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Effect of Career Adaptability on Subjective Well-Being of Middle-Aged and Older Employees

Makiko Takao * and Nobutaka Ishiyama

Hosei Graduate School of Regional Policy Design, Tokyo 102-0073, Japan; nobutaka.ishiyama.33@hosei.ac.jp
* Correspondence: makiko.takao.46@hosei.ac.jp; Tel.: +81-33264-5055

Abstract: This study aimed to elucidate how career adaptability (CA) affects subjective well-being by focusing on the psychological adjustment of middle-aged and older workers. Two web-based surveys were conducted at 1-year and 3-month intervals with 3540 workers aged 40 to 64 years, including those eligible for both position-retirement and reemployment. Factor analysis of CA in the first wave extracted two factors "control and confidence" and "concern and curiosity". Multiple regression analysis, adjusted for important covariates, was conducted with the overall CA and the two factors of CA as the independent variables, and scores of the Satisfaction with Life Scale (SWLS) as the dependent variable. For satisfaction with life, only concern and curiosity had a significant positive association, while control and confidence had no significant association. Analysis by employment stage indicated that only concern and curiosity had a significant positive association with satisfaction with life, while control and confidence had no significant association with any employment stage. The results suggest that the effect of CA on satisfaction with life remains the same, even among those who are position-retired or reemployed at the end of their vocational lives, which is a transition period in their lives.

Keywords: career adaptability; subjective well-being; middle-aged to older workers; position-retirement; reemployment; psychological adjustment

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1. Introduction

1.1. Background and Objective

The aging of the population is an issue common to all developed countries, and the aging of the workforce has a significant impact on human resource management. In Japan, the retirement age was extended in the 1980s and 1990s in response to the aging of baby boomers (born 1947–1949), who represent the largest proportion of the population, and post-retirement reemployment was institutionalized when baby boomers reached retirement age in the 2000s. Today, the second baby boomer generation in Japan (born 1971–1974) is approximately 50 years old, and many are expected to continue working after the age of 60. To contribute to the organization and maintain well-being after the age of 60, there is a need to acquire occupational skills and adapt to new roles during middle and old age.

In the area of human resource management (HRM), sustainable human resource management [1,2], which emphasizes not only financial outcomes but also human and social outcomes, has received much attention. In sustainable HRM, models have been proposed that focus on three components: respect for employees as stakeholders in the organization (Respect), environmental awareness and external perspectives on HRM (Openness), and a long-term approach from the perspective of economic and social sustainability and the employability of individuals (Continuity) [3]. From this perspective, increased attention to the long-term well-being of employees is needed, rather than management that focuses on only the financial performance of the company and dismisses middle-aged and older workers or deprives middle-aged and older workers of their job satisfaction. At the same

time, it is necessary for employees to pay attention to the society outside as well as inside the company and create their own careers. In particular, middle-aged and older employees who will be retiring in the near future and moving from a work-centered life to a life in the local community will be required to adapt to their new environment.

The study of adaptability and well-being of middle-aged and older adults is consistent with this new approach to human resource management. Therefore, this study aims to contribute to sustainable human resource management by elucidating the relationship between adaptability to new careers and well-being of middle-aged and older adults.

In recent years, there has been growing interest in subjective well-being research, which focuses on measures of well-being and factors that determine subjective well-being. Previous research indicates that the level of subjective well-being by age is lowest in middle age and that negative emotions decrease in old age and positive emotions and life satisfaction increase from the late 50s onwards, depending on the scale and survey [4,5]. However, in recent years, it has been observed that the U-shape of the relationship between age and life satisfaction is caused by excessive influence of marital status, income, education, etc. If these variables are not controlled, the increase after middle age disappears or is negligible [6,7]. Among the six aspects of well-being presented by Ryff, older adults display lower scores for purpose in life and personal growth, but self-acceptance and positive relations with others are not age-related, and autonomy and environmental mastery are higher than among younger adults [8,9]. Subjective well-being is maintained during old age, even though many factors reduce well-being, including loss of roles and decline in physical functioning; psychological adjustment is also thought to have an effect [10].

