Changes in Life Satisfaction in the Retirement Transition: Interaction Effects of Transition Type and Individual Resources

Isabelle Hansson, Sandra Buratti, Valgeir Thorvaldsson, Boo Johansson, and Anne Ingeborg Berg

Department of Psychology and Centre for Ageing and Health (AgeCap), University of Gothenburg, Gothenburg, Sweden

ABSTRACT

The impact of retirement on well-being varies between individuals, but also within individuals over time. Type of transition and individual differences in resource capability are two factors likely to influence the retirement adjustment process, but we still lack in our understanding of the importance of these factors in relation to each other. The aim of this study was to investigate interaction effects of transition type and individual resources on changes in life satisfaction in the retirement transition. We studied changes in life satisfaction over 1 year in a sample of 3,471 older adults from the population-based HEalth, Ageing, and Retirement Transitions in Sweden (HEARTS) study. The sample included participants retiring gradually (n = 360) or fully (n = 346) between the two measurement points as well those continuously working (n = 1,860) or retired (n = 905) in both waves. Resources evaluated for their role in the transition included baseline measures of self-esteem, autonomy, social support, self-rated physical health, self-rated cognitive ability, and basic financial assets. Results from multiple group latent change score models showed that retirement transition type and individual differences in resource capability variously influenced changes in life satisfaction. The six resources accounted for a larger proportion of individual differences in change among those who retired between the two waves (21.2%) than in those whose retirement status remained unchanged (12.6%). In addition, a larger proportion of variability in changes in life satisfaction were explained in abrupt (31.4%) than in gradual (11.7%) retirement.

Retirement from work is a major life event in older adulthood because it serves as a marker of the transition from pre-retirement midlife to the new life phase as senior citizen (Ekerdt, 2010). This transition involves a process of psychologically and behaviorally distancing oneself from the workforce. The person is confronted with new social roles, expectations, challenges, and opportunities, all of which can influence well-being (Wang & Shi, 2014). Research has shown that, for the majority, retirement has no major impact on well-being (see Henning, Lindwall, & Johansson, 2016, for a recent review). Nevertheless, a considerable body of research indicates that the impact may differ both between and within individuals over time (van Solinge, 2013). Several longitudinal studies (Heybroek, Haynes, & Baxter, 2015; Muratore, Earl, & Collins, 2014; Pinquart & Schindler, 2007; Wang, 2007) report heterogeneity in the effects of retirement and show that many older workers may have problems adjusting to retirement.

Well-being in early retirement has been identified as an important predictor of future health status and survival (Diener, & Chan, 2011; Wiest, Schüz, Webster, & Wurm, 2011). These findings, combined with reports of a rapidly aging population (OECD, 2006), have contributed to a growing interest in retirement research in political, socioeconomic, and human resources areas (Wang & Shi, 2014). The transition to retirement is, however, frequently characterized as a multidimensional and dynamic process (van Solinge, 2013) in which no two people are likely to have the same experience (Shultz & Wang, 2011).
Pre-retirement work factors such as psychological and physical demands (Quick & Moen, 1998), stress, and job satisfaction (Wang, 2007) are likely to influence well-being in retirement. Other factors related to well-being in retirement include socioeconomics and labor market status (e.g., Wetzel, Huxhold, & Tesch-Römer, 2016).

Retirement adjustment refers to the process of getting used to life changes accompanied with the transition (van Solinge & Henkens, 2008). Research on the retirement adjustment process has typically focused on either the impact of retirement or the factors related to retirement adjustment quality (Wang, Henkens, & van Solinge, 2011). The retirement adjustment process is preferably studied through context-dependent measures of the person’s psychological comfort with life as a retiree (Wang et al., 2011). Direct measures of adjustment and satisfaction in retirement have some obvious advantages for capturing the dynamics of the process (van Solinge & Henkens, 2008), but to account for changes in well-being across the retirement transition, it is necessary to also include measures of well-being before the actual retirement event. In this study, we investigated how individual well-being changes in the years before and after retirement, and therefore estimated retirement adjustment indirectly through measures of global subjective well-being. More specifically, we studied levels and changes in life satisfaction, here defined as the person’s global cognitive evaluation of their satisfaction with life as a whole (Diener, 1984).

In a recent review, Wang and colleagues (2011) concluded that there is still a lack in our understanding of the underlying mechanisms of successful adjustment to retirement. Type of transition, gradual or abrupt work exit (Zhan & Wang, 2015), and individual resource capability (Wang et al., 2011) are two factors likely to influence the retirement adjustment process. The present study adds to the current literature on retirement adjustment by combining these two factors in studying individual differences in changes in subjective well-being before and after retirement. More specifically, both the type of transition and individual differences in resource capability are investigated as predictors of changes in life satisfaction in the retirement transition.

**TYPE OF RETIREMENT TRANSITION**

Whether the work exit is gradual or abrupt is likely to influence both the immediate effects of retirement and the development of a post-retirement lifestyle. Retirement may not necessarily be viewed as a permanent career exit (Wang & Shultz, 2010; Zhan & Wang, 2015); many retirees continue working to some extent in the form of bridge employment as an intermediate step toward a complete labor force withdrawal (Shultz, 2003). Bridge employment can take many forms, and it has become relatively common among older workers to retire, “un-retire,” and “re-retire” several times (Beehr & Bennett, 2015; Shultz & Wang, 2011). Bridge employment, often described as an optional part of the retirement process (Shultz & Wang, 2011; Wang & Shultz, 2010), is assumed to be beneficial for both physical and psychological well-being (Zhan, Wang, Liu, & Shultz, 2009).

In their review, Zhan and Wang (2015) suggested that bridge employment may serve as a coping mechanism in adapting to retirement. In this sense, bridge employment can be used to prevent the adverse effects of an abrupt loss of work role and to preserve continuity in lifestyle patterns (e.g., Wang & Shultz, 2010; Zhan & Wang, 2015). It can also be an opportunity for people to financially and psychologically prepare for their definite withdrawal from the labor force (Zhan & Wang, 2015). Similarly, Beehr and Bennett (2015) proposed that bridge employment may help to maintain structure in central aspects of daily life, including finances, daily routines, social contacts, physical activities, and sense of identity.

Bridge employment has been shown to be beneficial in the retirement adjustment process as it predicts both retirement satisfaction and overall life satisfaction (Kim & Feldman, 2000). Bridge employees seem to have a smoother transition in that they experience less change in well-being than retirees without bridge jobs (Wang, 2007), and bridge employment has been shown to mitigate the negative effects of involuntary retirement on life satisfaction (Dingemans & Henkens, 2014).

However, even though retirees generally report positive reasons for working after retirement (Dingemans, 2016; Fasbender, Wang, Voltmer, & Deller, 2015), bridge employment has also been shown to have negative influences on well-being. Some retirees enter bridge employment for financial reasons (Beehr & Bennett, 2015; Zhan, 2016), which Dingemans and Henkens (2014) found to be associated with decreased life satisfaction. De Vaus and colleagues (De Vaus, Wells, Kendig, & Quine, 2007) found that gradual retirement is associated with less health deterioration, but with more adjustment problems than abrupt retirement. They found no differences, however, in subjective well-being between those who retired gradually or abruptly.

