

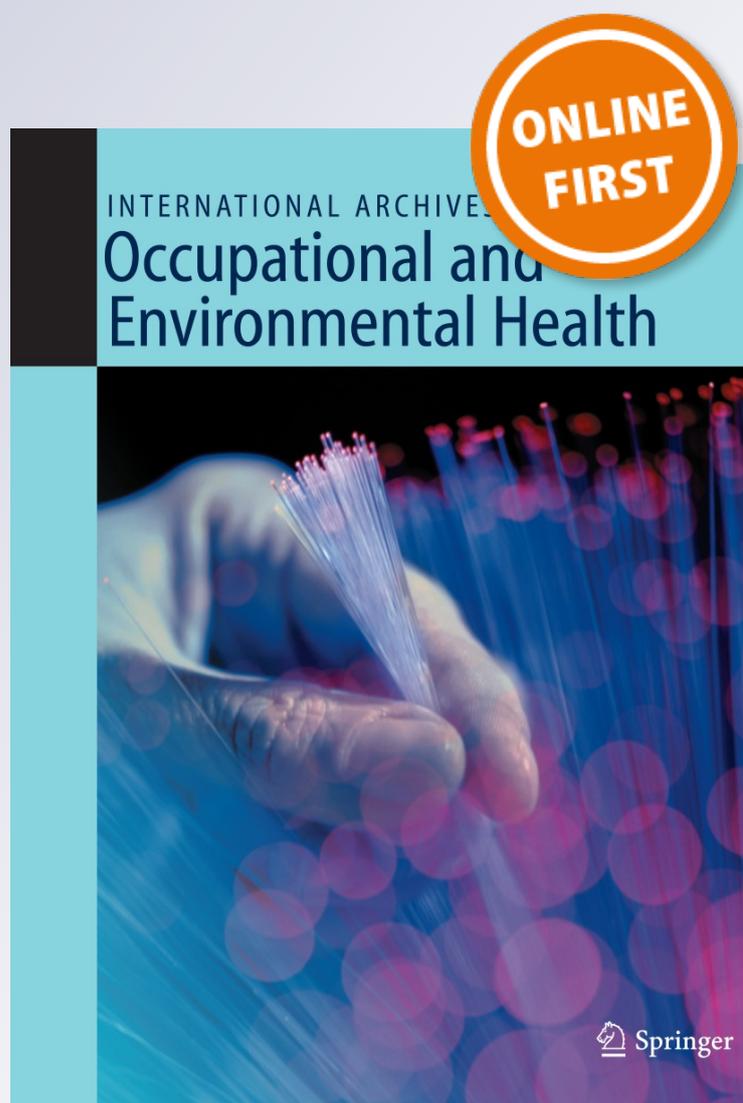
*Relationships of organizational social capital with the presence of “gossip and slander,” “quarrels and conflicts,” sick leave, and poor work ability in nursing homes*

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# Relationships of organizational social capital with the presence of “gossip and slander,” “quarrels and conflicts,” sick leave, and poor work ability in nursing homes

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## Abstract

**Purpose** This study aimed to explore the associations of organizational social capital (OSC) with the presence of “gossip and slander,” the presence of “conflicts and quarrels,” sick leave prevalence, and prevalence of poor work ability in frontline working personnel of nursing homes.

**Methods** A total of 239 subjects (81 % participation), working in 11 different nursing homes, took part in a cross-sectional questionnaire study. Following end points were considered, they are as follows: prevalence of “gossip and slander,” “conflicts and quarrels,” sick leave, and poor work ability. Associations with OSC were explored at individual level (binomial log-linear regression analysis) and on group level (Kendall’s tau correlation coefficients).

**Results** Significant associations were found between OSC and “gossip and slander,” sick leave, and poor work ability, both in the individual- and group-level analyses. The associations showed a higher significance level in the group-level analyses, with the strongest association found between mean OSC of the workplace and the prevalence of poor work ability at the workplace ( $\tau = -0.722$ ;  $p = 0.002$ ).

**Conclusions** This study demonstrated significant associations of OSC with three end points that are relevant

within the framework of well-being at work in nursing homes. The results are suggestive that OSC should be treated as a characteristic of the entire workplace, rather than as an individually experienced characteristic. The strikingly strong association between OSC and prevalence of poor work ability is suggestive for an important role of OSC within the context of maintaining work ability.

