

**PROPORTIONATE OR CONCENTRATED BURDENS?
HEALTH OF WIDOWED, DIVORCED AND
NEVER-MARRIED IN HUNGARY**

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INTRODUCTION

It is a well-established fact that health status of widowed and divorced people is worse and their mortality is higher as compared with their married counterparts. It is also evident in the scholarly literature that the chances of long and healthy life are unequally distributed among people in different social positions. Nonetheless the interaction between the impacts of social and marital position has become an issue only very recently in socio-demographic analysis.

Are the life chances of those widowed people, who have high income and educational level disproportionately better as compared with the poor and uneducated ones? In other words are the chances of poor health and dying among uneducated widowed people significantly higher than we would expect it on the basis of summing up their health risks being much higher related to the educated and married counterparts? Furthermore, do health risks increase dramatically if someone is a widowed manual worker? Altogether then, we can raise the question: Are there extremely vulnerable and extremely privileged socio-demographic groups in terms of health risks in contemporary societies?

This analysis aims at which groups are extremely vulnerable in terms of their health risks in Hungary at the turn of Millennium. This analysis cannot be completed without investigating those mechanisms which link marital status to health risks so widely discussed in demographic literature. These mechanisms will serve as a basis for the hypotheses and interpretation. Therefore, we look at how that interpretative framework emerged in scholarly literature, which explains the extra risks of high mortality and poor health among non-married.

Connecting mechanisms

One of the earliest analyses, seen as a classic today, is Durkheim's *Suicide*, in which the author, identified connections between suicide rates and marital status (Durkheim 1982). To explain such connections he elaborated the concept of anomie later partially ignored in explaining extra health risks among non-

married. Durkheim also pointed out certain regularities which can still be seen as practically universal. Durkheim found suicide rate higher among the non-married than among married and even within the non-married group he identified clearly higher suicide ratios among widowed. The simple fact of being non-married goes with greater increase in the probability of suicide for men than it does for women.

Looking at the total mortality rates among the white population of the USA in the 1970's, Gove came to the same results (Gove 1973). In later years a great quantity of information was gathered regarding other countries and a consensus was also reached regarding an interpretative framework. This shaped the question in the relevant research for a long time to come.

The general framework of interpretation, which is used for all non-married groups now, but with varying emphases, distinguishes between two main types of mechanisms. The first type includes what are called mechanisms of selection: i. e. social processes leading to poorer chances of marriage or re-marriage among people having a poorer state of health originally (i. e. before choosing a partner, marrying or re-marrying) as compared to those who are in a good state of health. In terms of research methodology the mechanisms can be seen as disturbing factors in describing causal processes. Thus in second place we have to talk about so-called causal mechanisms. Regarding these mechanisms we assume that partly they all have a possible positive influence on life chances and, partly, they operate mainly among married people. Such conditions can be a relatively favourable financial position, a sense of emotional stability owing to the presence of a partner, a sense of being psychologically supported, as well as the possible positive influence of spouses on the person's health behaviour (i.e. they pursue fewer habits detrimental to health and use the health services adequately).

As a contrast to the above, we may assume that the everyday life of the non-married contains fewer of the above mentioned protective mechanisms. As far as divorced are concerned, we must mention the influence of a relatively worse financial position, whereas in the case widows the stress reactions that follow the loss of the partner are usually emphasised as the most important psychological factor.

If we survey the studies written in this field over the recent years, we see that studying the selection mechanisms has become less significant. Studies in this field, some of them extremely thorough, have come to the conclusion that selection mechanisms play a negligible role in the emergence of the differences concerning marital status in terms health status and mortality.

According to Fu and Goldman (1997), conditions which predetermine poor health (alcohol and drug use, obesity or even low level of education) could not be shown to worsen marriage chances to any significant extent (in the USA of the 1980's). State of health had a similarly negligible influence on differences

in chances of marriage and re-marriage in the Netherlands in the 1990's. (Jung et al. 1998). According to the above mentioned authors and several others it seems clearly proven that the role of selection mechanisms is negligible in explaining the differences in state of health and mortality according to marital status.

We have to reckon with cultural differences when we study the working of causal mechanisms. Beyond the working of the cultural environment a significant role has to be attributed to differences in economic and institutional settings (Elstad 1996). To use an obvious example, clearly the burdens of divorced persons were different in the cases of a well developed welfare system than in case of its absence. The psychological burden of being divorced is a different experience for people who live in a society where divorce is a rare, exceptional, rather unconventional procedure than those in a setting where this is a common practice. Being a widow is a different experience if the person is surrounded by a number of other widows than if the person's bereavement is an exceptional, rare event.

