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Compensating losses in bridge employment? Examining relations between compensation strategies, health problems, and intention to remain at work

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ABSTRACT

In order to better understand the precursors of bridge employment, this study aimed to investigate whether individual action strategies in terms of selection, optimization, and compensation (SOC; Baltes & Baltes, 1990) are able to buffer the well-known negative impact of poor health on the intention to remain in the workforce. 784 employees (60–85 years, 74.8% male) affiliated with a temporary employment agency that specifically contracts employees older than 65 participated in a cross-sectional survey. Results of moderated hierarchical regression analyses indicated that for older employees with high use of SOC there was no significant relationship between health status and intention to remain in bridge employment. However, for older employees with low use of SOC, there was a weaker intention to remain in bridge employment when their health status was poor, while this intention was stronger in case of a better health status. On closer examination of the SOC subdimensions, this moderating effect was especially due to the compensation behavior of these older workers. As a conclusion, SOC seems to mitigate the detrimental effects of health problems on older employees' intention to remain in bridge employment. From a practical perspective, these findings provide important suggestions for the development of practical measures for the tertiary prevention of poor health during the retirement process.

Due to the graying and dejuvinization of the global labor market, aging workers are both motivated and increasingly required to continue working beyond their retirement age (De Lange, Bal, Van der Heijden, De Jong, & Schaufeli, 2011; Hedge & Borman, 2012). Along with these demographic changes, it becomes more and more important to study the conditions that support older employee's attempts to remain an active member in the workforce (Löckenhoff, 2012).

In this study, we will focus on the question whether the compensation of losses due to health problems contributes to the intention of older employees to remain (ITR) at work. Before addressing our main hypotheses, we will start with introducing the concepts under study and the theories on which we have mainly built upon.

Bridge employment is one of the most central factors for the successful adjustment to one's post-retirement life (Shultz & Wang, 2011; Wang, 2007). The phenomenon takes place after an older employee has stopped regular employment, but before he or she permanently withdraws from the workforce (Kim & Feldman, 2000). For organizations, bridge employment offers the

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opportunity to preserve valuable experience that older employees have gained throughout their professional careers and/or to transfer this experience to young employees (Shultz & Wang, 2011). From the perspective of older employees themselves, engaging in bridge employment supports physical and mental health (Zhan, Wang, Liu, & Shultz, 2009), retirement satisfaction as well as life satisfaction (Kim & Feldman, 2000).

Considering important predictors in earlier research, good health status is shown to be essential for retirees to engage in bridge employment (Wang, Zhan, Liu, & Shultz, 2008; Weckerle & Shultz, 1999). Poor health status, on the other hand, is one of the most prominent predictors to stop working (e.g., Karpansalo et al., 2004; Schuring, Burdorf, Kunst, & Mackenbach, 2007; Shultz, Morton, & Weckerle, 1998). Accordingly, the poorer their health status, the less likely older employees move into bridge employment, and the more likely they are to exit the workforce (Quinn, 1999).

Thus, by maintaining opportunities to work and to keep older employees actively involved in the workforce, bridge employment considerably supports their well-being and their successful adjustment to the retirement process. Good health status seems to be an important precondition in this regard. Against this background, our study aims to investigate whether individual life management and action strategies in terms of selection, optimization, and compensation (SOC; Baltes & Baltes, 1990) buffer the expected negative impact of poor health on the intention of older employees to remain in bridge employment (Shultz, 2003).

1. Contributions of our study to the scholarly literature

Our study aims to contribute to the scholarly literature in the following ways: *First*, it takes a new perspective on one of the most critical issues related to age and retirement—health. Recent research has identified various factors that support employees' health during the retirement process, like social support (Fiori, Antonucci, & Cortina, 2006), or socioeconomic status (Singh, 2006). Such research can contribute to the *primary prevention* of poor health, i.e. the prevention of *new* health-related harms that may impair the retirement process. So far, there is little empirical research addressing the perspective of *tertiary prevention of poor health* during the retirement process, i.e. factors that buffer detrimental effects of *existing* health-related harms on the retirement process (Löckenhoff, 2012).

Second, this study aims to extend the research on the SOC model by obtaining additional insights into the interplay of health and behavioral strategies during the transition retirement. There is growing evidence that the SOC model is a valuable theoretical framework for explaining individual behavior related to cope successfully with limited resources (Baltes & Dickson, 2001; Baltes, Rudolph, & Bal, 2012; Riediger, Li, & Lindenberger, 2006). However, we are not aware of studies that applied the SOC model to unravel the interplay of health complaints, and ITR at work during the transition into retirement.

