Journal of Applied Psychology
2007, Vol. 92, No. 2, 455–474

0021-9010/07/$12.00 DOI: 10.1037/0021-9010.92.2.455

Profiling Retirees in the Retirement Transition and Adjustment Process: Examining the Longitudinal Change Patterns of Retirees' Psychological Well-Being

Mo Wang
Portland State University

The author used role theory, continuity theory, and the life course perspective to form hypotheses regarding the different retirement transition and adjustment patterns and how different individual and contextual variables related to those patterns. The longitudinal data of 2 samples ($n_1 = 994$; $n_2 = 1{,}066$) from the Health and Retirement Survey were used. Three latent growth curve patterns of retirees' psychological well-being were identified as coexisting in the retiree samples through growth mixture modeling (GMM) analysis. On the basis of the latent class membership derived from GMM, retiree subgroups directly linked to different growth curve patterns were profiled with individual (e.g., bridge job status) and contextual variables (e.g., spouse working status). By recognizing the existence of multiple retiree subgroups corresponding to different psychological well-being change patterns, this study suggests that retirees do not follow a uniform adjustment pattern during the retirement process, which reconciles inconsistent previous findings. A resource perspective is further introduced to provide a more integrated theory for the current findings. The practical implications of this study are also discussed at both individual level and policy level.

Keywords: psychological well-being, retirement transition and adjustment, growth mixture modeling

Individuals' adaptation to retirement has been a focal point for researchers as well as the popular media (Beehr & Adams, 2003). Although retirement has received extensive empirical study, the nature of the impact of retirement remains unclear, and investigators know little about what predicts different retirement transition and adjustment patterns. Furthermore, previous research findings in this area have been largely inconsistent. Some researchers have found that retirees, in comparison with workers, tend to report poorer physical health, greater depression and loneliness, lower life satisfaction and happiness, a less positive view about retirement, and lower activity levels (e.g., Atchley & Robinson, 1982; J. E. Kim & Moen, 2002; Richardson & Kilty, 1991; Ross & Drentea, 1998). In contrast, others have found retirement to have a positive impact on life satisfaction, health, and stress level (e.g., Calasanti, 1996; Ekerdt, Bosse, & LoCastro, 1983; Midanik, Soghikian, Ransom, & Tekawa, 1995). Finally, retirement has also been shown as a benign event with no apparent impact on an individual's well-being (e.g., Gall, Evans, & Howard, 1997; Stull, 1988). Minimal differences in measures of mental health, coping, and health behaviors were also reported between workers and retirees within a similar age range (Szinovacz, 2003).

The reasons for these inconsistent findings may be attributable to two sources: methodology and individual differences. In terms of methodology, many studies in this research area have relied on cross-sectional designs to compare retirees and workers. Participants could differ with respect to cohort membership and other cohort-associated variables, which may result in different comparison outcomes among studies (Barnes-Farrell, 2003). Furthermore, with cross-sectional designs, it is impossible to observe the intraindividual well-being changes during the retirement transition and adjustment process, which makes integration of research findings from cross-sectional designs and longitudinal designs difficult.

The second reason for these inconsistent findings might be that different retirees may follow different retirement transition and adjustment processes. According to a recent review (Szinovacz, 2003), across different studies, a significant minority of retirees (estimates ranged from 10% to over 30%) reported some problems in retirement or a decline in well-being after retirement. Nevertheless, on average, retirees were satisfied with their life. Therefore, it seems that there are at least two subgroups of retirees. Those in the majority group are well adjusted to their retirement life, whereas others, in the minority group, have relatively poorer adjustment to retirement life. Retirement research from a career development perspective also supports the existence of multiple subgroups of retirees (e.g., Hanisch & Hulin, 1991; Shultz, Morton, & Weckerle, 1998). However, very few studies have been conducted to further explore different retirement transition and adjustment patterns and to profile retiree subgroups that correspond to those patterns.

As such, this study takes a theory-driven approach to examine the different patterns of retirement transition and adjustment process. In the process, three theoretical perspectives of the retirement transition and adjustment process are reviewed. They are role theory, continuity theory, and the life course perspective. On the basis of these theoretical perspectives, hypotheses are formed

I thank Michael Zickar, Yiwei Chen, Scott Highhouse, Nancy Orel, and Kenneth Shultz for their comments on drafts of this article.

Correspondence concerning this article should be addressed to Mo Wang, Department of Psychology, Portland State University, Portland, OR 97207. E-mail: mw@pdx.edu

regarding multiple retirement transition and adjustment patterns and how different individual and contextual variables may relate to those patterns. To overcome the methodological issues in previous studies, the current study uses longitudinal data to examine multiple change patterns of retirees' psychological well-being. Furthermore, data from two samples are used to cross-validate the results and to generalize the findings.

Theoretical Perspectives of the Retirement Transition and Adjustment Process

Under the different research paradigms of retirement experience, there are distinct theoretical perspectives for the study of postretirement well-being (Szinovacz, 2003). However, research guided by any one of them may only tell part of the story. Therefore, the three most applied theoretical perspectives of the retirement transition and adjustment process are reviewed in this section to provide a relatively comprehensive theoretical foundation for the current study.

Role Theory

Role theory emphasizes the importance of the role exit and role transition processes in retirement. According to Ashforth (2001), to the extent that one is highly invested in a particular role (e.g., work role), one's feelings of self-worth tend to be associated with the ability to carry out that role in an effective manner. Therefore, being retired can be characterized as a role transition (Moen, Dempster-McClain, & Williams, 1992; Riley & Riley, 1994). In detail, this role transition may include the processes of losing or weakening work roles, such as the worker role, the organizational member role, and the career role, and strengthening the family member role and the community member role (Barnes-Farrell, 2003).

Role theorists argue that the role loss resulting from the retirement transition can cause people to feel anxious or depressed (Thoits, 1992), leading to low levels of well-being in retirement. This may be due to the functional importance of work-related roles, which serve to maintain one's positive self-image (Feldman, 1994; Hulin, 2002). When these work roles have been central to one's identity, their loss may be an especially stressful disruption (Burke, 1991). Consequently, the retirement years might be viewed as less satisfying in comparison with the years when one was employed, especially for those most invested in their job.

Conversely, retirees with other role involvements or those who are retiring from an unpleasant job may be less troubled by and even pleased with the loss of those work roles (Adams, Prescher, Beehr, & Lepisto, 2002; Wheaton, 1990). For individuals who find their job stressful or burdensome, retiring could be a very positive experience—a relief from ongoing strains and conflicts. Also, for individuals who would like to engage more highly in the roles of family member and community member, retirement is an opportunity for them to free up and to enjoy the rewards and responsibilities tied to those roles.

Continuity Theory

The second theoretical approach is continuity theory (Atchley, 1989, 1999). *Continuity* refers to a consistency of patterns over time, the accommodation of change without the experience of a stressful disruption. According to Atchley (1999), there is considerable continuity in identity and self-concept over the retirement transition, and this continuity contributes to the retirement adjustment process. He observed that "middle-aged and older adults attempt to preserve and maintain existing structures . . . and prefer to accomplish this objective by using continuity, i.e., applying familiar strategies in familiar arenas of life" (Atchley, 1989, p. 183). Rather than focusing on retirement as a disruptive role loss, continuity theorists view it as an opportunity to maintain social relationship and lifestyle patterns. Continuity theory predicts that there should not be a significant drop in well-being when people transition from work into retirement life, unless they experience severe difficulty in maintaining those general patterns. In other words, the most common pattern of adjustment in retirement is to maintain the same lifestyle patterns developed prior to retirement. For example, retirees may attempt to maintain continuity by viewing retirement as another career stage or by continuing to work in retirement (S. Kim & Feldman, 2000). Atchley (1998) has found that this continuity strategy results in maintenance of psychological well-being in most life transition cases, even among elders who are disabled.

It should be noted that continuity theory does not preclude the existence of psychological stress led by role exit and role transitions. Instead, it emphasizes that maintaining continuity is critical for retirees to keep their psychological well-being. Therefore, individuals who maintain their lifestyle or activities (e.g., employment) through retirement or who view retirement as a fulfillment of a prior goal (e.g., those who planned for retirement) should not experience significant decline of psychological well-being during the retirement transition.

Life Course Perspective

The third theoretical approach, the life course perspective (Elder, 1995; Elder & Johnson, 2003), draws attention to concepts that seem crucial to the understanding of postretirement well-being: (a) transitions and trajectories, (b) contextual embeddedness, (c) interdependence of life spheres, and (d) timing of transitions (Szinovacz, 2003). Transitions and trajectories may be the most important concepts in the life course framework. *Transitions* refer to changes in status over time (e.g., from employment to retirement), and *trajectories* refer to life development in relatively stable statuses (e.g., individual development in postretirement). Retirement can be viewed as a process that incorporates both the retirement transition and the postretirement trajectory (Beehr & Adams, 2003). Specific characteristics of the retirement transition may impact the postretirement trajectory. In terms of the shape of the postretirement trajectory, life course theorists (Levinson, 1986; Levinson & Levinson, 1996; Super, 1990) have suggested that the normative later life stages may be characterized by movement to activities and roles that involve less responsibility to others (e.g., leisure activities and retirement roles). Thereby, individuals should enjoy their postretirement life more and more over time and approach a stabilized psychological well-being state.

Contextual embeddedness implies that the experience of life transitions and developmental trajectories is contingent on the specific circumstances under which the transition occurs. For the retirement transition and adjustment process, such circumstances

include individual attributes (e.g., finance and health), current and past status and roles (e.g., former job attitudes, former job characteristics, and career trajectories), and social context (e.g., social network and family structure). Interdependent life spheres emphasize that experiences in one life sphere (e.g., postretirement life) influence and are influenced by experiences in other life spheres (e.g., marital life). According to this concept, nonwork life spheres are important for retirement adjustment, because they provide retirees with alternative salient identities after retirement and offer opportunities for postretirement engagement. There is consistent evidence that individuals who are married and strongly identify with their family roles have a more positive experience in retirement (Calasanti, 1996; Reitzes, Mutran, & Fernandez, 1996). In addition, marital problems enhance perceptions of retirement-related hassles (Bosse, Aldwin, Levenson, & Workman-Daniels, 1991).

According to the life course perspective, the experience of life transition is also contingent on its timing in terms of social and cultural deadlines, personal expectations, and occurrences in other life spheres. Therefore, another key to understanding the retirement transition and adjustment process is the retirement timing. Previous research has found that role entries or exits that are experienced as "off time" (i.e., earlier or later than is socially prescribed or personally expected) may be perceived as more stressful or disruptive than role transitions that are normatively on time (George, 1993). For example, Shultz et al. (1998) found that workers who were unexpectedly forced into early retirement because of corporate restructuring experienced this off-time transition as disruptive and psychologically stressful.

Hypothesis Development

Retiree Psychological Well-Being Change Patterns

When considering the retiree psychological well-being change patterns during the retirement process, it is necessary to set up a reference point to index the change direction. Because the retirement process contains both the retirement transition and the postretirement trajectory, it is reasonable to set the individual's psychological well-being prior to the retirement transition as the reference point. In this way, the impact of retirement as an important life event on one's psychological well-being can be included. Therefore, the level of the retiree's psychological well-being before he or she engaged in the retirement process is regarded as the reference point in the following hypotheses. This is consistent with other studies (e.g., Gall et al., 1997; Jonsson, 1993).

According to role theory, two patterns of retiree psychological well-being change during the retirement transition and adjustment process may exist. For retirees who did not enjoy their career job, psychological well-being in retirement should be higher than the reference point. This is because retirement may provide them an opportunity to escape from unpleasant roles, which leads to a recovering process of their psychological well-being. For those who value work-related roles as central, psychological well-being will drop during the retirement transition. It should be noted that role theory does not provide explicit hypotheses regarding retirees who experience minimum changes in psychological well-being during the retirement transition. In this case, hypotheses may be derived from continuity theory.

According to continuity theory, there should also be two retiree psychological well-being change patterns during the retirement process. For retirees who successfully maintain their prior lifestyle and activities, postretirement psychological well-being should be consistent with the reference point. For retirees who are unable to assimilate retirement life into their continuity of self and lifestyle, their postretirement psychological well-being is likely to be lower than the reference point. The change shape of the second pattern is similar to the second hypothesized pattern derived from role theory, although the underlying mechanisms may be different.

In terms of the shape of the general postretirement psychological well-being trajectory after transition, the life course perspective (Levinson, 1986; Levinson & Levinson, 1996; Super, 1990) suggests that the overall retirement adjustment direction should point to a stabilized and comfortable well-being state for retirees. Therefore, after adjusting to retirement, retirees should enjoy their postretirement life more and more over time and approach stabilized psychological well-being states. As such, although some retirees may experience negative changes in their psychological well-being during the retirement transition, their psychological well-being may eventually recover and approach a more positive state. According to the life course perspective, the initial negative changes may be due to the fact that, in the transition stage, some retirees may experience fewer resources and/or frustrations from having unrealistic expectations about retirement. However, as time passes, these retirees reevaluate their life status, accept their limitations in resources, and refocus on further adjustment to retirement. Then their postretirement adjustment trajectories start, and their psychological well-being may thereby take an upward turn (Gall et al., 1997). In this case, retirees' psychological well-being may follow a U-shape trajectory during the retirement transition and adjustment process. Combining the hypotheses derived above, Figure 1 presents a summary of these psychological well-being change patterns in terms of their shapes.