Despite the fact that differences in life and health chances according to marital status are clearly influenced by the overall social and institutional setting, there are not however, many publications where these differences are emphasised. There are very few attempts to make these factors play a role in formulating the research question or even to use them in interpreting the research findings. It could be said that the researchers seem to be looking more for a connection of a 'scientific' type which could characterise, for example, changes in mortality and state of health after conjugal bereavement which occur in practically every society (at least every Western, industrialised society).

But then: are there such regularities? At the moment it seems as if culture has a powerful influence not only on the transformations and mechanisms that mediate between marital status and health or mortality: even the surplus mortality or health deficit which occurs as an end result seems to be influenced by it. Differences are significant, for example, in determining which groups of the population are affected most drastically by surplus mortality and health deficit. Thus, for example, as far as widows are concerned, it once seemed obvious that mortality increases after loss of spouse (Hu and Goldman demonstrated this in terms of a number of countries (1990)), and this phenomenon seems to be most powerful in the period just after the bereavement (Martikainen and Valkonen 1996/a). However, no such effect was noticeable among widowed men in the United States (while the mortality of divorced men in the same setting was significantly higher) (Zick-Smith 1991). Most surveys found a higher increase of mortality among widowed men than among widowed women – however, no such differences occurred, regarding the mortality of Israeli widows (Manor and Eisenbach 2003).

There is practically a consensus among researchers that loss of spouse has a more dramatic effect (in terms of state of health) among younger than older persons. It has not yet been clearly decided, however, whether there is a significant surplus mortality (or health deficit) at all among the very old age group of non-married persons.

The picture is even less clear among the divorced. According to Hu and Goldman's classic and wide ranging mortality analysis (1990), in the 16 countries analysed the mortality ratios of the divorced showed the widest difference compared to that of married people. Even though according to the findings of more subtle age-specific analyses, the mortality of young widows often exceeded the mortality of divorced people of the same age group. At the same time, surplus mortality also occurs clearly among the elderly divorced. Some of those surveys that concentrate specifically on the very old come to the conclusion that in the United States the phenomenon of health deficit is absolutely non-existent among the elderly divorced population (Goldman et al. 1995). Some other surveys emphasise that men are more strongly affected, yet others find the same concerning the female population.

The situation is similar concerning social mechanisms that mediate between marital state and state of health or mortality. In the broadest sense, there is a consensus that in the case of loss of spouse psychological factors play the most important role. Within this in the period directly following the loss of partner the most vital factor is stress, while in the subsequent period the main factor is that the social network becomes more sparse and certain ties which had once been maintained through the partner may become weakened or lost. There is not the same degree of agreement concerning the details. Can we attribute a serious role to the possible worsening of the financial conditions after loss of spouse? Are the above factors equally important for men or women, the old and the young, the educated and the less educated? Is it possible that following bereavement it is mainly the lifestyle that changes in such a direction as to have harmful influence over state of health?

Similarly, in terms of divorced people it is also customary to emphasise one mediating mechanism over all the others. In this case it is the worsening of the financial position after divorce – a change which can be prognosticated in practically all countries. At the same time it is also obvious that divorce affects the state of health through psychological factors as well. Besides, many researchers, particularly those who carry out mortality analyses by causes of death argue that some special causes of death related to life style factors, for example lung cancer and cirrhosis are particularly common among persons who had divorced in an earlier part of their lives.

Zick and Smith (1996) clearly pointed out financial mediating mechanisms among women. According to their analyses of the American population, the only channel through which marriage leads to a better state of health for women

is that it creates better financial conditions in general and significantly reduces the risk of regressing into poverty.

Understandably, very few databases allow for the simultaneous study of the full spectrum of transfer mechanisms. Ideally a database like that should account for all the changes that follow the change in marital status, whether they be material or psychological in nature or affect certain elements of lifestyle.

Without having completed the description and interpretation of differences in mediating mechanisms, some research projects seems to be turning in a new direction these days. They are addressing a question the study of which cannot substitute a detailed mapping of transfer mechanisms but is suited to shed light on the most important social problems that occur in the area of a non-married marital state regarding mortality and state of health.

There has already been some findings to show that the negative effects of divorce and loss of spouse on health and mortality are not evenly shared between various social groups. Earlier analyses, as we had tried to demonstrate in rough outline, followed a classic demographic approach, in other words examined differences according to gender and age. After analysing indicators of social position, however, a number of facts became identified which showed that certain groups were particularly affected and these groups could be outlined by various characteristics not primarily of demographic nature. According to Hemström's (1996) analyses of the Swedish population, surplus mortality attributed to loss of partner is far higher among the poorly educated than among those who have at least completed a course of vocational education. This connection was present for men and women alike. While the surplus mortality of men and women who have no vocational training was 30 and 40% (compared to the corresponding married population), for those with at least vocational training were only 10%. In the United States Waldron et al. (1996) found that uneducated Afro-American non-married women constitute the population where health chances are especially worsened by a mutual interaction of non-married marital state, high chances of unemployment and poor education.