Several reviews on bridge employment (e.g., Beehr & Bennett, 2015; Wang & Shultz 2010; Zhan & Wang, 2015) have concluded that more research on the various outcomes of bridge employment is needed. Although gradual retirement is generally believed to ease the retirement adjustment process (Cahill, Giandrea, & Quinn, 2013), studies are lacking on the mechanisms underlying how and why retirees can benefit from prolonged work engagement after retirement (Zhan & Wang, 2015). For example, the effects of type of transition may vary depending on individual differences in resource capability.

**INDIVIDUAL RESOURCES**

The resource-based dynamic model on retirement adjustment by Wang and colleagues (2011) claims that retirement is a longitudinal dynamic process in which individual well-being is influenced by available resources and changes in these resources over time. The model is proposed as an integrative theoretical framework suitable for the study of various outcomes of retirement as well as the underlying mechanisms through which retirement has its impact. In contrast to previous theories on retirement (e.g., role theory, continuity theory, and stage theory), it has the potential to account for within- as well as between-person differences in well-being in the retirement adjustment process. The central premise in the resource-based dynamic model is that levels and changes in well-being in the retirement transition are directly influenced by the individual’s access to resources. Resources are here broadly defined as “those entities that either are centrally valued in their own right or act as means to obtain centrally valued ends” (Hobfoll, 2002, p. 307).

Factors on various levels, including individual, household, job, organizational, and macro level variables are expected to influence the availability of and changes in individual resources, which are described as the driving mechanism behind changes in well-being. Emotional, motivational, social, physical, cognitive, and financial resources are suggested to be of particular importance in this process. Resources are described as means or assets that can be used to cope with challenges associated with the transition. Resources are assumed to be key
elements because they define the conditions of retirement and influence what people are able to do physically and what they can afford financially in retirement. For instance, individuals with limited financial resources and poor health may be constrained in the maintenance of their pre-retirement lifestyle and the possibilities to take up new activities in retirement. More resources are expected to lead to fewer adjustment problems and greater well-being (Wang et al., 2011).

The applicability of a resource perspective for studying the retirement adjustment process has received considerable support (see Barbosa, Monteiro, & Murta, 2016, for a recent review). However, most previous research has focused on a limited set of resources and mainly on the impact of health and wealth. Measures of physical health and financial assets were found to correlate with direct (e.g., adjustment to or satisfaction with retirement) or indirect (e.g., life satisfaction or quality of life) measures of retirement adjustment in about 80% of the 115 studies reviewed by Barbosa and colleagues (2016). People with poor physical and financial resources are more likely to experience adjustment problems (e.g., Earl, Gerrans, & Halim, 2015; Muratore & Earl, 2015) and lower levels of psychological well-being in retirement (Kim & Moen, 2002). Notably, only eight of the reviewed studies explicitly included more than two of the six resource domains specified in the resource-based dynamic model (Wang et al., 2011). None of them included all six domains. In these studies, physical and financial resources were typically accompanied with measures of social and/or motivational resources. Social resources, frequently measured as frequency (e.g., Earl et al., 2015) and/or quality (e.g., Price & Balaswamy, 2009) in social relations, was found to predict retirement adjustment outcomes in 63% of the studies. More social resources are generally associated with higher levels of adjustment (Earl et al., 2015) and satisfaction (Price & Balaswamy, 2009).

The role of psychological resources in the retirement adjustment process is studied less frequently. In their review, Barbosa and colleagues (2016) made no distinction between cognitive, motivational, and emotional resources, as suggested in the model by Wang and colleagues (2011). Instead, they were all categorized as indicators of psychological resources, and within this category, motivational resources, often measured as self-efficacy, personal control, or mastery, was the most common resource type. Lack of personal control or mastery have been shown to predict adjustment problems (Earl et al., 2015; Muratore & Earl, 2015) as well as lower levels of psychological well-being (Kim & Moen, 2002) and satisfaction (Price & Balaswamy, 2009) in retirement. Self-esteem, as an indicator of emotional resources, has also previously been related to retirement adjustment (e.g., Reitzes & Mutran, 2004) and satisfaction (e.g., Price & Balaswamy, 2009). Noteworthy, none of the 115 studies reviewed by Barbosa and colleagues (2016) included measures of cognitive resources (i.e., memory, processing speed, or general cognitive ability). More in-depth studies on the role of psychological resources could contribute to the understanding of heterogeneity in well-being in the retirement transition as these resources are likely to influence how individuals react to and cope with changes associated with the transition (van Solinge, 2013).

To our knowledge, only one previous study on retirement adjustment has included all six resource domains suggested by Wang and colleagues (2011). In this study, Leung and Earl (2012) evaluated a resource inventory and found the six resource types to be aggregated in three clusters with a shared variance between material (i.e., physical and financial) and psychological (i.e., cognitive, emotional, and motivational) resources. Social resources were the only domain without shared variance with other resource types. Although Leung and Earl found all three resource domains to be related to both adjustment and satisfaction in retirement, studies on the role of these six resources for changes in well-being in the transition from work to retirement are still lacking. For instance, despite the fact that five of the six resource domains have previously been identified as predictors of both levels and changes in well-being in the retirement adjustment process, little is still known about the effects of these resources relative to the type of retirement transition.

### PRESENT STUDY

Previous research on the retirement adjustment process indicates that the type of transition (Shultz & Wang, 2011; Wang & Shultz, 2010; Zhang & Wang, 2015) and individual differences in resource capability (Barbosa et al., 2016; Wang et al., 2011) are likely to influence both within- and between-person differences in well-being in the retirement transition. The present study adds to current knowledge by further investigating the effects of these two factors on changes in life satisfaction in the years before and after retirement. We specifically aimed to investigate interaction effects of type of transition and individual resources on changes in life satisfaction over 1 year in a Swedish population-based sample of older adults. Three hypotheses were formulated:

Type of retirement transition is associated with changes in life satisfaction after 1 year (H1). Given that retirement is associated with substantial lifestyle changes (e.g., Wang & Shi, 2014; Wang & Shultz, 2010; Wang et al., 2011), it is likely that people who enter retirement between two measurement points are more responsive for changes in well-being than those with unchanged retirement status, regardless if the changes are positive or negative. We therefore assumed that changed retirement status would be associated with more changes in life satisfaction compared with what can be observed among those with unchanged retirement status. Based on the idea that bridge employment may serve as a coping mechanism in adapting to retirement and that gradual retirement leads to more successive lifestyle changes (Shultz & Wang, 2011; Wang & Shultz, 2010; Zhang & Wang, 2015), we also expected that gradual retirement would be associated with less change in life satisfaction compared with abrupt retirement.

Individual differences in resource capability are associated with changes in life satisfaction after 1 year (H2). In accordance with the resource-based dynamic model (Wang et al., 2011), we assumed that emotional, motivational, social, physical, cognitive, and financial resources would be related to changes in life satisfaction after 1 year. The six resource domains were in this study represented by measures of self-esteem (emotional), autonomy (motivational), social support (social), self-rated physical health (physical), self-rated cognitive ability (cognitive), and basic financial resources (financial). We expected fewer resources at baseline to be associated with a decrease in life satisfaction after 1 year, and more resources to be related to an overall increase.

