Chapter 4
The Importance of Social Capital for Health among Older People: The Bourdieu Perspective

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4.1 Social Capital and Health – Bourdieu's Notion of Social Capital

Modern concepts of health rely on a bio-psycho-social paradigm of health (Freidl et al. 2007). This paradigm follows the idea of health or illness being not just the result of biological mechanisms but of health being influenced by all three aspects. The bio-psycho-social model of health is influenced by modern action theories and system theories (Freidl et al. 1999). These theories regard the individual as being within a field of tension between his or her potential to stay healthy and stressors from the environment. This idea features prominently in Antonovsky's concept of salutogenesis, as well as in the theory on stress and coping with stressing environments by Lazarus (Lazarus and Folkman 1984; Antonovsky 1987). Antonovsky and colleagues are interested in the question of what possibilities a person has for maintaining health in spite of being exposed to stressful environmental conditions. The stressors are also termed the "demands" a person has to deal with by using resources to maintain health. The health status of an individual at a particular point in time is assumed to be the result of "complex person–environment transactions" (Freidl et al. 2007). Individual demands and resources can be found on three levels: (1) the macro environment (the society), (2) the micro environment, for example in the family (external demands and resources) and (3) the person (internal demands and resources) (Freidl et al. 1999).

Following the World Health Organisation's (WHO) definition of health to be "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity" (WHO 1948), contentment with health, contentment with the capability to deal with daily life and contentment with the capacity to work can

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be regarded as aspects of health. They are strongly related to health-related quality of life and self-rated health (Matthews et al. 2002; Sloane-Seale and Kops 2010; Garrido et al. 2013) and they have mostly the same or similar determinants (Post et al. 1999; Laubach et al. 2000).

It has been shown that social inequality and in particular low income are important demands that challenge health (Rognerud and Zahl 2006; Brunner et al. 2009; Crimmins et al. 2009; Zajacova et al. 2009; Marmot et al. 2010). Social inequality, however, has more dimensions than just the distribution of economic resources; for example, another dimension is the distribution of social capital.

Social capital is defined in several different ways (Kawachi et al. 1997; Putnam 2000; Lin 2001; Bourdieu 2005).The most well-known proponent linking social capital to health is probably Ichiro Kawachi, who refers to Putnam when he defines social capital as "the features of social organization, such as civic participation, norms of reciprocity and trust in others, that facilitate cooperation for mutual benefit" (Kawachi et al. 1997, p. 1491). Following these authors social capital can be regarded as a community level ("ecologic") variable whose counterpart at the individual level is measured by a person's social networks.

Bourdieu in contrast conceptualises social capital in a different way, in that he differentiates between economic, cultural and social capital. All forms of capital belong to a system of exchange. They are very important for the individual's power, status and opportunities in society and are important influencing factors regarding their opportunities in life. Economic capital includes an individual's financial resources. Cultural capital includes the cultural knowledge and education of the persons. Social capital is defined as the "the aggregate of the actual or potential resources an individual has access to" (Bourdieu 2005, p. 51). These resources depend on belonging to certain groups. They can be based on material or symbolic exchange relationships and can be more or less institutionalised. In other words, the resources can be based on subjective feelings like recognition, respect, and friendship or on institutionalised guarantees such as legal claims (Bourdieu 2005). Following Bourdieu, belonging to a certain group can be characterised by geographic vicinity, by the quality of relationships in the neighbourhood or by economic and social closeness (Bourdieu 2005).

Most previous research has focused on empirical definitions of social capital (Kawachi et al. 2008). However, there is a lack of knowledge on the relation between health and social capital in the way it is defined by Bourdieu. One important aspect of Bourdieu's theory is not distinguishing between agency and structure, but rather to develop a new theory that covers both. His concept of habitus forms part of a link between agency and structure. The concept of habitus includes the notion that all forms of capital develop their mode of action to a certain extent via the individual's perception and evaluation of their resources – their economic, cultural and social capital. We argue that this perception can be defined as cognitive social capital.