Hypothesis 1: Three retiree psychological well-being change patterns will exist during the retirement transition and adjustment process. Accordingly, retirees may be distinguished into three subgroups. The first subgroup of retirees may experience positive change in psychological well-being in the retirement process (i.e., the recovering pattern in Figure 1). The second subgroup may experience negative change in psycho-

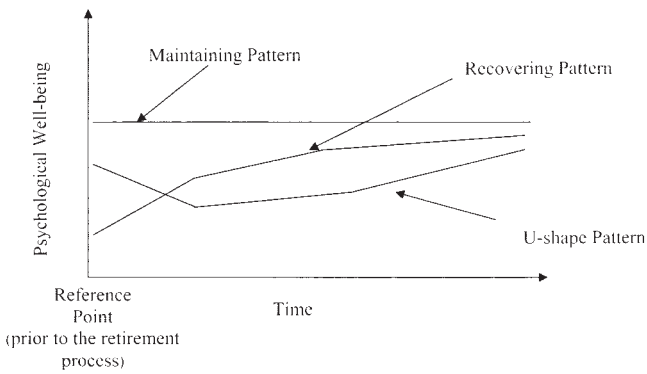

Figure 1. An illustration of different psychological well-being change patterns during the retirement transition and adjustment process.

logical well-being in the retirement transition but approach a better psychological well-being state in the postretirement trajectory (i.e., U-shape pattern in Figure 1). Finally, the third subgroup of retirees may not experience psychological well-being change compared with the reference point during the retirement process (i.e., maintaining pattern in Figure 1).

Next, hypotheses were developed to profile retiree subgroups that correspond to different psychological well-being change patterns in the retirement transition and adjustment process.

Profiling Retirees Who Display the Maintaining Pattern

According to continuity theory, engagement in postretirement employment is an efficient way to maintain continuity of personal goals and lifestyle (Atchley, 1999; S. Kim & Feldman, 2000; Quick & Moen, 1998). This may ease the potentially disruptive transition out of the labor force and provide retirees extra time to accommodate the lifestyle changes caused by retirement. Therefore, if retirees continue to work (i.e., holding bridge jobs) during their retirement transition, they may not experience pronounced changes in psychological well-being.

Hypothesis 2A: Retirees who hold bridge jobs will be more likely to experience minimum changes in psychological well-being during the retirement transition.

It is clear that retirement planning serves a number of psychological functions for individuals (Taylor & Doverspike, 2003). For example, Fretz, Kluge, Ossana, Jones, and Merikangas (1989) found that planning for and feeling prepared for retirement were associated with lower anxiety and depression with respect to the retirement transition. Retirement planning may smooth the retirement transition because it allows people to form realistic expectations about the social and financial aspects of retirement (Taylor-Carter, Cook, & Weinberg, 1997). Furthermore, presentation of information on retirement may allow one to clarify goals for financial, health, and social well-being after leaving the workforce. Therefore, retirement planning may help decrease the role ambiguity related to the retirement transition. Thus, the following hypothesis was formulated:

Hypothesis 2B: Retirees who engage more in retirement planning will be more likely to experience minimum changes in psychological well-being during the retirement transition.

According to the life course perspective, nonwork life spheres are important for retirement transition and adjustment. Among them, marital life may be the most important life sphere, because it provides retirees with a stable identity and offers certain social support. As noted earlier, one of the outcomes associated with work role loss is lack of social interaction with others. For married retirees, social interaction with their spouse may at least partially substitute for interaction with colleagues (S. Kim & Feldman, 2000). Therefore, the following hypothesis was formed:

Hypothesis 2C: Married retirees whose spouse is present will be more likely to display the maintaining pattern than retirees with another marital status.

Given the importance of marital life, it is also possible that the spouse's working status will moderate the effects expected in Hypothesis 2C. This is because if a retiree's spouse is still working, he or she may not be able to provide the companionship expected by the retiree (S. Kim & Feldman, 2000). In this case, retirees who are married may not be able to engage in sufficient social interaction with their working spouse. Therefore, Hypothesis 2C may only hold when the retiree's spouse is not working.

Hypothesis 2D: Spouses' working status will moderate the effect of spouse presence on the possibility that retirees display the maintaining pattern. In particular, retirees who are married and whose spouse is present will be more likely to experience minimum changes in psychological well-being when their spouse is not working.

Profiling Retirees Who Display the Recovering Pattern

According to role theory, the nature of the preretirement job may affect retirees' psychological well-being change patterns. For some retirees, leaving an unpleasant job can be a relief (Wheaton, 1990). This is consistent with the notion that negative considerations about preretirement life (i.e., push factors) often induce older workers to retire (Hanisch, 1994; Shultz et al., 1998).

Hypothesis 3A: Individuals who retired from a highly physically demanding job will be more likely to display the recovering pattern.

Hypothesis 3B: Individuals who retired from a highly stressful job will be more likely to display the recovering pattern.

Hypothesis 3C: Retirees who had low job satisfaction at their prior employment will be more likely to display the recovering pattern.

Profiling Retirees Who Display the U-Shape Pattern

It has been long recognized that the main attributes associated with retirement well-being are health and financial status (e.g., Kosloski, Ginsburg, & Backman, 1984; O'Rand & Henretta, 1999; Szinovacz, 2003). Research based on cross-sectional examinations has consistently found that retirees with better health conditions and financial status report better well-being in postretirement life (e.g., Dorfman, 1992; Hardy & Quadagno, 1995). However, as J. E. Kim and Moen (2002) argued, to better understand the longitudinal changes of well-being, it is more important to investigate the changes of health and financial status during the retirement transition. According to continuity theory, retirees' health and financial status impose major resource constraints on their ability to maintain previous life structures and activities (S. Kim & Feldman, 2000).

Hypothesis 4A: Retirees who experience severe health declines will be more likely to display the U-shape pattern.

Hypothesis 4B: Retirees who experience severe financial declines will be more likely to display the U-shape pattern.

Previous studies have also shown that an unhappy marriage may contribute to the deterioration of an individual's well-being after

retirement (Rosenkoeter & Garris, 1998; Szinovacz & Davey, 2004). Entering retirement within the context of an unhappy marriage may enhance vulnerability to the transition for two reasons: (a) Unhappily married retirees lack another salient identity, and (b) the combination of marital problems and life event stress resulting from the retirement transition leads to stress accumulation (Szinovacz, 2003).

> *Hypothesis 4C:* Retirees who had an unhappy marriage prior to retirement will be more likely to display the U-shape pattern.

According to the life course perspective, retirement timing is an important factor influencing retiree psychological well-being change patterns. In particular, off-time transitions—those that occur later or earlier than the individual expected or preferred—may be linked to difficulty in adjustment and higher levels of stress (Quick & Moen, 1998).

> *Hypothesis 4D:* Retirees who retired off time will be more likely to display the U-shape pattern.

Method

Samples

Data were taken from Waves 1–5 of the Health and Retirement Survey (HRS). HRS is sponsored by the National Institute on Aging and is intended to provide interdisciplinary data (e.g., on health, economic, and family variables) for researchers, policy analysts, and program planners who are making major policy decisions that affect retirement, health insurance, saving, and economic well-being (Juster & Suzman, 1995). Data from HRS have been used by psychologists and gerontologists to investigate antecedents of retirement planning (Kosloski, Ekerdt, & DeViney, 2001); the impact of husbands' involuntary job loss on wives' mental health (Siegel, Bradley, Gallo, & Kasl, 2003); and education, wealth, and cognitive function in later life (Cagney & Lauderdale, 2002). The current study is the first one that uses HRS data to examine retirement transition and adjustment patterns.

In the first wave of HRS (conducted in 1992), a nationally representative sample of persons ages 51–61 years was included (n = 12,562; Juster & Suzman, 1995). The data were obtained via 1-hr face-to-face interviews with individuals. After Wave 1, the same participants were revisited and interviewed every 2 years. As such, Waves 1–5 contain data collected from 1992, 1994, 1996, 1998, and 2000, respectively. From this multiwave data set (Rand HRS Data Version D; St. Clair et al., 2004), two samples were selected for the present study. Sample 1 (n = 994) includes individuals who were not retired in Wave 1 but were retired in Wave 2 data collection. Sample 2 (n = 1,066) includes individuals who were not retired in Wave 2 but were retired in Wave 3 data collection. Using two samples provides the opportunity for cross-validation of results and generalization of findings.

Of the 994 persons in Sample 1, 81.6% were White; 16.6% were African American; and the remaining 1.8% were Hispanic, Asian, and Native American. Fifty-one percent of the sample were men, 75.9% of the sample were married, and the average amount of education was 12.2 years (SD = 3.08) at Wave 1 data collection. The average age at Wave 1 data collection was 57.4 years (SD = 4.29). It should be noted that because HRS had no control about when participants made their retirement decisions, the data collections were not conducted the same amount of time after retirement or partial retirement for each participant. For Sample 1, the average time between Wave 1 data collection and retirement or partial retirement was 1.1 years (SD = 0.14). In other words, at Wave 2 data collection, Sample 1 had, on average, spent about 0.9 years in retirement or partial retirement.

Of the 1,066 persons in Sample 2, 83.0% were White; 14.4% were African American; and the remaining 2.6% were Hispanic, Asian, and Native American. Forty-eight percent of the sample were men, 75.8% of the sample were married, and the average amount of education was 12.4 years (SD = 3.02) at Wave 2 data collection. The average age at Wave 2 data collection was 58.5 years (SD = 4.33). For Sample 2, the average time between Wave 2 data collection and retirement or partial retirement was 1.0 year (SD = 0.11). In other words, at Wave 3 data collection, Sample 2 had, on average, spent about 1.0 year in retirement or partial retirement. According to results from t tests and chi-square tests, no significant differences between Sample 1 and Sample 2 existed for these demographic variables.

Measures

As Kosloski et al. (2001) pointed out, one drawback of using archival data is that, because the data were collected for other purposes, direct measures or well-established measures of constructs of interest are not always available. To some extent, this is the case in this study. Although effort has been made to search for at least two items from the HRS data set to identify variables hypothesized in this article, most of the variables are still represented by single-item measures. Nevertheless, some researchers (e.g., Nagy, 2002; Wanous, Reichers, & Hudy, 1997) have shown that single-item measures can correlate highly with scale measures and sometimes are more robust than the scale measures. For all measures used in this study, an index list of item locations in HRS surveys is available from me on request.

Psychological well-being. In HRS surveys, psychological well-being was measured by an 8-item scale. This scale was shortened from a 20-item mental health scale (Radloff, 1977). Six of the 8 items indicate the presence of certain negative psychological well-being states (e.g., depressed). Two items indicate certain positive psychological well-being states (e.g., happy). A yes–no response format (1 = yes, 0 = no) was used for each item. Negative items were reverse coded so that the higher values of the scale indicated greater psychological well-being. Previous studies using HRS data have suggested good reliability of this 8-item scale (e.g., Siegel et al., 2003). Turvey, Wallace, and Herzog (1999) also provided evidence that using the yes–no response format did not appear to compromise the psychometric properties of the scale. For the current two samples, the standardized Cronbach's alphas based on polychoric correlations (Mehta, Neale, & Flay, 2004) across five waves ranged from .86 to .92, providing good evidence for the internal consistency of this scale. Therefore, at each wave, the scale score was used to provide an index of participant psychological well-being. For Sample 1, psychological well-being scores from Waves 1, 2, 3, and 4 were used. For Sample 2, psychological well-being scores from Waves 2, 3, 4, and 5 were used. In this

way, for each sample, four waves of data were used for the current analyses.

Bridge job status. Bridge job status was indicated by whether retirees were still working for pay after they retired. For Sample 1 and Sample 2, this measure was obtained from Wave 2 and Wave 3 data, respectively. In both waves, respondents were asked whether they were currently doing any work for pay. The responses were coded into a dichotomous variable (1 = working for pay, 0 = not working for pay). In all, 30.1% of Sample 1 participants were working for pay at Wave 2, and 36.8% of Sample 2 participants were working for pay at Wave 3.

Retirement planning. Two items were selected to measure retirement planning activities (e.g., "How much have you thought about retirement planning?"). Responses were originally scored on a 4-point scale (from 1 = *a lot* to 4 = *hardly at all*). They were recoded in the current study so that the higher values of the scale indicated more retirement planning. Kosloski et al. (2001) have shown desirable construct validity of this two-item measure. For both samples, measures of retirement planning were taken from Wave 1 data. In Sample 1 and Sample 2, the correlations between these two items were .60 and .58, respectively.

Marital status during retirement transition. For Sample 1 and Sample 2, marital status data were taken from Wave 2 and Wave 3, respectively. This is because retirees entered retirement right before that time point. In both waves, respondents' marital status was coded as married and spouse present, married but spouse absent, separated, divorced, widowed, or never married. In all, 75.7% of Sample 1 participants were married and spouse present at Wave 2, and 76.0% of Sample 2 participants were married and spouse present at Wave 3. In the current study, because the focus is on the presence of the spouse, marital status was recoded into a dichotomous variable (1 = married and spouse present, 0 = other status).