The increase in the number of middle-aged and older workers is a common issue in all developed countries. In Japan as well, with the expansion of position-retirement and reemployment after the retirement age (the term "reemployment" refers to the continued employment by reemployment after the retirement age of 60, following the 2012 amendment of the Law for Stabilization of Employment of Older Persons, which mandated measures to ensure employment until age 65 for all applicants.), middle-aged and older workers, who have already established their own careers according to the traditional view of careers, are increasingly required to adapt to new roles. In the position-retirement age system, managers retire from their position after reaching a certain age, but remain in the company in a different role, such as that of specialist. In Japan, the Law for Stabilization of Employment of the Elderly, enacted in 1986, mandated a mandatory retirement at age 60 or older, and in 1994, banned the mandatory retirement at age below 60 and mandated continuous employment until age 65. In response to these changes in the system, the "position retirement age system" was introduced, mainly in large companies. In companies that have introduced the position retirement system, the retirement age is generally around 55 years of age for section chiefs, and 57–58 years of age for department managers. However, it has been suggested that the change in roles in the late 50s leads to a decline in work motivation and further affects intention to work after age 60 (Keidanren Japan Bu, 2016; Organization for the Promotion of Employment of the Elderly, Disabled and Job Seekers, 2016). In particular, people who have retired from their management positions are considered to be successful in and strongly focused on their careers [11]. Therefore, when they retire from their positions, they not only lose their motivation to work, but are often shocked with a sense of loss and loneliness, a loss of psychological sense of place, and a loss of self-worth [12]. A study by Sudo and Okada [13], who interviewed people who are retired from their positions, revealed that after retiring from their positions, individuals experience a sense of loss of managerial roles, but readjust to their new roles.

Regarding adaptation to new professional roles, Savickas [14,15] presents the concept of career adaptability from the standpoint of career construction theory, due to the interaction of environmental change and individuals. Career adaptability is thought to be important during transitions, such as entering or exiting professional life [16]. However, there is less research on career adaptability among older employees in the transition phase

of their professional lives than among younger employees, and there is little research on its relationship with well-being [16,17].

The present study focuses on the psychological adjustment of middle-aged and older workers, including those who are eligible for retirement and reemployment, and aims to investigate how career adaptability affects the subjective well-being of middle-aged and older workers.

Although there are various definitions of the age of middle-aged and older workers, the theory of lifelong career development considers the age of approximately 40 to be an important turning point [18]; thus, middle-aged and older workers are defined as those aged 40 and above.

1.2. Previous Studies and Hypotheses

1.2.1. The Concept and Measurement of Well-Being

Subjective well-being is the most comprehensive concept related to well-being, and it is said to include (1) positive/negative affect, (2) life satisfaction, and (3) eudaimonia [19–22]. Positive and negative affect are the emotional aspects of subjective well-being, while life satisfaction focuses on the cognitive aspects. Eudaimonic well-being includes characteristics such as a sense of purpose in life which focuses on living a life in accord with one's potential and the presence of positive relationships with others [21]. Eudaimonic well-being (in positive psychology) has been influenced by the concept used by Aristotle and Aristotelian philosophy [23,24].

Several scales have been developed to measure subjective well-being, but they can be broadly divided into two categories: those that focus on emotional well-being and assess happiness, and those that focus on cognitive well-being and assess overall life satisfaction [25].

Emotional well-being is often assessed using the Affect-Adjective Scale [26], which assesses negative and positive emotions, and the Positive and Negative Affect Schedule (PANAS) [27]. The Satisfaction with Life Scale (SWLS) [28] is widely used to focus on the cognitive aspect of life satisfaction. Scales such as the single-item Cantril Ladder Scale, which directly asks about comprehensive happiness, have been used by the World Happiness Report. Lyubomsky and Lepper [29] developed the subjective happiness scale (SHS) as a four-item scale to measure comprehensive happiness and has been tested for reliability and validity. These various measures of well-being are correlated with each other but are not identical [22].

1.2.2. Psychological Adjustment and Subjective Well-Being of the Elderly

One of the paradoxes of well-being is the relationship between aging and well-being. Even though factors that decrease well-being, such as a decline in physical functioning, loss of roles, and shrinking social networks, increase with age, subjective well-being tends to be maintained. For this reason, various theories regarding the effects of aging on well-being have been presented in terms of psychological adjustment.

There are two positions on psychological adjustment among older adults: disengagement theory [30] and activity theory [31]. Disengagement theory assumes that older people prepare for death and maintain their subjective well-being by disengaging from social activities and reducing their social environment. Alternatively, activity theory assumes that people maintain their middle-age lives as much as possible in old age, and remaining active leads to life satisfaction. However, the process of adaptation to aging is diverse, and continuity theory, which focuses on the continuity of an individual's internal and external structures, has become the focus of attention. According to continuity theory, middle-aged and elderly people try to maintain their previous internal and external structures when they select how to adapt to aging, and continuity, in this case, does not indicate an absence of change, but a concept that includes change and development [32].