**Keywords** Organizational social capital · Gossip and slander · Nursing homes · Quarrels and conflicts · Sick leave · Work ability

## Introduction

In recent years, it has become apparent that psychosocial work environment is more than a collection of descriptive characteristics of a certain job (Kristensen 2010). Within an organization, as within any social community, there exists an overall binding factor transgressing the boundaries of the individualistic oriented job characteristics and acting as a connecting matrix between the different people and their jobs. This factor has been denoted as “organizational social capital” (OSC), based on sociological terminology. Social capital is a multidimensional concept, referring to those features of social relationships that facilitate collective action for mutual benefit (Putnam 1995). It is therefore to be seen as a characteristic of social groups rather than of individuals, and it is born of shared experience, which fosters mutual trust and reciprocity (Kouvonen et al. 2006; Shortt 2004). Social capital has been defined in various ways, but all of them share the notion that networks and norms are important dimensions of the concept (Kouvonen et al. 2006).

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In this study, the definition of OSC was based on Putnam's definition (Putnam 1995), in which networks and trust within an organization facilitate coordination and cooperation. The concept of collaboration describes more accurately the internal dynamics in the relations among the employees and between management and employees than the concept of networks (Hasle et al. 2007) and can therefore be seen as a first pillar of the social capital concept within an organization. Trust is by definition an essential part of OSC and constitutes its second pillar. Justice is to be seen as the feeling of fairness of work distribution in relation to the contributions of each group member. Trust and justice are both expressions of the social relationships between management and staff. Therefore, it seemed valid to include justice or fairness as a third component in the concept of OSC (Hasle et al. 2007). In the present study, the definition of OSC was operationalized as a characteristic of the entire workplace consisting of three dimensions: collaboration, trust, and justice.

Research has suggested that OSC is important for the health and well-being of employees. In a longitudinal study, it was shown that low organizational justice at work increased the risk for several adverse health outcomes in working populations (Kivimäki et al. 2003). Decreased social capital at work was shown to be related to low self-rated health (Oksanen et al. 2008; Suzuki et al. 2010), depressive symptoms (Jung et al. 2012), and depression (Kouvonen et al. 2008; Oksanen et al. 2010; Kim et al. 2012). Low OSC was also found to be associated with an increased risk for the development of hypertension (Oksanen et al. 2012). In the health care sector, it has been shown that low OSC was related to emotional exhaustion in clinicians (Driller et al. 2011) and hospital nurses (Kowalski et al. 2010), and to low job satisfaction in physicians (Ommen et al. 2009). To our knowledge, the influence of OSC on the well-being of personnel working in nursing homes has not been investigated.

Up to now, all studies performed in a health care setting approached the considered outcomes at the individual level, investigating the relationship between OSC (individually experienced or on organizational level) and the particular outcome as experienced by the individual worker. As OSC is defined as a characteristic of the entire workplace, it would be more appropriate to handle it as such. In that regard, it would also be more appropriate to handle outcomes as characteristics of the entire workplace when studying the impact of OSC, i.e., the prevalence of a condition in the workplace on group (workplace) level instead of the presence of a condition in the individual worker.

In the present study, we examined the associations between OSC in nursing homes and four different end points related to the psychosocial work environment and

well-being of the employees. It was suggested that OSC could be an important factor for the psychosocial work environment (Pejtersen et al. 2010a). Exposure to gossip and slander and involvement in quarrels or conflicts are two features of psychosocial work environment that are not extensively studied, but have been shown to be a matter of increasing concern (Pejtersen and Kristensen 2009). Therefore, these two dimensions of the psychosocial work environment were used as outcome parameters in this study, aiming to assess the influence of OSC on the presence of "gossip and slander" and "quarrels and conflicts" at the workplace.

Recent research showed that organizational climate was associated with sick leave (Holmgren et al. 2010; Stoetzer et al. 2012). It was also shown that exposure to problems in workplace relationships could be a trigger for sick leave (Hultin et al. 2011). The present study aimed to assess the influence of OSC on sick leave in the particular setting of nursing homes.

Due to the economical and political tendency to raise the retirement age, workers will have to work longer. Organizations will have to deal with the challenges of an aging workforce. Within this context, the concept of promotion and maintaining work ability takes a predominant place (Ilmarinen 2009). This is not any different for nursing home personnel. Therefore, this study also aimed to assess the influence of OSC on work ability.