The first steps towards formulating the question in a theoretical language were taken by Valkonen and Martikainen (1998). They assume that the psychological burden of conjugal bereavement can be eased by using other resources and these can counteract the increased mortality chance that accompanies the loss. They assume that one such resource can be the activation of inter-personal relationships, reliance on cultural capital associated with a higher level of education, as well as high income (benefiting for example from the consumption of greater number of services). According to their hypothesis we should find a smaller surplus mortality after loss of spouse among the highly trained and the wealthier than among those with a lower level of education and lower income. Indeed, a great number of findings in social psychology suggest that, although these results are culture specific, persons and families of a lower social status

find it more difficult to manage every negative event of life than persons or families of a higher status (Kessler and McLeod 1990). The hypothesis is self-evident, yet it was not proven by Finnish mortality figures (Martikainen and Valkonen 1998). A Belgian survey that set out with a similar hypothesis found the exact opposite: surplus mortality of widows compared to married persons was significantly higher among graduates than among those with only secondary level qualifications. Lowest surplus mortality was found among those who had only been to primary school (Lusyne, Page and Lievens 2001).

The above, rather surprising elements suggest that concentration or the proportionate distribution of the mortality burdens of the non-married might rewrite or significantly modify what we used to think about the surplus mortality of single, widowed or divorced people and their exposure to greater health risk. Therefore in the present paper, beyond a general description of the state of health of the Hungarian non-married population, we also wish to examine the question whether in the case of the divorced and the widowed the risk of poor state of health is concentrated in any of the groups distinguished by various dimensions of education and financial position.

In the absence of adequate research findings, however, we also consider it important to provide at least a sketchy picture of the kind of mediating mechanisms that possibly in operate between marital status and state of health, in Hungary at the turn of the century. This picture, however, will not be complete, owing to the characteristics of the available database.

HYPOTHESES, SOURCE OF DATA, METHODS OF ANALYSIS

In Hungary mortality and health of the non-married population have not been examined in detail. Our earlier calculations registered a significant surplus mortality both among widows and among the divorced in all examined age groups when compared to the corresponding groups of married people (Kovács 2003). In that cross section mortality analysis, however, it was not possible to take into account any of the characteristics of the social position of the deceased.

Earlier examinations of health concentrating on other social dimensions had shown that the level of education and the various markers of income position play a highly significant and only partially interchangeable role in determining the state of health of the population (including the risk of ill health). On the basis of the above we assume that there are probably great differences in the changes of state of health of married and non-married people. In the light of mortality figures we can assume significant differences in the health risk of divorced men and divorced or widowed women and men compared to married persons, but these differences lessen as the persons progress toward old age. In

the case of divorced women age-related connections are less likely to be found, but generally we assume the presence of the same degree of health deficit as we find among men. We also assume that income and other material indicators will play an emphatic role among the mechanisms that mediate between a non-married marital state and a poor state of health.

In Hungary, both the statuses of being divorced and widowed are common phenomena. Although the probability of losing someone's spouse shows a rather steep social gradient, this experience, due to the high mortality of middle aged, is not rare even among the most educated and wealthiest social groups. Therefore we do not assume, that skills of managing bereavement or divorce is missing in any social group in terms of having no friends or acquaintances experiencing the same life events. Based on the assumption that crisis management skills and supportive social environment play an important role in maintaining satisfactory health (Lusyne, Page and Lievens 2001) the only assumption we can make, that no special social-demographic group, but only better off younger widowed might lack such a knowledgeable and supportive social environment.

We can also assume, that at the lower edges of social stratification, especially among the poorest, the constant financial strain persisting in these families makes any event of financial loss even more stressful. It is also clear, that these families have no free resources, which can be used for the consumption of any psycho-social services. Therefore, we can assume some concentration of health burden among the poorest or most deprived families.

As never married, we have to set up different hypotheses for two broad age groups separated in this study. In the younger age group, the group of never married is relatively large, while it is small among the older ones. It can be argued that the never married status is partly a result of a kind of health related selection in the older age groups, but much less in the younger ones. Nevertheless, it can also be assumed, that financial difficulties can not be better managed together with someone else, so that we do not exclude, that poorest people living alone can experience extra stress, which can lead to worse health status.

For our present analysis we use the data of the survey that was carried out on the turn on 2001 and 2002 by the Demographic Research Institute. The data collection entitled 'Turning points of life course' covered the 18 to 75 year-old population who are Hungarian citizens and live in non-institutional households. The survey offered detailed information on the family ties of the person, the financial position of the family and also contains a number of attitude questions. The sample of the survey can be considered representative in terms of distribution according to sex, age group and place of residence. The total number of persons participating in the survey was 16,300. Although the survey was the first wave of a follow-up type panel survey to be implemented later on, in its present form it can be seen as a cross-section survey.