Baltes and Baltes [33] present Selective Optimization with Compensation (SOC) for adaptation during old age. This theory posits that individuals attempt to maintain well-

being through three processes: goal selection, resource optimization, and compensation for the losses associated with aging. Another theory by Heckhausen et al. extracts four optimization strategies by combining two of them: primary control, which entails changing one's environment to suit one's desires, and secondary control, which exerts changes to self to suit the environment, selection, and compensation [34–36]. It is thought that older adults maintain well-being by increasing secondary control as their primary control declines.

Brandtstädter and Greve [37] state that with aging, flexible goal adjustment attempts to disengage from blocked goals to maintain self-esteem and stabilize the subjective quality of life (well-being). Furthermore, according to Carstensen's Socioemotional Selectivity Theory (SST), when limitations of time are perceived, present-oriented goals related to emotional meaning are prioritized over future-oriented goals aimed at acquiring information and expanding horizons. For this reason, as we age, we maintain positive emotions and well-being by controlling our emotions [10,38].

Thus, older adults are thought to compensate for age-related losses through resource optimization and compensation, as well as maintaining their well-being through methods such as disengagement from blocked goals and emotional control.

However, the loss and adaptation associated with aging vary among individuals. Sudo and Okada [13] observed that when people who are retired from their positions are appointed to new roles, they adapt psychologically by learning and performing these roles, achieving results, and readjusting practically, while some retain negative emotions due to feelings of loss associated with the resignation of the management position. This confirms that the activity theory fits better than the disengagement theory.

1.2.3. Career Adaptability and Subjective Well-Being

Career development theory presents a model that divides careers into developmental stages, such as the growth phase and the establishment phase. Super presents five stages of career development: growth, exploration, establishment, maintenance, and decline. The maintenance phase refers mainly to individuals between the ages of 45 and 65, while the decline phase begins at age 65 and above [39]. The theory of career construction states that careers are constructed by the interaction of the individual and the environment; career adaptability (CA) is a central concept in career construction theory and, "career adaptability is a psychosocial construct that denotes an individual's readiness and resources for coping with current and anticipated tasks of vocational development, beliefs, and competencies—the ABCs of career construction—increase along the developmental lines of concern, control, conception, and confidence [15] (p. 46)".

Moreover, career adaptability consists of four dimensions: concern, control, curiosity, and confidence [14,15,40]. In career construction theory, adaptive individuals are (1) becoming concerned about their future as a worker, (2) increasing personal control over their vocational future, (3) displaying curiosity by exploring possible selves and future scenarios, and (4) strengthening the confidence to pursue their aspirations [15] (p. 52) and [40].

Career adaptability is related to career success, such as career satisfaction and self-rated career performance [41,42], and is positively related to professional well-being and general well-being [43–45]. Career adaptability also has a positive impact on emotions and job satisfaction and a negative impact on negative emotions and work stress [46]. Urbanaviciute, Udayar, and Rossier [47] observed a positive cross-lagged effect of CA on job and life satisfaction two years later, and a negative association with respect to life stress. Furthermore, limited career prospects and recent experience of a significant work-related event may strengthen the positive relationship between CA and job and life satisfaction. Rudolph, Lavigne, and Zacher [16], in a meta-analysis of CA and measures of adaptivity, adapting responses, and adaptation results revealed that CA was significantly related to not only job satisfaction but also general well-being, such as life satisfaction, positive affect, and lower negative affect. However, when other covariates were controlled for, CA had a significant impact on life satisfaction, but not on job satisfaction. Furthermore, previous research indicates that CA is positively related to job satisfaction among older

workers [48]. Ramos and Lopez [17] also measured attachment security, CA, life satisfaction, and meaning of life among young adults in transition to professional life and older adults before and after retirement and observed that attachment security and CA were positively related to life satisfaction, and CA mediated the relationship between attachment security and life satisfaction. Furthermore, among the four dimensions of CA in both groups, concern and control of the career significantly mediated these relationships.

According to these previous studies, career adaptability increases job-related satisfaction of middle-aged and older employers [48]. Especially because positional retirement employees are more aware of their career limitations, it is assumed that career adaptability increases life satisfaction. Hence, the following hypotheses were formulated.