In summary, this study aimed to evaluate the relationships of OSC with the presence of gossip and slander, the presence of conflicts and quarrels, sick leave prevalence, and prevalence of poor work ability in frontline working personnel of nursing homes.

## Methods

### Study design

This was a cross-sectional questionnaire study performed among employees working in nursing homes. The study was not anonymous, but conducted by the occupational health physician of the employees, who insured complete privacy protection by professional secrecy. The study has been approved by the Ethics Committee Progecov-Securex (Commissie voor Medische Ethiek OG 211, Ghent, Belgium).

### Subjects and data collection

The target population consisted of 295 subjects, comprising all nurses, geriatric helpers, paramedics, and animation personnel, working in two different nursing home organizations within the public sector. Staff members were not

included in the target population. All subjects were asked to fill out a standardized self-completed questionnaire. In one organization, the employees had the opportunity to fill out the questionnaire at the occasion of information sessions organized by the employer. The employees of the second organization received the questionnaire at their home addresses by mail. One month later, a second data collection was carried out among the non-responders. Eventually, the study population consisted of 239 subjects (81.0 % response): 62 nurses, 150 geriatric helpers, 17 paramedics, and 10 animation workers.

### Workplace

The subjects were grouped according to their workplace. In the first organization, there were five workplaces, each located at a different geographical site. The six workplaces of the second organization were located at different floors within the same building. The mean number of subjects per workplace was 27, ranging from 12 to 77. Response rates per workplace ranged from 56.0 to 100 %.

### Psychosocial work environment

The second version of the Copenhagen Psychosocial Questionnaire (COPSOQ II) (Pejtersen et al. 2010a) was used to assess the exposure to gossip and slander (“have you been exposed to gossip and slander at your workplace during the last 12 months?”) and the involvement in quarrels or conflicts (“have you been involved in quarrels or conflicts at your workplace during the last 12 months?”). For both questions, the answers were dichotomized (“yes/no”), regardless the frequency of exposure.

### Sick leave

Self-reported sick leave was asked for as the number of days of sick leave during the last 12 months. The answers were dichotomized into “has been on sick leave at least 10 days during the last 12 months” and “has not been on sick leave at least 10 days during the last 12 months.”

### Work ability

Work ability was assessed by the short version of the Work Ability Index (WAI) as used in the Nurses' Early Exit Study (NEXT study) (Camerino et al. 2003). Scoring for the short WAI is analogous to the scoring for the long version of the WAI (Tuomi et al. 1998), resulting in a score ranging from 7 to 49 (the higher the score, the better the work ability). A WAI score lower than 37 was defined as poor work ability.

### Organizational social capital

OSC was assessed by an OSC scale. This scale was computed out of six questions, derived from the subscales “vertical trust,” “justice,” and “social community at work” of the COPSOQ II (Pejtersen et al. 2010a); each subscale was asked for in two questions offering five response options. The dimension was transformed into a 0–100 scale; the higher the score, the higher the OSC. Cronbach's  $\alpha$  of the scale was 0.79 (inter-item correlations 0.21–0.62).

### Physical workload

Physical work characteristics were assessed using a four-item physical workload scale, comprising sustained physical efforts, repetitive work, lifting heavy weights, and working in awkward positions. The physical workload scale was computed by summing up the scores of the four constituent items and transformed into a 0–100 scale. The highest score was concordant with the highest physical workload. Cronbach's  $\alpha$  of the scale was 0.86, with inter-item correlations ranging from 0.51 to 0.66. The reliability figures were similar to those reported in an earlier study (Kiss et al. 2013).

### Emotional work demands

Emotional work demands were assessed using the “emotional work demands” dimension (0–100 scale) of the long research version of the COPSOQ II (Pejtersen et al. 2010a). Cronbach's  $\alpha$  of the scale was 0.75 (inter-item correlations 0.34–0.58), which was comparable to reliabilities reported earlier (Burr et al. 2010; Kiss et al. 2013; Pejtersen et al. 2010a).

### Job insecurity

Job insecurity was assessed using the “job insecurity” dimension of the long research version of the COPSOQ II (Pejtersen et al. 2010a). The dimension was transformed to a 0–100 scale. Cronbach's  $\alpha$  of the scale was 0.67 (inter-item correlations 0.21–0.44).