Information regarding health status is found at two points of the questionnaire. In this paper we use the indicator of disability to measure health status. We qualify every person as disabled who answered 'yes' to the question 'do you have a health problem, illness or disability which is an obstacle to you in your everyday activities?' With regard to this question we must take into account that in the present survey we can only give a conservative estimate of differences in state of health, as non-married people who have health problems of this kind are more likely to be institutionalised than married persons who are in the same state of health (Murphy et al. 1997).

In evaluating the socio-economic status of our respondents we use a few indicators that we had successfully applied earlier when analysing the social determination of health. We have detailed data concerning the level of education of the respondent. We eventually processed this information into a five-grade scale. On the lowest rung of this ladder we find those people who have not completed primary school in the way in which it is demanded by the Hungarian regulations. They are followed by those who have completed their primary school education, in other words finished eight classes. Within the group of those people with secondary qualifications we separated those with a vocational qualification from people who (also) have completed grammar school. Eventually, we have a separate class for persons who graduated at some college or university. At some points of the analysis we use a more concentrated, two-grade educational classification.

Incomes were measured with great accuracy in our survey. After accounting for all the regular and 'transfer' revenues of the family we took into account the number and age structure of people living together before calculating the equivalent per capita income. Per capita income, if corrections are also made to account for family structure, is a far more realistic indicator of financial well-being than personal income or, particularly, uncorrected per capita income. Involving financial position into the analysis had the drawback that information regarding the number of children (which is available both in terms of children living with the respondent and of those who had already moved out) was not included in the analysis as the number of children living in the family had a rather too strong correlation with per capita income. Eventually per capita equivalent income was incorporated in the analysis in the form of a categorical indicator, that of belonging to one of the five income quintiles. We hoped that in this way we shall be able to observe more precisely the risks that possibly accumulate in some of the social groups.

We considered that it would also be useful to analyse the financial position of each family through a different channel. It is well known that income mobility emerged and became quite intensive in the Hungary of the 1990's (Spéder 2002). Therefore, we tried to approach the long-term changes in the fortunes of the family, for which we used what is called a deprivation scale. The depriva-

tion scale asks the respondent questions regarding the possession of certain goods and the use of certain services.¹ Placing persons on the deprivation scale we receive clearly outlined quintiles regarding the entire population. In the lowest deprivation quintile we included persons who are deprived in their family of at least 7 of the goods and services listed. In the lower medium quintile we put persons who lack 5 or 6, in the medium quintile those who lack 4 or 5, while in the upper medium quintile we find people who are deprived of 1 or 2 goods or services. The top deprivation quintile includes persons who own or use each of the assets listed.

As the last means of characterising social position we examined the respondent's occupational group. In the case of the elderly we used the last occupation in which they worked. The classification of occupations was very highly concentrated in this case – we only distinguished manual from non-manual jobs.

Beyond material position we also wished to characterise, at least on the level of mere indications, psychological influences, too. For this purpose we constructed a 'loneliness indicator' which we compiled from responses given to questions gauging various aspects of a sense of loneliness.

Our database has no indicator that would allow us to characterise various elements of life style.

In our analysis we used logistic regression. In the analysis we always strove to compare nested models and examined interactions between pairs of individual variables. This paper does not examine higher-level interactions.

On the basis of our earlier analysis we found that social characteristics that influence health chances operate in a fundamentally different fashion among the older and the younger generation. Therefore, we divided our sample into two sub-samples, that of 25 to 54-year-olds and that between 55 and 75 years of age, and analysed both separately. Knowing the characteristics of the sample this division proved logical with regard to the aims of the present analysis, even though from several points of view, the 55–64 age group can be seen as a transitional stage between the relatively young and the elderly age groups.

In younger sub-populations there is a relatively high rate of people who had never yet been married, although this is mainly true of men. The rate of widows is low, in fact among men it is on the verge of not being analysable. Among the elderly the rate of those who had never been married is low, and the proportion

¹ These items were the followings:

An apartment in which everyone has a separate room; eats a hot meal daily; WC and bathroom or shower in the apartment; garden, terrace or balcony overlooking pleasant environment; telephone; car; colour TV set; washing machine (automatic); dishwasher; video recorder; PC; go away for a week for a holiday once a year; regularly buys new clothes; replaces worn out furniture; subscribes to a newspaper or buy it regularly; invites friends for supper once a month; has lunch with his/her family in a restaurant once a month; saves at least 5,000 HUF a month.

of widows is high. The rate of divorced, although it obviously shows an increase as we progress toward old age, is not very different in the old and the younger age groups (Table 1). Therefore, in the present analysis only the older age group was considered as experiencing the position of widows.