Third, there are already studies that have demonstrated that SOC should help especially older employees to remain healthy and active in their jobs (Abraham & Hansson, 1995; Müller, Weigl, Heiden, Glaser, & Angerer, 2012; Müller, Weigl, Heiden, Herbig, Glaser, Angerer, in press; Weigl, Müller, Hornung, Zacher, & Angerer, in press; Yeung & Fung, 2009). However, all these previous publications focused exclusively on the chronological age of employees, i.e. the number of lived years. However, recent publications suggest that functional age, i.e. the state of capacity of employees, is considered to be a more relevant criterion for being considered an old employee, than chronological age (De Lange et al., 2006; Schalk, Van Veldhoven, De Lange, et al., 2010). Particularly, subjective changes in health status appeared to shift individual time horizons and goal priorities (Fung & Carstensen, 2006). Therefore, we aim to extend the SOC research by incorporating health, operationalized in terms of functional age, in order to obtain additional insights into the interplay of individual characteristics and behavioral strategies during later stages of adulthood. In the next two sections, we will elaborate the theoretical basis of our study.

2. Selection, optimization, and compensation at work

There is a growing base of evidence that corroborates the impact of people's resources on well-being and functioning (e.g., Hobfoll, 2002). Since the last two decades, the SOC model (Baltes & Baltes, 1990) stipulated research on the question of how older employees maintain functioning despite losses of resources. The SOC model suggests that every human developmental process encompasses a combination of three kinds of adaptive behaviors: *Selection* refers to the setting and prioritization of goals, based on personal motives and preferences (elective selection) or due to perceived losses of resources or presence of hindrances (loss-based selection). Selection guides individual behavior and development. It centers the usage of personal resources on specific goals, in contrast to distributing resources among multiple goals. Moreover, it is assumed that selection creates the feeling of purpose and meaning in one's life (Freund & Baltes, 2002). *Optimization* involves the obtainment, constant improvement, and use of means to successfully pursue a selected goal. Thus, optimization refers to the critical issue of having the effective means to achieve a selected goal. *Compensation*, like optimization, also refers to means and processes of goal attainment. It specifically involves the acquisition and application of alternative means or use of aid in case that lost resources or hindrances hamper the use of previous means. Thus, compensation addresses the question of how people are still able to maintain a desired level of functioning in the face of difficulties. Basically, the SOC model assumes that available resources can be used more efficiently when a person focuses on less but important goals, pursues these goals in an optimized way, and, in doing so, applies adequate compensatory means (Baltes, 1999).

A growing number of studies demonstrated that the SOC model can provide a valuable framework for explaining vocational behavior and coping with age-related changes in occupational contexts (Löckenhoff, 2012). More specifically, SOC is related to subjective well-being, job satisfaction, a better balance between work and family domains, and positive expectations about future opportunities at work (Baltes & Heydens-Gahir, 2003; Schmitt, Zacher, & Frese, 2012; Wiese, Freund, & Baltes, 2000, 2002; Young,

Baltes, & Pratt, 2007; Zacher & Frese, 2011). There are positive cross-sectional, yet no longitudinal associations between SOC and career success (Abele & Wiese, 2008; Wiese et al., 2002). SOC contributes to competency maintenance, work ability, and job performance (Abraham & Hansson, 1995; Bajor & Baltes, 2003; Müller et al., in press; Weigl et al., in press; Yeung & Fung, 2009). Thereby, SOC seems especially helpful for older employees in their attempt to maintain capability and functioning (Abraham & Hansson, 1995; Müller et al., 2012, in press; Weigl et al., in press; Yeung & Fung, 2009).

Research addressing SOC at work is in line with the job crafting perspective that perceives employees as active shapers of their work conditions (Wrzesniewski & Dutton, 2001). This perspective compliments the traditional job design perspective (Hackman & Oldham, 1976), i.e. that employees act within more or less static boundaries of existing work conditions (Hornung, Rousseau, Glaser, Angerer, & Weigl, 2010).

From the perspective of aging, such a dynamic view is especially useful for a better understanding of the vocational behavior of employees throughout their working life. It considers that aging is not a uniform process (e.g., Birren & Schaie, 2001). Members of older age groups are likely to differ more in terms of individual characteristics compared to members of younger age groups (e.g., Morse, 1993). As a consequence, this places particularly high demands on the design of age-differentiated work systems and stresses the need to take intra- and inter-individual differences into account (Schlick, Frieling, & Wegge, 2013).