We thus decided to operationalise cognitive social capital according to the individual's perception of and satisfaction with their access to resources and personal relationships (Muckenhuber et al. 2012). Bourdieu uses a broad concept of social

capital. His theory is that the social structure of a society includes aspects of the macro-environment in addition to aspects of the micro environment. As a consequence a person's social capital consists of both aspects: the macro- and of the micro-environment. In order to capture aspects of the macro-environment (such as access to health services or access to transport) as well as aspects of the micro environment (such as the support persons receive from friends or the quality of personal relationships), we differentiated between institutional and informal social capital.

It has been shown that social capital is important for health in general and for the possibilities to deal with the life challenges of older persons in particular (Gray 2009). In addition it has been shown that social capital is important for maintaining health (Kawachi et al. 1999, 2008; Ichida et al. 2009; Nummela et al. 2009; Snelgrove et al. 2009; Theurer and Wister 2009; D'Hombres et al. 2010). Some studies showed a lack social capital to be detrimental in particular for the health of older individuals (Boneham and Sixsmith 2006; Nummela et al. 2009; Muckenhuber et al. 2012). Most of these studies focus on self-rated health and general health indicators, but there is a lack of knowledge on the association between contentment with health and social capital; in addition there is a lack of knowledge concerning the associations between the perception of pain and social capital in the older population.

Pain is a major reason for persons to consult doctors. Moreover chronic pain constitutes a major problem to health and to wellbeing (Hasselstrom et al. 2002; Friessem et al. 2009). Research showed social factors to be important for the process of developing chronic pain (Crook et al. 1989; Kikuchi 2008). In general it has been reported that low socioeconomic status (low education, low income, low professional position) and higher age are associated with a higher prevalence of pain and to the feeling of being disabled through pain (Carroll et al. 2004; Macfarlane et al. 2009; Stein et al. 2010; Dorner et al. 2011). Furthermore, low socioeconomic status is significantly related to a higher prevalence of pain even when controlling for age (Dorner et al. 2011). Hence higher age and low socioeconomic status can be regarded as independent risk factors for pain. Not only do older persons perceive more pain than younger persons regardless their socioeconomic situation, but persons with low socioeconomic status perceive more pain than persons with high socioeconomic status of the same age. Nevertheless, even though low socioeconomic status is often related to low social capital, there is a need to directly analyse the associations between social capital and pain. There is a lack of knowledge on the possible interactions between social capital and age regarding their effects on pain and the perception of pain. For that reason it is beneficial to analyse if a lack of social capital is more detrimental to older person's perception of pain than to that of younger ones.

It can be argued that in particular the feeling of being disabled through pain might be strongly related to the social environment of individuals. In the situation of a strong perception of pain it is very likely that individuals are dependent on help from friends and family (which constitutes informal social capital) to cope with their pain and to be able to handle their daily routines. In addition, in the situation of a strong perception of pain, we would argue that institutional social capital such as access to transport and to health services might influence the feeling of being

disabled through pain. There is scarce knowledge available, however, on the associations between social capital and pain.

Previous research (Muckenhuber et al. 2012) showed that a lack of social capital is more detrimental to older people's health and wellbeing than to the health and wellbeing of younger people. However, it has not yet been analysed if this effect can also be shown in regard to the perception of pain, or the feeling of being disabled through pain and contentment with health.

The purpose of the study presented here was to analyse whether informal and institutional social capital have a stronger impact on contentment with health, on contentment with the capacity to deal with daily life, the prevalence of pain and on the feeling of being disabled through pain in older persons compared to that in younger persons.

4.2 The Study: Data and Analyses

We used data from the Austrian Health Interview Survey (ATHIS) 2006/2007 (Klimont et al. 2007) which was carried out by Statistic Austria. In the period between March 2006 and February 2007, a total of 15,474 individuals were interviewed through computer assisted face-to-face interviews (CAPI). The 15,474 individuals constitute a random sample of persons aged 15 years and older drawn from the central population register. This sample is representative of the Austrian population. A response rate of 63.1 % was reached.