Spouse working status during retirement transition. For Sample 1 and Sample 2, spouse working status was also taken from Wave 2 and Wave 3 data, respectively. In both waves, spouses were asked whether they were currently doing any work for pay. The answers were coded into a dichotomous variable (1 = working for pay, 0 = not working for pay). After exclusion of missing data, 48.9% of Sample 1 had a spouse who was working for pay at Wave 2, and 52.6% of Sample 2 had a spouse who was working for pay at Wave 3.

Physical demands of the preretirement job. For Sample 1 and Sample 2, two items (e.g., "My job requires lots of physical effort") from Wave 1 and Wave 2 data, respectively, were used to measure physical demands of the preretirement job. Responses were originally coded into a 4-point scale (1 = *all or almost all of the time* to 4 = *none or almost none of the time*). They were recoded so that the higher values of the scale indicated greater physical demands. In Sample 1 and Sample 2, the correlations between these two items were .65 and .60, respectively.

Work stress at the preretirement job. For Sample 1 and Sample 2, the work stress variable was taken from Wave 1 and Wave 2 data, respectively. In both waves, respondents were asked one question to indicate how much they agreed or disagreed with the statement "My job involves a lot of stress." The responses were originally coded into a 4-point Likert scale (1 = *strongly agree* to 4 = *strongly disagree*). They were recoded in the current study so that higher values of the scale indicated greater work stress.

Job satisfaction at the preretirement job. For Sample 1 and Sample 2, the job satisfaction variable was taken from Wave 1 and Wave 2 data, respectively. In Wave 1, respondents were asked one question to indicate how satisfied or dissatisfied they were with their job. The responses were originally coded on a 5-point Likert scale (1 = *very satisfied* to 5 = *very dissatisfied*). In Wave 2, the question was replaced by one asking respondents to indicate how much they agreed or disagreed with the statement "I really enjoy going to work." The responses were originally coded into a 4-point Likert scale (1 = *strongly agree* to 4 = *strongly disagree*). Both items were recoded in the current study so that higher values of the scale indicated higher job satisfaction.

Health declines during retirement transition. Two measures were used to index health declines during the retirement transition. I obtained the first measure by calculating the differences between the self-reported health items (coded from 1 = excellent to 5 = poor) across two waves. For Sample 1, I calculated the difference score by subtracting the Wave 1 measure from the Wave 2 measure. For Sample 1, I calculated the difference score by subtracting the Wave 2 measure from the Wave 3 measure. The possible score range was from −4 to 4, with the higher values indicating more health declines.

The second health decline measure was based on the sum of indicators for whether a doctor had ever told the respondent that he or she had ever had a particular disease. The eight included diseases were high blood pressure, diabetes, cancer, lung disease, heart disease, stroke, psychiatric problems, and arthritis. By calculating the differences between the sum scores across two waves, I obtained an objective measure of health decline. For Sample 1, I calculated the difference by subtracting the Wave 1 measure from the Wave 2 measure. For Sample 2, I calculated the score by subtracting the Wave 2 measure from the Wave 3 measure. The possible score range was from 0 to 8, with higher values indicating more objective health declines.

Financial declines during retirement transition. Declines in financial status during the retirement transition were also indexed by two measures. The first measure was based on an individual annual earning variable obtained from each wave of data. It was the sum of the respondent's salary income; bonuses, overtime pay, commissions, and tips; second job or military reserve earnings; and professional practice or trade income. Through calculation of the differences across two consecutive waves, the financial declines in terms of individual earning were reflected.

Some researchers (Engen, Gale, & Uccello, 1999; Gustman & Steinmeier, 1998) have suggested that when measuring the financial status of retirees, researchers usually ignore housing equity, other sources of income, and continued saving prior to retirement. They have argued that including those financial components may give a more accurate estimation of retiree financial status. Therefore, in the current study, a total wealth measure obtained from each wave of data, which was the sum of all wealth components minus debt, was used. When the differences across two consecutive waves were calculated, another measure of financial declines was obtained.

For Sample 1, I calculated both financial decline measures by subtracting the Wave 2 data from the Wave 1 data. For Sample 2, I calculated both measures by subtracting the Wave 3 data from the Wave 2 data. The higher values of these measures indicated more financial decline.

Marriage quality before retirement. For Sample 1 and Sample 2, the marriage quality variable was taken from Wave 1 and Wave 2 data, respectively. In both waves, one question addressed marriage quality: "Generally speaking, would you say that the time you spend together with your (husband/wife/partner) is extremely enjoyable, very enjoyable, somewhat enjoyable, or not too enjoyable?" The answers were originally coded on a 4-point Liker scale (1 = *extremely enjoyable* to 4 = *not too enjoyable*). They were recoded so that the higher values of the scale indicated better marriage quality.

Off-time retirement. On the basis of the information about expected retirement year collected in Wave 1 and the information about actual retirement year collected in other waves, the year differences between expectations and realities were calculated. Because retiring either earlier or later than expected could be considered as off-time retirement, the absolute value of year differences between expected and actual retirement was calculated to index the extent of off time. In addition, to further explore how different types of off-time retirement influence postretirement well-being change, following Quick and Moen (1998), off-time retirement was also coded as three dichotomous variables: earlier than expected (1 = yes, 0 = no), later than expected (1 = yes, 0 = no), and on-time retirement (1 = yes, 0 = no).

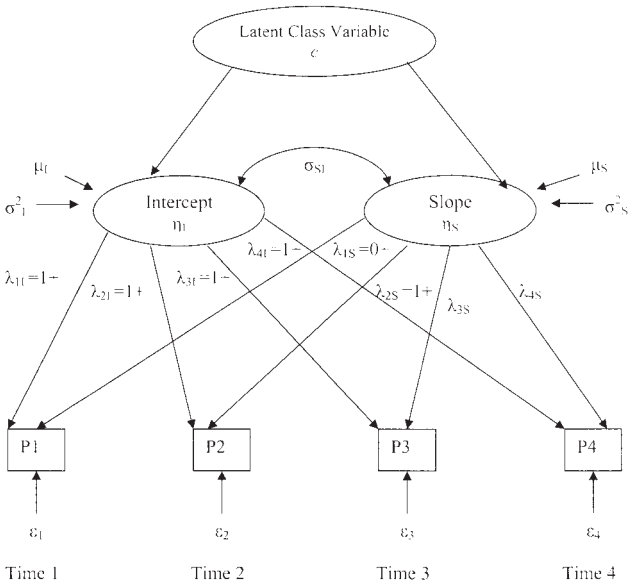

Figure 2. The growth mixture model for multiple retiree psychological well-being change patterns is shown. $\lambda_{1I} = 1+$, $\lambda_{2I} = 1+$, $\lambda_{3I} = 1+$, and $\lambda_{4I} = 1+$ mean that all factor loadings for retirees' psychological well-being from Time 1 to Time 4 are fixed as 1 on the latent intercept factor. $\lambda_{1S} = 0+$ means that the factor loading for retirees' psychological well-being at Time 1 is fixed as 0 on the latent slope factor. $\lambda_{2S} = 1+$ means that the factor loading for retirees' psychological well-being at Time 2 is fixed as 1 on the latent slope factor. λ_{3S} and λ_{4S} mean that the factor loadings for retirees' psychological well-being at Time 3 and Time 4 on the latent slope factor are freely estimated. P1–P4 = retirees' psychological well-being at Time 1–Time 4; η_I = latent intercept factor; η_S = latent slope factor; μ_I = mean of latent intercept factor; μ_S = mean of latent slope factor; σ_I^2 = variance of latent intercept factor; σ_S^2 = variance of latent slope factor; σ_{SI} = covariance between latent intercept factor and latent slope factor; ε1–ε4 = time-specific errors of retirees' psychological well-being at Time 1–Time 4.

Analytic Strategy

The current study mainly relies on growth mixture modeling (GMM; for reviews, please see B. Muthén, 2004; B. Muthén et al., 2002) to reveal different change patterns of retirees' psychological well-being. To illustrate the approach of GMM on the basis of conventional latent growth modeling, consider a latent categorical variable *c* representing the unobserved subpopulation membership for each retiree (see Figure 2). Here, *c* is referred to as a latent class variable. According to Hypothesis 1, there may be three unobserved retiree subgroups. Therefore, *c* represents a minimum change subgroup ($c = 1$), a positive change subgroup ($c = 2$), and a U-shape change subgroup ($c = 3$). GMM estimates a separate latent growth model for each of the three latent classes simultaneously. Differences across classes are typically found in the parameters of the intercept or slope factors (B. Muthén, 2004; B. Muthén et al., 2002).

The selection criteria for the optimal growth mixture model have been discussed extensively in the statistical literature on finite mixture modeling (for a review, see McLachlan & Peel, 2000). Recent development in this area has reached agreement on the use of the adjusted Lo–Mendell–Rubin likelihood ratio test (adjusted LRT) to select the optimal model (Lo, Mendell, & Rubin, 2001; B. Muthén, 2004). It applies a corrected likelihood ratio distribution to comparing a $k - 1$–class model and a *k*-class model. Significant test results indicate that the $k - 1$–class model has to be rejected in favor of a model with at least *k* classes. In the current study, I examined a series of GMM models with one to four latent classes, until the adjusted LRT test was not significant. Information criteria, including the Bayesian information criterion, Akaike information criterion, and sample-size adjusted Bayesian information criterion, were also reported to provide comprehensive fit information.[1] Entropy (Jedidi, Ramaswamy, & Desarbo, 1993) was reported as a measure of the latent classification accuracy. It ranges from .00 to 1.00, with higher values indicating better classification. In previous research, entropy values higher than .80 have been viewed as suggesting good classification (e.g., Greenbaum, Del Boca, Darkes, Wang, & Goldman, 2005; B. Muthén, 2004).

Mplus 3.1 (L. Muthén & Muthén, 2004) was used to analyze the current data.[2] First, the growth mixture model shown in Figure 2 was estimated through the maximum likelihood approach via an expectation-maximization algorithm. In Mplus 3.1, missing data on dependent variables are modeled by means of the assumption that the data are missing at random (Little & Rubin, 1987).

[1] The conventional chi-square-based fit indexes (e.g., comparative fit index [CFI], goodness-of-fit index, root-mean-square error of approximation [RMSEA]) are not available for mixture modeling when more than one latent class is estimated, because there is not a single covariance matrix to which to fit the data. In other words, the unrestricted mean and covariance model (i.e., the saturated model) cannot be estimated (McLachlan & Peel, 2000).

[2] Further technical aspects are given in Technical Appendix 8 of the *Mplus User's Guide* (L. Muthén & Muthén, 1998–2003) and in B. Muthén and Shedden (1999).

Therefore, the missing values in the longitudinal psychological well-being measures were modeled simultaneously to maintain full sample size.[3] After the best fitting GMM model was identified, latent class membership derived from this model was assigned to each participant. Then, conventional logistic regression (i.e., without latent variables) and mixture modeling (i.e., with latent variables) were used to investigate the effects of hypothesized predictors on the corresponding psychological well-being change patterns. In these analyses, missing values in the predictors were handled with listwise deletion. To obtain logistic coefficients, a reference class was designated for each model. For example, when predictors were tested for the maintaining pattern, participants classified into the other two patterns were treated as from the reference class.[4] Significant logistic coefficients indicate that the corresponding predictors are significantly related to the probability of being in the target pattern. Odds ratios for predictors were then calculated to illustrate how the predictors influenced the probability of being in the target pattern as compared with the reference class. Supplementary analyses were run that included age, gender, years of education, and race as control variables to examine whether they had any influence on the results. However, the results were virtually identical.[5] Thus, the results are reported without these control variables below.

Results

Means, standard deviations, and correlations among the variables are presented in Table 1 and Table 2. To test Hypothesis 1, a series of GMM analyses was performed on the longitudinal psychological well-being measures for both samples.

Identifying Multiple Change Patterns of Retirees' Psychological Well-Being

The GMM analysis begins by observing how well the single-curve (i.e., one-class) latent growth model fits the data. In particular, a latent trajectory with free growth shape was estimated. For both samples, the information criteria of this model are reported in Table 3. The conventional chi-square-based fit indexes, such as CFI, standardized root-mean-square residual (SRMR), and RMSEA, were also derived. They indicated well fitting models for both samples: for Sample 1, $\chi^2(3, N = 994) = 12.23$, $p < .01$ (CFI = .99, SRMR = .03, RMSEA = .06); for Sample 2, $\chi^2(3, N = 1066) = 4.52$, $p > .10$ (CFI = 1.00, SRMR = .02, RMSEA = .02). This provided support for a good starting point of the GMM analyses.

Next, a two-class latent growth curve model was estimated with free growth shape in each class for Sample 1 and Sample 2, respectively. This model resulted in smaller information criteria compared with the one-class model (see Table 3) for both samples. Consistent with smaller information criteria, the adjusted LRT tests yielded significant results (for Sample 1, the value was 560.63, $p < .01$; for Sample 2, the value was 598.76, $p < .01$), indicating that the one-class model had to be rejected in favor of a two-class model.

