



GENDER DIFFERENCES IN HEALTH: EVIDENCE FROM THE CZECH REPUBLIC

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Abstract—Gender differences in health have been linked to gender stratification in the United States. Women's relation to production, paid and unpaid work, and their experience of this gender inequality disadvantage their self-rated health compared to men. Men's consumption or health lifestyles disfavours their comparative health. This formulation is tested in the Czech Republic with a sample of matched wives and husbands ($N = 577$ households). This extends previous research in the United States on gender differences in health in two ways: into post-communist Europe and by comparing paired wives and husbands. Respondents completed questionnaires in 1994 on their health and well-being, jobs and finances, non-economic life events, marriage, psychological states, opinions about the changes in the Czech Republic, and socioeconomic background. Wives and husbands filled out separate questionnaires. The relation to production (both the objective relation and its subjective experience) did not impair wives' self-reported health any more than that of their husbands, and husbands' consumption or health lifestyles did not put them at a health disadvantage. Interpretations of these findings rest on both the extension of the study into post-communist Europe and by comparing matched wives and husbands. Copyright © 1996 Elsevier Science Ltd

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INTRODUCTION

Gender stratification and health in the United States

Through most of the life course, American women report more nonfatal illness of all kinds than do men, even when excluding reproductive ailments [1]. They report higher rates of physical illness, more disability days and physician visits, and higher use of prescription and nonprescription drugs, although men have higher rates of physical impairment [2]. Women's health disadvantage disappears and even reverses itself, however, when controlling for social factors correlated with health [2, 3]. American men's health advantage also decreases with age, as American men suffer life-threatening diseases in later life and die on average about seven years earlier than women [4].

Reasons for gender differences in physical health include biological differences, differential acquired risks, differences in prior use of health-care services, and gender differences in the perception of health [2]. Biological risks and low prior use of health care impair men's relative health, whereas perception of health disfavours women's health [2]. Acquired risks are a mixed case for the genders. Women's risks stem from lesser employment, lower levels of exercise, as well as felt stress and vulnerability to illness. Men's health is advantaged by their employment, socioeconomic status and higher levels of exercise, but men are disadvantaged by their smoking, drinking,

being overweight, as well as exposure to work hazards [2].

Ross and Bird [5] connected these gender differences in health to gender stratification in American society. Their formulation is "...sex stratification in paid and unpaid work and the subjective experience of this inequality disadvantages women [women's health], while lifestyle disadvantages men [men's health]" [5] (p. 161). They expressed their formulation this way as well: "...compared to women, men's relation to the means of production—their paid and unpaid labor—improves their physical well-being. In contrast, men's and women's relation to the means of consumption, or lifestyle, disadvantages men" [5] (p. 162). Specifically, women's employment status, lower incomes, greater economic hardships, and unpaid housework indicate that they face gender inequality, which they can subjectively experience as greater work dissatisfaction, lower sense of control, and greater distress, according to Ross and Bird [5]. The result is American women report more morbidity than American men after adjusting for age.

It is men's consumption patterns or lifestyles which impair their health. American men are more likely to smoke and be overweight, for example, meaning their lifestyle puts them at a health disadvantage compared to American women [2, 6]. Smoking has well-established health consequences and being overweight is associated with lower back pain, hypertension,

coronary diseases, among others, and a perception of being in poor health [7–10]. However, American men are more likely to physically exercise and this is to their health advantage. Overall, according to Ross and Bird [5], American women's health is disadvantaged by their relation to production, while American men's health is disadvantaged by their consumption after adjusting for age.

This formulation proposes the following testable hypotheses. Women are disadvantaged in their relation to production at both work and home, and they experience less job satisfaction, lower sense of control, and higher levels of distress as a consequence. Women's disadvantaged relation to production (paid and unpaid work) and their experience with it (job satisfaction, sense of control and distress) result in their lower levels of self-rated health compared to men after controlling for age. If men's relation to production puts them at a health advantage compared to women, then their unhealthy lifestyles account for any health disadvantage they might have compared to women.