3. Hypotheses development: health, SOC and the intention to remain in bridge employment

From a resources perspective, the above-reported findings on the negative effect of poor health status on bridge employment suggest that poor health status leads to an imbalance between impaired personal resources and job demands, and that this imbalance handicaps employees to do their work well (e.g., Bakker & Demerouti, 2007; Tuomi, Huuhtanen, Nykyri, & Ilmarinen, 2001; Warr, 1998). Subsequently, this negative effect of poor health status on bridge employment may have adverse effects on employees' self-concept as well, which, in turn, reduces work motivation and increases the likelihood to withdraw from the job (Kanfer & Ackerman, 2004).

Hypothesis 1. Poor health status is negatively related to ITR in bridge employment.

We further argue that an equalization of this imbalance between impaired personal resources and job demands may strengthen ITR in bridge employment. In other words, for employees who are able to allocate their impaired resources more effectively, the negative effects of poor health status on ITR bridge employment should be less pronounced. SOC is assumed to contribute to a more effective allocation of resources (Baltes & Lang, 1997), and herewith should help to buffer the negative effect of poor health on bridge employment. As an example, an older nurse working in the operating theater who suffers from backache may nevertheless perform his/her job when he/she knows a way to compensate this constraint—e.g., to switch for favorable body postures repeatedly.

Hypothesis 2. SOC moderate the negative relation between poor health status and ITR in bridge employment, such that there is a weaker relation between health status and ITR for employees with high SOC use.

Looking in more detail into the sub-dimensions of SOC, selection and optimization are related to personal growth and to reaching desired outcomes, whereas loss-based selection and compensation are specifically related to preservation and to minimize losses (Freund, 2006). Thus, especially loss-based selection and compensation should be relevant to buffer the negative consequences of poor health status.

Hypothesis 3. Loss-based selection and compensation moderate the negative relation between poor health status and ITR in bridge employment, such that there is a weaker relation between health status and ITR for employees with high use of loss-based selection or compensation.

4. Method

4.1. Context and participants

4.1.1. Research context

This study took place in the Netherlands in May 2011 where the current official retirement age is 65 years; yet which will change to 66 years in 2013. However, in the Netherlands it is possible to continue working after one's formal retirement age, while maintaining a government-funded pension. In recent years, shortages in the labor force have emerged as a result of the Netherlands having the lowest unemployment rates in Europe (Eurostat, 2012). Therefore, an increasing number of Dutch organizations have employed workers >65. Moreover, because organizations have to pay lower employment taxes for workers over 65, it is also financially attractive to employ such workers.

4.1.2. Participants

Initially, all registered clients of a temporary employment agency that specifically contracts workers older than 65 years were invited to participate in the study ($N = 6538$ working and non-active clients; 74.80% males, $M_{age} = 69.70$ years). Of the invited employees, $N = 784$ employees responded to an on-line questionnaire (response rate 11.99%); 76.50% of them being male with a mean age of 69.20 years ($SD = 6.54$ years; range 60–85 years). 91.2% of the participants were older than 65 years. On average,

the respondents worked 2.90 ($SD = 3.53$) years for the employment agency, while, on average, they had worked 34.18 ($SD = 16.07$) years prior to their 65th birthday. Of the participating employees, 54% worked a maximum of 13 h/week for the temporary employment agency. The majority had a bridge employment position in the education & science sector (27.6%), followed by transportation & delivery (18.2%), and technology (10.5%). A comparison of the response and total group of employees revealed that the sample did not significantly differ from the total population working for the employment agency in terms of age and gender.

4.2. Measures

4.2.1. Intention to remain in bridge employment (ITR)

The outcome variable was assessed with the three item-scale introduced by Armstrong-Stassen and Schlosser (2008), e.g. "I expect to continue working as long as possible in this organization." Items used a 5-point Likert scale from 1 = "strongly disagree" to 5 = "strongly agree". Cronbach's alpha of the scale was .87.

4.2.2. Health status

Current health status was measured with one item: "How would you describe your general health?" The item used a 5-point Likert scale ranging from 1 = "bad" to 5 = "excellent". There is a large body of research that has demonstrated the validity of single-item assessments of health status (Bowling, 2005): Concrete, single-item measures of health status are significantly associated with health problems, changes in functionality, mortality, and recovery from poor health (e.g., Idler & Kasl, 1995; Kaplan & Camacho, 1983; Siegel, Bradley, & Kasl, 2003).