A three-class latent growth curve model was then estimated. The growth shape in each latent class was modeled according to Hypothesis 1.[6] That is, Latent Class 1 was modeled as the minimum change group. Therefore, only the intercept factor was estimated in this latent class. For the other two latent classes (i.e., the positive change group and U-shape change group), additional linear and quadratic factors were estimated. In keeping with Biesanz, Deeb-Sossa, Papadakis, Bollen, and Curran (2004), orthogonal polynomial coefficients were used as factor loadings to minimize multicollinearity among growth factors (i.e., inflated correlations between growth factors). The factor loadings for the linear factor were fixed as [−3, −1, 1, 3], and the factor loadings for the quadratic factors were fixed as [1, −1, −1, 1]. This model converged for both samples. In one of the latent classes, in which the polynomial factors were estimated, the latent mean and variance estimates of the quadratic factor were not significant and approached zero. Therefore, when this three-class model was further revised, only the linear factor was estimated for this latent class. This revised three-class model resulted in smaller information criteria compared with the two-class model (see Table 3) for both samples. In addition, the adjusted LRT tests yielded significant results (for Sample 1, the value was 124.11, $p < .05$; for Sample 2, the value was 266.31, $p < .05$), indicating that the two-class model had to be rejected in favor of this revised three-class model.

After the three-class latent growth curve model was fitted, a four-class model was estimated by addition of one class with free growth shape to the fitted three-class model. Although this four-class model resulted in smaller information criteria compared with the fitted three-class model for both samples (see Table 3), the adjusted LRT tests yielded insignificant results (for Sample 1, the value was 67.32, $p > .10$; for Sample 2, the value was 98.67, $p > .10$). This indicates that the three-class model should not be rejected in favor of this four-class model. Therefore, the previously fitted three-class solution was selected as the optimal model.

Table 4 presents parameter estimates of the three-class growth mixture models for Sample 1 and Sample 2. On the basis of these parameters, Figure 3A and Figure 3B graphically display the fitted trajectories of the three classes for Sample 1 and Sample 2, respectively. In both figures, it can be seen that (a) the growth curve for the first latent class was a flat line, indicating minimum psychological well-being change during the retirement process; (b) the growth curve for the second latent class was a straight line with a positive slope, indicating positive changes in psychological well-being during the retirement process; and (c) the growth curve for

[3] For both samples, according to *t* tests and chi-square tests, there were no significant differences in age, gender, years of education, race, or marital status between participants with missing values and participants without missing values in psychological well-being measures.

[4] I also performed multinomial regression and mixture modeling by not collapsing membership classes. The results were consistent with current findings and are available on request. For the purpose of brevity, only the results of logistic regression and mixture modeling are reported in this article.

[5] The results of supplementary analyses with control variables are available on request.

[6] Previous authors (e.g., Greenbaum et al., 2005; B. Muthén, 2004) have recommended that researchers specify the growth shape in each latent class according to predetermined theoretical hypotheses to directly test the hypotheses and compare the hypothesized number of latent classes with alternatives. This helps to reduce the number of free parameters to be estimated and decreases the computational load of GMM estimation.

Table 1
Means, Standard Deviations, Correlations, and Alpha Reliabilities for Sample 1

Variable	Valid *n*	*M*	*SD*	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
1. Physical demands of the job (Item 1)	784	2.29	1.10	—																					
2. Physical demands of the job (Item 2)	784	1.71	0.94	.64**	—																				
3. Work stress	784	2.70	0.83	.03	−.01	—																			
4. Job satisfaction	784	4.24	1.01	−.01	−.02	−.24**	—																		
5. Bridge job	994	0.30	0.46	−.07*	−.04	−.10**	.10**	—																	
6. Retirement planning (Item 1)	994	2.94	1.16	−.05	−.01	.17**	−.09*	−.01	—																
7. Retirement planning (Item 2)	994	2.18	1.16	−.05	−.04	.13**	−.04	−.02	.54**	—															
8. Off-time retirement (years)	189	1.97	2.58	−.04	−.02	−.03	−.03	.07	−.22**	−.18**	—														
9. Retire earlier than expected	189	0.50	0.50	−.06	−.02	−.06	.02	.07	−.13*	−.12	.65**	—													
10. Retire later than expected	189	0.13	0.33	−.03	−.04	.09	.01	−.07	.10	.05	−.12	−.38**	—												
11. On-time retirement	189	0.37	0.48	.08	.05	.00	−.03	−.02	.06	.09	−.59**	−.77**	−.29**	—											
12. Self-reported health decline	994	0.15	0.94	.04	.01	−.03	.00	−.07*	−.02	.00	.20**	.15*	−.05	−.013*	—										
13. Objective health decline	994	0.27	0.56	.03	.01	.00	−.03	−.13**	.00	−.02	.23**	.14*	−.01	−.14*	.26**	—									
14. Individual annual earning change ($1,000)	994	10.02	46.17	.06	.01	−.06	.02	−.05	−.09**	−.02	.15*	.09	.12	−.18*	.02	.00	—								
15. Total assets change ($10,000)	994	−3.66	40.91	−.04	−.09*	.06	.01	−.01	.03	.04	.01	.10	−.03	−.09	−.01	.00	−.03	—							
16. Marital status	994	0.76	0.43	−.05	−.06	.01	.11**	.04	.02	.03	−.08	−.03	.01	.02	.00	−.05	−.03	.03	—						
17. Spouse working status	744	0.49	0.50	.09*	.04	−.02	−.03	.15**	−.01	.02	.13	.11	−.02	−.10	.02	.03	.00	.00	−.08*	—					
18. Marriage quality	632	3.16	0.69	−.08*	−.09*	.02	.10*	.05	.12**	.09*	.04	.04	.07	−.10	−.04	.00	.04	−.02	.07	.00	—				
19. Psychological well-being (Time 1)	994	7.36	1.20	−.13**	−.14**	−.17**	.24**	.09**	.06	.16**	−.17**	−.13*	.01	.13*	.05	−.10**	−.03	.04	.17**	−.05	.15**	(.87)			
20. Psychological well-being (Time 2)	994	6.73	1.93	−.17**	−.12**	−.10**	.08*	.14**	.09**	.09**	−.08	−.12	.09	.06	−.13**	−.20**	−.03	.04	.20**	.02	.15**	.37**	(.92)		
21. Psychological well-being (Time 3)	905	6.79	1.83	−.06	−.04	−.03	.15**	.10**	.09*	.08*	−.04	−.09	.03	.08	−.06	−.13**	−.02	.04	.20**	.01	.20**	.35**	.56**	(.90)	
22. Psychological well-being (Time 4)	881	6.64	1.82	−.18**	−.14**	−.16**	.19**	.11**	.07	.08*	−.10	−.11	.08	.06	−.03	−.11**	−.02	−.01	.17**	−.01	.08*	.39**	.53**	.50**	(.88)

Note. Correlations are based on pairwise deletion. Sample sizes range from 189 to 994. Alpha reliabilities appear in parentheses along the diagonal.
* $p < .05$. ** $p < .01$.

Table 2
Means, Standard Deviations, Correlations, and Alpha Reliabilities for Sample 2

Variable	Valid *n*	*M*	*SD*	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
1. Physical demands of the job (Item 1)	745	2.27	1.09	—																					
2. Physical demands of the job (Item 2)	745	1.62	0.89	.61**	—																				
3. Work stress	745	2.74	0.79	−.01	−.02	—																			
4. Job satisfaction	745	3.02	0.68	−.02	−.02	−.11**	—																		
5. Bridge job	1,066	0.37	0.48	−.07*	−.05	−.06	.11**	—																	
6. Retirement planning (Item 1)	1,066	2.82	1.17	−.05	−.02	.16**	−.15**	−.01	—																
7. Retirement planning (Item 2)	1,066	2.12	1.11	−.07*	−.04	.12**	−.07	.00	.56**	—															
8. Off-time retirement (years)	179	2.07	2.35	−.03	.07	.05	−.05	.10	.03	−.03	—														
9. Retire earlier than expected	179	0.52	0.50	−.08	−.01	.01	−.16*	.01	.00	−.08	.61**	—													
10. Retire later than expected	179	0.19	0.39	.02	.01	.04	.16*	.00	.02	−.01	−.13	−.50**	—												
11. On-time retirement	179	0.29	0.46	.07	.00	−.05	.04	−.01	−.01	.10	−.57**	−.67**	−.31**	—											
12. Self-reported health decline	1,066	0.08	0.97	.06	.02	.05	.06	−.04	−.05	−.02	.09	.07	−.04	−.05	—										
13. Objective health decline	1,066	0.24	0.50	.00	−.01	.02	−.01	−.04	−.12**	−.04	.05	.00	.02	−.02	.22**	—									
14. Individual annual earning change ($1,000)	1,066	8.45	23.75	.09**	.05	−.07*	.11**	−.01	−.11**	−.11**	−.14*	−.14*	.01	.15*	.02	−.01	—								
15. Total assets change ($10,000)	1,066	−5.58	54.17	−.11**	−.04	−.06	.08*	.01	.05	.03	.01	−.05	.10	−.03	.00	−.01	−.09**	—							
16. Marital status	1,066	0.76	0.43	−.10**	−.11**	−.04	.13**	.06*	.02	−.01	.03	.00	.00	.00	.03	.01	−.04	.06	—						
17. Spouse working status	802	0.53	0.49	−.09**	−.11**	−.03	.04	.17**	−.06	.00	.03	−.02	−.07	.08	.03	.00	.05	.02	.43**	—					
18. Marriage quality	702	3.12	0.73	−.07*	−.08*	−.03	.13**	.01	.07	.07	−.01	.02	.02	−.05	−.03	.00	.00	.00	.07*	.06	—				
19. Psychological well-being (Time 1)	1,066	6.92	1.76	−.17**	−.15**	−.09**	.16**	.15**	.01	.06	−.20**	−.11	−.01	.13	−.01	−.04	−.03	.09**	.16**	.14**	.25**	(.87)			
20. Psychological well-being (Time 2)	1,066	6.80	1.92	−.17**	−.18**	−.07*	.10**	.15**	.05	.08*	−.18**	−.19**	.04	.18**	−.16**	−.14**	−.05	.05	.17**	.11**	.23**	.48**	(.90)		
21. Psychological well-being (Time 3)	958	6.59	1.85	−.14**	−.13**	−.09**	.19**	.14**	.00	.04*	−.19**	−.08	.02	.07	−.07*	−.10**	−.03	.07*	.15**	.12**	.21**	.52**	.57**	(.88)	
22. Psychological well-being (Time 4)	923	6.55	1.96	−.19**	−.17**	−.07*	.14**	.14**	.03	.08*	−.19*	−.15*	.06	.11	−.12*	−.15**	−.03	.09*	.12**	.05	.19*	.53**	.56**	.59**	(.90)

Note. Correlations are based on pairwise deletion. Sample sizes range from 179 to 1,066. Alpha reliabilities appear in parentheses along the diagonal.
* $p < .05$. ** $p < .01$.

Table 3
Fit Indexes, Entropy, and Model Comparisons for Growth Mixture Models in Sample 1 and Sample 2

Growth mixture model	AIC	BIC	SSABIC	Entropy	Adjusted LRT
		Sample 1 (n = 994)			
One class	13,313.80	13,367.72	13,332.78		
Two class	12,918.45	12,991.97	12,944.33	.92	560.63**
Three class	12,161.15	12,244.48	12,190.49	.89	124.11*
Four class	12,082.65	12,175.78	12,115.44	.88	67.32
		Sample 2 (n = 1,066)			
One class	14,918.73	14,973.42	14,938.48		
Two class	14,354.20	14,428.78	14,381.13	.98	598.76**
Three class	13,543.23	13,622.78	13,571.96	.92	266.31*
Four class	13,234.23	13,323.72	13,266.55	.90	98.67

Note. AIC = Akaike information criterion; BIC = Bayesian information criterion; SSABIC = sample-size-adjusted Bayesian information criterion; Adjusted LRT = Lo–Mendell–Rubin adjusted likelihood ratio test.
* $p < .05$. ** $p < .01$.

the third latent class was a U-shape curve, indicating negative changes in psychological well-being at the beginning of the retirement transition but showing improvements in psychological well-being after the transition. These findings provide support to Hypothesis 1, demonstrating the existence of multiple longitudinal change patterns of retirees' psychological well-being. Correspondingly, in Sample 1 and Sample 2, respectively, 69.01% and 74.39% of retirees were classified into the maintaining pattern class, 4.12%

Table 4
Parameter Estimates of the Three-Class Growth Mixture Models in Sample 1 and Sample 2

Parameters for growth factors	Sample 1 (n = 994)		Sample 2 (n = 1,066)	
	Estimate	*SE*	Estimate	*SE*
Maintaining pattern				
Mean of growth factors				
Intercept factor	7.79**	0.19	7.57**	0.28
Variance of growth factors				
Intercept factor	0.54**	0.11	0.51**	0.06
Recovering pattern				
Mean of growth factors				
Intercept factor	3.42**	0.24	3.02**	0.36
Linear factor	0.21**	0.04	0.42**	0.10
Variance of growth factors				
Intercept factor	0.27**	0.05	0.32**	0.05
Linear factor	0.82**	0.14	0.30*	0.14
U-shape pattern				
Mean of growth factors				
Intercept factor	5.88**	0.24	5.27**	0.35
Linear factor	0.08**	0.01	0.11**	0.04
Quadratic factor	0.27**	0.08	0.24**	0.06
Variance of growth factors				
Intercept factor	0.21**	0.07	0.44**	0.12
Linear factor	0.21**	0.02	0.28**	0.03
Quadratic factor	0.96**	0.15	1.39**	0.27

Note. For the maintaining pattern, n = 686 for Sample 1 and 793 for Sample 2. For the recovering pattern, n = 41 for Sample 1 and 40 for Sample 2. For the U-shape pattern, n = 267 for Sample 1 and 233 for Sample 2.
* $p < .05$. ** $p < .01$.