Gender stratification and health in the Czech Republic

These hypotheses will be tested in an extension of the Ross and Bird [5] study into the Czech Republic. The Czech Republic has been undergoing a transformation from socialism to capitalism since 1989. The country underwent economic shock therapy in 1991–1992, when its economy was in serious trouble with rising unemployment and inflation. Over 80% of a national sample anticipated in 1990 their personal circumstances would deteriorate over the next 2 years, over 80% found it necessary to cut household and personal expenses, over 65% reported problems in getting desired food, and 60% said they could not afford good clothing [11]. By the beginning of 1991, the currency was devalued 55% and real incomes dropped by a third in 1991 [12]. People cut their food purchases by 10–20% and their expenditures for services by 25% [12]. The Czechoslovak people were making do by using past savings; seeking financial help from family and friends; by working more hours, if possible; and by curtailing expenditures such as taking vacations, switching from private cars to public transportation, and even buying cheaper food. The shock period ended in 1993 and price continues to exceed wage inflation.

The transformation of post-communist Europe may increase gender stratification in these countries [13, 14]. In the former GDR, for example, women (including university women) are being forced down and out of the labor market, and welfare benefits such as maternal leave and subsidized child care for employed mothers have been reduced or eliminated [15–17]. Other signs that women's societal position has deteriorated in post-communist Europe include the rise of commercialized sex and pornography, the demand of nationalistic movements that women

return to traditional female roles, as well as the downsizing of government that often results in more layoffs for women than men.

Czechoslovak socialist ideology had women's emancipation as a theme; women were expected to be employed full-time outside the home and to participate in party politics [18]. Czechoslovak women had during socialism the highest employment rate for women in Europe. Their employment was forced on them, however, for to be unemployed without an official exemption (e.g. maternal leave) was a punishable crime for women as well as men. Women also worked out of necessity since the socialist suppression of the wage structure made two incomes imperative in most households. Not only were women compelled to work but they also had to work in a gender stratified labor market. Women were concentrated during socialism in lower jobs, especially the services with lower pay [19, 20].

Since 1989, some Czech women have been leaving the labor force: 43% of the employed people in 1992 Czech Republic were women, compared to 46% of the labor force in 1985. Women who remain in the labor market have been leaving jobs in industry, agriculture, and construction since 1989 as compared to men, and have been disproportionately moving even more into service jobs. Currently, women's wages are 70% of men's in the Czech Republic in all sectors and 64% in the services, jobs in which they are becoming more concentrated since the reforms.

The experiences of Czech women since 1989 do not, however, provide evidence for increasing gender stratification in the Czech Republic. Leaving the labor force might be a voluntary act for many Czech women now that being unemployed is no longer a state crime. The current sense of emancipation for Czech women is to have the choice of returning to family life [18, 21]. Hraba *et al.* [22] found that, although Czech and Slovak women reported more unemployment, economic strain and insecurity since the reforms than men, the gender differences did not increase between 1990 and 1993. Rather, these gender differences at the end of socialism continued with the reforms without growing. Thus, the extension of the Ross and Bird [5] study should find Czech women's health to be disadvantaged by their continued disadvantaged relation to production, parallel to the American case, even if gender inequality is not growing. This should be true for unpaid housework as well as work outside the home. Czech women still work full-time without the home appliances and shopping conveniences known to Americans, making their unpaid housework also burdensome. Marketing for food alone is done daily and takes several stops, not just one, and virtually all dishes are made from scratch.