4.2.1 Dependent Variables

For the dependent variables we used four different variables as indicators of health. Contentment with health had a response range from 1 to 5, with 1 signifying very low contentment. Contentment with the capacity to deal with daily life had a response scale from 1 to 5, with 1 signifying very low contentment. Feeling disabled through pain had a response scale from 1 to 5, with 1 signifying a feeling of being strongly disabled through pain and 5 a feeling of not being at all disabled through pain). Finally, one question asked whether persons had perceived pain within the last 12 months (1 = yes, 2 = no).

4.2.2 Independent Variables

Indices of social capital and variables concerning socioeconomic status were integrated in the model as independent variables. Social capital was operationalised following Bourdieu's theory and was divided into two indices: informal social capital and institutional social capital, in accordance with previous research (Muckenhuber

et al. 2012). The variables were taken from the WHOQOL-bref social and environmental domains, while the indices of social capital have been used in previous research (Muckenhuber et al. 2012, 2013).

4.2.3 Informal Social Capital

The index "informal social capital" measures resources of individuals that are based on subjective feelings as well as on geographic closeness to other individuals. This index ranges from 3 to 15, with 3 indicating very low informal social capital and 15 indicating very high informal social capital. The Cronbach's Alpha for the index was 0.62 ($M = 12.71$; $SD = 1.72$). The index is composed of the following items: "How satisfied are you with your personal relationships?"; "How satisfied are you with the support you get from your friends?"; "How satisfied are you with the conditions of your living place?" The composition of the index is a result of a factor analysis conducted with a theory-based selection of variables. Satisfaction with the living place is an approximation for satisfaction with the neighbourhood, as we assume that the interviewed persons interpreted the question from the perspective of neighbourhood being an important aspect of the conditions of the living place.

4.2.4 Institutional Social Capital

The index "institutional social capital" is a measurement of the satisfaction with access to institutionalised resources. This index ranges from 5 to 25, with 5 indicating very low institutional social capital and 25 indicating very high institutional social capital. The Cronbach's Alpha for the index was 0.70 ($M = 20.36$; $SD = 2.91$). The index is composed of the following items: "How available to you is the information you need in your day-to-day life?"; "To what extent do you have the opportunity for leisure activities?"; "How safe do you feel in your daily life?"; "How satisfied are you with your transport?"; "How satisfied are you with your access to health services?" The composition of the index is, as with the composition of the index "informal social capital", a result of a factor analysis conducted with a theory-based selection of variables.

4.2.5 Socioeconomic and Demographic Status (SES)

We controlled the association between social capital and health for the impact that socioeconomic status has on health. The following variables were included in the model: sex, age, self-perceived quality of livelihood, employment status, education and the equivalence income.

Sex (1 = male, 2 = female)

Age As we wanted to compare younger individuals with older individuals, a variable was computed that classified individuals into four groups. (15–29 years ($N=3111$); 30–44 years ($N=3979$); 45–59 years ($N=3759$); and 60 years or older ($N=4625$)).

Self-perceived quality of livelihood was measured by the item "How do you get by with your money?" ranging from 1 (very well) to 5 (not at all).

Employment status was calculated as an index ranging from 0 to 3 with 0 signifying that someone is unemployed and 3 signifying individuals in higher non-manual occupations.

The level of education was measured by an ordinal variable. Education was split into five groupings, differentiated by the number of years of schooling (1 very low education, 5 is very high education).

Equivalence income per capita ($M=1103.06$, $SD=640.48$) was computed with the household income as the variable of origin. The calculation was based on the OECD equivalence scale (OECD Social Policy Division 2009).

The calculated indices for social capital were constructed using factor analysis as described above. Principal axis factoring and orthogonal rotation (Varimax) were used as extraction methods. We used multiple linear regression models in order to calculate the associations between health and social capital. The SPSS (version 17.0) procedure for general linear modelling was applied. In total we calculated four different regression models for four different health outcome variables.

4.3 Social Capital Has a Stronger Impact on Older People's Health

Table 4.1 shows descriptives for all variables used in the models.