Hypothesis 1: *Career adaptability among middle-aged and older employees will positively affect subjective well-being.*

In the study by Ramos and Lopez [17], among the four dimensions of CA, concern and control over career were positively related to life satisfaction and significantly mediated the relationship between attachment security and life satisfaction.

Regarding the four dimensions of career adaptability, a comparison of Japanese and Korean university students revealed that concern and control had a higher correlation with life satisfaction than curiosity and confidence among Japanese university students [49].

In terms of career adaptability, concern has a positive impact on knowledge brokering, whereas control has a negative impact and confidence had no significant impact [50]. Here, concern is a concept that includes Savickas's concern and curiosity. Commenting on this difference, Ishiyama said that concern plays an important role in knowledge brokering because it involves planning for one's career development, cognition to cope with environmental changes, and gathering information with curiosity, while control implies the cognition and behavior indicative of self-determination and autonomy over one's career. It is assumed that this proactive control will have a negative impact on knowledge brokering, which includes behaviors that influence diverse people.

CA and aging experience (i.e., physical loss, social loss) affect later career planning via future time perspective of the occupation [51]. This previous study demonstrated how the four career adaptability subscales are correlated with each item analyzed (p. 29) and that all the subscales are positively correlated with occupational future time perspective and late-career planning. However, their correlations with aging experience are somewhat different, and concern is negatively correlated with personal growth and that confidence is positively correlated with social loss, which differs from the other subscales. Although the subscales are not specifically mentioned in the study, the results of this correlation analysis suggest that career concern increases among middle-aged and older adults when they realize their personal growth is declining and that high confidence is related to the loss of social relationships.

It can be inferred from these previous studies that, among middle-aged and older adults, concern and curiosity, which are related to adaptation to the future, may have a positive impact on well-being, while confidence and control, which are related to autonomy and self-determined behavior, may have a negative impact on social relationships.

As mentioned above, there are limited studies on how the four dimensions of CA affect well-being, but the studies by Ramos and Lopez [17] and Lee et al. [49] indicate that concern and control have a positive impact. Alternatively, the study by Fasbender, Wohermann, Wan, and Klehe [51] revealed a positive correlation between confidence and loss of social relationships, while the study by Ishiyama [50] suggests that control may have a negative impact on relationships with people.

Therefore, the following hypothesis was evaluated in this study.

Hypothesis 2: *Among the four dimensions of CA among middle-aged and older employed people, concern and curiosity will have a positive influence on subjective well-being, while control and confidence will not have a significant influence.*

It should be noted that even among middle-aged and older workers, the impact of CA on well-being may differ depending on the stage of employment. Previous research on the CA of older workers suggests that while they may have high CA [52] due to their work and career experiences, older workers may have lower career adaptability due to the perceived time remaining in the workplace and work-related career adaptability may be reduced due to fewer opportunities [53].

For position-retired employees, readjustment to a new role is also thought to be linked to psychological well-being. CA is thought to have an important impact on well-being, especially since concern with the future and curiosity, which are associated with flexibility in accepting a new role, have a positive impact on well-being. Control, as the belief that one can control the environment, and confidence in achieving goals, may have a negative impact on well-being in position-retirees who have previously had a positive impact on their professional achievement but have no hope of promotion to higher positions. Therefore, the following hypothesis was formulated.

Hypothesis 3: *Among the four dimensions of career adaptability, concern and curiosity positively affect subjective well-being, while control and confidence negatively affect subjective well-being for position-retired employees.*

Alternatively, because the remaining time in their professional lives is short, we assume that retirees will maintain their well-being by withdrawing from unattainable goals, focusing on domains other than work, and increasing secondary control and suppressing their emotions. In other words, except for curiosity, which is also associated with new approaches to domains other than work, we hypothesize that CA will not affect subjective well-being.

Hypothesis 4: *Among the four dimensions of career adaptability, curiosity will positively affect subjective well-being, but concern, control, and confidence will not during reemployment after retirement age.*

2. Materials and Methods

2.1. Survey Participants and Methods

In this study, middle-aged and older workers between the ages of 40 and 64, including those who were eligible for positional retirement and mandatory reemployment, were surveyed through Macromill, Inc. using two internet-based questionnaires in November 2018 and February 2020. The company states on its website that responses to the web survey are voluntary and that there is no disadvantage associated with not responding or discontinuing the survey. The company has also confirmed that it is taking appropriate measures to protect personal information in accordance with its privacy policy.