The effects of transition type and individual resources on changes in life satisfaction vary systematically in relation to each other (H3). We argued that the substantial lifestyle changes associated with retirement would make a person more vulnerable and more dependent on the availability of certain resources in order to successfully adjust to and develop a satisfactory life as retiree. The effects of the six resources would therefore be stronger and account for a larger proportion of
the changes in life satisfaction for individuals who retire between two measurement points than for those whose retirement status remain unchanged. Given that abrupt retirement is associated with more immediate lifestyle changes, we further anticipated that the six resources would account for a larger proportion of the changes in life satisfaction in abrupt than in gradual retirement.

**METHOD**

**Sample and Procedure**

We used data from the HEArth, Ageing and Retirement Transitions in Sweden (HEARTS) study (Lindwall et al., 2017), a longitudinal population-based study aimed to capture developmental psychological processes in the years before and after the retirement transition. The participants in HEARTS were recruited from the Swedish register “Statens personadressregister” (SPAR). In April 2015, a nationally representative sample of 14,990 people aged 60–66 were mailed an invitation to participate in the study. Participants were asked to complete a survey including questions about their sociodemographic background, work life and retirement, health, lifestyle, well-being, social relations, and personality. Data were collected mainly through the online platform “Qualtrics”, but a paper version of the questionnaire was generated for the second reminder 6 weeks later.

A total of 5,913 individuals (39.4%) participated in the first wave (T1), 69% (n = 4,068) completed the web-based survey, and 31% (n = 1,845) completed the paper version. The sample is generally representative of the population born in Sweden from 1949 to 1955, although the proportions of women (sample = 53%; population = 50%) and of people with higher education (sample = 41%; population = 33%) are higher. The first follow-up (T2), conducted in the spring 2016, resulted in a retention rate of 78.7% (N = 4,651). To avoid potential confounding effects of labor market status on changes in life satisfaction (Wetzel et al., 2016), we excluded people reporting unemployment (n = 158) or disability pension (n = 333) at T1 or T2. For the purpose of this study, we also excluded participants who: (a) did not report retirement status at both measurement occasions (n = 135), (b) were bridge employed in both waves (n = 343), (c) retired from previous bridge employment (n = 129), or (d) “un-retired” between the two waves (n = 82). The final sample consisted of 3,471 individuals with a mean age of 63.01 years (SD = 2.01), and 56% of whom were women.

**Measures**

**Life satisfaction**

Life satisfaction was measured at T1 and T2 using the Satisfaction With Life Scale (Diener, Emmons, Larsen & Griffin, 1985). The scale consists of five items (e.g., “I am satisfied with my life”) measured on a 7-point scale, ranging from strongly disagree (1) to strongly agree (7). Cronbach’s alpha was estimated to .92 in both waves.

**Retirement transition type**

Retirement status was measured at T1 and T2 through responses to the question “Are you retired (receive old-age pension)?”. Four response alternatives were given: (1) no, (2) yes, but still working and consider myself a worker, (3) yes, still working but consider myself a retiree, and (4) yes, full-time retiree. For this study, we made no distinction between the two middle response alternatives. Thus, a negative answer (no) was coded as “working,” the two middle alternatives (yes, but still working and consider myself a worker and yes, still working but consider myself a retiree) were coded as “bridge employed,” and a positive answer (yes, full-time retiree) was coded as “retired.” As shown in Table 1, four retirement transition types were generated based on the participants’ retirement statuses at T1 and T2: (1) working both waves, (2) gradual retirement between waves, (3) abrupt retirement between waves, and (4) retired both waves.

**Individual resources**

Baseline (T1) measures of self-esteem, autonomy, social support, self-rated physical health, self-rated cognitive ability, and basic financial resources were included.

**Self-esteem**

Self-esteem was measured on the five positively phrased items (e.g., “I feel that I have a number of good qualities”) from the Rosenberg Self-Esteem Scale (Rosenberg, 1965). This decision was based on studies suggesting that responses to positively phrased items are more accurate than those to negatively phrased items (Lindwall et al., 2012; Schriesheim & Hill, 1981). The five items were measured on a 4-point scale, ranging from strongly disagree (1) to strongly agree (4). Cronbach’s alpha was estimated to .91.

**Autonomy**

Autonomy was measured on the Autonomy subscale of the Basic Psychological Need Satisfaction Scale (Chen et al., 2015). The scale consists of three items (e.g., “I feel a sense of choice and freedom in the things I undertake”) measured on a 5-point scale, ranging from completely false (1) to completely true (5). Cronbach’s alpha was estimated to .66.

**Social support**

Social support was measured on the Multidimensional Scale of Perceived Social Support (Zimet, Dahlem, Zimet, & Farley, 1988). The scale consists of 12 items divided into three subdomains: Family (e.g., “I get the emotional help and support I need from my family”), Friends (e.g., “I can talk about my problems with my friends”), and Significant Other (e.g., “There is a special person who is around when I am in need”).

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**Table 1. Frequency Distribution of the Four Retirement Transition Types**

| Retirement Transition Type | Retirement Status T1 | Retirement Status T2 | n  |
|---------------------------|----------------------|----------------------|----|
| Working both waves        | Working              | Working              | 1,860 |
| Gradual retirement between waves | Working              | Bridge employed      | 360  |
| Abrupt retirement between waves | Working              | Retired              | 346  |
| Retired both waves        | Retired              | Retired              | 905  |
Participants rated the items on a 7-point scale, ranging from strongly disagree (1) to strongly agree (7). Cronbach’s alpha was estimated to .95.

Self-rated physical health
Self-rated physical health was measured on one item (“How do you currently evaluate your overall health condition?”) and estimated on a 6-point scale ranging from very bad (1) to very good (6).

Self-rated cognitive ability
Self-rated cognitive ability was measured on one item (“How do you currently perceive your thinking ability?”) and estimated on a 6-point scale ranging from very bad (1) to very good (6).

Basic financial resources
Basic financial resources were measured by the participants’ estimates of their ability to cover unpredicted costs of 15,000 SEK (approx. €1,500) within 1 week. A positive response (yes, using own or household’s money) was coded as one (1) and a negative response (yes, but only with help from family or friends or no) was coded as zero (0).

Covariates
Demographic information from T1, including age, gender (0 = male, 1 = female) and education (0 = primary/secondary, 1 = tertiary/higher) were included to control for potential confounding effects.

Statistical Analysis
Changes in life satisfaction between T1 and T2 were investigated through structural equation modelling techniques in R version 3.3.2 (R Core Team, 2016). More specifically, we evaluated latent change score (LCS) models using the lavaan package (Rosseel, 2012). As suggested in literature reviewing statistical methods for analysis of within-person changes, particularly in data including only two time points (e.g., McArdle, 2009; Newsom, Jones, & Hofer, 2011), LCS models are preferable to raw difference score models or lagged regression models because they can better control for statistical problems such as regression to the mean, inflated standard errors, and low reliability among difference scores.