Virtually all previous research compared unmatched women and men on self-rated health (see [23–25]) for exceptions in the study of stress–distress). Possibly confounded in unmatched comparisons are

compositional differences between the genders, e.g., their proportional distribution by class, marital status, number of children, living conditions and consumption patterns. Matched husbands and wives are compared in this study, meaning that health differences are between men and women living under similar conditions, the same marital status, number of children, etc. in the same households. Thus, compositional differences between the genders are more strictly controlled, allowing for a more unequivocal and decisive test of the relation between production, consumption, and comparative gender health. We might anticipate less gender difference in health as a consequence, as previously suggested [2, 3]. This seems to be true for at least some of the measures of consumption available in this study, namely, nutrition and sleep, although husbands and wives can differ greatly in smoking, drinking and exercise. Better control over women and men's relation to production is less apparent with matched wives and husbands, except that it might moderate gender differences in economic hardship because income and other work rewards are often shared by men and women living in the same households. By the same token, gender differences in unpaid housework might be greater when comparing matched spouses. In combination, these two extensions lead us to expect a similar relation between gender stratification, outside and inside the home, and health in the Czech Republic, although the experience of this stratification as economic hardship and its effect on health might be moderated because of comparing paired couples. Gender differences in the effect of lifestyle (at least nutrition and sleep) on health might also be less by comparing paired husbands and wives.

METHODS

Sample

The sample of 740 households in 1994 Czech Republic includes 577 husbands and wives, 146 single-female-headed households, and 17 single-male-headed households ($N = 1317$). The sample was drawn from a panel of 4000 households contacted periodically by the Czech Census Bureau Division of Family Budgets. During the Fall 1993 contact with respondents, the goals of the research were explained and families were asked to participate. Those who agreed then returned a signed consent form to the Czech Census Bureau, from which a sample of 774 families was selected, with roughly equal numbers from rural (residence is less than 5000 people) and urban places. Their names and addresses were forwarded to the Czech Agriculture University (Prague). Questionnaires were subsequently sent to these 774 families and 740 (97%) returned questionnaires. Married couples in the same households filled out separate questionnaires and were asked not to consult each other in the process. Single household

heads filled out single questionnaires. Upon receipt of the completed questionnaires, respondents were paid a 150 Korun (\$5) stipend. Only the wives and husbands of the 577 married households are included in this analysis, and the N was reduced to 511 matched wives and husbands in the analyses because of missing data.

Measures

Because this study is an extension of Ross and Bird [5], we tried to match as closely as possible measures available in this study to those used by Ross and Bird [5]. Most of these measures were pre-tested in 1990–1991 (a two-wave panel study) in the Czech Republic [26–33]. All measures were translated and contextualized to make them appropriate for Czech respondents. Two of the authors also interviewed a small subsample of respondents in May 1994, hearing from them that the research instrument had clear instructions and the questions made sense to them. The questionnaire is divided into seven sections: background, health, well-being, spouse and marriage, family and friends, job and finances, and opinions.

Control variables

Ross and Bird [5] controlled for ethnicity, marital status, number of children, education and age in order to compare the self-reported health of American women and men. All Czech women in this analysis are married, of course, and the other control variables were measured in the following ways:

Age. Respondents' ages were coded in years, and the mean age of wives was 40 years and their husbands was 43 years.

Ethnicity. Ethnicity was coded one for Czech and two for non-Czech, which included mostly self-identified Moravians and Slovaks. Czechs are 85% of the respondents, 13% Moravian, and just over 1% is Slovak.

Education. Respondents' education was coded as years of formal schooling. The average schooling was 13.4 years for men and 12.9 years for women.

Inequality at work

Variables indicative of inequality at work comparable to those used by Ross and Bird [5] available in this study include income, employment status, and economic hardship.

Income. Respondents' individual income in 1993 was obtained by asking three questions: "In the past 12 months, how many months did you work at your main job, including paid vacation time?" "In a normal week, how many hours did you work at your main job?" "How much do you earn per hour, week, month or year in your main job?". With this information, we calculated yearly income of both wives and husbands. Husbands' mean yearly income was significantly higher (72,294 Korun) than the

wives' income (40,248 Korun). Higher income might be a function of having two or more jobs and, thus, a source of stress rather than an indication of an advantage. Husbands and wives who reported having two or more jobs actually had less income, but the mean differences in income by male and female respondents with 1 vs 2 or more jobs were not statistically significant.