The first wave survey pre-screened for the condition of full-time employees for those aged 40 to 59 years, full-time employees, and those eligible for retirement reemployment for those aged 60 to 64 years, and if they were eligible for retirement reemployment. Not only full-time employees, but also contract, commissioned, and part-time employees were included in the survey. The pre-screened participants were divided into three categories: the general sample, the sample of position-retired employees, and the sample of post-retirement rehired employees. For the general sample, gender and age were assigned based on the Labour Force Survey of the Ministry of Internal Affairs and Communications. Since it was determined that the allocation conditions were not sufficient to secure an ample sample of workers with position-retirement and those who were post-retirement rehired for the analysis, 300 samples for each of the position-retirement and post-retirement rehired categories were separately extracted from the general category. Since the general sample included both position-retirement and reemployment, the number of participants was 3351 for those who were neither position-retired nor reemployed, 452 for position-retirement,

and 528 for reemployment. In total, 4331 people were identified including 3290 men (76.0%) and 1041 women (24.0%), with a mean age of 51.0 years (standard deviation (SD) 7.04).

The second wave survey was conducted one year and three months later among the respondents of the first wave survey, and 3540 people responded. There were 2701 respondents who were neither retired in a position nor rehired (general), 245 who were retired in a position, 521 who were rehired in a position, and 73 who were not employed. There were 2777 men (78.4%) and 763 women (21.6%), with a mean age of 52.7 years (SD 6.89).

To address common method bias [54], the order of the questions was randomized for each respondent. In addition, the common method bias was avoided by using the independent variable, CA, as the first wave survey and the dependent variable, happiness index, as the second wave survey response.

2.2. Scales Used

The Career Adapt-Abilities Scale (CAAS) [40] was translated into Japanese and used as a measure of CA. For the translation from English to Japanese, the back-translation method of Brislin [55] was used. This scale consists of 6 items for each of the 4 subscales of CA and 24 items for each of the 4 dimensions of CA and has been widely used and validated worldwide.

Diener's Satisfaction with Life scale (SWLS, [28]) was used because the SWLS focuses on the cognitive aspects of well-being and is considered to include both life satisfaction and eudaimonia among the three aspects of well-being.

The SWLS is based on the following beliefs: (1) my life is close to my ideals in most respects, (2) my life is in a very good state, (3) I am happy with my life, (4) I have gotten the important things I want out of life, (5) I would change very little if I could live my life over again. The five items are scored using a seven-item scale (1–7 points).

For the question on health status, respondents were asked to rate their current health status on a scale of "not good", "not so good", "average", "fair", and "good" in response to the question "How is your current health status compared to others of your age"?

2.3. Method of Analysis

To test Hypothesis 1 and 2, we first conducted an exploratory factor analysis of the CAAS of the first group survey and then conducted a multiple regression analysis using the subscales with extracted factors as independent variables and the SWLS of the second group survey as the dependent variable. As control variables, we used gender, age, marital status, number of years in the household, and health status (subjective), which have been previously demonstrated to affect happiness. Note that we did not control for mental health, such as depression, since it was not measured.

Next, to verify Hypotheses 3 and 4, we classified the respondents into employment stages (general, position retirement, and reemployment) at the time of the second survey, and for the general group, into managerial and non-managerial. We conducted a multiple regression analysis with the CA subscale as the independent variable and the SWLS as the dependent variable. IBM SPSS v.24 (IBM Corp; Armonk, NY, USA) was used for all analyses.

3. Results

3.1. Factor Analysis on Career Adaptability

The results of the exploratory factor analysis conducted for the 24 questions on CA are shown in Table 1, where the factor loadings of "Keeping upbeat" that did not yield a factor loading of 0.4 or more were removed. Note that the cumulative factor contribution of the two factors was 54.65%. The factor extraction method was conducted by maximum likelihood method and Promax rotation.

Table 1. Results of Factor Analysis on Career Adaptability (CA).