We found significant bivariate correlations between institutional social capital and contentment with health (0.43), contentment with capacity to deal with daily life (0.54), contentment with capacity to work (0.52), feeling to be disabled through pain (0.39) and the perception of pain within the last 12 months (0.20) (data not shown in tables.).

Significant bivariate correlations were also be found between informal social capital and contentment with health (0.34), contentment with capability to deal with daily life (0.41), contentment with capability to work (0.40), feeling to be disabled through pain (0.23) and the perception of pain within the last 12 months (0.13).

4.3.1 Associations between SES and Health Outcome Variables

As Table 4.2 shows, older individuals are significantly less content than younger persons with health in general and with their capacity to deal with daily life. Older persons feel more strongly disabled through pain and perceived pain within the last

Table 4.1 Descriptives stratified by age groups

	15–29 years		30–44 years		45–59 years		60 years and older	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Contentment with health	4.38	0.79	4.19	0.82	3.84	0.91	3.55	0.98
Contentment with capacity to deal with daily life	4.57	0.63	4.43	0.69	4.15	0.83	3.77	0.99
Feeling disabled through pain	4.69	0.68	4.48	0.83	4.09	1.04	3.71	1.12
Perception of pain within the last 12 months	1.78	0.42	1.67	0.47	1.55	0.50	1.49	0.50
Institutional social capital	21.24	2.59	20.71	2.68	20.17	2.90	19.61	3.11
Informal social capital	13.07	1.68	12.94	1.68	12.60	1.74	12.36	1.69
Sex	1.50	0.50	1.54	0.50	1.55	0.50	1.58	0.49
Self-perceived quality of livelihood	3.60	1.04	3.64	0.91	3.58	0.98	3.48	0.95
Employment status	2.10	0.89	1.82	0.73	1.66	0.77	1.12	0.36
Education	2.36	1.32	2.67	1.22	2.39	1.19	1.92	1.12
Equivalence income	1003.85	630.72	1134.39	597.26	1216.33	702.98	1041.84	607.80

12 months more often than younger persons. Furthermore, socioeconomic status in terms of quality of livelihood, employment status, and education are associated significantly with poor health (see Table 4.2 for detailed results).

Women are significantly less content with their capability to deal with daily life than men are and significantly more women than men perceived pain within the last 12 months. But there is no significant association between sex and contentment with health and with the feeling to be disabled through pain.

Table 4.2 Regression coefficients: associations of social capital and interaction terms social capital*age in their associations with: contentment with health, contentment with the capability to deal with daily life, feeling of being disabled trough pain and the perception of pain within the last 12 months

	Contentment with health (1–5, 1 = very low contentment)	Contentment with capability to deal with daily life (1–5, 1 = very low contentment)	Feeling to be disabled through pain (1–5, 1 = feeling strongly disabled)	Perception of pain within last 12 months (1 = yes, 2 = no)
	Beta(95% CI)			
Sex (1 = male, 2 = female)	−0.009(−0.044/0.011)	−0.015*(−0.048/−0.002)	−0.013(−0.056/0.005)	−0.045***(−0.060/−0.027)
Age	−0.229***(−0.207/−0.179)	−0.222***(−0.182/−0.158)	−0.268***(−0.261/−0.230)	−0.169***(−0.083/−0.067)
Self-perceived quality of livelihood (1 = very well to 5)	0.041***(0.023/0.057)	0.023*(0.006/0.034)	0.040***(0.024/0.060)	0.033***(0.007/0.027)
Employment status	0.058***(0.048/0.089)	0.041***(0.026/0.060)	0.058***(0.051/0.096)	0.048***(0.018/0.042)
Education	0.046***(0.022/0.047)	0.054***(0.027/0.047)	0.073***(0.046/0.073)	0.029**(0.004/0.019)
Equivalence-income	−0.005(0.000/0.000)	0.010(0.000/0.000)	0.023**(0.000/0.000)	−0.008(0.000/0.000)
Institutional social capital (3–15, 3 = very low social capital)	0.259***(0.078/0.090)	0.364***(0.102/0.112)	0.257***(0.084/0.097)	0.117***(0.016/0.024)
Informal social capital (5–25, 5 = very low social capital)	0.135***(0.065/0.084)	0.164***(0.074/0.090)	0.021*(0.002/0.023)	0.022*(0.001/0.012)
Category of reference for age-groups: 15–29 years				
Age_30–44* Institutional social capital	0.011(−0.009/0.025)	0.020(0.000/0.028)	0.031**(0.007/0.044)	0.016(−0.004/0.016)
Age_45–59* Institutional social capital	0.041***(0.013/0.047)	0.060***(0.026/0.054)	0.077***(0.043/0.080)	0.050***(0.010/0.029)
Age_60 +* Institutional social capital	0.096***(0.052/0.085)	0.131***(0.071/0.099)	0.134***(0.086/0.122)	0.047***(0.008/0.027)
Age_30–44* Informal social capital	0.023*(0.001/0.055)	0.037***(0.019/0.064)	0.013(−0.013/0.046)	0.001(−0.015/0.016)
Age_45–59* Informal social capital	0.027*(0.007/0.062)	0.036**(0.019/0.065)	−0.006(−0.039/0.022)	−0.011(−0.023/0.009)
Age_60 +* Informal social capital	0.019(−0.004/0.052)	0.009(−0.013/0.034)	−0.011(−0.046/0.015)	−0.030*(−0.037/−0.004)