Employment. For this analysis, employment status of respondents was categorized into retired, unemployed (including housewives), employed and over employed according to number of weekly working hours (over 40). Students and the disabled were excluded.

Economic hardship. Czech respondents were asked "How much do you agree or disagree with each statement about your family's economic situation?" (1 = strongly agree, 5 = strongly disagree). The statements are my family has enough money to afford (a) the kind of place to live we would like to have, (b) the kind of clothing we need, (c) the kind of car we need, (d) the kind of food we need, (e) the kind of medical care we need, (f) the kind of leisure and recreational activities we want to participate in. These five items were summed to create a single index of economic hardship. Ross and Bird's [5] index of economic hardship has three items: do you have enough money to buy food, clothes or other things your household needs; do you have enough money to pay for medical care; and do you have trouble paying bills?

Inequality at home

We formulated two variables that represent unpaid housework and number of dependent children in the home. Our measures are different than those of Ross and Bird [5], who used self-reported percentage of housework as a measure of gender stratification at home (unpaid housework) and number of dependent children as a control variable. This data set has no measures of self-reported housework. We used instead number of dependent children in the home as an indication of work pressure at home on women, and as a surrogate measure for proportion of housework we made recourse to self-reported marital demands. The latter measure is broader than the household division of labor, but it reflects that division of labor. Glass and Fujimoto [34] and Sanchez [35] found that the actual distribution of work load at home (housework) across spouses was accurately reflected in wives and husbands' perception of equity and fairness about the household division of labor, close to our measure of marital demands.

Marital demands. Respondents were asked "How often do you feel your spouse makes too many demands on you, and how often does your spouse expect more from you than he/she is willing to give?" (1 = never, 7 = always). This is hopefully a measure inclusive of household division of labor, but one that

can mean any and all spousal demands and the perceived equity of those demands in the relationship. Responses were summed as a two-item index.

Number of children. Number of children was coded as the number of children under age 18 years living in the household. The average number of dependent children in the households was 1.23. Obviously, the number of children of wives and husbands should be the same, but the impact of dependent children on the health of wives and husbands may be different.

The experience of gender inequality

Ross and Bird [5] utilized work satisfaction, sense of control and distress as measures of the experience of gender stratification. We used two similar sets of variables, work rewards and three psychological states (mastery, self-esteem and distress) representing the experience of gender stratification.

Work rewards. Work rewards included two dimensions: autonomy at work and good-work environment. These indices were obtained by responses to questions about how strongly did respondents agree or disagree with statements about their main jobs? Job autonomy included statements on flexible work schedules, being one's own boss, and having independence on the job. Responses were summed into a three-item scale for wives ($\alpha = 0.69$) and husbands ($\alpha = 0.79$). Statements about a good work environment included opportunities for advancement, opportunities to use one's ideas, experiencing variety on the job, and one's job being repetitious work. Responses were summed into a four-item scale for wives and ($\alpha = 0.80$) and husbands ($\alpha = 0.80$).

Mastery. Mastery as originally developed by Pearlin *et al.* [36] measures a sense of internal control over one's life. It is a seven-item scale ($\alpha = 0.76$ for husbands, 0.75 for wives) with questions such as: there is really no way I can solve some of the problems I have, I feel that I'm being pushed around in life, I have little control over the things that happen to me, I can do just about anything I really set my mind to, I often feel helpless in dealing with the problems in life, what happens to me in the future mostly depends on me, and there is little I can do to change many of the important things in my life. Response categories ranged from strongly agree to strongly disagree.

Self-esteem. As originally defined by Rosenberg [37], self-esteem indicates a high evaluation of oneself. The scale used is composed of 10 Likert items that indicate feelings of self-worth and ability, attribution of good qualities to oneself, satisfaction and respect for oneself, etc. The responses were summed into a 10-item scale ($\alpha = 0.79$ for husbands, 0.81 for wives).