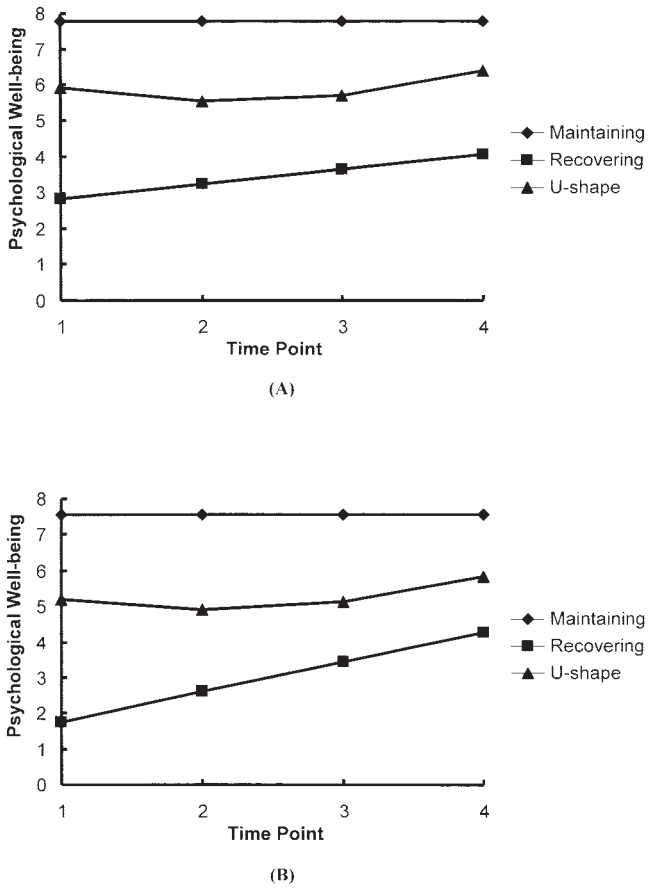

Figure 3. A: Fitted psychological well-being change trajectory classes for Sample 1. B: Fitted psychological well-being change trajectory classes for Sample 2.

and 4.75% of retirees were classified into the recovering pattern class, and 26.86% and 21.86% of retirees were classified into the U-shape pattern class. For each sample, the entropy of the three-class model was higher than .80 (for Sample 1, the value was .89; for Sample 2, the value was .92), indicating good classification.

Profiling Retirees in Different Latent Classes

Latent class membership obtained from the fitted three-class GMM model was assigned to each retiree. A series of conventional logistic regression–mixture modeling analyses was then performed to use individual and contextual variables to profile retirees for different latent classes.

Profiling retirees who displayed the maintaining pattern. Bridge job status (Hypothesis 2A), retirement planning (Hypothesis 2B), and marital status (Hypothesis 2C) were hypothesized to predict the probability of retirees being in the maintaining pattern class. In addition, spouse working status (Hypothesis 2D) was hypothesized to moderate the effect of martial status. The analyses were conducted via a hierarchical approach to test the main effects, followed by the interaction effect. To obtain the logistic coefficients, participants from the recovering pattern and U-shape pattern classes were treated as from one reference class. Table 5 presents estimated coefficients and corresponding standard errors of hypothesized predictors in different mixture models for Sample 1 and Sample 2.

Model 1 assessed the predictive effects of bridge job status, retirement planning, and marital status. Retirees' bridge job status was significantly and positively related to their odds of being in the maintaining pattern class. The odds ratios were 1.89 and 1.41 for Sample 1 and Sample 2, respectively. In other words, retirees who held a bridge job were more likely to experience minimum changes in psychological well-being during the retirement transition than retirees who did not hold a bridge job. This positive effect was also observed in Model 2 for both samples (see Table 5 for coefficients), providing consistent support to Hypothesis 2A.

Retirement planning was found to significantly increase the odds of being in the maintaining pattern class. The odds ratios were 1.37 and 1.45 for Sample 1 and Sample 2, respectively. This is consistent with Hypothesis 2B, indicating that retirees who engaged more in retirement planning were more likely to experience minimum changes in psychological well-being during the retirement transition than retirees who engaged less in retirement planning. This positive effect was also significant in Model 2 for both samples (see Table 5 for coefficients).

Retirees' marital status was significantly and positively related to their odds of being in the maintaining pattern class. The odds ratios were 2.68 and 1.89 for Sample 1 and Sample 2, respectively. This is consistent with Hypothesis 2C, indicating that retirees who were married and whose spouse was present during their retirement transition were more likely to experience minimum changes in psychological well-being during the retirement transition than retirees who did not have their spouse present.

Model 2 focused on examining the moderating effect of spouse working status on the relationship between spouse presence and odds of being in the maintaining pattern class (i.e., Hypothesis 2D). Accordingly, a mixture model with known classes (spouse not working vs. spouse working) was examined (see Table 5 for coefficients). When retirees' spouse was not working, spouse presence was significantly and positively related to the odds of being in the maintaining pattern class. That is, married retirees whose spouse was present and was not working were more likely to experience minimum changes in psychological well-being than retirees who did not have a spouse present (for Sample 1, the odds ratio was 2.90; for Sample 2, the odds ratio was 1.62). However, when retirees' spouse was working, spouse presence had no significant impact on the odds of being in the maintaining pattern class. That is, married retirees whose spouse was present and working did not differ from retirees whose spouse was not present in terms of their chances in experiencing minimum changes in psychological well-being. Further evidence of this moderating effect was collected via a model comparison between Model 2 and a nested model. In this nested model, the coefficients of marital status on the odds of being in the maintaining pattern class were fixed as the same across different spouse working statuses. The model comparisons in both samples yielded significant restricted chi-square test results—for Sample 1, $\Delta\chi^2(1, N = 744) = 7.51$, $p < .01$; for Sample 2, $\Delta\chi^2(1, N = 802) = 10.22$, $p < .01$—indicating that the nested model should be rejected in favor of Model 2. In other words, supporting Hypothesis 2D, results from this model comparison suggest that the coefficients of marital status on the odds for being in the maintaining pattern class differed across different spouse working statuses.

Profiling retirees who displayed the recovering pattern. Three preretirement job variables were hypothesized to predict the probability of retirees being in the recovering pattern class. They were physical demands of the preretirement job (Hypothesis 3A), work stress (Hypothesis 3B), and job satisfaction (Hypothesis 3C). To test their predictive effects, retirees from the maintaining pattern and U-shape pattern classes were treated as from one reference class. Table 6 presents estimated coefficients of hypothesized predictors in different mixture models for Sample 1 and Sample 2.

For both samples, all three predictors were significant (see Table 6). In particular, supporting Hypothesis 3A, physical demands of the preretirement job were positively related to the odds of being in the recovering pattern class. Retirees who retired from a highly physically demanding job were more likely to experience positive changes in psychological well-being (the odds ratios were 1.72 for Sample 1 and 1.92 for Sample 2) than retirees who retired from a less physically demanding job. Consistent with Hypothesis 3B, work stress was positively related to the odds of being in the recovering pattern class. Retirees who retired from a highly stressful job were more likely to experience positive changes in psychological well-being (the odds ratios were 3.80 for Sample 1 and 1.24 for Sample 2) than their counterparts. Supporting Hypothesis 3C, job satisfaction was negatively related to the recovering pattern class membership. Retirees who had low job satisfaction at their preretirement job were more likely to experience positive changes in psychological well-being (the odds ratios were 1.52 for Sample 1 and 1.43 for Sample 2) than retirees who had high job satisfaction at their preretirement job.

Profiling retirees who displayed the U-shape pattern. Four hypotheses were proposed regarding the profiles of retirees in the U-shape pattern class. The corresponding predictors were self-reported health decline and objective health decline (Hypothesis 4A), individual annual earning change and total assets change (Hypothesis 4B), marriage quality (Hypothesis 4C), and off-time retirement (Hypothesis 4D). The analyses were conducted in a

Table 5
Estimated Coefficients for the Mixture Modeling of the Maintaining Pattern in Sample 1 and Sample 2

Predictor and sample size	Model 1		Model 2			
			Spouse not working		Spouse working	
	Estimate	*SE*	Estimate	*SE*	Estimate	*SE*
Sample 1						
Predictor						
Bridge job	0.63**	0.18	0.62**	0.23	0.67*	0.28
Retirement planning[a]	0.32*	0.14	0.31*	0.16	0.33*	0.16
Marital status (spouse presence)	0.99**	0.16	1.07**	0.19	0.11	0.51
n	994		744			
AIC	6,322.48		7,640.15			
BIC	6,391.10		7,752.89			
SSABIC	6,346.64		7,679.85			
Sample 2						
Predictor						
Bridge job	0.34**	0.13	0.37*	0.16	0.32*	0.16
Retirement planning[a]	0.37*	0.16	0.24*	0.12	0.21*	0.09
Marital status (spouse presence)	0.64**	0.23	0.49*	0.19	0.37	0.83
n	1,066		802			
AIC	6,574.65		7,844.99			
BIC	6,644.25		7,959.34			
SSABIC	6,599.79		7,886.29			

Note. AIC = Akaike information criterion; BIC = Bayesian information criterion; SSABIC = sample-size-adjusted Bayesian information criterion.
[a] Latent variable.
* $p < .05$. ** $p < .01$.

hierarchical approach, according to the numbers of missing values in the different predictors. In these analyses, retirees from the recovering pattern and U-shape pattern classes were treated as from one reference class. Table 7 and Table 8 present estimated coefficients of the hypothesized predictors in the different logistic regression models for Sample 1 and Sample 2.

Model 1 assessed the predictive effects of health declines and financial declines on the U-shape pattern class membership. In both samples, only objective health decline was significantly and positively related to the odds of being in the U-shape pattern class (see Table 7 and Table 8 for coefficients). The odds ratios were 1.40 and 1.25 for Sample 1 and Sample 2, respectively. This is consistent with Hypothesis 4A, indicating that retirees who experienced more objective health decline were more likely to be in the U-shape pattern class than retirees who experienced less objective health decline. This positive effect of objective health decline was also found in Model 2 for both samples. The proposed predictive effects of the financial decline variables (Hypothesis 4B) were not supported.

Model 2 focused on examining the predictive effect of marriage quality. Marriage quality was significantly and negatively related to the odds of being in the U-shape pattern class. The odds ratios of unhappy marriage were 1.63 and 1.49 for Sample 1 and Sample 2, respectively. This is consistent with Hypothesis 4C, indicating that retirees who had an unhappy marriage were more likely to experience negative changes in psychological well-being in retirement transitions than those who had a happy marriage. This negative effect of marriage quality was found consistently throughout all models tested in both samples (see Table 7 and Table 8 for coefficients).

Models 3 through 6 focused on examining the predictive effects of off-time retirement (i.e., Hypothesis 4D). In particular, Model 3 tested the predictive effect of absolute time differences between expected retirement year and actual retirement year, Model 4 tested the effect of early retirement, Model 5 tested the effect of

Table 6
Estimated Coefficients for the Mixture Modeling of the Recovering Pattern in Sample 1 and Sample 2

Predictor and sample size	Sample 1		Sample 2	
	Estimate	*SE*	Estimate	*SE*
Predictor				
Physical demands of the job[a]	0.54*	0.23	0.61*	0.25
Work stress	1.34**	0.36	0.21*	0.10
Job satisfaction[b]	−0.42*	0.19	−0.36*	0.18
n	784		745	
AIC	6,780.25		7,006.85	
BIC	6,887.53		7,108.35	
SSABIC	6,814.49		7,038.50	

Note. AIC = Akaike information criterion; BIC = Bayesian information criterion; SSABIC = sample-size-adjusted Bayesian information criterion.
[a] Latent variable. [b] Different measures were used for Sample 1 and Sample 2.
* $p < .05$. ** $p < .01$.