As a first step to establish an adequate measurement model, we generated a two-latent-factors confirmatory model for life satisfaction from the item scores at T1 and T2, and evaluated measurement invariance over time and across groups. We then generated an LCS from the residual in T2 when regressed on T1. Figure 1 illustrates the estimated LCS model; two latent factors (“sT1” and “sT2”) were derived from the items scores at T1 (“A101_1”–“A101_5”) and T2 (“B101_1”–“B101_5”), and a LCS (“chn”) was generated based on the two latent measures of life satisfaction at T1 and T2. The model was specified so that the total variance in T2 was accounted for by T1 plus change. The change factor was regressed on T1 and intercepts (i.e. means) were estimated for both T1 and the change component. This way, the change intercept represents the average rate of change while

Figure 1. Path-diagram for the estimated latent change score model of life satisfaction. Two latent factors (“sT1” and “sT2”) were derived from the items scores at T1 (“A101_1”–“A101_5”) and T2 (“B101_1”–“B101_5”), and a latent change score (“chn”) was generated based on the residual in sT2 when accounting for life satisfaction at T1.
controlling for life satisfaction at T1 (McArdle, 2009). The intercept for T2 was constrained to zero. The items were mean centered (items for T2 centered on average level on the corresponding item for T1) before included in the analysis so that the change intercept could be interpreted as the average change given mean levels at T1. Selected covariates (age, gender, and education) were included as predictors of both T1 and the change component.

To investigate if changes in life satisfaction are related to retirement transition type (H1), we estimated a multiple group LCS model with all parameters initially constrained to be equal across the four retirement transition groups (Model 1). In a second model, the change intercept was released to be a free parameter and vary across the groups (Model 2). We evaluated group differences in average rate of change through chi-square tests on pairwise constraints.

To investigate if changes in life satisfaction are related to individual differences in resource capability (H2), we estimated a third model with all six resource variables (self-esteem, autonomy, social support, self-rated physical health, self-rated cognitive ability, and basic financial resources) included (Model 3). The resources were included as predictors of both level (T1) and changes in life satisfaction. This way, we could evaluate the effects on change while controlling for the effects on baseline levels in life satisfaction. Latent-factor confirmatory models of self-esteem, autonomy, and social support were estimated and evaluated separately before inclusion in the LCS model. The effects of the six resources on changes in life satisfaction were in this model constrained to be equal across the four retirement transition groups.

To investigate interaction effects of transition type and resources on changes in life satisfaction (H3), we estimated a fourth model where the effects of the six resources were free to vary across the four retirement transition groups (Model 4). Group differences were evaluated using chi-square tests. All models were estimated using full information maximum likelihood and continuous (or nonbinary) predictors were grand-mean centered.

**RESULTS**

Table 2 provides an overview of baseline demographics and group-related differences in the included variables. Workers reported lower life satisfaction than retirees at both T1 and T2, and lower life satisfaction at T2 than those retiring fully between the waves. Retirees reported higher autonomy at T1 compared with those working at baseline. Compared with the proportion in the full sample, a larger proportion of those retiring between the two waves and a smaller proportion of the retirees reported that they had sufficient financial resources to

| Table 2. Baseline Demographics and Group-Related Differences in Included Variables | Working (n = 1,860) | Gradual Retirement (n = 360) | Abrupt Retirement (n = 346) | Retired (n = 905) | Full Sample (N = 3,471) | Group Differences |
|---|---|---|---|---|---|---|
| Life satisfaction T1 | 4.86 (1.30)<sup>a</sup> | 4.94 (1.25) | 5.03 (1.24) | 5.13 (1.35)<sup>b</sup> | 4.96 (1.31) | F(3, 3,189) = 8.80, p < .001 |
| Life satisfaction T2 | 4.85 (1.29)<sup>ab</sup> | 5.01 (1.24) | 5.17 (1.28)<sup>b</sup> | 5.11 (1.35)<sup>b</sup> | 4.97 (1.30) | F(3, 3,255) = 10.80, p < .001 |
| Self-esteem | 3.48 (0.55) | 3.49 (0.54) | 3.46 (0.54) | 3.45 (0.54) | 3.47 (0.54) | F(3, 3,174) = 0.84, p = .47 |
| Autonomy | 3.77 (0.71)<sup>a</sup> | 3.87 (0.70)<sup>b</sup> | 3.84 (0.70)<sup>c</sup> | 4.07 (0.69)<sup>d</sup> | 3.87 (0.71) | F(3, 3,211) = 35.91, p < .001 |
| Social support | 5.75 (1.32) | 5.78 (1.26) | 5.85 (1.19) | 5.83 (1.31) | 5.78 (1.30) | F(3, 3,102) = 0.95, p = .42 |
| Self-rated physical health | 4.79 (0.90) | 4.86 (0.91) | 4.81 (0.90) | 4.77 (1.00) | 4.79 (0.93) | F(3, 3,383) = 0.91, p = .43 |
| Self-rated cognitive ability | 4.84 (0.82) | 4.90 (0.79) | 4.84 (0.81) | 4.85 (0.80) | 4.85 (0.81) | F(3, 3,358) = 0.51, p = .67 |
| Basic financial resources | 91 | 91 | 95<sup>*</sup> | 90<sup>*</sup> | 91 | χ²(3) = 7.60, p = .05 |
| Age<sup>d</sup> | 61.82 (1.54)<sup>a</sup> | 63.52 (1.65)<sup>b</sup> | 63.66 (1.49)<sup>c</sup> | 65.00 (1.27)<sup>d</sup> | 63.01 (2.01) | F(3, 3,445) = 967.19, p < .001 |
| Gender<sup>e</sup> | 55 | 50 | 58 | 59<sup>*</sup> | 56 | χ²(3) = 11.00, p < .01 |
| Education<sup>e</sup> | 49<sup>*</sup> | 48 | 40<sup>*</sup> | 37<sup>*</sup> | 45 | χ²(3) = 38.45, p < .001 |

<sup>a</sup>Values with a common subscript are significantly different at p < .05 with Bonferroni adjustments.
<sup>b</sup>Range 1–7.
<sup>c</sup>Range 1–4.
<sup>d</sup>Range 1–5.
<sup>e</sup>Range 1–6.
<sup>f</sup>% With basic financial resources.
<sup>g</sup>% Females.
<sup>h</sup>% Higher education.
<sup>i</sup>Significantly different compared to the proportion in the total sample, p < .05.
cover unpredicted costs. No significant differences were found in levels of self-esteem, social support, self-rated physical health, or self-rated cognitive ability across the four groups. As expected, participants working both waves were younger than those retiring between waves and those already retired at T1. In addition, women were overrepresented among retirees, and highly educated people were overrepresented among workers and underrepresented among retirees and participants retiring between waves. Bivariate correlations among the variables are presented in Table 3.

EFFECTS OF RETIREMENT TRANSITION TYPE ON CHANGES IN LIFE SATISFACTION (H1)
The estimated measurement model of life satisfaction showed acceptable fit indices ($\chi^2(162) = 554.18, p < .001$, comparative fit index [CFI] = .987, Tucker-Lewis index [TLI] = .986, root mean square error of approximation [RMSEA] = .053, 90% CI [.048, .058], standardized root mean square residual [SRMR] = .030) and strict measurement invariance was established over time and across groups. More specifically, the factor loadings, the intercepts, and the residual variances were found to be stable from T1 to T2 ($\Delta \chi^2(12) = 16.09, p = .19, \Delta \text{CFI} < .001$) and across the four retirement groups ($\Delta \chi^2(78) = 98.69, p = .060, \Delta \text{CFI} = .001$).