Distress. Psychological distress is measured as the response to seven questions asking about distress symptoms such as feeling lonely, feeling blue, worrying too much about things, feeling hopeless about the future, feeling tense, feeling restless, and

feeling helpless. This measure of psychological distress was developed by Derogatis [38] and is part of the SCL-90 (symptom checklist of 90 items for depression, anxiety, hostility and related psychological distress). We tried to match distress questions asked of the Czech respondents as closely as possible with those asked of Americans in Ross and Bird [5]. We were successful except for items on positive feelings (enjoy life, hopeful and happy) which are not included in this study. Responses to the seven items were summed into a scale ($\alpha = 0.76$ for husbands and 0.82 for wives).

Consumption/lifestyle

We used the following as indicators of health lifestyle in the Czech Republic:

Nutrition. This measure was obtained by asking respondents how often they ate three nutritious meals a day. Responses were coded (1) never, (2) rarely, (3) sometimes, (4) most of the time, and (5) always.

Sleep. Sleep was measured by asking respondents how many hours they usually slept in a 24-hour period. In this study, we use absolute deviation ($|X - \bar{X}|$) to calculate less-than-average and more-than-average sleep in hours.

Drinking. High consumption of alcohol and problem drinking are known detriments to health. We used a 12-item measure of problem drinking that includes questions on drinking too much, being criticized for drinking, seeking treatment for drinking, and questions about experiencing troubles at work and with law-enforcement, for example, due to drinking. The response categories ranged from 5 (always) to 1 (never). The responses were summed into a single scale.

The data set does not have measures of tobacco use, exercise and respondents' weight like that of Ross and Bird [5].

Health

We used five items to measure self-rated general health. Respondents were asked "In general, would you say your health is (1) poor (2) fair (3) good (4) very good (5) excellent", and "How true or false is the following four statements for you: I seem to get sick a little easier than others, my health is excellent, I am as healthy as anybody I know, and I expect my health to get worse." To the latter four questions, respondents also answered on a five-point scale from definitely false to definitely true. The five-item scores were summed in the direction of self-reported good health ($\alpha = 0.77$ for husbands, 0.82 for wives). Ross and Bird [5] used a single item index, self-rated general health, coded from very poor to very good.

Analysis Plan

First, we compare male and female respondents on health, control variables, inequality at work and home, their experience of inequality, and their consumption/lifestyles. Then, a regression analysis is conducted for each set of these variables (above) on health outcomes. To determine the direct impact of each set on health outcome, a multiple partial *F*-test is done.

RESULTS

In Table 1, Czech wives and husbands are compared on the variables used in this study. First, there is no significant difference between these Czech wives and husbands on self-reported health, contrary to Ross and Bird's [5] finding that American men were advantaged in health. In regard to control variables, the husbands are older and somewhat better educated than their wives. These matched wives and husbands indicate, of course, the same number of dependent children in the home. While the husbands have higher personal income than their wives, there is no difference between them in reported economic hardship. Wives are more likely to be unemployed, which includes housewives, but their husbands are more likely to be retired, perhaps due to their being older on average. Husbands report being overworked more than their wives and, interestingly, there is no significant difference between wives and husbands on reported marital demands. Czech husbands have more job autonomy, but there is no significant difference between husbands and

Table 1. Means and standard deviations for wives and husbands

	Wives (<i>N</i> = 501) ^a		Husbands (<i>N</i> = 511) ^a	
	Mean	SD	Mean	SD
Health	16.49	3.49	16.37	3.68
Age	40.17	11.19	43.09	11.50 ^b
Ethnicity	1.15	0.36	1.15	0.36
Education	12.85	2.26	13.14	2.95 ^b
Individual income	40.25 ^c	28.99 ^c	72.29 ^c	90.42 ^c
Economic hardship	21.66	4.80	21.57	4.87
Retired ^d	7.91	0.739	9.36	0.657 ^b
Unemployed ^e	30.81	2.312	18.73	1.939 ^b
Over employed ^f	2.11	0.521	18.91	0.779 ^b
Autonomy	7.28	0.883	7.92	0.937 ^b
Good work environment	12.16	0.890	13.32	0.929
Marital demands	4.75	1.65	4.84	1.45
Mastery	24.39	3.83	25.15	3.82 ^b
Self-esteem	34.87	4.86	35.94	4.76 ^b
Psychological distress	6.29	4.44	4.82	3.55 ^b
Nutrition	3.54	1.08	3.66	1.08 ^b
Sleep	0.74	0.60	0.73	0.64
Drinking problem	12.80	1.47	14.90	4.51 ^b