4.2.3. Selection, optimization, and compensation (SOC)

Use of SOC was assessed using an adapted version of the 12-item SOC short-scale (Baltes, Baltes, Freund, & Lang, 1999; cf., Freund & Baltes, 2002). The questionnaire operationalizes the action strategies as proposed in the SOC model, i.e. selection (3 items, e.g.,: "I concentrate all my energy on few things"), loss-based selection (3 items, e.g.,: "When I can't do something important the way I did before, I look for a new goal"), optimization (3 items, e.g.,: "I make every effort to achieve a given goal"), and compensation (3 items, e.g.,: "When things don't go as well as they used to, I keep trying other ways until I can achieve the same result I used to"). In line with previous studies (Zacher & Frese, 2011; Ziegelmann & Lippke, 2007a, 2007b) and in order to minimize survey time, only response options reflecting typical SOC behaviors, and not distractor response options reflecting non-SOC behaviors, were included. All items used a 5-point Likert scale ranging from 1 = "does not apply at all" to 5 = "applies completely". Cronbach's alpha of the sub-scales ranged from .64 (compensation) to .86 (optimization). Cronbach's alpha of the total scale was .86.

Control variables were chronological age (in years of life), gender (1 = "male", 2 = "female"), and job as a main source of income: Information on age and gender was assessed with a single survey item respectively. We controlled for age because it seems to be negatively related to the extent of participation in bridge employment (Kim & Feldman, 2000). Gender was controlled for in our analyses because previous research suggested that male retirees seem to be relatively more engaged in bridge employment (Davis, 2003). Job as a main source of income was assessed with one item ("For me paid work is a major source of income"; scale: 1 = "strongly disagree"; 5 = "strongly agree"), and was controlled for as well because one of the major reasons for older employees to continue working is that they do not have the financial resources to fully retire (e.g. Barrington, 2004).

4.3. Analyses

Factorial validity of the scales was tested performing confirmatory factor analyses (CFA) (AMOS 20.0; maximum-likelihood estimation). Thereby conventional cut-offs (e.g., Brown, 2006; Byrne, 2001) of accepted goodness-of-fit indices were applied: incremental fit indices (IFI, TLI, CFI) should be >0.90 indicating good fit, and RMSEA < .08 indicates reasonable fit and <.05 indicates good fit. χ^2 statistics were used to compare the fit of the factorial models.

Hypotheses were tested with hierarchical moderated regression analysis (Cohen, Cohen, West, & Aiken, 2003) using SPSS 20.0. Prior to the analyses, all continuous predictor variables were mean-centered. Within the first step, all control variables were

Table 1
Results of the confirmatory factor analyses.

Model	χ^2	*df*	IFI	TLI	CFI	RMSEA [CI]
1) One Factor	2044.48***	90	.58	.51	.58	.17 [.16–.17]***
2) Two Factors (SOC, ITR)	796.25***	89	.85	.82	.85	.10 [.09–.11]***
3) Five Factors & Superior SOC Factor	376.70***	85	.94	.92	.94	.06 [.06–.07]***
4) Five Factors & Superior SOC Factor (correlated errors of item 4)	258.05***	82	.96	.95	.96	.05 [.05–.06] n.s.

Notes. SOC = selection, optimization, compensation; ITR = intention to remain, χ^2 = chi-square discrepancy, *df* = degrees of freedom; IFI = Incremental Fit Index; TLI = Tucker Lewis Index; CFI = Comparative Fit Index; RMSEA = Root Mean Square Error of Approximation; CI = 90% Confidence Interval; Δdf = change in degrees of freedom; $\Delta\chi^2$ = change in chi-square.
Model 2 vs. Model 1: $\Delta\chi^2 = 1248.23^{***}$, $\Delta df = 1$.
Model 3 vs. Model 1: $\Delta\chi^2 = 1667.78^{***}$, $\Delta df = 5$, Model 3 vs. Model 2: $\Delta\chi^2 = 419.55^{***}$, $\Delta df = 4$.
Model 4 vs. Model 1: $\Delta\chi^2 = 1786.43^{***}$, $\Delta df = 8$, Model 4 vs. Model 2: $\Delta\chi^2 = 538.20^{***}$, $\Delta df = 7$, Model 4 vs. Model 3: $\Delta\chi^2 = 118.65^{***}$, $\Delta df = 3$.
*** $p \leq .001$.

entered. Second, the predictor variable health and the moderator variable SOC were introduced to the model. In the final step, the two-way interaction term between health and SOC was entered. In order to test the hypothesized interaction effects, simple slopes were calculated for significant two-way interactions consistent with the procedure proposed by Aiken and West (1991). Similar analyses were conducted for each of the four SOC sub-scales separately.