Table 7
Estimated Coefficients for the Logistic Regression of the U-Shape Pattern in Sample 1

Predictor and sample size	Model 1		Model 2		Model 3		Model 4		Model 5		Model 6	
	Estimate	*SE*	Estimate	*SE*	Estimate	*SE*	Estimate	*SE*	Estimate	*SE*	Estimate	*SE*
Predictor												
Self-reported health decline	0.05	0.084	0.10	0.12	0.25	0.27	0.23	0.27	0.21	0.27	0.22	0.27
Objective health decline	0.34**	0.130	0.22*	0.10	0.09	0.41	0.04	0.45	0.13	0.38	0.06	0.43
Individual annual earning change	0.02	0.028	0.00	0.05	−0.01	0.08	−0.01	0.07	0.01	0.10	−0.02	0.07
Total assets change	0.00	0.017	0.01	0.02	0.04	0.04	0.02	0.04	0.03	0.04	0.03	0.04
Marriage quality			−0.49**	0.16	−0.76*	0.33	−0.80*	0.32	−0.67*	0.33	−0.79*	0.33
Off-time retirement					0.15	0.11						
Early retirement							1.58**	0.59				
Late retirement									−0.52	0.32		
On-time retirement											−0.84	0.57
n	994		632		189		189		189		189	
AIC	1,119.12		623.09		161.59		154.38		156.69		160.91	
BIC	1,163.24		676.48		203.73		196.52		198.84		203.06	
SSABIC	1,134.66		638.38		162.56		155.34		157.66		161.88	

Note. AIC = Akaike information criterion; BIC = Bayesian information criterion; SSABIC = sample-size-adjusted Bayesian information criterion.
* $p < .05$. ** $p < .01$.

late retirement, and Model 6 tested the effect of on-time retirement. In both samples, only early retirement was found to be significantly and positively related to the odds of being in the U-shape pattern class. The odds ratios of retiring earlier than expected were 4.83 and 1.89 for Sample 1 and Sample 2, respectively. This indicates that retirees who retired earlier than they expected were more likely to experience negative changes in psychological well-being in their retirement transition. Taken as a whole, the results for Models 3 through 6 provide partial support to Hypothesis 4D, indicating that off-time retirement only increased the odds of being in the U-shape pattern class when it happened earlier than retirees expected.

Discussion

The current study was designed to address the following two questions: Do multiple longitudinal change patterns of retirees' psychological well-being exist during the retirement transition and adjustment process? If so, can these multiple patterns be predicted by individual and contextual variables? Because of theoretical and

Table 8
Estimated Coefficients for the Logistic Regression of the U-Shape Pattern in Sample 2

Predictor and sample size	Model 1		Model 2		Model s3		Model 4		Model 5		Model 6	
	Estimate	*SE*	Estimate	*SE*	Estimate	*SE*	Estimate	*SE*	Estimate	*SE*	Estimate	*SE*
Predictor												
Self-reported health decline	0.13	0.09	0.18	0.12	0.35	0.25	0.32	0.25	0.36	0.24	0.35	0.25
Objective health decline	0.22*	0.11	0.31*	0.14	−0.04	0.52	−0.03	0.52	0.12	0.50	−0.02	0.51
Individual annual earning change	−0.005	0.003	−0.01	0.00	0.00	0.01	0.00	0.01	0.00	0.09	0.00	0.01
Total assets change	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01	−0.01	0.01	0.00	0.01
Marriage quality			−0.40**	0.14	−0.88*	0.35	−0.90**	0.35	−0.87*	0.35	−0.91**	0.35
Off-time retirement					0.06	0.08						
Early retirement							0.64*	0.30				
Late retirement									−0.85	0.85		
On-time retirement											−0.16	0.53
n	1066		702		179		179		179		179	
AIC	1,060.49		621.69		174.42		173.12		173.132		174.72	
BIC	1,105.23		676.34		215.85		214.55		214.568		216.15	
SSABIC	1,076.65		638.24		174.68		173.38		173.398		174.98	

Note. AIC = Akaike information criterion; BIC = Bayesian information criterion; SSABIC = sample-size-adjusted Bayesian information criterion.
* $p < .05$. ** $p < .01$.

methodological complications, prior research has not provided clear answers to these questions. A discussion of the current findings in terms of how they answer these two questions follows.

Multiple Change Patterns of Retirees' Psychological Well-Being

Results from the current study support the hypothesis that multiple longitudinal change patterns of retirees' psychological well-being exist during the retirement transition and adjustment process. In particular, three latent growth curve patterns were identified as coexisting in the retiree samples examined in the current study. They were a flat line (i.e., the maintaining pattern), a straight line with a positive slope (i.e., the recovering pattern), and a U-shape curve (i.e., the U-shape pattern).

The maintaining pattern identified is consistent with the prediction of continuity theory. According to continuity theory, people attempt to accommodate considerable life changes by maintaining their familiar patterns of thought, behavior, and relationship. This finding corroborates previous studies that showed retirement as a benign event with no severe impact on one's well-being. For example, Gall et al. (1997) found that retirees' life satisfaction did not differ before and after retirement. A lack of differences between retirees and workers in mental health, coping, depression, and frequency of drunkenness was also reported by Midanik et al. (1995).

The recovering pattern identified is consistent with the prediction of role theory and the life course perspective. According to role theory, for retirees who did not enjoy their career job, retirement provides an escape from unpleasant work roles. As such, for these retirees, retirement leads to positive changes in psychological well-being. In addition, the life course perspective suggests that the adjustment processes after the retirement transition lead to a positive and stabilized well-being state for retirees. This may also account for the positive changes in psychological well-being over time. This finding corroborates previous studies that found retirement to have a positive effect on retirees' health, stress level, and satisfaction (e.g., Wheaton, 1990).

The U-shape pattern identified is consistent with predictions from role theory, continuity theory, and the life course perspective. According to role theory, the role loss resulting from retirement may cause retirees to feel anxious or depressed and lead to negative changes in psychological well-being. Continuity theory posits that retirees who have difficulty maintaining their continuity of identity and lifestyle may experience negative changes in psychological well-being during retirement transition. These two mechanisms may both account for the initial psychological well-being drop for retirees who displayed the U-shape pattern. Again, the recovery process following this psychological well-being drop can be explained by the life course perspective. Although these retirees experienced a reduction in psychological well-being at the initial stage of the retirement process, their adjustment to retirement life over time led them to a better psychological well-being state. Overall, this finding corroborates previous studies that found retirement transition to have a negative effect on retirees' well-being. For example, J. E. Kim and Moen (2002) found that retirees' depression increased during the retirement transition. Richardson and Kilty (1991) also showed that retirees' well-being declined during the retirement transition. This finding is also consistent with studies that showed that individuals' retirement satisfaction increased after a long period of time in retirement (e.g., 6–7 years; Gall et al., 1997).

Corresponding to the three latent growth curve patterns identified in the current study, retirees were classified into three subgroups. The majority of retirees (69.01% of Sample 1 and 74.39% of Sample 2) were classified into the maintaining pattern class. A sizable proportion of retirees (26.86% of Sample 1 and 21.86% of Sample 2) were classified into the U-shape pattern class. This is consistent with previous findings that, across different studies, a significant minority of retirees (from 10% to over 30%) reported declines in their well-being during the retirement transition but that the majority of retirees did not (Szinovacz, 2003). In the current study, a small but significant proportion of retirees (4.12% of Sample 1and 3.75% of Sample 2) were classified into the recovering pattern class. Although there have been no previous studies documenting the population proportion of this type of retiree, this small proportion was similarly identified in both samples with similar latent growth patterns, which provides cross-validated evidence for the existence of the recovering pattern class. Furthermore, the small proportion derived in this study is compatible with the proportions of retirees whose previous jobs were very stressful (6.3% of Sample 1 and 4.2% of Sample 2) and dissatisfactory (2.3% of Sample 1 and 2.1% of Sample 2). This is consistent with the theoretical logic that the recovering patterns are likely to be preceded by unpleasant work roles. This small proportion could also be due to the fact that most Americans enjoy their job (Balzer et al., 1997).

Profiles of Retiree Subgroups

The current investigation also used individual and contextual variables to profile retirees in different latent classes. In particular, it was found that retirees who (a) held a bridge job, (b) were more actively engaged in retirement planning, and (c) were married and had a spouse who was present and not working were more likely to be classified into the maintaining pattern class. Retirees who (a) retired from highly physically demanding jobs, (b) retired from highly stressful jobs, and (c) had low job satisfaction at their prior employment were more likely to be classified into the recovering pattern class. Retirees who (a) experienced objective health declines during the retirement transition, (b) had an unhappy marriage, and (c) retired earlier than they expected were more likely to be classified into the U-shape pattern class. Overall, these predictive effects suggest that the multiple longitudinal change patterns of retirees' psychology well-being during the retirement transition and adjustment process can be predicted.

However, although above findings support a majority of the hypotheses proposed in the current study, there were still some unexpected findings. For example, in the current study, retirees who experienced objective health declines during retirement transitions were found to have a higher likelihood of being classified into the U-shape pattern class, but the same effect was not shown for self-reported health declines. This inconsistency may be due to the deficiency of the self-report health measure. Previous studies have repeatedly documented that stability was more common than change in self-reported health over time, even when declines were observed in most of the determinants of self-reported health (e.g., Leinonen, Heikkinen, & Jylha, 2001, 2002). This may be because,

with increasing age, people adapt to their worsening health conditions (Borawski, Kinney, & Kahana, 1996; Johnson & Wolinsky, 1993). This deficiency of the self-reported health measure may make it difficult to accurately capture actual health declines over time.

The current study also fails to show the hypothesized positive effect of financial declines in predicting the possibility of being in the U-shape pattern class. This might be due to two reasons. First, research has found that retirees usually have normative expectations about experiencing financial declines in their retirement (Taylor-Carter et al., 1997). This may lead retirees to be more adaptive to financial declines during the retirement transition (Gall et al., 1997). Second, simulation studies based on economical models have suggested that by the time of retirement, retirees have already accumulated enough financial resources to support their retirement and maintain their preretirement living standards (Engen et al., 1999; Gustman & Steinmeier, 1998). Therefore, the financial declines experienced by retirees in the current samples might not lead to perceptions of severe resource constraints and impair retirees' abilities to maintain their previous life structure and lifestyle.

From the methodological standpoint, another alternative explanation of the less than supportive results for health declines and financial declines may relate to the use of difference scores. It has been long recognized that the use of difference scores fails to control for the level of the variables in question at the two points in time that are compared. In other words, difference scores do not capture the main effects of the variables. It is very possible that with identical difference scores, a different result may be expected when the difference scores arise from a low base level of health or finance compared with a high base level of health or finance. As such, the results may be different when the baseline effects of health and finance are controlled. To explore this possibility, I conducted a set of supplemental analyses to include the baseline measures of health and finance in models that examined the predictive effects of health declines and financial declines. That is, for Sample 1, the Wave 1 measures of self-report health, objective health conditions, individual annual earning, and total assets were included as baseline measures. For Sample 2, the Wave 2 measures of self-report health, objective health, individual annual earning, and total assets were included as baseline measures. It was found that none of the baseline effects were significant. Although including these baseline effects did decrease the predictive effects of objective health decline in both samples, the predictive effects of objective health decline were still significant. Therefore, it appears that including the baseline effects from health and finance did not substantially change the current findings. The results of this additional set of analyses are available on request.

The hypothesized positive effect of off-time retirement in predicting the possibility of being in the U-shape pattern class was partially supported by the current finding. Only retirees who retired earlier than they expected were found to have a higher likelihood of being classified into the U-shape pattern class. The fact that the similar effect was not shown for late retirement may be due to the possibility that late retirement usually gives retirees more time to prepare for and accumulate more resources for their retirement transition (Hatcher, 2003). Therefore, although retiring later than expected may impose some negative impact on retirees' perceived personal control over the environment, it also may provide an opportunity for retirees to regain this perceived personal control before actual retirement. As such, the detrimental impact of retiring later than expected may become negligible by the time of actual retirement.

Theoretical and Practical Implications

The current findings have important theoretical and practical implications. With respect to theory, first, the fact that multiple change patterns of retirees' psychological well-being during the retirement process can be identified and systematically modeled suggests that retirees may experience different retirement transition and adjustment processes. In other words, retirees do not follow a uniform adjustment pattern during the retirement process. By recognizing the existence of these multiple patterns, the current findings provide a way to reconcile the inconsistency from previous studies. In particular, this study reveals the possibility that previous researchers might have capitalized on the average adjustment patterns observed from their samples when they reported a specific form (e.g., increasing, decreasing, or maintaining) of retirees' well-being changes. For example, it is quite possible that researchers disregarded and mistreated the recovering and U-shape patterns as random errors when they analyzed data from a sample in which a majority of retirees displayed the maintaining pattern. As such, the current findings emphasize the importance of examining the interindividual variability of retirees' well-being change patterns in greater depth.

Second, the above problem of capitalization on the sample may become even more severe when only one theoretical framework is used to derive research hypotheses. Although most theories used in this research area have received consistent empirical support, each of them may only provide valid hypotheses or explanations for a specific scope of relationships or developmental trends. For example, as illustrated in the current study, the combination of role theory, continuity theory, and the life course perspective was necessary to account for all three change patterns identified. That is, role theory does not provide hypotheses about the existence of the maintaining pattern. Continuity theory does not provide hypotheses about the existence of the recovering pattern. Furthermore, without the life course perspective, the recovering process following the initial psychological well-being drop in the U-shape pattern could not have been hypothesized. As such, the current findings also emphasize the benefits of studying the retirement process via multiple theoretical perspectives.