^aIn *t*-test, each variables has same case numbers for wives and husbands, but the number of cases for regression analysis were reported in Table 1. Because of listwise deletion, case numbers in regression analysis were 501 for women and 511 for men.

^bSignificant wives-husbands difference, 2-tailed test; $P < 0.05$.

^cIn thousands.

^dComparison group is disabled, homemaker, maternity leave, and unemployed.

^eComparison group is employed.

^fComparison group is full time, and part time.

Table 2. Multiple partial *F*-test in variance in self-reported health explained by each block for wives and husbands

Block	Variables	Wives (<i>N</i> = 501)			Husbands (<i>N</i> = 511)		
		β	ΔR^2	<i>F</i>	β	ΔR^2	<i>F</i>
1	Age	-0.239 ^a	0.087 ^b		-0.262 ^a	0.082 ^b	
	Education	0.022			0.047		
	Ethnicity	0.036			0.012		
2	Individual income	-0.008	0.011	1.382	-0.031	-0.017	2.527 ^a
	Economic hardship	-0.082 ^a			-0.128 ^a		
	Occupation status						
	Retired	-0.012			0.009		
3	Unemployed	-0.109			-0.055		
	Over employed	-0.112			-0.033		
	Marital demands	-0.011	0.005	1.518	0.030	-0.002	0.561
4	Number of children	0.077			-0.034		
	Autonomy	0.063	0.005	1.404	0.045	0.002	0.642
5	Good work environment	0.039			-0.017		
	Mastery	-0.026	0.138	13.995 ^a	0.180 ^a	0.114	25.570 ^a
	Self-esteem	0.130 ^a			0.093 ^a		
6	Distress	-0.207 ^a			-0.171 ^a		
	Nutrition	-0.027	0.017	10.737 ^a	0.018	0.011	7.418 ^a
	Sleep	-0.109 ^a			-0.104 ^a		
	Drinking problem	0.070 ^a			-0.002		
	<i>R</i> ² (total)		0.224	7.741		0.277	10.513

^a Significant level at 0.10.

^b *R*² of first equation as control variables.

wives on work environment. The husbands report more mastery and self-esteem, and the wives indicate more distress, a pattern consistent with American results. The two significant differences between wives and husbands in consumption/lifestyle is that husbands report better nutrition but more drinking.

The above comparisons of Czech wives and husbands are both consistent and inconsistent with gender differences in the United States, including those reported by Ross and Bird [5]. With respect to their relation to production, specifically work outside the home, there is no clear pattern of wife-husband inequality. While wives have lower personal incomes and indicate more unemployment, husbands are either retired or more overworked, and there is no gender difference in economic hardship. Our findings on work rewards (job autonomy and work environment) are generally consistent with Ross and Bird's [5] American results. In regard to unpaid work at home, however, we find no gender difference in marital demands at home, our surrogate measure of housework. The differences in mastery, self-esteem and distress between these husbands and wives in the Czech Republic are consistent with the American findings of Ross and Bird [5], with wives higher on distress but lower on mastery and self-esteem. This is also true for some of the husband-wife differences in consumption (nutrition, sleep and drinking). However, these Czech wives and husbands are no different in self-rated health, a major inconsistency between our findings and those of Ross and Bird [5].

In Table 2, we separate control and predictor variables into blocks and regress these blocks on self-reported health. Block 1 is the control variables, and age affects both wives' and husbands' health in the expected direction. Age is significantly and negatively related to health, but neither education nor ethnicity is related to health.