Table 1
Composition of the sample according to marital status, disability, level of education, income, level of deprivation, occupational group and degree of loneliness by sex and age

	Men					Women				
	Age 25–34	Age 35–44	Age 45–54	Age 55–64	Age 65–75	Age 25–34	Age 35–44	Age 45–54	Age 55–64	Age 65–75
	(n=1640)	(n=1398)	(n=1614)	(n=1166)	(n=1008)	(n=1604)	(n=1402)	(n=1748)	(n=1441)	(n=1537)
<i>Marital status</i>										
Single	59.1	20.5	11.7	4.6	3.3	40.5	9.1	5.1	4.9	3.6
Married	37.5	67.8	73.2	74.1	79.2	51.7	72.9	67.3	60.5	41.5
Widowed	0.1	0.1	1.7	5.6	12.1	0.3	3.5	8.4	20.8	45.9
Divorced	3.3	11.5	13.5	10.7	5.5	7.5	14.6	19.2	13.8	9.0
<i>Presence of disability</i>										
Yes	11.7	17.9	34.9	49.3	43.0	9.2	19.2	39.6	50.4	32.8
No	89.9	82.1	65.1	50.2	57.0	90.8	80.8	60.4	49.6	67.2
<i>Level of education</i>										
Less than eight years	1.6	1.6	2.0	5.2	16.8	1.9	2.2	2.9	7.6	32.1
Eight years	14.1	14.9	17.4	23.3	30.0	14.9	20.1	28.4	36.9	37.9
Vocational school	45.0	46.9	44.5	34.7	24.5	27.1	25.1	21.0	15.7	11.1
A levels	26.3	23.0	22.2	20.3	15.0	36.0	33.9	33.6	28.6	14.4
Tertiary	13.0	13.6	13.9	16.6	13.7	20.1	18.7	14.1	11.2	4.6
<i>Income quintiles</i>										
Lowest	19.1	25.9	26.1	16.1	12.4	25.0	30.8	23.7	16.1	13.7
Lower-medium	14.5	18.4	15.8	20.1	20.0	17.4	17.6	18.0	20.5	26.9
Medium	15.8	17.1	16.9	19.8	28.0	15.2	16.1	18.7	24.1	31.5
Upper medium	20.8	21.3	19.4	20.2	23.5	18.5	19.0	20.0	20.3	17.7
Upper	29.7	17.4	21.9	23.8	16.1	23.8	16.4	19.7	18.9	10.2
<i>Deprivation quintiles</i>										
Lowest	21.7	26.7	25.2	17.4	12.3	24.7	28.5	25.5	20.7	13.6
Lower-medium	13.4	16.5	14.3	14.0	12.3	14.6	16.8	18.2	13.4	13.8
Medium	18.8	17.5	17.5	19.1	17.6	20.6	18.3	19.2	20.8	19.1
Upper-medium	25.6	20.3	22.5	24.0	27.9	23.6	20.3	19.3	24.4	32.4
Upper	20.6	19.1	20.4	25.5	29.9	16.5	16.1	17.1	20.7	21.2
<i>Occupational group</i>										
White-collar	24.7	19.6	19.2	25.8	28.6	46.1	43.6	42.5	40.7	29.9
Manual	75.3	80.4	80.8	74.2	71.4	53.9	56.4	57.5	59.3	70.1
<i>Loneliness</i>										
Feels lonely	16.4	18.5	20.8	18.1	19.8	25.4	24.3	26.2	28.1	37.9
Does not feel lonely	83.6	81.5	79.2	81.9	80.2	74.6	75.7	73.8	71.9	62.1

The indicators of sex and age were used in our models on every occasion, in order to allow standardisation. The age variable was used in its discrete form to

enable possible interactions to appear clearly. However, we also carried out the analyses using a continuous age variable but which caused no significant difference in our results.