5. Results

5.1. Test for the factorial validity

We tested for factorial validity of the ITR scale and the SOC scales, by comparing three different measurement models (see Table 1): In Model 1, the three items of the ITR scale and the twelve items of the SOC scale were assigned to one latent factor. Model 2 distinguished between the two latent factors representing ITR and SOC. Model 3 represented the hypothesized factor structure by distinguishing between the two latent factors ITR and SOC, and by adding four latent sub-factors for SOC. All models did not allow for correlations between error variances.

All indices showed an insufficient fit between the data and Model 1 and 2. However, $\Delta\chi^2$ statistics suggested that the distinction between a latent ITR factor and a SOC factor in Model 2 leads to a significant improvement of fit compared to Model 1. According to our hypothesized Model 3, IFI, TLI, and CFI showed a good fit and RMSEA showed reasonable fit between the model and the data. Model 3 appeared to be significantly superior to Models 1 and 2. Modification indices pointed to a covariance between the error terms of one item of the SOC sub-scale "Loss-based selection" and all three items of the SOC sub-scale "Selection". Thus, there seemed to be an unconsidered common latent factor of these four items. Model fit significantly improved allowing for this error covariance (see post-hoc Model 4 in Table 1). Overall, the CFA confirmed the hypothesized distinction between the latent ITR factor and the SOC factors. However, in line with prior studies (e.g. Wiese et al., 2000), we found minor issues remaining in regard to the measurement of SOC, in our case in distinguishing between the two SOC sub-scales "Selection" and "Loss-based selection".

5.2. Descriptive statistics

Means, standard deviations and inter-correlations of the study variables are summarized in Table 2. The most substantial correlation was between health status and ITR in bridge employment, i.e. the better the subjective health status the stronger the ITR. In line with the SOC model, we found medium to strong inter-correlations between the SOC sub-scales. However, the correlations between SOC and other variables appeared to be weak.

5.3. Hypotheses testing

The results of the hierarchical moderated regression analyses are presented in Table 3. Within the first step, of all control variables, only gender appeared to have a significant positive effect on ITR in bridge employment, i.e. females reported stronger effects. In the second step, we tested for main effects of the predictor variables health status and SOC: The results revealed support for Hypothesis 1 indicating that poorer health status was indeed associated with a weaker ITR in bridge employment, while good health status was related to a stronger ITR. We observed no significant relationship between SOC and ITR in bridge employment.

In the third step, we entered the two-way interaction term between health status and SOC into the regression model. We found a significant effect of the two-way interaction term, over and above the main effects of health status and SOC, on ITR in bridge employment. In accordance with Hypothesis 2, among employees with low use of SOC, poorer health status was associated with weaker ITR in bridge employment, while good health status was associated with stronger ITR (i.e. 1 *SD* below SOC mean; $ß = .21$, $p < .01$; $N = 112$); and in employees with high use of SOC there was no association between health and ITR (i.e. 1 *SD* above SOC mean; $ß = -.06$, n.s.; $N = 104$) (see Fig. 1).

Table 2
Means (M), standard deviations (*SD*), inter-correlations and *p*-values of study variables.

	M	*SD*	1.	2.	3.	4.	5.	6.	6a.	6b.	6c.
1. Intention to remain	3.47	.87									
2. Age (in years)	69.16	3.12	.02								
3. Gender	1.23	.42	.10**	−.06							
4. Job as main source of income	2.37	1.14	−.04	−.04	.03						
5. Health status	3.34	.73	.14**	.00	.06	.04					
6. SOC	2.77	.70	.01	.05	.08**	.07*	−.01				
6a. Selection	2.94	.88	.04	.00	.05	.05	.07	.74**			
6b. Loss-based selection	2.87	.87	.03	.02	.05	.06	.02	.81**	.57**		
6c. Optimization	2.45	.98	−.02	.04	.09**	.06	−.03	.80**	.39**	.50**	
6d. Compensation	2.83	.85	.01	.09**	.08**	.07*	−.08*	.78**	.38**	.49**	.58**

Notes. $N = 783–784$; Gender: male = 1, female = 2; SOC = selection, optimization, compensation.
** $p \leq .01$.
* $p \leq .05$.

Table 3
Results of hierarchical moderated regression analyses predicting the intention to remain ($N \leq 784$).