### Other considered variables

Following independent variables have been shown to be associated with one or more of the considered end points (Moncada et al. 2002; Costa 2003; Camerino et al. 2006; Donders et al. 2012) and were considered as well: age (asked for as a continuous variable), gender, part-time (<38 h a week) or full time work, shift work (yes or no), and job task (nurse, geriatric helper, paramedic, or animation worker).

## Statistical analyses

All data analyses were performed using IBM SPSS Statistics, version 20 (IBM 2011). Dependent and independent variables were described for the total study population. OSC and dependent variables were described for each nursing home. Variables were described by mean and standard deviation or by number and percentage where appropriate.

The associations between OSC and the considered end points were investigated in three different ways: (a) the “classic” approach: assessing the risk of the considered outcome for the individual worker, using the individually experienced OSC as independent variable; (b) the “classic” approach, assessing the risk of the considered outcome for the individual worker, but where OSC was not treated as an individually experienced feature, but as a workplace characteristic, using the mean OSC value of the workplace as independent variable; and (c) the workplace approach, where both dependent and independent variables were treated as workplace characteristics, using workplace prevalence rates of the considered outcomes and mean OSC values of the workplace. The mean OSC value of the workplace was calculated as the mean of the individual OSC values of all the workers working in that workplace.

In the first method, multivariate log-binomial regression analyses were used to calculate regression coefficients and their 95 % confidence interval (95 % CI) for the dichotomized values of the four considered outcome variables: exposure to gossip and slander during the last 12 months, involved in quarrels or conflicts during the last 12 months, having been absent due to sickness for at least 10 days in the last 12 months, and the presence of a poor work ability. In all four models, gender, full/part-time work, shift work, and job task were entered as categorical variables; age, physical workload, emotional demands, and job insecurity as continuous variables. In this first method, OSC was entered as the value of the individual employee (individually experienced OSC).

In the second method, the same multivariate regression modelling of the first method was used, but instead of entering the OSC variable as the individually experienced OSC into the model, OSC was entered as the mean value of the workplace where the respondent was employed.

For both first and second methods, correlations between all exposure variables were checked beforehand to prevent the occurrence of multicollinearity and no multicollinearity was found (Checkoway et al. 2004).

In the third method, the considered end points as well as OSC were treated as workplace characteristics and not as individual characteristics. The end points were handled as the prevalence of a condition in the workplace and the OSC as the mean OSC of that particular workplace. Kendall's

tau correlation coefficients and corresponding  $p$  values were used to assess the association between workplace OSC and the considered end points on group level for the 11 considered workplaces. To visualize the relationships, scatter diagrams were drawn.

## Results

The descriptives of all variables studied for the total study population are summarized in Table 1. The distributions of gender, job tasks, full/part-time work, and shift work were as could be expected within the employment sector studied.

The number of subjects, the mean value of OSC, and the outcome parameters for each nursing home are given in Table 2. Striking was the total absence of subjects with a

**Table 1** Descriptives of the dependent and independent variables for the total study population

Variable	<i>N</i>	%	Mean	(SD)
Age (years)	239	–	40.5	10.9
<i>Gender</i>				
Men	13	5.4	–	–
Women	226	94.6		
<i>Job task</i>				
Nurses	62	25.9	–	–
Geriatric helpers	150	62.8		
Paramedics	17	7.1		
Animation staff	10	4.2		
<i>Work activity</i>				
Part time	148	62.2	–	–
Full time	90	37.8		
<i>Shift work</i>				
No	36	15.1	–	–
Yes	203	84.9		
OSC scale (0–100)	239	–	67.4	15.7
<i>Gossip and slander</i>				
No	158	66.4	–	–
Yes	80	33.6		
<i>Quarrels and conflicts</i>				
No	151	63.4	–	–
Yes	87	36.6		
<i>Sick leave</i>				
No	196	82	–	–
Yes	43	18		
<i>Work ability</i>				
Good	196	82	–	–
Poor	43	18		
Physical workload scale (0–100)	238	–	57.8	23.5
Emotional demands scale (0–100)	239	–	58.7	16.6
Job insecurity scale (0–100)	238	–	26.9	29.6