Table 2
Rate of persons living with disability according to sex, marital status and age

Age group	Male				N	Female				N
	single	married	widowed	divorced		single	married	widowed	divorced	
	(percent)					(percent)				
25–34	11.5	9.8	0.0	18.5	1639	7.2	10.5	20.0	10.8	1606
35–44	19.2	15.8	50.0	27.3	1399	20.5	17.4	28.6	25.0	1401
45–54	45.2	31.9	51.7	39.9	1613	48.9	37.7	53.1	38.2	1748
55–64	73.6	48.2	55.4	52.8	1166	38.0	49.2	59.3	41.2	1441
65–75	57.6	56.7	63.1	49.1	1008	78.2	64.8	68.8	65.7	1537
N	1531	4463	219	612	6825	993	4538	1205	997	7733

RESULTS OF THE ANALYSIS: DISTRIBUTION OF BURDENS

In the 25–54 age group, after standardisation to gender and age, the odd of disability is significantly higher among the non-married than among the married. This more than 20% surplus of the odd ratio drops considerably after we take into account the effect of levels of education. Other indicators of social position (income and deprivation levels) have a smaller influence than the last mentioned effect on the odds of disability of those who had never been married (Table 3 models “A”, “B”, “C” and “D”). Odds of disability showed a most clear correlation with the ‘loneliness’ indicator: after its inclusion into the model, it influences the odds of the ‘never married’ in such a way as to eradicate any significant difference in comparison with the odds of disability of the married (Table 3, model “E”).

In the same age group, widowed persons showed an exceedingly high odd of displaying disability. At the same time, as we noted at the start of the present analysis, the number of widowed is relatively low in this age group, and so our results in this respect are relatively uncertain. It is still clear, however, that material and social disadvantages must play a serious role in the case of young widowed people, just like psychological burdens. In models “B” and “C”, but particularly “E”, the odd ratios of widowed persons gradually approached one.

Table 3
Chances of disability: changes of odd ratios after inclusion of variables characterising social position, in the 25–44-age group

	A	B	C	D	E	F	G	H
<i>Sex</i>								
(reference: male)								
Female	1,0658	1,1021	1,0425	1,0385	1,0303	1,2274 ***	1,0710	1,0045
<i>Age group</i>								
(ref: 25–34 years)								
35–44 years	2,0755 ***	1,9952 ***	1,9330 ***	1,9114 ***	2,0252 ***	2,0412 ***	1,9617 ***	1,8871 ***
45–54 years	5,3489 ***	5,1053 ***	5,4517 ***	5,4164 ***	5,2302 ***	5,4637 ***	5,0357 ***	5,3366 ***
<i>Marital status</i>								
(ref: married)								
Single	1,2249 **	1,1344	1,1704 *	1,2058 *	1,0444	1,1438	0,9923	1,0509
Widowed	1,9970 ***	1,6370 ***	1,6780 ***	1,7275 ***	1,5888 **	1,8599 ***	1,3448 *	1,4110 *
Divorced	1,3442 ***	1,3164 ***	1,1829 *	1,3127 ***	1,0974	1,3273 ***	1,1016	1,0999
<i>Level of education</i>								
(ref: tertiary)								
Under 8 years		9,0812 ***					8,4410 ***	
Completed 8 classes		3,6202 ***					3,3604 ***	
Vocational		2,4268 ***					2,3173 ***	
A levels		1,5486 ***					1,4980 ***	
<i>Income quintiles</i>								
(ref: upper quintile)								
Lowest			3,0967 ***					2,8771 ***
Lower-medium			2,3803 ***					2,2584 ***
Medium			1,8069 ***					1,7209 ***
Upper-medium			1,4337 ***					1,3999 ***
<i>Deprivation quintiles</i>								
(ref: upper quintile)								
Lowest				3,2787 ***				
Lower-medium				2,1559 ***				
Medium				1,7668 ***				
Upper medium				1,4142 ***				
<i>Occupational group</i>								
(ref: white-collar)								
Manual						1,9803 ***		1,7901 ***
<i>Loneliness</i>								
(ref: not lonely)								
Lonely					1,9657 ***		1,8117 ***	

Divorced members of the younger age group also have a higher chance of disability, as it is indicated by an odd ratio of 1.34 in model “A”, a level, which differs significantly from 1.0. The odd ratio proved very sensitive to the income indicator: after involving the latter (model “C”), the odd ratio dropped considerably. The greatest change, however, was still caused by involving the ‘loneliness indicator’ (model “G”). Taking into account the generally poorer health of people who are lonely and have a low income (model “H”), the odd of divorced with disability do not differ significantly from that of the corresponding married population. Thus among the young divorced population, material drawbacks and the psychological burden of loneliness can both be assumed to play a mediating role, which have a roughly equal part in influencing the chances of ill health.

We also examined possible interactions with regard to variables used as indicators of social position. In the younger age group interactions between family status and sex all proved significant and show considerably lower health burdens among women than among men (Table 4), except in the case of widows where there is no significant difference between men and woman in the chances of disability (model "B"). Thus in the age groups between 25 and 54 the health drawbacks of those who had never married all concentrate among men. We found no significant interactions between marital status and level of education, level of deprivation or occupational group. The situation is different, however, in terms of income position: divorced members of the poorest stratum (lowest income quintile) have a far higher odd of having disability. After involving the interactions (Table 5, model "C"), the health chances of the divorced do not differ considerably (in general) from those of married. In other words, the health burdens of the divorced concentrate among the poorest groups.