The results from Model 1 and 2 are presented in Table 4. The intercept in Model 1 shows the average rate of change in life satisfaction between T1 and T2 for the whole sample. The intercepts in Model 2 show the estimated changes in life satisfaction separately for the four retirement transition groups. The change intercepts are estimated for mean levels of life satisfaction at T1 in order to control for group differences at baseline. Model 1 showed no overall changes in life satisfaction across the two waves. Chi-square test between the two models showed, in accordance with our first hypothesis (H1), group differences in average rate of change between the two measurement points ($\Delta \chi^2(3) = 9.83, p = .02$). The estimated changes for each retirement transition group are illustrated in Figure 2. An overall increase was found for those who retired fully between the two waves and a decrease was shown for those working in both waves. No significant changes were observed among those who retired partially between waves or were retired in both waves. Chi-square test of significant group differences in average rate of change showed, in line with our prediction, more changes for those who retired between the two waves ($b = .07, SE = .05$) than for those with unchanged ($b = -.02, SE = .03$) retirement status ($\Delta \chi^2(2) = 6.34, p = .04$). No significant differences were found, however, in average rate of change between abrupt and gradual retirement ($\Delta \chi^2(1) = 2.44, p = .12$).

EFFECTS OF INDIVIDUAL RESOURCES ON CHANGES IN LIFE SATISFACTION (H2)
The estimated confirmatory factor models of self-esteem ($\chi^2(8) = 17.93, p = .02, \text{CFI} = .999, \text{TLI} = .995, \text{RMSEA} = .039, 90\% \text{CI [.014, .064]}, \text{SRMR} = .005$), autonomy ($\chi^2(8) = 22.28, p = .004, \text{CFI} = .990, \text{TLI} = .985, \text{RMSEA} = .047, 90\% \text{CI [.024, .071]}, \text{SRMR} = .018$), and social support ($\chi^2(192) = 1021.03, p < .001, \text{CFI} = .981, \text{TLI} = .974, \text{RMSEA} = .073, 90\% \text{CI [.069, .078]}, \text{SRMR} = .030$) showed acceptable fit indices. Evaluation of measurement invariance showed that, for self-esteem, the factor loadings ($\Delta \chi^2(12) = 12.92, p = .37, \Delta \text{CFI} < .001$) and the intercepts ($\Delta \chi^2(12) = 15.31, p = .22, \Delta \text{CFI} < .001$) were stable across the four groups, but the residual variances ($\Delta \chi^2(15) = 41.67, p < .001, \Delta \text{CFI} = .002$) varied slightly. Also for autonomy, the factor loadings ($\Delta \chi^2(3) = 6.18, p = .10, \Delta \text{CFI} = .002$) and the intercepts ($\Delta \chi^2(3) = 7.79, p = .05, \Delta \text{CFI} = .003$) were stable across groups, but the residual variances ($\Delta \chi^2(9) = 22.73, p = .01, \Delta \text{CFI} = .009$) were found to vary. For social support, sources of measurement invariance were found for both the factor loadings ($\Delta \chi^2(27) = 52.42, p = .002, \Delta \text{CFI} < .001$), the intercepts ($\Delta \chi^2(27) = 55.89, p = .001, \Delta \text{CFI} < .001$), and the residual variances ($\Delta \chi^2(36) = 162.74, p < .01, \Delta \text{CFI} = .003$). However, given that chi-square tests of measurement invariance are sensitive to large sample sizes (Milfont, & Fischer, 2010) and that CFI

Table 3. Bivariate Correlations Among Included Variables

| Variables                  | 1  | 2  | 3  | 4  | 5  | 6  | 7  | 8  | 9  | 10 | 11 |
|----------------------------|----|----|----|----|----|----|----|----|----|----|----|
| 1. Life satisfaction T1    |    | .76|    |    |    |    |    |    |    |    |    |
| 2. Life satisfaction T2    |    |    | .48| .42|    |    |    |    |    |    |    |
| 3. Self-esteem*             |    |    |    | .60| .50| .40|    |    |    |    |    |
| 4. Autonomy*                |    |    |    |    | .49| .43| .37|    |    |    |    |
| 5. Social support*          |    |    |    |    |    | .40| .37| .30| .33| .20|    |
| 6. Self-rated physical health*|    |    |    |    |    |    | .27| .24| .35|    |    |
| 7. Self-rated cognitive ability*|    |    |    |    |    |    |    | .18| .17| .03| .11|
| 8. Basic financial resources*|    |    |    |    |    |    |    |    | .18| .17| .03|
| 9. Age*                     |    |    |    |    |    |    |    |    |    | .08| .07|
| 10. Gender*                 |    |    |    |    |    |    |    |    |    |    | .02|
| 11. Education*              |    |    |    |    |    |    |    |    |    |    |    |

Note. N = 3,471.
*Range 1–7.
*Range 1–4.
*Range 1–5.
*Range 1–6.
*Without basic financial resources = 0, with basic financial resources = 1.
*Range 60–66.
*Male = 0, female = 1.
*Primary/secondary = 0, higher = 1.
Table 4. Model 1 and 2: Effect of Retirement Transition Type on Changes in Life Satisfaction

| Life Satisfaction T1 | Changes in Life Satisfaction T1–T2 |
|----------------------|------------------------------------|
| **Model 1**          |                                    |
| Intercept            | - .09 [.04] .02 < .001 .92 - .001 |
| Working              |                                   |
| Gradual retirement   |                                   |
| Retired              |                                   |
| Life satisfaction T1 | - .21 .01 < .001 - .33 .004       |
| Age                  |                                   |
| Gender               |                                   |
| Educationb           | .18 .05 < .001 .07 .002 .03 .92 .002 |

Fit indices Model 1: $\chi^2(341) = 868.16, p < .001, CFI = .983, TLI = .985, RMSEA = .042, 90% CI [.039, .046], SRMR = .036$. Fit indices Model 2: $\chi^2(338) = 858.34, p < .001, CFI = .983, TLI = .985, RMSEA = .042, 90% CI [.039, .046], SRMR = .036$.

| **Model 2**          |                                    |
| Intercept            | - .06 [.04] .02 < .001 - .07       |
| Working              |                                   |
| Gradual retirement   |                                   |
| Retired              |                                   |
| Life satisfaction T1 | - .21 .01 < .001 - .33 .004       |
| Age                  |                                   |
| Gender               |                                   |
| Educationb           | .02 .03 .65 .01                    |

Note. Fit indices Model 1: $\chi^2(341) = 868.16, p < .001, CFI = .983, TLI = .985, RMSEA = .042, 90% CI [.039, .046], SRMR = .036$. Fit indices Model 2: $\chi^2(338) = 858.34, p < .001, CFI = .983, TLI = .985, RMSEA = .042, 90% CI [.039, .046], SRMR = .036$.