**Table 2** Number of subjects (*n*), mean value, and standard deviation (SD) for organizational social capital (OSC, range 0–100), percentage of subjects who were exposed to gossip and slander during the last 12 months (SLAN%), percentage of subjects who were involved in quarrels or conflicts at the workplace during the last 12 months (QUAR%), percentage of subjects who have been absent due to sickness at least 10 days in the past 12 months (SICK%), and percentage of subjects with a poor work ability (WAI%) by nursing home (NH)

NH	<i>n</i>	OSC	(SD)	SLAN%	QUAR%	SICK%	WAI%
A	15	68.9	(11.9)	33.3	46.7	6.7	6.7
B	29	71.6	(11.2)	20.7	13.8	6.9	20.7
C	18	75.8	(12.9)	5.6	16.7	0.0	0.0
D	74	70.3	(15.4)	36.5	45.9	10.8	13.5
E	12	78.1	(14.2)	45.5	27.3	16.7	0.0
F	17	64.8	(16.6)	41.2	29.4	47.1	35.3
G	12	59.1	(18.7)	41.7	25.0	25.0	25.0
H	14	51.2	(17.8)	50.0	57.1	28.6	35.7
I	13	52.3	(12.1)	61.5	61.5	38.5	30.8
J	21	65.3	(12.0)	28.6	38.1	33.3	28.6
K	14	65.3	(13.9)	21.4	28.6	21.4	14.3

**Table 3** Binomial regression coefficients ( $\beta$ ) and their 95 % CI for being exposed to gossip and slander during the last 12 months, being involved in quarrels or conflicts during the last 12 months, having been absent due to sickness at least 10 days in the past 12 months, and the presence of a poor work ability

Considered outcome	Model	<i>N</i>	$\beta$	95 % CI		<i>p</i>
				Lower	Upper	
Gossip and slander	ORG	235	-0.038	-0.075	0.000	0.048
	IND	235	-0.025	-0.043	-0.008	0.005
Quarrels and conflicts	ORG	235	-0.023	-0.060	0.013	0.213
	IND	235	-0.012	-0.029	0.005	0.163
Sick leave	ORG	236	-0.052	-0.097	-0.006	0.027
	IND	236	-0.006	-0.027	0.015	0.591
Poor work ability	ORG	236	-0.046	-0.092	0.000	0.048
	IND	236	-0.021	-0.044	0.001	0.066

ORG, regression model where OSC was entered as the mean value of the nursing home where the employee was employed; IND, regression model where OSC was entered as the individual value of the employee. All models were corrected for age, gender, physical workload, emotional work demands, job insecurity, full/part-time work, shift work, and job task

poor work ability in the nursing homes that had the highest OSC.

The results of the analyses on individual level are given in Table 3. No significant associations were found between OSC and being involved in “quarrels and conflicts.” Exposure to “gossip and slander” was significantly associated both with individually experienced OSC and mean OSC of the workplace. A stronger significant relationship

was found with the individually experienced OSC. Having been on sick leave and having a poor work ability were not significantly associated with individually experienced OSC, but were significantly associated with mean OSC of the workplace.

Although the sample size (11 nursing homes) was small, the group-level analyses, where OSC as well as outcome parameters were both considered on the organizational level, significant negative correlations were found between mean OSC and prevalence rates of “gossip and slander,” sick leave, and poor work ability at workplace level, with the strongest correlation found between mean OSC of the workplace and prevalence of poor work ability. Figure 1 shows the scatter plots of the associations of the mean OSC on organizational level with the four considered outcome variables.