Third, the current findings demonstrate that the multiple change patterns of retirees' psychological well-being can be predicted by individual and contextual variables. These variables include job characteristics (i.e., physical demands and work stress), job attitude (i.e., job satisfaction), health attributes (i.e., objective health declines), transition characteristics (i.e., retirement planning and timing), and family context variables (i.e., marital status, spouse working status, and marriage quality). This broad range of antecedents indicates that retirement quality is associated with considerable aspects of retirees' attributes and environmental features. Therefore, it supports the emphases of the life course perspective on the contextual embeddedness of life transitions, interdependence of life spheres, and transition characteristics. Nevertheless, the life course perspective offers few concrete hypotheses for variables other than the timing of transitions and family context

variables. Therefore, it may serve as a general framework for studying retirement process by directing researchers' attention to variables that may be of interest, whereas the concrete hypotheses on mechanisms regarding these variables may be drawn from other theories, such as role theory and continuity theory.

When these results are taken as a whole, it seems that a more integrated theory is needed to account for the current findings and to guide future research in the field of retirement adjustment. It is indeed unsatisfactory that each theory used in the current study could only explain the outcomes for a subset of retirees. To improve this situation, introducing a resource perspective to the research field of retirement adjustment may be beneficial. According to Hobfoll (2002), *resource* can be broadly defined as the total capability an individual has to fulfill his or her centrally valued needs. In the retirement context, this total capability may include one's physical resources (e.g., muscle strength; McArdle, Vasilaki, & Jackson, 2002), cognitive resources (e.g., processing speed and working memory; Park, 2000), motivational resources (e.g., self-efficacy; Bandura, 1997), financial resources (e.g., salary and pension; Taylor & Doverspike, 2003), and social resources (e.g., social support; S. Kim & Feldman, 2000). With this resource perspective, psychological well-being change can be viewed as a result from resource change. Regarding retirement transition and adjustment patterns, if, compared with the reference point (i.e., prior to the retirement), a retiree's total resources do not change significantly after retirement (e.g., because he or she successfully maintains prior lifestyles and activities), he or she may not experience significant change in psychological well-being. If a retiree's total resources significantly decrease compared with the reference point (e.g., because of loss of a major income source), he or she may experience negative change in psychological well-being. Furthermore, if an individual's retirement enables him or her to invest significantly more resources (e.g., because he or she gains cognitive resources that were previously occupied by stressful jobs) in fulfilling centrally valued needs, he or she may experience positive change in psychological well-being. Another characteristic of the resource perspective is that resources can be accumulated over time (Hobfoll, 2002). As such, this perspective accounts for the observation that, over time, retirement adjustment leads to a better psychological well-being state in the postretirement trajectory.

When considering the predictors of different retirement transition and adjustment processes, researchers may focus on examining antecedents that have direct impact on different types of resources. These antecedents may include variables from the macro level (e.g., societal norms), the organizational level (e.g., organizational culture and climate), and the individual level (e.g., health conditions). As such, adopting the resource perspective may lead to more comprehensive and fruitful examination on different retirement transition and adjustment patterns. For example, although role theory, continuity theory, and the life course perspective can predict the downward and upward trend of the U-shape pattern, they may not be as informative in terms of understanding the turning point of psychological well-being at the bottom of the U shape. However, with the resource perspective, it is not difficult to hypothesize that certain individual differences (e.g., openness to change, goal orientation in retirement, and need for structure) that may impact retirees' motivational resources and certain environmental factors (e.g., family support, community cohesiveness, and unemployment rate in the local labor market) that may impact retirees' financial and social resources may predict how quickly the turning point will be reached for retirees who experience the U-shape pattern. This is because the more resources the retirees accumulate, the more likely they will be to switch from the downward trend to the upward trend. Therefore, in future studies, researchers should examine both individual differences and environmental factors to better understand the turning point at the bottom of the U shape.

Practically, the implications of the current study are twofold. First, for retirees and prospective retirees as well as psychologists who may work with them, the current study provides a feasible way to predict the psychological well-being change patterns during the retirement transition and adjustment process. That is, for retirees and prospective retirees, self-evaluating on the important predictors identified in the current study may help them build realistic expectations about the obstacles and barriers they may face in their retirement transition and adjustment. In turn, that may help them develop better coping strategies to overcome those obstacles and barriers. Furthermore, through the use of a broad range of variables to profile retiree subgroups that correspond to different psychological well-being change patterns, relatively comprehensive pictures of each retiree subgroup are depicted in the current study. Psychologists can easily use those profiles to identify retirees who are likely to experience negative changes in psychological well-being after retirement (i.e., retirees who are likely to display the U-shape pattern). According to retirees' different profiles, corresponding intervention programs can also be designed and tailored to improve their retirement quality. For example, for retirees who suffer from an unhappy marriage but not health declines, psychologists may recommend marriage counseling rather than health promotion workshops in improving their retirement quality.

Second, this study also offers some practical implications at the policy level. It has been recognized that the current governmental and corporate policies in the United States for retirement mainly focus on the financial aspect of retirement (e.g., encouraging individuals to save for retirement; Taylor & Doverspike, 2003). However, findings from this study clearly indicate that health declines had a more significant impact on retirees' psychological well-being change than financial declines. For policy makers, these findings may suggest that helping and encouraging retirees to get better health insurance plans is also important. Furthermore, in terms of benefiting retirees' psychological well-being, a prevention-oriented health care system may be more effective than a curing-oriented health care system. The current study also found that bridge employment helped retirees to maintain their psychological well-being. Given this finding and the projected growing labor shortages resulting from the pending retirement of the baby boomers (American Association of Retired Persons, 2005), it may be of great benefit for both governmental and corporate policy makers to act to reduce barriers and encourage work at older ages. For example, government may facilitate partnership-building among public universities, organizations, and older worker advocacy groups (e.g., American Association of Retired Persons) to provide skill enhancement training for older workers (Shultz, 2003). Employers may also provide multiple work patterns and options to help older workers to less abruptly transition into retirement. These work patterns and options may include phased retirement, job sharing, job transfers, job redesign, sabbaticals, and

flexible work arrangements (for a detailed review, please refer to Shultz, 2003).

Limitations and Future Research

There are several important limitations to the current study. Some of these limitations are directly related to the archival nature of the data used. First, because HRS essentially was devised for a different purpose, direct measures of constructs of interest were not always available from the HRS data set. Thus, the current examination of retiree subgroup profiles is clearly not complete. Future studies may include more predictors to provide more comprehensive profiles of different latent retiree subgroups. For example, future studies that include direct measures of important individual differences, such as personality variables (e.g., openness to change and neuroticism), may help researchers to understand more about the antecedents of different retirement adjustment and transition patterns and the underlying psychological mechanisms. It is conceivable that retirees who are open to change are less likely to experience abrupt transitions to their retirement and thus more likely to show the maintaining pattern of psychological well-being change. It is also conceivable that retirees who score high on neuroticism are more likely to experience stress and anxiety during their retirement transition and thus more likely to show negative changes in their psychological well-being.

Second, because the current work uses measures that were devised for a different research purpose, most variables included in the current study were represented by single-item measures. The reliability and variance of constructs of interest would have increased if multiple indicators or established scale measures had been available from the HRS data set. Thus, relationships between predictors and retiree subgroup membership might be underestimated in the current study because of measurement errors. Future studies may test these relationships via well-established scales instead of single-item measures to provide more accurate estimates.

Third, the current data contain considerable missing values,[7] which imposed some constraints on choice of the analytical procedures and methods. For example, to avoid the distortion of the latent class membership estimation in the expanded GMM analysis that would have been caused by missing values, a two-step approach was used for the current analysis (i.e., first estimating the latent class membership with missing value modeling, then treating them as observed class membership in multinomial–mixture modeling). B. Muthén (2004) has noted that when many predictors are included, the two-step approach may lead to some biased estimation itself. Although research is still needed to address the nature of this kind of statistical bias, the current estimates should certainly be interpreted with caution. In addition, to preserve as many valid data points as possible, the logistic–mixture analyses were conducted in a hierarchical approach, and the sample size decreased at each step (see Tables 5 through 8). Thus, the estimates yielded from each model should be viewed as from different subsamples instead of from nested models. This precluded certain nested-model comparisons and created some isolated findings.

Fourth, readers should also be cautioned that, because of missing values, when target predictors were tested in each model, all other variables were not controlled to avoid a large reduction in the sample size. Nevertheless, two pieces of information help to alleviate the concerns regarding the validity of the current findings given that other variables were not included as controls. One is that the correlations among different sets of predictors were quite low. It can be seen from Table 1 and Table 2 that most of these correlations did not exceed .15. As such, it is not likely that including other variables as controls would substantially change the current findings. In addition, I also conducted an additional set of analyses, in which all of other variables (except measures related to off-time retirement that had more than 80% missing values) were controlled, when assessing whether a given variable differentiated among the groups. I found that including all other variables as controls did not change the current results, although the sample sizes shrank about 50% in both samples. The results of this additional set of analyses are available on request.

Fifth, the longitudinal HRS data were collected at 2-year time intervals. This time constraint makes it difficult to examine and explore the retirement transition and adjustment process in a smaller time window. Future studies may collect longitudinal data with a shorter time interval to provide more information about the retirement process. A diary study design may also be helpful to track and examine retirees' intraindividual changes immediately before and after their retirement.

Finally, it should be noted that the current samples represent the population of retirees who have survived for at least about 8 years after their retirement. In other words, the current samples did not provide information regarding retirees who died shortly after their retirement. One may ask how many of those who retire live a substantive length of time to actually adjust to their retirement life. A recent study conducted by Tsai, Wendt, Donnelly, de Jong, and Ahmed (2005) reported that for workers who retired at 60, which is comparable to the current samples' average retirement age, the mortality rate was 4.63% (98 deaths out of 2,116 American retirees) within the first 5 years after retirement. On the basis of this mortality rate, the current study may apply to a large population (about 95%) of actual retirees. Nevertheless, future studies should further examine the relationship between retirement adjustment process and mortality, as it seems plausible that retirees who do not adjust well to their retirement life may face higher risks of death.

In summary, the current study supports two conclusions: (a) Multiple longitudinal change patterns of retirees' psychological well-being do exist and can be systematically modeled, and (b) these multiple change patterns can be predicted by individual and contextual variables. These conclusions help to reconcile inconsistent findings from previous literatures and provide directions for designing and developing intervention programs to improve retirement quality. In addition, the current study also provides solid theoretical and methodological foundations for conducting further research in the field of retirement transition and adjustment processes.

[7] Among all 19 measures that were directly derived from the HRS data set, 10 of them contained no missing values, 8 of them contained missing values ranging from 9% to 36% in Sample 1 and Sample 2, and 1 of them (i.e., off-time retirement) had 81% of the values missing in Sample 1 and 83% of the values missing in Sample 2. Please see Tables 1 and 2 for the valid sample size for each variable.

References

Adams, G., Prescher, J., Beehr, R., & Lepisto, L. (2002). Applying work-role attachment theory to retirement decision-making. *International Journal of Aging and Human Development, 54,* 125–137.

American Association of Retired Persons. (2005). *The business case of workers age 50+: Planning for tomorrow's talent needs for today's competitive environment.* Washington, DC: Author.

Ashforth, B. (2001). *Role transitions in organizational life: An identity-based perspective.* Mahwah, NJ: Erlbaum.

Atchley, R. C. (1976). *The sociology of retirement.* New York: Wiley.

Atchley, R. C. (1989). A continuity theory of normal aging. *Gerontologist, 29,* 183–190.

Atchley, R. C. (1998). Activity adaptations to the development of functional limitations and results for subjective well-being in later adulthood. *Journal of Aging Studies, 12,* 19–38.

Atchley, R. C. (1999). Continuity theory, self, and social structure. In C. D. Ryff & V. W. Marshall (Eds.), *Families and retirement* (pp. 145–158). Newbury Park, CA: Sage.

Atchley, R. C., & Robinson, J. L. (1982). Attitudes toward retirement and distance from the event. *Research on Aging, 4,* 299–313.

Balzer, W. K., Kihm, J. A., Smith, P. C., Irwin, J. L., Bachiochi, P. D., Robie, C., et al. (1997). *Users' manual for the Job Descriptive Index (JDI; 1997 revision) and the Job in General (JIG) scales.* Bowling Green, OH: Bowling Green State University.

Bandura, A. (1997). *Self-efficacy: The exercise of control.* New York: Freeman.

Barnes-Farrell, J. L. (2003). Beyond health and wealth: Attitudinal and other influences on retirement decision-making. In G. A. Adams & T. A. Beehr (Eds.), *Retirement: Reasons, processes, and results* (pp. 159–187). New York: Springer.

Beehr, T. A., & Adams, G. A. (2003). Introduction and overview of current research and thinking on retirement. In G. A. Adams & T. A. Beehr (Eds.), *Retirement: Reasons, processes, and results* (pp. 1–5). New York: Springer.

Biesanz, J. C., Deeb-Sossa, N., Papadakis, A. A., Bollen, K. A., & Curran, J. C. (2004). The role of coding time in estimating and interpreting growth curve models. *Psychological Methods, 9,* 30–52.