Predictor variables (step)	Dependent variable: intention to remain								
	B	*SE*	*β*	*B*	*SE*	*β*	*B*	*SE*	*β*
Control variables (Step 1)									
Age	.02	.03	.03	.02	.03	.03	.03	.03	.03
Gender	.21	.07	.10**	.19	.07	.09**	.19	.07	.09**
Job main source of income	−.03	.03	−.04	−.04	.03	−.04	−.04	.03	−.04
Main Effects (Step 2)									
Health				.16	.04	.14***	.16	.04	.13***
SOC				.01	.04	.01	.02	.04	.02
Two-way-Interactions (Step 3)									
Health × SOC							−.05	.03	−.07*
Δ*R*		.01*			.01**			.01*	
R^2		.01			.02			.03	

* $p \leq .05$.
** $p \leq .01$.
*** $p \leq .001$.

Finally, we tested the main and interaction effects between health status and each of the four sub-dimensions of SOC on participants' ITR in bridge employment (Table 4). None of the four sub-dimensions of SOC appeared to have main effects on ITR. Looking at the interaction effects (Hypothesis 3), only the interaction of health status and compensation significantly contributed to older employees' ITR in bridge employment. The direction of the moderation effect was the same as that of the total scale displayed in Fig. 1, i.e. the relationship between health status and ITR was stronger in employees with low compensation compared to employees with high compensation. Moreover, we have found a trend that loss-based selection moderated the relation between health status and ITR. We observed no interaction effects between health status and the two other SOC sub-dimensions (selection and optimization) on ITR. With these outcomes, our results only confirm partly the assumptions of Hypothesis 3 concerning the differential moderation effects of the SOC sub-dimensions.

6. Discussion

Bridge employment is one of the central factors supporting retirees to participate actively in the labor market and to successfully manage the critical life transition of work into retirement. With that, bridge employment is becoming an increasingly meaningful measure to deal with the challenges along with the demographic changes in Western Societies. In order to better understand the precursors of bridge employment, this study among older employees, mainly >65 years, aimed to investigate the effect of individual life management and action strategies in terms of selection, optimization, and compensation (SOC; Baltes & Baltes, 1990) on the well-known negative impact of poor health on the ITR in bridge employment.

Our results confirmed Hypothesis 1 indicating that poorer health status was associated with weaker ITR in bridge employment, while good health status was related to stronger ITR. The main finding of our study was a two-way interaction

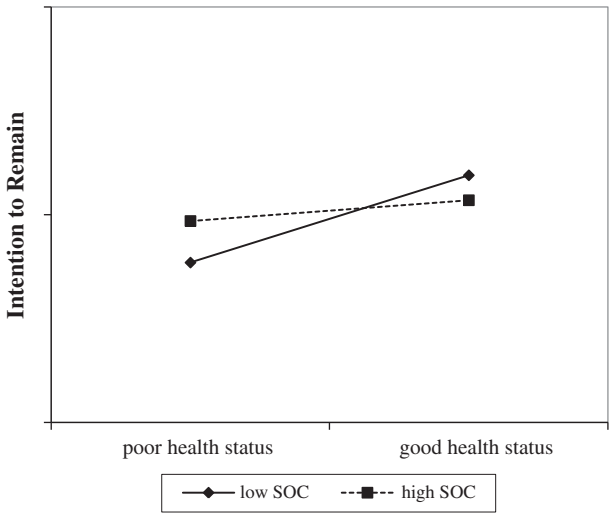

Fig. 1. Two-way moderation effect between health status, selection, optimization and compensation (SOC) and intention to remain.

Table 4
Results of hierarchical moderated regression analyses predicting the intention to remain: main effects and interactions of health status and SOC sub-dimensions ($N \leq 784$).

Predictor variables (step)	Dependent variable: intention to remain					
	B	*SE*	β	*B*	*SE*	β
Model a) Selection as predictor						
Main Effects (Step 2)						
Health status	.12	.03	.13***	.12	.03	.13***
Selection	.02	.03	.03	.03	.03	.03
Two-way-Interactions (Step 3)						
Health * Selection				−.04	.03	−.05
Model b) Loss Based Selection as predictor						
Main Effects (Step 2)						
Health status	.12	.03	.14***	.12	.03	.14***
Loss Based Selection	.02	.03	.02	.02	.03	.03
Two-way-Interactions (Step 3)						
Health * Loss-Based Selection				−.05	.03	−.06†
Model c) Optimization as predictor						
Main Effects (Step 2)						
Health status	.12	.03	.13***	.12	.03	.13***
Optimization	−.02	.03	−.03	−.02	.03	−.02
Two-way-Interactions (Step 3)						
Health * Optimization				−.02	.03	−.02
Model d) Compensation as predictor						
Main effects (Step 2)						
Health status	.12	.03	.14***	.12	.03	.14***
Compensation	.01	.03	.01	.02	.03	.02
Two-way-Interactions (Step 3)						
Health * Compensation				−.06	.03	−.08*