Table 4
*Chances of disability: changes in odd ratios and interaction effects
(sex and marital status), in the 25–54-age group*

	A	B
<i>Sex</i> (reference: male)		
Female	1,0658	1,2112 *
<i>Age group</i> (ref: 25–34 years)		
35–44 years	2,0755 ***	2,0595 ***
45–54 years	5,3489 ***	5,3381 ***
<i>Marital status</i> (ref: married)		
Single	1,2249 **	1,4470 ***
Widowed	1,9970 ***	2,2070 *
Divorced	1,3442 ***	1,6286 ***
<i>Interaction effects</i> (sex x marital status) (ref: married men)		
Single and female		0,6613 **
Widowed and female		0,8472
Divorced and female		0,7147 *

Table 5
*Chances of disability: changes in odd ratios and interaction effects
(income and marital status) in the 25–54-age group*

	A	B	C
<i>Sex</i> (reference: male)			
Female	1,0658	1,0385	1,0348
<i>Age group</i> (ref: 25–34 years)			
35–44 years	2,0755 ***	1,9114 ***	1,9086 ***
45–54 years	5,3489 ***	5,4164 ***	5,4618 ***
<i>Marital status</i> (ref: married)			
Single	1,2249 **	1,2058 *	1,2303
Widowed	1,9970 ***	1,7275 ***	1,5990
Divorced	1,3442 ***	1,3127 ***	1,0315
<i>Income quintiles</i> (ref: upper two quintiles)			
Lowest quintile		2,5703 ***	2,4144 ***
Low-medium and medium quintiles		1,7297 ***	1,6925 ***
<i>Interaction effects</i> (income x marital status) (ref: upper income quintile and married)			
Lowest income quintile and never married			0,9518
Low-medium and medium income quintiles and never married			0,9659
Lowest income quintile and widowed			1,0548
Low-medium and medium income quintiles and widowed			1,1555
Lowest income quintile and divorced			1,6262 *
Low-medium and medium income quintiles and divorced			1,2087

As 55–75 year-old, odd ratios of widows were found significantly higher than those of married people, at the same time, this difference in probability is smaller than that found among young married and widowed persons. The probability of elderly widows for disability is 'easy to explain.' The fact that widows in general are less educated (Table 6, model "B"), and that a higher percentage of them work or used to work in manual occupations (model "E"), as well as the fact that a great proportion of them do not own a wide range of goods (model "C") seem to have considerable influence over their health chances. Our 'loneliness' indicator, however, influenced these chances, most heavily. This means that among elderly widows we have to attribute particular importance to psychological transfer mechanisms. Model "H" also indicates that indicators which signal social stratification (of these we included level of education) play an independent part in the poor health chances of widows, which means that disadvantages of the social type are not only mediated through psychological mechanisms.

Table 6

Chances of disability: changes in odd ratios after inclusion of variables characterising social position, in the 55–75-age group

	A	B	C	D	E	F	H
<i>Sex</i> (reference: male)							
Female	1,1302 *	0,9991	1,1201	1,0902	1,2116 **	1,1095	0,9858
<i>Age group</i> (ref: 55–64 years)							
65–75 years	1,6241 ***	1,3474 ***	1,7564	1,4983 ***	1,5936 ***	1,6181 ***	1,3527 ***
<i>Marital status</i> (ref: married)							
Single	1,3136	1,2301	1,1484	1,2729	1,2811	1,0174	0,9814
Widowed	1,3554 ***	1,2259 **	1,2736 **	1,3057 ***	1,2465	1,0196	0,9340
Divorced	0,9150	0,9739	0,8070	0,9161	0,9403	0,7612 **	0,8141
<i>Level of education</i> (ref: tertiary)							
Under 8 years		4,6114 ***					4,4918 ***
Completed 8 classes		3,0410 ***					3,0343 ***
Vocational school		2,0649 ***					2,0953 ***
A levels		1,6057 ***					1,6307 ***
<i>Deprivation quintiles</i> (ref: upper quint.)							
Lowest			2,4743 ***				
Lower-medium			2,3541 ***				
Medium			1,8721 ***				
Upper-medium			1,5278 ***				
<i>Income quintiles</i> (ref: upper quintile)							
Lowest				3,1785 ***			
Lower medium				2,8204 ***			
Medium				2,3912 ***			
Upper medium				1,7798 ***			
<i>Occupational group</i> (ref: white-collar)							
Manual					2,0653 ***		
<i>Loneliness</i> (ref: not lonely)							
Lonely						2,0196 ***	1,6307 ***

One surprising result is that the health chances of divorced in the older age groups do not differ significantly from that of married people. In terms of deprivation the situation of the divorced is somewhat worse than that of the entire population and, not surprisingly, they have a higher rate of persons who feel lonely. A situation worse in terms of deprivation and loneliness generally goes with poorer health. If we adjust for these indicators (Table 6, models “C” and “F”), we can also see that apart from these influences, being divorced would actually go with better health than being married.