Model 1 and 2: Effect of Retirement Transition Type on Changes in Life Satisfaction

The results from Model 4 are presented in Table 6. Chi-square test between models 3 and 4 showed, in line with our third hypothesis (H3), group differences in the effects of the six resources on changes in life satisfaction ($\Delta\chi^2(21) = 73.27, p < .001$). More specifically, a larger proportion of the changes in life satisfaction were explained by the six resources in participants retiring ($R^2 = .212$) between the two waves than for those with unchanged ($R^2 = .126$) retirement status ($\Delta\chi^2(12) = 40.93, p < .001$). In line with our prediction, the six resources also accounted for a larger proportion of the changes in abrupt ($R^2 = .314$) than in gradual ($R^2 = .117$) retirement ($\Delta\chi^2(6) = 17.36, p = .008$). The findings in Model 4 are illustrated in Figure 4. As in Figure 3, we calculated the estimated changes for high and low resources given average levels of life satisfaction at baseline.

Figure 2. Effect of retirement transition type on changes in life satisfaction. Changes in life satisfaction T1–T2.

only decreased marginally between the models (Meade, Johnson, & Braddy, 2008), we assumed strict measurement invariance for all three measurement models when included in further analysis.

The results from Model 3 are presented in Table 5. With partial support for our second hypothesis (H2), we found three of the six resources to be related to changes in life satisfaction after 1 year. In line with our expectations, more social support, better physical health, and basic financial resources at T1 were associated with an overall increase in life satisfaction after 1 year. Consequently, poor physical health, low social support, and the absence of basic financial resources at baseline were generally associated with a decrease in life satisfaction in 1 year. Contrary to our expectations, baseline levels of self-esteem, autonomy, and self-rated cognitive ability were not significantly related to changes in life satisfaction between the two waves.

The findings in Model 3 are illustrated in Figure 3. The predicted changes were calculated for participants with average levels of life satisfaction at baseline and separated by low (one standard deviation below mean, or yes for financial resources) and high (one standard deviation above mean, or yes for financial resources) resources at T1. The effects of self-esteem, autonomy, social support, self-rated physical health, and self-rated cognitive ability were calculated for those with basic financial resources and average scores on all other resource measures. Similarly, the effects of financial resources were calculated for those with average scores on the other measures.

**INTERACTION EFFECTS OF TRANSITION TYPE AND RESOURCES ON CHANGES IN LIFE SATISFACTION (H3)**

The results from Model 4 are presented in Table 6. Chi-square test between models 3 and 4 showed, in line with our third hypothesis (H3), group differences in the effects of the six resources on changes in life satisfaction ($\Delta\chi^2(21) = 73.27, p < .001$). More specifically, a larger proportion of the changes in life satisfaction were explained by the six resources in participants retiring ($R^2 = .212$) between the two waves than for those with unchanged ($R^2 = .126$) retirement status ($\Delta\chi^2(12) = 40.93, p < .001$). In line with our prediction, the six resources also accounted for a larger proportion of the changes in abrupt ($R^2 = .314$) than in gradual ($R^2 = .117$) retirement ($\Delta\chi^2(6) = 17.36, p = .008$). The findings in Model 4 are illustrated in Figure 4. As in Figure 3, we calculated the estimated changes for high and low resources given average levels of life satisfaction at baseline.

Four of the six resources were associated with changes in life satisfaction among those who retired between the two waves: self-esteem, autonomy, self-rated cognitive ability, and basic financial resources. All four resources predicted changes in abrupt retirement but only one of them (basic financial resources) was related to changes in gradual retirement. Chi-square test of difference in effect showed, in accordance with our prediction, a larger influence of financial resources on changes in life satisfaction in abrupt than in gradual retirement ($\Delta\chi^2(1) = 4.95, p = .03$). Scarce financial resources before retirement was associated with a decrease in life satisfaction the year after in both groups, but the effect was found to be less detrimental in gradual than in abrupt retirement. Contrary to our prediction, we found autonomy to be negatively related to changes in life satisfaction in those who retired fully between the two waves; low autonomy before retirement
was associated with a larger increase the year after. Social support and self-rated physical health were not significantly related to changes in life satisfaction among those who retired between the two measurement points.

Three of the six resources were related to changes in life satisfaction among those with unchanged retirement status: self-esteem, social support, and self-rated physical health. Baseline self-esteem predicted changes in workers while social support and self-rated physical health were related to changes in life satisfaction among those retired in both waves. No significant effects were found for autonomy, self-rated cognitive ability, or basic financial resources in any of the groups.

**DISCUSSION**

This study was designed to investigate two central aspects in the retirement adjustment process; the effects of retirement transition type and individual resources on changes in life satisfaction in the years before and after retirement. We specifically aimed to investigate interaction effects of type of transition and individual resources on changes in life satisfaction.
Changes in Life Satisfaction in the Retirement Transition

Table 6. Model 4: Interaction Effects of Retirement Transition Type and Individual Resources on Changes in Life Satisfaction

| Changes in Life Satisfaction T1–T2 | b     | SE  | p     | β    |
|-----------------------------------|-------|-----|-------|------|
| Intercept                         | -0.07 | 0.08| 0.36  | 0.09 |
| Working                           | 0.19  | 0.07| 0.006 | 1.2  |
| Gradual retirement                | 0.06  | 0.18| 0.37  | 0.06 |
| Abrupt retirement                 | 0.10  | 0.08| 0.21  | 0.09 |
| Retired                           | 0.13  | 0.04| 0.002 | 0.16 |
| Self-esteem T1                    | 0.05  | 0.03| 0.62  | 0.02 |
| Working                           | 0.06  | 0.07| 0.05  | 0.06 |
| Gradual retirement                | 0.12  | 0.07| 0.07  | 0.11 |
| Abrupt retirement                 | 0.15  | 0.03| 0.001 | 0.18 |
| Self-rated physical health T1     | 0.05  | 0.03| 0.62  | 0.02 |
| Working                           | 0.06  | 0.07| 0.05  | 0.06 |
| Gradual retirement                | 0.16  | 0.08| 0.03  | 0.13 |
| Abrupt retirement                 | 0.06  | 0.04| 0.01  | 0.06 |
| Basic financial resources T1      | 0.04  | 0.08| 0.65  | 0.01 |
| Working                           | 0.46  | 0.20| 0.02  | 0.14 |
| Gradual retirement                | 1.21  | 0.27| 0.001 | 0.25 |
| Retired                           | 0.06  | 0.11| 0.56  | 0.02 |

Note. N = 3,471. Fit indices: \( \chi^2(2,506) = 6480.80, p < .001, \) CFI = .957, TLI = .958, RMSEA = .043, 90% CI [.041, .044], SRMR = .080.

*Male = 0, female = 1.
*Primary/secondary = 0, higher = 1.

satisfaction over 1 year. We anticipated that both the type of transition and individual differences in resource capability would be related to changes in life satisfaction, but that the effects would vary in relation to each other. Our findings provide considerable support for this supposition.