Inequality at work is represented by Block 2. As a block, these variables do not significantly impact the wives' health but do significantly and negatively affect the husbands' health. One of these variables, economic hardship, is significantly and negatively related to both wives' and husbands' health. None of the three variables under occupational status are significantly associated with either wives' or husbands' health.

Inequality at home as measured by Block 3 is not significantly related to the physical health of wives and their husbands (Table 2). Neither self-reported marital demands nor the number of dependent children is separately associated with the wives' and husbands' health.

The experience of inequality at work is represented by Block 4. Job autonomy and a good-work environment are not related to the physical health of either wives or their husbands. However, Block 5, another indication of experiencing inequality according to Ross and Bird [5], is significantly associated with wives' and husbands' health. Specifically, self-esteem and distress are related to wives' health in the expected directions, with self-esteem positively associated with health and distress negatively associated with health. However, Block 5 as a measure of subjective gender inequality is also associated with husbands' health, and all three variables, mastery as well as self-esteem and distress, are associated with husbands' health in the expected directions. That is, if the experience of gender inequality is measured by Blocks 4 and 5, then they affect these husbands' health in virtually the same way as they affect their wives' health.

Consumption/lifestyle is represented by Block 6. It is significantly associated with both wives' and husbands' health. Deviation in sleep patterns is negatively associated with health for both wives and

husbands, but drinking is significantly and positively associated with the reported health of wives. This latter finding is not really surprising since the mean on drinking problems for wives was 12.8 and a score of 12 meant no reported drinking problems. The total explained variance in health for wives is 22% and nearly 28% for husbands.

DISCUSSION

Women's work impairs their health, putting men at a health advantage by comparison, but men are disadvantaged by their unhealthy lifestyles. We extended the test of this hypothesis for health differences between the genders in two ways: into the Czech Republic and by comparing matched wives and husbands. The latter enabled us to better control for compositional differences between the genders, as the former put the research issue into another country with a different history.

The Czech wives reported less personal income, less job autonomy, more unemployment, and were more distressed and had lower levels of mastery and self-esteem than their husbands. These results are consistent with those of Ross and Bird [5] and suggestive of gender inequality in production. However, the Czech wives and husbands were no different in reporting economic hardship and marital demands at home, results inconsistent with those of Ross and Bird [5] and contrary to women being disadvantaged in production. With respect to consumption, husbands reported better nutrition, on the one hand, but more problem drinking, on the other, indicating no clear pattern of gender difference in health lifestyle. Most importantly, we found no difference between husbands and wives in self-reported health.

Previous research in the United States [2, 3] suggested that by statistically controlling for differences between American men and women, their disparity in level of health is reduced or even eliminated. By matching Czech wives with their husbands, we found no significant difference in their self-reported health, further evidence that gender differences in at least self-rated morbidity can be reduced with controls for some of the compositional differences between the genders. Unfortunately, we have no baseline data on self-reported health of Czech unmatched men and women with which to compare these results. The Institute of Health in Prague did the only systematic studies of health and mental health in the former Czechoslovakia, and they studied so few women as to make gender comparisons impossible. Thus a change in country and sampling, from unmatched to matched women and men, are confounded in the comparison of these findings with those of Ross and Bird [5].

The relation to production at work (Block 2) was significantly associated with self-rated health, but this was to the health disadvantage of husbands and not

the wives. This is the exact opposite of both the argument and findings of Ross and Bird [5], although economic hardship in Block 2 was to the health disadvantage of both wives and husbands. Czech wife's self-rated health was no more negatively affected by their relation to paid work than that of their husbands, although the wives have lower incomes and more unemployment.