In examining the elderly our focus was once more to find out whether health problems were concentrated in any of the demographic or social groups in par-

ticular. Our results concerning the interaction of marital state with sex are summarised in Table 7. Significant interaction was only found among those who had never married. This also means that the relatively small health deficit that we found among single men and women compared to their married counterparts was concentrated almost entirely among men. The health of unmarried women is thus no worse than that of their married counterparts.

Table 7
Chances of disability: changes in odd ratios and interaction effects (sex and marital status), in the 55–75-age group

	A	B
<i>Sex</i> (reference: male)		
Female	1,1302 *	1,1847 *
<i>Age group</i> (ref: 55–64 years)		
65–75 years	1,6241 ***	1,6313 ***
<i>Marital status</i> (ref: married)		
Single	1,3126	1,9635 **
Widowed	1,3554 ***	1,2693
Divorced	0,9150	1,0566
<i>Interaction effects (sex x marital status)</i> (ref: married and male)		
Single and female		0,5049 *
Widowed and female		1,0580
Divorced and female		0,7914

As far as indicators of social position are concerned, significant interaction was only found in terms of level of education. In this analysis (for the sake of transparency) level of education was handled in a very compact fashion, distinguishing only two groups: those who have no more than a primary level education and those who have higher qualifications. The majority of the interaction elements are not significant and their values are also rather close to one (Table 8, model “B”). In the case of unmarried persons with no secondary school qualifications (who are mostly men) we found a high concentration of poor health. Thus we can say that in the age group 55 to 75 as a whole health burdens related to marital status are distributed more or less evenly, except for those who had never married and lack secondary school qualifications. In this latter case these people seemed particularly vulnerable.

Table 8

*Chances of disability: changes in odd ratios and interaction effects
(level of education and marital status), in the 55–75-age group*

	A	B
<i>Sex</i> (reference: male)		
Female	0,9916	0,9982
<i>Age group</i> (ref: 55–64 years)		
65–75 years	1,4072 ***	1,4068 ***
<i>Marital status</i> (ref: married)		
Single	1,2418	0,8980
Widowed	1,2773 **	1,2375
Divorced	0,9754	1,0481
<i>Level of education</i> (ref: over 8 years)		
No more than 8 years	2,1163 ***	2,0771 ***
<i>Interaction effects (marital status x level of education)</i> (ref: over 8 years education and married)		
no more than 8 years education and single		1,9427 *
no more than 8 years education and widowed		1,0556
no more than 8 years education and divorced		0,8126

CONCLUSION

In accordance with our hypotheses, the role of possession of material assets has been shown to play a role among several of the non-married groups. At the same time, the influence of financial factors, which we were able to measure with high accuracy from a number of angles, seemed to play a lesser role than psychological burdens. Nevertheless, there was only one indicator to gauge this latter factor, and this undermines to some extent the soundness of our results.

Our data collection arrangement does not allow us to consider these connections more than associations which, however can serve as well-founded hypotheses in future research, investigating the kind of mechanisms through which the non-married state leads to worse than average chances for a healthy life.

As extra high risk of disability among the younger divorced, it is important to note, that the number of widowed in this age group was particularly low. It is likely, that this is the only reason why we could not point it out the extra vulnerability of the poorest younger widowed people. It seems to be rather likely, that our hypothesis about the extra stress of the poorest families in case of loss

of spouse can be maintained. Our hypothesis about the especially stressful situation of poor never married, however, failed. As it was assumed, we did not find concentration of health risks in any social groups being in advantageous situation.

Contrary to our assumption, we did not find any concentration of disability among the older widowed and divorced, but we did among the least educated never married. This finding suggests that in certain social-demographic groups special health disadvantages are concentrated. The less likely explanation for the high disability risk of never married with low education is, that these persons, who are likely men, lack many resources necessary for maintaining good health in the same time. It is very often assumed that health related knowledge and health consciousness is more developed among women than men. Never married men might have any opportunity to acquire the element of this knowledge throughout their lifetime. It is also without doubt, that social relations are less frequent in the case of never married men, than in any other social groups.

We have also been able to show which social classes are affected by a concentration of a high probability of poor health. Among the younger generation we found that the poorest groups of the divorced population were cases of such concentration while among the elderly the most badly affected were unmarried persons of low education. Such a high concentration of health deficit is likely to lead to the social marginalisation of these persons and a considerable worsening in their quality of life.

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