$p<0.05$*; $p<0.01$**; $p<0.001$***

4.3.2 Associations between Social Capital and Health

As Table 4.2 shows and consistent with previous research (Muckenhuber et al. 2012), a lack of informal as well as of institutional social capital was significantly associated with poor health for all the health outcome variables used in this study. We would argue that more social capital and its attendant better access to institutional resources has a preventive effect in the way that persons, for example, can find it easier to visit a doctor if they have access to transport and they can also exercise by walking if they feel comfortable and safe in their neighbourhoods. In addition, we argue that good access to informal social capital has a preventive effect on health, contentment with health, and perception of pain, since good informal resources such as contentment with personal relationships reduce stress and are important for psychosocial-wellbeing.

In particular, contentment with the capacity to deal with daily life and the feeling of being disabled through pain are strongly influenced by the institutional as well as informal resources that individuals have access to. In particular, if a person perceive pain, the extent to which he or she feels disabled through pain is likely to be influenced by the psychological as well as practical support received from other persons. Institutional social capital such as access to transport is clearly also very important. Individuals who perceive pain are likely to feel less disabled by their pain if they have easy access to transport and thereby can preserve their mobility.

Previous research showed that social networks and psychological wellbeing have positive effects on general health and pain (Campbell et al. 2011; Chemaitelly et al. 2013; Tsai and Thompson 2013).

4.3.3 The Meaning of Age for the Relationship between Social Capital and Health

As described in the next paragraphs, there are significant interaction effects between institutional social capital and age in their associations with all four health outcome variables. These interaction effects are strongest for the oldest age category when compared to 15–29 years age group. Regarding older people, a lack of institutional social capital is more strongly related to poor contentment with health and with the capacity to deal with daily life when compared with younger persons. The same is true for the negative impact of a lack of institutional social capital. In the older population, low institutional social capital is more strongly related to the feeling of being disabled through pain and to the perception of pain within the last 12 months as compared to the younger population. Institutional social capital comprises access to information, to transport and to health services. Possibly younger individuals have more possibilities to compensate for a lack of access and therefore are less dependent on institutional social capital.

A lack of institutional social capital can lead to limited possibilities to access leisure activities and to restricted possibilities to meet friends. A consequence might

be that persons are more alone and as a result, less distracted from their pain. Consequently, they might feel more disabled through the pain they perceive. A lack of institutional social capital can also lead to difficulties to accomplish normal daily routines, particularly in the case of perceived pain. This might be explained by the fact that older persons who experience a lack of social capital often perceive more problems when trying to accomplish their daily duties.