Borawski, E. A., Kinney, J. M., & Kahana, E. (1996). The meaning of older adults' health appraisals: Congruence with health status and determinant of mortality. *Journal of Gerontology: Social Sciences, 51B,* S157–S170.

Bosse, R., Aldwin, C. M., Levenson, M. R., & Workman-Daniels, K. (1991). How stressful is retirement? Findings from the Normative Aging Study. *Journal of Gerontology: Psychological Sciences, 46B,* P9–P14.

Burke, P. J. (1991). Identity processes and social stress. *American Sociological Review, 56,* 836–849.

Cagney, K. A., & Lauderdale, D. S. (2002). Education, wealth, and cognitive function in later life. *Journal of Gerontology: Psychological Sciences, 57B,* P163–P172.

Calasanti, T. M. (1996). Gender and life satisfaction in retirement: An assessment of the male model. *Journal of Gerontology: Social Sciences, 51B,* S18–S29.

Dorfman, L. T. (1992). Academics and the transition to retirement. *Educational Gerontology, 18,* 343–363.

Ekerdt, D. J., Bosse, R., & LoCastro, J. S. (1983). Claims that retirement improves health. *Journal of Gerontology, 38,* 231–236.

Elder, G. H. (1995). The life course paradigm: Social change and individual development. In P. Moen, G. H. Elder, & K. Luscher (Eds.), *Examining lives in contexts: Perspectives on the ecology of human development* (pp. 101–139). Washington, DC: American Psychological Association.

Elder, G. H., & Johnson, M. K. (2003). The life course and aging: Challenges, lessons, and new directions. In R. A. Settersten Jr. (Ed.), *Invitation to the life course: Toward new understandings of later life* (pp. 49–81). Amityville, NY: Baywood.

Engen, E. M., Gale, W. G., & Uccello, C. E. (1999). The adequacy of household saving. *Brookings Papers on Economic Activity, 2,* 65–187.

Feldman, D. (1994). The decision to retire early: A review and conceptualization. *Academy of Management Review, 19,* 285–311.

Fretz, B. R., Kluge, N. A., Ossana, S. M., Jones, S. M., & Merikangas, M. W. (1989). Intervention targets for reducing preretirement anxiety and depression. *Journal of Counseling Psychology, 36,* 301–307.

Gall, T. L., Evans, D. R., & Howard, J. (1997). The retirement adjustment process: Changes in the well-being of male retirees across time. *Journal of Gerontology: Psychological Sciences, 52B,* P110–P117.

George, L. K. (1993). Sociological perspectives on life transitions. *Annual Review of Sociology, 19,* 353–373.

Greenbaum, P. E., Del Boca, F. K., Darkes, J., Wang, C., & Goldman, M. S. (2005). Variation in the drinking trajectories of freshmen college students. *Journal of Consulting and Clinical Psychology, 73, 229–238* .

Gustman, A. L., & Steinmeier, T. L. (1998). Effects of pensions on saving: Analysis with data from the Health and Retirement Survey (NBER Working Paper No. 668I). Cambridge, MA: National Bureau of Economic Research.

Hanisch, K. A. (1994). Reasons people retire and their relation to attitudinal and behavioral correlates in retirement. *Journal of Vocational Behavior, 45,* 1–16.

Hanisch, K. A., & Hulin, C. L. (1991). General attitudes and organizational withdrawal: An evaluation of a causal model. *Journal of Vocational Behavior, 39,* 110–128.

Hardy, M. A., & Quadagno, J. (1995). Satisfaction with early retirement: Making choices in the auto industry. *Journal of Gerontology: Social Sciences, 50B,* S217–S228.

Hatcher, C. B. (2003). The economics of the retirement decision. In G. A. Adams & T. A. Beehr (Eds.), *Retirement: Reasons, processes, and results* (pp. 136–158). New York: Springer.

Hobfoll, S. E. (2002). Social and psychological resources and adaptation. *Review of General Psychology, 6,* 307–324.

Hulin, C. L. (2002). Lessons from industrial and organizational psychology. In J. M. Brett & F. Drasgow (Eds.), *The psychology of work: Theoretically based empirical research* (pp. 3–22). Mahwah, NJ: Erlbaum.

Jedidi, K., Ramaswamy, V., & Desarbo, W. S. (1993). A maximum likelihood method for latent class regression involving a censored dependent variable. *Psychometrika, 58,* 375–394.

Johnson, R. J., & Wolinsky, F. D. (1993). The structure of health status among older adults: Disease, disability, functional limitation, and perceived health. *Journal of Health and Social Behavior, 34,* 105–121.

Jonsson, H. (1993). The retirement process in an occupational perspective: A review of literature and theories. *Physical & Occupational Therapy in Geriatrics, 11,* 15–34.

Juster, F., & Suzman, R. (1995). The Health and Retirement Study: An overview. *Journal of Human Resources, 30*(Suppl.), 7–56.

Kim, J. E., & Moen, P. (2002). Retirement transitions, gender, and psychological well-being: A life-course, ecological model. *Journal of Gerontology: Psychological Sciences, 57B,* P212–P222.

Kim, S., & Feldman, D. C. (2000). Working in retirement: The antecedents of bridge employment and its consequences for quality of life in retirement. *Academy of Management Journal, 43,* 1195–1210.

Kosloski, K., Ekerdt, D., & DeViney, S. (2001). The role of job-related rewards in retirement planning. *Journal of Gerontology: Psychological Sciences, 56B,* P160–P169.

Kosloski, K., Ginsburg, G., & Backman, C. W. (1984). Retirement as a process of active role transition. In V. L. Allen & E. Van de Vliert (Eds.), *Role transitions: Explorations and explanations* (pp. 331–341). New York: Plenum Press.

Leinonen, R., Heikkinen, E., & Jylha, M. (2001). Predictors of decline in self-assessments of health among older people: A 5-year longitudinal study. *Social Science and Medicine, 52,* 1329–1341.

Leinonen, R., Heikkinen, E., & Jylha, M. (2002). Changes in health, functional performance and activity predict changes in self-rated health: A 10-year follow-up study in older people. *Archives of Gerontology & Geriatrics, 35,* 79–92.

Levinson, D. J. (1986). A conception of adult development. *American Psychologist, 41,* 3–13.

Levinson, D. J., & Levinson, J. D. (1996). *The seasons of a woman's life.* New York: Knopf.

Little, R. J., & Rubin, D. B. (1987). *Statistical analysis with missing data.* New York: Wiley.

Lo, Y., Mendell, N. R., & Rubin, D. B. (2001). Testing the number of components in a normal mixture. *Biometrika, 88,* 767–778.

McArdle, A., Vasilaki, A., & Jackson, M. (2002). Exercise and skeletal muscle aging: Cellular and molecular mechanisms. *Aging Research Reviews, 1,* 79–93.

McLachlan, G. J., & Peel, D. (2000). *Finite mixture models.* New York: Wiley.

Mehta, P. D., Neale, M. C., & Flay, B. R. (2004). Squeezing interval change from ordinal panel data: Latent growth curves with ordinal outcomes. *Psychological Methods, 9,* 301–333.

Midanik, L. T., Soghikian, K., Ransom, L. J., & Tekawa, I. S. (1995). The effect of retirement on mental health and health behaviors: The Kaiser Permanente Retirement Study. *Journal of Gerontology: Social Sciences, 50B,* S59–S61.

Moen, P., Dempster-McClain, D., & Williams, R. W., Jr. (1992). Successful aging: A life course perspective on women's multiple roles and health. *American Journal of Sociology, 97,* 1612–1638.

Muthén, B. (2004). Latent variable analysis: Growth mixture modeling and related techniques for longitudinal data. In D. Kaplan (Ed.), *Handbook of quantitative methodology for the social sciences* (pp. 345–368). Newbury Park, CA: Sage.

Muthén, B., Brown, C. H., Masyn, K., Jo, B., Khoo, S. T., Yang, C. C., et al. (2002). General growth mixture modeling for randomized preventive interventions. *Biostatistics, 3,* 459–475.

Muthén, B., & Shedden, K. (1999). Finite mixture modeling with mixture outcomes using the EM algorithm. *Biometrics, 55,* 463–469.

Muthén, L., & Muthén, B. (1998–2003). *Mplus user's guide.* Los Angeles: Author.

Muthén, L., & Muthén, B. (2004). Mplus (Version 3.1) [Computer software]. Los Angeles: Author.

Nagy, M. S. (2002). Using a single-item approach to measure facet job satisfaction. *Journal of Occupational and Organizational Psychology, 75,* 77–86.

O'Rand, A. M., & Henretta, J. C. (1999). *Age and inequality: Diverse pathways through later life.* Boulder, CO: Westview Press.

Park, D. C. (2000). The basic mechanisms accounting for age-related decline in cognitive function. In D. C. Park & N. Schwarz (Eds.), *Cognitive aging: A primer* (pp. 3–22). Philadelphia: Psychology Press.

Quick, H. E., & Moen, P. (1998). Gender, employment, and retirement quality: A life course approach to the differential experiences of men and women. *Journal of Occupational Health Psychology, 3,* 44–64.

Radloff, L. (1977). The CES-D scale: A self-report depression scale for research in the general population. *Applied Psychological Measurement, 1,* 385–401.

Reitzes, D. C., Mutran, E. J., & Fernandez, M. E. (1996). Preretirement influences on postretirement self-esteem. *Journal of Gerontology: Social Sciences, 51B,* S242–S249.

Richardson, V., & Kilty, K. M. (1991). Adjustment to retirement: Continuity vs. discontinuity. *International Journal of Aging and Human Development, 33,* 151–169.

Riley, M. W., & Riley, J. W., Jr. (1994). Structural lag: Past and future. In M. W. Riley, R. L. Kahn, & A. Foner (Eds.), *Age and structural lag: The mismatch between people's lives and opportunities in work, family, and leisure* (pp. 15–36). New York: Wiley.

Rosenkoeter, M. M., & Garris, J. M. (1998). Psychosocial changes following retirement. *Journal of Advanced Nursing, 27,* 966–976.

Ross, C. E., & Drentea, P. (1998). Consequences of retirement activities for distress and the sense of personal control. *Journal of Health and Social Behavior, 39,* 317–334.

Shultz, K. S. (2003). Bridge employment: Work after retirement. In G. A. Adams & T. A. Beehr (Eds.), *Retirement: Reasons, processes, and results* (pp. 214–241). New York: Springer.

Shultz, K. S., Morton, K. R., & Weckerle, J. R. (1998). The influence of push and pull factors on voluntary and involuntary early retirees' retirement decision and adjustment. *Journal of Vocational Behavior, 53,* 45–57.

Siegel, M., Bradley, E. H., Gallo, W. T., & Kasl, S. V. (2003). Impact of husbands' involuntary job loss on wives' mental health, among older adults. *Journal of Gerontology: Social Sciences, 58B,* S30–S37.

St. Clair, P., Bugliari, D., Chien, S., Haider, S., Hayden, O., Hurd, M., et al. (2004). *RAND HRS data documentation Version D.* Santa Monica, CA: RAND Center for the Study of Aging.

Stull, D. E. (1988). A dyadic approach to predicting well-being in later life. *Research on Aging, 10,* 81–101.

Super, C. E. (1990). A life-span, life-space approach to career development. In D. Brown (Ed.), *Career choice and development* (2nd ed., pp. 197–261). San Fransisco: Jossey-Bass.

Szinovacz, M. E. (2003). Contexts and pathways: Retirement as institution, process, and experience. In G. A. Adams & T. A. Beehr (Eds.), *Retirement: Reasons, processes, and results* (pp. 6–52). New York: Springer.

Szinovacz, M. E., & Davey, A. (2004). Honeymoons and joint lunches: Effects of retirement and spouse's employment on depressive symptoms. *Journal of Gerontology: Psychological Sciences, 59B,* P233–P245.

Taylor, M. A., & Doverspike, D. (2003). Retirement planning and preparation. In G. A. Adams & T. A. Beehr (Eds.), *Retirement: Reasons, processes, and results* (pp. 53–82). New York: Springer.

Taylor-Carter, M. A., Cook, K., & Weinberg, C. (1997). Planning and expectations of the retirement experience. *Educational Gerontology, 23,* 273–288.

Thoits, P. A. (1992). Identity structure and psychological well-being: Gender and marital status comparisons. *Social Psychology Quarterly, 55,* 236–256.

Tsai, S. P., Wendt, J. K., Donnelly, R. P., de Jong, G., & Ahmed, F. S. (2005). Age at retirement and long term survival of an industrial population: Prospective cohort study. *British Medical Journal, 331,* 995–998.

Turvey, C., Wallace, R., & Herzog, R. (1999). A revised CES-D measure of depressive symptoms and a *DSM*-based measure of major depressive episodes in the elderly. *International Psychogeriatric Association, 11,* 139–148.

Wanous, J. P., Reichers, A. E., & Hudy, M. J. (1997). Overall job satisfaction: How good are single-item measures? *Journal of Applied Psychology, 82,* 247–252.

Wheaton, B. (1990). Life transitions, role histories, and mental health. *American Sociological Review, 55,* 209–223.

Received November 24, 2005
Revision received April 5, 2006
Accepted April 12, 2006 ■