### Discussion

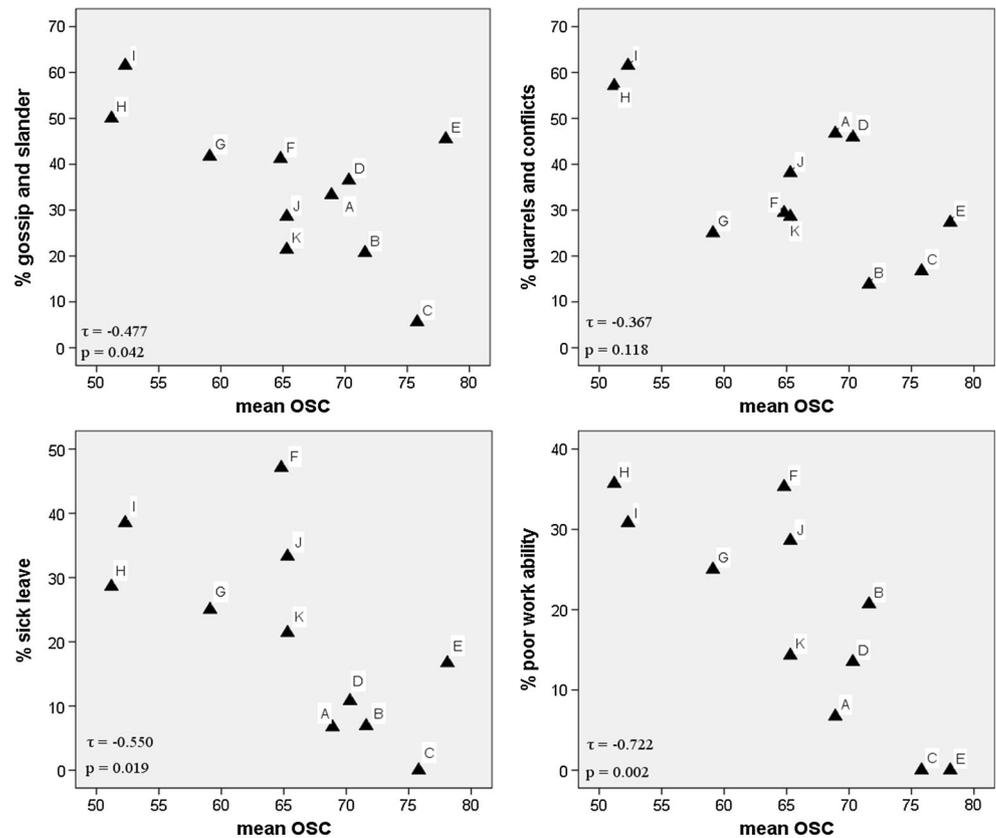
This was the first study to investigate the relationship between OSC and unacceptable behavior in the workplace as well as the relationship with the WAI in personnel working in nursing homes. The approach considering both OSC and considered end points at group level is also new for a nursing home setting. Up to now, most studies investigated the influence of OSC on individual health characteristics, leaving the relationship between OSC and health outcomes at workplace level unexplored.

Our findings indicated a significant relationship between OSC and the presence of “gossip and slander.” However, the fact that, in the analyses on the individual level, a stronger significant relationship was found with the individually experienced OSC, could be indicative that the findings could be explained by reversed causality: people who are subject to unacceptable behavior could be more likely to experience OSC to be more unfavorable for themselves personally, creating stronger relationships with individually rated OSC than OSC on the workplace level. This could also be an explanation for the conflicting results concerning poor employee health and level of OSC (Kouvonen et al. 2008; Oksanen et al. 2008; Suzuki et al. 2010).

Also, the significant relationship of nursing home OSC with nursing home prevalence of “gossip and slander” should be interpreted with caution: it is plausible to assume that a poor OSC in the nursing home could create an atmosphere prone for gossip and slander, but it cannot be excluded that a high prevalence of gossip and slander at the workplace creates an atmosphere prone for a poor OSC.

The absence of any significant relationship between OSC and “conflicts and quarrels” at the workplace could be due to the specific situation in nursing homes. In nursing

**Fig. 1** Scatter plots with Kendall's tau correlation coefficients ( $\tau$ ) and  $p$  values for the associations between OSC measured on the organizational level (mean OSC) and the 12-month prevalence of gossip and slander, quarrels and conflicts, and sick leave, and the percentage of workers with a poor work ability for the 11 considered nursing homes (A–K)



homes, conflicts and quarrels are not only prevalent among employees, but are (perhaps more likely) to appear with residents and their families. In the latter case, it is to be expected that OSC has less influence on the occurrence of conflicts and quarrels, which is compatible with the results of this study.

In the individual-level analyses, OSC was negatively associated with sick leave. However, the association was found only to be significant between sick leave and mean OSC of the workplace. Individually experienced OSC was not significantly associated with sick leave. This could be an indication that workplace level OSC is of more importance than individually experienced OSC in the case of sick leave. The fact that a significant relationship exists in the group-level analysis seems to support this. Previous cross-sectional (Holmgren et al. 2010) and longitudinal (Ybema and van den Bos 2010) studies have shown associations between OSC and sick leave. However, the use of different definitions and assessment parameters for OSC makes it difficult to compare the results.