There are significant interaction effects between informal social capital and age in their association with contentment with health and with contentment with the capacity to deal with daily life. These interaction effects are significant for the age groups 30–44 years old and 45–59 years old in comparison to younger individuals, but not for persons aged 60 years or older. Interestingly there is no significant interaction effect between informal social capital and higher age regarding contentment with health, with the capacity to deal with daily life and with feeling disabled through pain. Middle-aged people are the age group most strongly affected by a lack of informal social capital regarding their contentment with health.

However, a lack of informal social capital has a stronger negative impact on older individuals' perception of pain than on that of younger individuals. This might be caused by the fact that chronic pain is strongly influenced by the opportunity for personal relationships and by social support (Kerns et al. 2002; Warwick et al. 2004; Lopez-Martinez et al. 2008). We assume that older individuals have fewer possibilities to compensate for a lack of informal social capital. This might be an explanation for the interactions effect described.

The research presented in this chapter has used the theory of social capital as conceptualised by Bourdieu. He defines social capital as the total of actual and potential resources an individual has access to. In particular the potential resources an individual has access to are important to his theory. This aspect covers the idea that people's perception of their environment and of their possibilities is strongly related to their habitus. The habitus forms a link between structure and agency. It interrelates with health and health behaviour. Some health-related aspects such as the perception of pain, contentment with health, and contentment with the capacity to deal with daily life as well as feeling disabled trough pain can be defined as strongly related to a person's habitus. As we have shown, the actual and potential resources an individual has access to differ strongly by age. Yet the way that a lack of resources – of social capital – is handled also differs by age. In line with the theory of Bourdieu, we argue that not only the actual resources but also the habitus related to coping strategies can vary according to age. Bourdieu's concept is helpful in understanding the interplay between the structural aspects of social capital and health. To introduce his theory into research on social capital and health is therefore conceptually important for the field. Future research should compare the habitus of various age groups. This can also help in understanding the pathways of influence that social capital has on health. A next step should be to analyse whether there is a difference between age groups in the interplay between social capital, habitus and health. In this context it could be analysed whether the health-related habitus of persons with low social capital differs from the health-related habitus of individuals with high social capital.

As a limitation it is necessary emphasise that Bourdieu's theory was not developed to be tested by means of quantitative research. Nevertheless, we argue that it is a legitimate approach to start to apply Bourdieu's theory in quantitative research. In this context one limitation of our study is the measurement of social capital. We chose to use different measures to those mostly commonly used. This possibly makes our results less comparable to other research. On the other hand, our study adds new knowledge to the field in part as a result of the measures we used.

Another limitation concerns causality. The dataset includes cross-sectional data and for that reason we cannot report causality on an empirical basis. Arguments about causality can only be made on the basis of theoretical considerations.

4.4 Conclusions

As our study presented in this chapter shows, institutional as well as informal social capital play a crucial role in all age groups in regard to contentment with health, contentment with the capacity to deal with daily life, the perception of pain and feeling disabled through pain. Therefore, in general it would be very important to strengthen social capital as a preventive action and in order to reduce negative consequences of pain.

The findings show that a lack of social capital is more detrimental to older persons' health than to that of younger persons. Hence public health and preventive activities should be age-group specific and aim in particular to provide better access to institutional as well as to the informal resources of older persons. These policies could include the aim of improving public transport. City planning should take into considerations the particular needs in the direct neighbourhoods of older persons. It would be important that shops providing for daily needs are within walking distance, as well as providing safe and friendly environments and also spaces and opportunities to meet other persons.

An important finding is that a lack of informal social capital has the most detrimental effects on contentment with regard to the health of middle-aged persons. Consequently, this age group – which seldom is the focus of preventive actions – should be taken into consideration as a target group that may need support concerning informal social capital. As middle-aged persons are often pressured with the duties of paid work and domestic duties at home, a focus on policies to enhance their possibilities to build informal social capital could include work-life balance as an important topic.

We conclude that older individuals are disadvantaged because they suffer from poorer health and from less social capital than other age groups. In addition, a lack of social capital is more detrimental to their health than to the health of other age groups. For this reason, their needs in particular for social capital should be supported.

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