We first hypothesized that type of retirement transition would be related to changes in life satisfaction after 1 year (H1). We anticipated that the substantial lifestyle changes associated with retirement (e.g., Wang & Shi, 2014; Wang & Shultz, 2010; Wang et al., 2011) would be associated with more changes in life satisfaction than what can be observed among those with unchanged retirement status. In accordance with this hypothesis, we found retirement to be associated with an overall increase in life satisfaction after 1 year while unchanged retirement status was related to a smaller overall decrease. Based on the idea that gradual retirement leads to more successive lifestyle changes (Shultz & Wang, 2011; Wang & Shultz, 2010; Zhang & Wang, 2015), we further anticipated that gradual retirement would be associated with fewer changes in life satisfaction than those observed for abrupt retirement. Contrary to this prediction, we found no significant difference in average rate of change between gradual and abrupt retirement.

We also hypothesized that individual differences in resource capability would be associated with changes in life satisfaction (H2). In accordance with the resource-based dynamic model (Wang et al., 2011), we anticipated that baseline levels of self-esteem, autonomy, social support, self-rated physical health, self-rated cognitive ability, and basic financial resources would be related to changes in life satisfaction after 1 year. With partial support for this hypothesis, we found three of the six resources to be related to changes in life satisfaction. More social support, better physical health, and basic financial resources at baseline were associated with overall increases in life satisfaction after 1 year while scarce resources were related to decreased life satisfaction the year after. Baseline levels of self-esteem, autonomy, and self-rated cognitive ability were not significantly related to changes in life satisfaction after 1 year.

We further hypothesized that the effects of transition type and the six resources on changes in life satisfaction would vary systematically in relation to each other (H3). We assumed that the substantial lifestyle changes associated with retirement (e.g., Wang & Shi, 2014; Wang & Shultz, 2010; Wang et al., 2011) would make a person more vulnerable and more dependent on the availability of certain resources in order to successfully adjust to and develop a satisfactory life as a retiree. Our findings support this prediction. The six resources accounted for a larger proportion of the changes in life satisfaction among those who retired between the two waves (21.2%) compared with those whose retirement status remained unchanged (12.6%). Based on the idea that abrupt retirement is associated with more immediate lifestyle changes (Shultz & Wang, 2011; Wang & Shultz, 2010; Zhang & Wang, 2015), we also assumed that the six resources would have a stronger influence on the changes in life satisfaction in abrupt than in gradual retirement. In line with this, we found the six resources to explain a larger proportion of the changes in abrupt (31.4%) than in gradual (11.7%) retirement.

The six resources were shown to variously influence changes in life satisfaction across the four retirement groups. Basic financial resources predicted changes in life satisfaction only among those who retired between the two waves. In line with our prediction, we found a stronger effect in abrupt than in gradual retirement. A lack of basic financial resources before retirement was related to decreased life satisfaction the year after in both transition types, but the effect was less detrimental in gradual than in abrupt retirement. Bridge employment naturally contributes with an additional income that may be of particular importance for retirees with financial constraints. Our findings...
confirm this by showing that a gradual transition can buffer negative effects of retirement for individuals with poor financial resources. The idea that bridge employment can be beneficial for the adjustment process by leading to more successive lifestyle changes (Shultz & Wang, 2011; Wang & Shultz, 2010; Zhang & Wang, 2015) and fewer changes in well-being (Wang, 2007) is thus supported by this finding. The positive effect of financial resources was, however, less pronounced in gradual than in abrupt retirement. In this sense, bridge employment may in fact hamper the positive effects of retirement for those with basic financial resources; potentially because it to some extent also limits the person’s ability to pursue desired activities in retirement.

Autonomy was related to changes in life satisfaction only among those who retired fully between the two waves. Contrary to our prediction, we found autonomy to be negatively related to changes in life satisfaction. Low pre-retirement autonomy was associated with a larger increase the year after. This finding contradicts the resource-based dynamic model (Wang et al., 2011) by showing that fewer resources are associated with better outcomes. The observed increase in life satisfaction among those with low pre-retirement autonomy may, however, also be explained as an effect of changes in the contextual environment (i.e., released job demands). Although the autonomy measure in this study is not specifically designed to capture autonomy in the workplace, it is likely that the scores are largely influenced by this factor. It is therefore perhaps not surprising that individuals with low pre-retirement autonomy are more likely to benefit from retirement; simply because it is associated with increased autonomy. In this sense, our finding is in accordance with the idea that changes in well-being in the retirement transition are driven through changes in individual resources (Wang et al., 2011).

Baseline levels of self-esteem and self-rated cognitive ability were also associated with changes in life satisfaction after 1 year among those who retired fully between the waves. This result indicates, in line with the resource-based dynamic model (Wang et al., 2011), that people with more resources are more likely to benefit from retirement. Furthermore, self-esteem was the only resource type related to changes in life satisfaction among those working in both waves, and social support and self-rated physical health were associated with changes only among those retired in both waves. This finding suggests that different resources are important in different stages of the retirement transition. In workers, it is likely that multiple factors in the workplace (e.g., job conditions, demands, and/or opportunities) are more important for changes in life satisfaction than the global resource measures used in this study. The effect of self-esteem could in this sense reflect the role that work plays for a person’s sense of self-worth (e.g., Ashforth, 2001; Taylor-Carter & Cook, 1995), which in turn will influence the older workers life satisfaction in the years toward retirement. On the other hand, while pre-retirement social support and self-rated physical health were not related to changes in life satisfaction the year after retirement, they were found to be reliable predictors for those retired in both waves. Given the assumed importance of work for maintaining structure and stability in central aspects of daily life (Beekh & Bennett, 2015), it is perhaps not surprising that individual differences in health and social networks have a larger influence on changes in life satisfaction in those who are not engaged in the workforce.

Figure 4. Interaction effects of retirement transition type and individual resources on changes in life satisfaction. Low = one SD below mean/without basic financial resources; high = one SD above mean/with basic financial resources.
Our findings provide some important theoretical and practical implications. The results demonstrate that individual differences in resource capability are more important for changes in life satisfaction in abrupt than in gradual retirement. This finding suggests that a gradual transition may be more beneficial for those with limited resources. From a theoretical perspective, type of transition can be viewed as one of the antecedents in the resource-based dynamic model (Wang et al., 2011); a gradual transition leads to more successive lifestyle changes which, in turn, generate fewer resource changes. Type of transition may therefore influence the adjustment process indirectly through its impact on individual resources. A practical implication of this finding would be to initiate changes on organizational (e.g., opportunity to reduce working hours) and societal (e.g., more flexible pension system) levels to increase the older workers' ability to choose a more gradual transition from work to retirement.

It is also important to recognize that not everyone has the same ability to choose their preferred exit route. Retirement decisions are influenced by multiple factors on the individual (e.g., health and/or financial incentives), organizational (e.g., opportunity to work part time), and societal (e.g., regulations in the pension system) levels (Beehr & Bennett, 2007; Beehr & Bennett, 2015). For example, people (preferentially men) with higher education often have more choices in bridge jobs (Wang, Adams, Beehr, & Shultz, 2009) and therefore are more likely to engage in bridge employments than to fully retire (von Bonsdorff, Shultz, Leskinen, & Tansky, 2009; Wang, Zhan, Liu, & Shultz, 2008). In this study, we found that people with higher education were overrepresented among those who retired fully between the two waves, but they were not underrepresented among those retiring gradually. People with higher education were instead more likely to remain fully employed in both waves.