This study is the first to investigate the influence of OSC on work ability, measured with the WAI. In the individual-level analyses, a significant negative association was found between mean OSC of the workplace and the presence of a poor work ability; individually experienced OSC was not significantly associated with poor work ability. This could

be an indication that workplace level OSC is of more importance than individually experienced OSC in the case of work ability. The strongly significant relationship in the group-level analysis could be an additional argument to support this hypothesis. The total absence of subjects with a poor work ability in the nursing homes that had the highest OSC was very striking in that regard. The results were in accordance with an earlier longitudinal study on self-predicted ability to work at older age, where it was suggested that healthy social climate at work supported the ability to continue working until the age of 65 years (Geuskens et al. 2012). However, the cross-sectional design of this study only allows to formulate some hypothetical explanations for the better WAI in nursing homes with high OSC: positive primary selection (only people with a good WAI are hired), positive secondary selection (people with a poor WAI are fired), and a genuine positive influence of the high social capital on the WAI of the employees.

An important strength of this study was the large range of OSC averages (on a 0–100 scale, the means ranged from 51 to 78) providing a very good exposure contrast, despite the small number of nursing homes. The fact that a difference of 5–10 points on COPSOQ scales makes a difference for the employees (Pejtersen et al. 2010b) stresses the importance of the findings in the current study. The

large range of OSC averages by workplace was also striking because it was observed in employees doing the same kind of job, working with the same kind of patients and within the same kind of institution, but in a different workplace (sometimes in the same building, but on a different floor). This finding confirms that OSC is a factor transcending the individualistic oriented job characteristics and that it is to be considered as an important group dimension of a workplace or organization. The strong relationships found between the average workplace OSC and the considered end points on workplace level are strongly suggestive that workplace OSC is an important independent workplace characteristic that has an impact on different aspects of well-being on workplace level.

This study is subject to some limitations. First of all, this was a cross-sectional study, making it difficult to point out causal relationships. As mentioned earlier in the discussion on gossip and slander, reversed causality should be considered. In the case of sick leave and work ability, reversed causality would implicate that sick leave and work ability would in some way influence the level of social capital: low sickness absence and good work ability would improve trust, justice, and collaboration at the workplace. Although, from a hypothetical point of view, this could be possible, there is, to our knowledge, no evidence of a theoretical framework supporting this direction of causality. Nevertheless, longitudinal studies should be carried out to clarify the causal relationships.

Secondly, self-reported measures, collected through the same questionnaire, could be subject to common method bias due to common rater effect, which may increase the risk of inflated relationships (Podsakoff et al. 2003), although it has been argued that the same bias type is rather to attenuate than to inflate interactions (Spector 2006; Conway and Lance 2010). Another aspect that has to be taken into consideration is social desirability of the answers. In this study, however, data collection was performed by the occupational health physician of the organizations, who, by means of his professional secrecy and independent status, and of his relationship of trust with the employees would tend to receive more “honest” answers.

Thirdly, the current study did not allow to take into consideration other possible relevant dimensions of the psychosocial work environment (Stoetzer et al. 2009). More classical components of the job strain model and the effort–reward imbalance model were not considered. Although recent research pointed out that components not included in the classical models were relevant psychosocial risk factors for mental health and sickness absence (Burr et al. 2010; Rugulies et al. 2010; Kiss et al. 2013), it cannot be excluded that certain components of these models have an influence on the studied end points or interfere with the considered independent variables of the current study.

In conclusion, this study demonstrated significant associations of OSC with three end points that are relevant within the framework of well-being at work in nursing homes: gossip and slander, sick leave, and work ability. The strikingly strong association between OSC and prevalence of poor work ability is suggestive for an important role of OSC within the context of maintaining work ability. Longitudinal studies are needed to investigate causal relationships. The results are suggestive that OSC should be treated as a characteristic of the entire workplace, rather than as an individually experienced characteristic. This has implications for future research on this subject: addressing issues on OSC should consider the OSC of the entire workplace.

**Conflict of interest** The authors declare that they have no conflict of interest.

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