Notes. ***$p \leq .001$, *$p \leq .05$; †$p \leq .10$, controlled for age, gender, job as a main source of income; for reasons of space only Steps 3 and 4 of the regression models are displayed; all continuous predictor variables were mean-centered.

between health status and SOC, herewith confirming Hypothesis 2. More specifically, for older employees with high use of SOC there was no relation between health status and ITR in bridge employment while for older employees with low use of SOC there was a weaker ITR when their health status was poor and a stronger ITR when their health status was better.

Finally, in line with the argument that a separate examination of SOC sub-dimensions can provide additional valuable information on older employees' adaptation to age- or health-related changes (e.g., Freund & Baltes, 2002), we searched for differential effects of the single SOC behaviors on their ITR in bridge employment. Referring to the differential meaning of the four SOC sub-dimensions for personal growths and preservation, we hypothesized that only loss-based selection and compensation buffer the relationship between older employees' health and ITR (Hypothesis 3). Results partially supported our assumption. We observed a significant moderating effect of compensation but only a trend of a moderating effect of loss-based selection.

Thus, older employees' SOC seems to mitigate detrimental effects of health problems on their ITR in bridge employment. Our findings are in line with the so-called Conservation Of Resources theory (COR; Hobfoll, 2001), with the theory of adult development of work motivation (Kanfer & Ackerman, 2004), and with job crafting theory: In terms of COR theory, older employees who face diminished personal resources, may still accomplish their job demands in case they are able to use their limited personal resources efficiently by means of SOC (Baltes & Lang, 1997). Referring to work motivation (Kanfer & Ackerman, 2004), employees' perception of being capable to perform their job despite health-related diminished personal resources is considerably linked to enhanced motivation to continue working and to a stronger ITR in bridge employment. In terms of job crafting theory (Wrzesniewski & Dutton, 2001), our results suggest that crafting one's job according to one's individual needs and abilities—similarly to SOC—might be effective for counterbalancing losses of resources due to poor health. Moreover, employees with enhanced resources at work are more capable to employ their individual coping strategies to maximize job-related resources, and to create individually favorable job conditions (e.g., Hakanen, Perhoniemi, & Toppinen-Tanner, 2008; Weigl et al., 2010).

On closer investigation of the SOC sub-dimensions, the observed buffering effect was especially pronounced for older employees' compensation behaviors. This finding is consistent with propositions underlying the SOC model that compensation is mainly geared toward counteracting losses of resources, e.g., by using aids or by developing and applying alternative means, whereas elective selection and optimization are mainly geared toward increasing personal resources (e.g., Baltes & Baltes, 1999). Following this argumentation, health-related losses of resources should be best counteracted by compensation compared to elective selection and optimization.

Against our assumptions, loss-based selection only tended to buffer the relationship between health status and ITR in bridge employment. One potential reason for the non-significant moderating effect of loss-based selection might be found in the specific focus of loss-based selection on goals, i.e. on *what* work tasks to do. Following Morgeson and Humphrey's (2006) distinction

between different facets of job autonomy, it can be assumed that in occupational contexts autonomous decisions on work tasks are more difficult to realize than autonomous decisions on work methods, because most employees usually have only limited job control or decision latitude to do so. To stay with the example in the introduction of our article: It seems plausible that an older nurse working in a highly standardized operating setting can more easily counteract his/her health problems by introducing slight changes in *how* he/she accomplishes this job (i.e. to compensate) compared to their limited autonomy in deciding *what* alternative tasks he/she can perform (i.e. to change task goals). Accordingly, a recent study on work ability in aging health care personnel corroborates that job autonomy can indeed significantly enhance the effectiveness of SOC in older employees (Weigl et al., in press).

6.1. Limitations of the study

Several limitations of this study have to be considered: *First*, the cross-sectional design does not allow for inferences about causal relations between study variables. As an example, one can conclude from earlier research that there is not a unidirectional but rather a reciprocal relationship between health status and bridge employment, i.e. health status has not only an effect on decisions to remain in bridge employment, but being in bridge employment may also support health (Shultz & Wang, 2011; Wang, 2007; Zhan et al., 2009). This potential reciprocal relationship does not necessarily challenge our findings but we cannot exclude that older employees' SOC may also attenuate the effects of bridge employment on health status.