Furthermore, although some people have the opportunity and desire to continue their work engagement in retirement, they may not be able to because of their ill health (Barnes-Farrell, 2003; Kim & Feldman, 2000; Topa, Mariano, Depolo, Alcover, & Morales, 2009). In this context, it is important to consider the risk for reversed causality; the event that the observed effect of retirement is caused by pre-retirement levels of life satisfaction and/or resources. Given that we in this study observed very few group differences at baseline, we perceive the risk for reversed causality as low. For instance, if life satisfaction would predict retirement rather than the other way around, we should have been able to identify group differences in levels of life satisfaction among those working in the first wave. Furthermore, if health would predict type of transition (i.e., gradual or abrupt), we would expect that those who retired fully reported lower baseline health than those who retired gradually. In this study, we did not observe such differences. We did, however, identify group differences in the financial resource domain. People with basic financial resources were underrepresented among those retiring fully between the two waves, which imply that the decision to retire was partially driven by financial factors. It seems as if people with basic financial resources were more likely to choose to retire than to remain in the workforce. The observed positive effect of retirement on life satisfaction may thus be somewhat biased by this factor. Future research should seek to further investigate causal mechanisms involved in the relationships between transition type, resources, and life satisfaction. Although we interpret the moderating effect of type of transition on the relationship between resources and life satisfaction as an effect of more gradual lifestyle changes, studies are still lacking on the association between type of transition and changes in individual resources. More research on the role of transition type for changes in resources across the transition would help us disentangle the mechanisms of how and why bridge employment may be beneficial for retirement adjustment.

We argue that the present study adds to the current knowledge on retirement adjustment in several important ways. First, although bridge employment has previously been linked to retirement adjustment (Shultz & Wang, 2011; Wang & Shultz, 2010; Zhang & Wang, 2015), few studies have investigated the role of this factor (i.e., gradual vs. abrupt retirement) for changes in well-being across the retirement transition. The present study contributes with more in-depth insights in the effects of retirement transition type on changes in life satisfaction 1 year after retirement. Second, although individual resources have previously been shown (e.g., Barbosa et al., 2016) to be reliable predictors of (direct or indirect measures of) retirement adjustment, few studies have investigated their influence on changes in well-being (or other retirement adjustment outcomes) over time. In addition, even fewer studies have included all six resource domains suggested in the resource-based dynamic model (Wang et al., 2011). The present study adds to this by systematically investigating the role of these six resource domains for changes in life satisfaction in the years before and after retirement. Third, and most importantly, our findings contribute important insights into the retirement adjustment process by showing that the type of retirement transition and individual differences in resource capability influence changes in life satisfaction variously depending on each other.

LIMITATIONS

As previously mentioned, the retirement adjustment process is preferably studied through context-sensitive measures with the ability to differentiate between adjustment and satisfaction in retirement (e.g., van Solinge & Henkens, 2008). The use of a global measure of subjective well-being as an indirect estimate of retirement adjustment is therefore a limitation of this study. However, to study within-person changes across the retirement transition, it is necessary to include pre-retirement measures, and this requirement clearly limits the use of more context-specific indicators. Life satisfaction has previously been shown to be a reliable indicator of adaption to life events (e.g., Lucas, 2007); therefore, we argue that the use of a standardized measure of subjective well-being is acceptable for the aim of the present study.

The selected resource indicators may also be considered limitations in this study. Self-rated single-item measures of physical health and cognitive ability cannot fully account for the multidimensional aspects of these resources, and subjective estimates are likely to differ from more objective measures. However, single-item indicators of subjective health are frequently shown to be reliable predictors of objective health (e.g., Diener & Seligman, 2004; Jylhä, 2009; Wu et al., 2013) as well as subjective well-being (e.g., Berg, Hassing, McClearn, & Johansson, 2006; Berg, Hoffman, Hassing, McClearn, & Johansson, 2009; Hoppmann, Infruna, Ram, & Gerstorf, 2017; Myers & Diener, 1995). Subjective health measures are in fact believed to be preferable in favor of more objective health measures when studying subjective well-being because they are assumed to better capture discrepancies between perceived and anticipated capacity (Diener, Sapyta, & Suh, 1998).
Based on the notion that subjective ratings are valuable estimates of perceived discrepancies in function, we believe that they are of particular interest when studying changes over time. Subjective cognitive problems have previously been shown to predict both objective cognitive performance (Burmester, Leatham, & Merrick, 2016; Stenfors, Markland, Hanson, Theorell, & Nilsson, 2013, 2014) and future cognitive decline (Crowe, Andel, Wadley, Cook, Unverzaght, Marsiske, & Ball, 2006; Wang, van Belle, Crane, Kukull, Bowen, McCormick, & Larson, 2004). Given the previously identified weak relationship between cognitive performance and subjective well-being (Allerhand, Gale, & Deary, 2014; Hoppmann, Infurna, Ram, & Gerstorf, 2017; Llewellyn, Lang, Langa, & Huppert, 2008), we further argue that subjective cognitive function may be a more reliable predictor of subjective well-being, simply because they both serve as estimates of discrepancies between perceived and anticipated capacity. The fact that we, in this study, found pre-retirement levels of self-rated cognitive ability to predict changes in life satisfaction 1 year after retirement also leads us to conclude that the measure contributes with valuable insights in the previously observed heterogeneity in retirement adjustment.

The measure of financial resources may also be considered somewhat insufficient as it was designed to capture a lack of adequate financial resources rather than the quantity of assets. However, because fundamental financial security is generally held to be more important for individual well-being than excessive wealth (Diener & Biswas-Diener, 2002; Diener, Oishi, & Lucas, 2003; Diener & Seligman, 2004; Veenhoven, 1991), we believe this measure is suitable for the aim of the present study. We also caution that the reliability coefficient for the autonomy scale was found to be relatively low and the many statistical tests performed increases the probability of incorrectly reject the null hypothesis (i.e., type I error). It should further be noted that our findings are based on change across only two measurement points, and that this entail a larger measurement error in the change component in comparison to analyses having three or more data waves (i.e., our findings may therefore be more affected by regression toward the mean). Also, although LCS models are assumed to provide more reliable change estimates (McArdle, 2009); additional measurements points would improve both the accuracy of the observed effects and our ability to identify within-person fluctuations over time.

Despite these limitations, we argue that the present study contributes to existing knowledge on retirement adjustment by integrating two central aspects of the transition that are likely to explain individual differences in changes in well-being in the years before and after retirement.

CONCLUSIONS

Our findings demonstrate that the type of retirement transition and individual differences in resource capability are associated with changes in life satisfaction, but that the effects vary in relation to each other. Individual resources before retirement have a stronger influence on changes in life satisfaction in abrupt than in gradual retirement. In the absence of adequate financial resources, bridge employment may serve as a buffer against negative effects of retirement.

ACKNOWLEDGEMENTS

This work was supported by the Swedish Research Council for Health, Working Life and Welfare (HEARTS 2013–2291; AGECAP 2013–2300) and Riksbankens Jubileumsfond (P14-0824-1).

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