsky M, et al. Self reported health problems of Slovak adolescents. *J Adolesc* 2001;24:635–45.
- [32] Reinhardt Pedersen C, Madsen M. Parents, labour market participation as a predictor of children's health and wellbeing: a comparative study in five Nordic countries. *J Epidemiol Community Health* 2002;56:861–7.
- [33] Sweeting H, West P. Family life and health in adolescence: a role for culture in the health inequalities debate? *Soc Sci Med* 1995;40:163–75.
- [34] Conger RD, Conger KJ, Elder GH, et al. A family process model of economic hardship and adjustment of early adolescent boys. *Child Dev* 1992;63:526–41.
- [35] Conger RD, Rueter MA, Elder GH Jr. Couple resilience to economic pressure. *J Pers Soc Psychol* 1999;76:54–71.
- [36] Kuhlthau KA, Perrin JM. Child health status and parental employment. *Arch Pediatr Adolesc Med* 2001;155:1346–50.
- [37] Smith LA, Romero D, Wood PR, et al. Employment barriers among welfare recipients and applicants with chronically ill children. *Am J Public Health* 2002;92:1453–7.