Second, along with the cross-sectional design a 'healthy worker effect' (Li & Sung, 1999) might have influenced the results: Older employees with poor health may have already withdrawn from the active workforce, and therefore participants with good or excellent health were probably overrepresented. This can also be one explanation for the comparatively weak effects of SOC: If the buffering effect of SOC on the relationship between health status and ITR in bridge employment is true, one can expect stronger effects of SOC in a population with poorer health. In that sense, the findings presented in this contribution might underestimate the effects of SOC.

Thus, the results of this study encourage the conduction of more extensive longitudinal studies that accompany older people through the process of retirement starting with the early stages (i.e. retirement decisions and planning in the last years of official employment; Wang & Shultz, 2010). Such longitudinal designs would allow, for instance, to apply multi-group cross-lagged panel models that simultaneously examine cross-sectional as well as reciprocal relationships between poor health and ITR in bridge employment.

Eventually, the causal dominance of either health or bridge employment can be disentangled in a more elaborated way (Zapf, Dormann, & Frese, 1996). Moreover such designs would allow controlling for healthy worker effects by better capturing the differential developments and dynamics of people with poor and good health status within the retirement process.

Third, as suggested by Zacher and Frese (2011), but in contrast to the original SOC scale, which uses a two-step answering format (Baltes et al., 1999), we have used a conventional 5-point Likert scale to assess SOC. We made this decision to increase the economic use of the instrument and to minimize the amount of missing values. However, it was at the expense of comparability with the main body of SOC research and the susceptibility to socially desirable response tendencies (Freund & Baltes, 2002).

Fourth, our study results are exclusively based on self-reports. Common-method bias might lead to spurious results due to inflated correlations between study variables (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). However, our preliminary tests for inter-correlations between the study variables showed low common variance such that statistical artifacts are implausible. Moreover, the validity of self-reports in the assessment of health status and ITR in bridge employment might be questioned: Regarding the assessment of health, previous studies have repeatedly demonstrated that single-item self-reports closely mirror more objective health indicators like changes in functionality, recovery from poor health, or mortality (e.g., Idler & Kasl, 1995; Kaplan & Camacho, 1983; Leinonen, Heikkinen, & Jylha, 2002; Siegel et al., 2003). Single item measures of health status have proven to be valid and become widely acknowledged in health research (for an overview see, Bowling, 2005). Regarding the measurement of ITR in bridge employment, intentions do not always lead to actual behavior; however intentions have been shown to be one of the strongest predictors of actual behavior (Prothero & Beach, 1984).

6.2. Implications for further SOC- and bridge employment-research and practice

In face of these limitations, our study has considerable strengths and valuable implications for theory and practice: From the perspective of further theory development, our study adds upon the growing evidence for the positive effects of SOC in occupational contexts (Baltes & Dickson, 2001). Moreover, it extends previous research on the role of SOC to counteract potential negative consequences of aging at work in terms of resource losses: While previous studies exclusively focused on *chronological* age as a proxy indicator of personal resources (Abraham & Hansson, 1995; Müller et al., 2012, in press; Weigl et al., in press; Yeung & Fung, 2009), this study focuses on health status—as a more direct indicator of personal resources—in a sample of employees with a homogenous chronological age. With that, the present study provides additional evidence for one of the central assumptions of the SOC model that SOC supports the more efficient use of limited personal resources.

Further, by providing evidence that SOC buffer the relation between health and ITR in bridge employment, our study is the first that demonstrates that the SOC model can also provide a valuable theoretical framework for retirement research. By combining a resource-based perspective and a life-span approach, our study may help to guide further theoretical development aimed at a better understanding of retirement transition and adjustment (Löckenhoff, 2012; Wang & Shultz, 2010).

From a practical perspective: As vulnerability increases with age, poor health is more relevant for older than for younger employees (e.g., Silverstein, 2008). As such, the SOC model provides a framework for the development of effective interventions that are especially beneficial for older employees. Those interventions might be based upon four pillars: *First*, tailor-made training

should furnish information for older employees to become acquainted with the SOC model. *Second*, such training might further identify older employees' individual causes for resource losses (i.e. health complaints or loss of supportive relationships). *Third*, each participant should be guided to develop adequate individual SOC behaviors to cope with his/her impaired resources at the work place. *Fourth*, such training should support and accompany the successful transfer of acquired SOC behaviors to the workplace, e.g., by providing opportunities for the participants to repeatedly discuss the progress or the barriers of the implementation of SOC at work, and to gradually adjust SOC behaviors if necessary. Organizational-oriented interventions that specifically address conditions of the work environment might effectively supplement individual-oriented SOC interventions.

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