A Czech wife being unemployed and/or with a lower income might not be indicative of her inequality in relation to her husband (the gender comparison in this paper). Her unemployment might be due to being a housewife and otherwise voluntary, as it is with women whose husbands have found increased income in the private sector since 1989, giving their wives the option of staying at home. During socialism, women in the Czech Republic worked out of necessity and being unemployed (a social parasite since employment was a constitutional guarantee) was a punishable state crime. Since 1989, that law no longer applies and some women have quit work. The parallel in American history—although not a close one—is the exit of ex-slave women from the labor force after Emancipation [39]. Furthermore, a wife's lower personal income is typically compensated by her sharing a husband's higher income and, thus, wives' income as well as unemployment may not translate into inequality and a health disadvantage relative to their husbands. Finding no connection between wives' relation to paid work (except for economic hardship) and their health might also be due to the history of socialized medicine in the Czech Republic. Regardless of income and employment, Czech women had the same access to medical care during socialism and since the reforms. That access is now becoming more stratified by income, employment and insurance, as it has been in the United States.

We found no wife-husband difference in perceived marital demands at home and this relation to production at home had no significant impact on the self-rated health of either wives or their husbands. This picture is hardly consistent with American research that the household division of labor is typically to the health disadvantage of women [5]. Perhaps, the difference in findings between the United States and the Czech Republic is due solely to our measure of the household division of labor as marital demands, but the meaning of demands at home might change from one country to the other. Work at home was not seen as a much of a burden in most Czech families, for it was the one sphere of life where one could live in truth and be a whole person during socialism. Household demands in the Czech Republic have often been greater for women than men. Outside work on a dwelling place was unnecessary for men living in state-maintained flats and coops, but routine housework, cooking and shopping took up much of the time of fully-employed wives. Nevertheless, these wives appeared not to translate housework in

particular and marital demands in general into a health impairment anymore than did their husbands.

Distress, mastery and self-esteem were associated with health, as expected, for husbands as well as their wives. To take this as evidence for the experience of gender stratification in the Czech Republic by women appears, however, to be unwarranted. We found little evidence that wife-husband differences at work (except for income) and home were to the health disadvantage of the wives. Rather, experiences at work and home affected the health of husbands at least as much as that of the wives. Furthermore, there was no wife-husband difference in economic hardship, and this hardship affected the health of wives and husbands alike. It is possible that distress, mastery and self-esteem are not related to gender stratification in the Czech Republic, at least not with paired wives and husbands. By the same token, distress, mastery and self-esteem were the best predictors of self-rated health in this study.

Consumption habits (Block 6) were significantly associated with the health of both wives and husbands. Sleep deviation affected the health of both wives and husbands, and drinking affected (and positively) only wives' self-reported health. Overall, no evidence was found that consumption or lifestyle was to the health disadvantage of Czech husbands compared to their wives, a finding anticipated with matched wives and husbands.

No gender pattern of wives' self-rated health being lower than that of husbands, explained by their relation to production (paid and unpaid work) and its subjective experience, was found in the Czech Republic. Given that the study was an extension of previous American research in two ways, into another country and with matched wives and husbands, we cannot be certain which of the extensions or both accounts for the difference between these findings and those of Ross and Bird [5], for example. Nor can we be certain that differences in measures between this study and that of Ross and Bird [5]—especially in health lifestyle and household division of labor—do not also account for the differences in findings.

We conclude that when matching women and men, as done in this study, much of the gender difference in self-rated health and many of the reasons for it will be reduced, and this can result in any country, not only the Czech Republic. This is due to controls over compositional differences between the genders. There are also good reasons to suspect that self-rated health by gender is different in the Czech Republic than the United States, and our results are due not only to differences in sampling (matched vs unmatched men and women) and measurement. Although Czech women were disadvantaged by gender stratification at work and role overload at home, their roles converged with those of men during socialism. Both women and men were forced to work full time outside the home and lived with an ideology that expected

public participation at the expense of private life. The genders have continued on parallel courses since 1989, facing together an uncertain and risky future. The history of Czech women is more like that of Czech men than American women. Hraba *et al.* [26] found in this context that unmatched Czech women and men in 1990–1991 reported the same stressors which had the same distress consequences for women and men. That is, the genders were alike in stress-distress, unlike American results. Thus, it should not come as a surprise that the genders in the Czech Republic are also similar in self-reported health. Czech wives and husbands reported the same level of health and its determinants could not be attributed to gender differences in production and consumption.

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