	Factor		CAAS Subscale
	1	2	
Taking responsibility for my actions	0.876	−0.149	control
Doing what's right for me	0.786	−0.113	control
Performing tasks efficiently	0.725	−0.010	confidence
Probing deeply into questions I have	0.720	−0.008	curiosity
Making decisions by myself	0.700	−0.046	control
Solving problems	0.697	0.104	confidence
Sticking up for my beliefs	0.592	0.151	control
Taking care to do things well	0.574	0.166	confidence
Counting on myself	0.549	0.162	control
Investigating options before making a choice	0.535	0.224	curiosity
Overcoming obstacles	0.489	0.269	confidence
Working up to my ability	−0.102	0.858	confidence
Concerned about my career	−0.147	0.842	concern
Learning new skills	−0.056	0.786	confidence
Looking for opportunities to grow as a person	0.013	0.774	curiosity
Becoming curious about new opportunities	−0.022	0.724	curiosity
Realizing that today's choices shape my future	0.173	0.568	concern
Thinking about what my future will be like	0.119	0.554	concern
Exploring my surroundings	0.110	0.546	curiosity
Planning how to achieve my goals	0.273	0.487	concern
Preparing for the future	0.126	0.456	concern
Becoming aware of the educational and career choices that I must make	0.318	0.449	concern
Observing different ways of doing things	0.332	0.412	curiosity
Factor correlation			
Factor	Factor 1	Factor 2	
Factor 1	1	0.737	
Factor 2	0.737	1	

Factor extraction: Maximum Likelihood Method Rotation: Promax with Kaiser's Normalization.

The first factor displayed high loadings for "taking responsibility for my actions", "doing what's right for me", and "performing tasks efficiently", and included five items in Savickas's career adaptability subscale of "control", four items in "confidence", two items in "curiosity". The two items of curiosity were also determined to be close to control and confidence, and were named "control and confidence". The second factor showed high factor loadings for "working up to my ability", "concerned about my career", and "learning new skills", and consisted of six items included in "concern", four items included in "curiosity", and two items included in "confidence" of CAAS. The two items of confidence were also considered to be items related to career interest, so they were named "concern and curiosity".

A reliability analysis was conducted and revealed that Cronbach's alpha = 0.917 for the 11 items of the first factor and alpha = 0.917 for the 12 items of the second factor were sufficient, so the following analysis was conducted using the mean score of the scale for these two factors as variables.

3.2. Correlation Analysis for Each Variable

Factor analysis and reliability coefficients were conducted for SWLS, and they displayed a one-factor structure, with five items of SWLS with Cronbach's $\alpha = 0.897$, which were found to be satisfactory.

The mean, standard deviation, and correlation coefficients of overall CA, the subscales obtained from the factor analysis, SWLS, were calculated for the overall CA and the two

factors of CA in the first wave survey and the SWLS variables in the second wave survey for 3540 respondents in both the first and second wave surveys (Table 2).

Table 2. Mean, Standard Deviation, and Correlation Coefficient of CA, Satisfaction with Life Scale (SWLS).

		N	Mean	SD	CA Total	Control and Confidence	Concern and Curiosity	SWLS (T2)
Career Adaptability (T1)	CA total	3540	3.35	0.59	1			
	Control and Confidence	3540	3.51	0.63	0.936 ***	1		
	Concern and Curiosity	3540	3.20	0.64	0.943 ***	0.779 ***	1	
	SWLS(T2)	3540	18.54	5.80	0.313 ***	0.258 ***	0.315 ***	1

***: $p < 0.001$.

3.3. Effect of CA on Subjective Well-Being (Multiple Regression Analysis)

To test Hypotheses 1 and 2, we conducted multiple regressions with demographics that have been previously demonstrated to affect well-being (gender, age, marital status, household income, and health status) as control variables, with CA from the first wave survey as the independent variable and SWLS from the second group survey as the dependent variable, and the results are shown in Table 3.

Table 3. Results of multiple regression analysis on subjective well-being with CA as an independent variable.

		Model 1		Model 2	
		β		β	
Demographics	Gender (female dummy)	0.008		0.012	
	Age	0.025		0.036	*
	Marital status (married dummy)	0.137	***	0.137	***
	Household income Log	0.107	***	0.105	***
	Health status	0.254	***	0.255	***
Career Adaptability	CA total	0.228	***		
	Control and Confidence			−0.014	
	Concern and Curiosity			0.248	***
F-value		1380.0	***	1210.5	***
Adjusted R^2		0.209		0.215	

Note: β: standardized coefficient *: $p < 0.05$ ***: $p < 0.001$.

With SWLS as the dependent variable, in addition to age, marital status, household income, and health status, total CA had a significant positive impact in Model 1 (β = 0.228, $p < 0.001$). CA's concern and curiosity had a significant positive impact (β = 0.248, $p < 0.001$). Control and confidence had no significant impact (Table 3).

Hence, Hypothesis 1 "CA positively influences subjective well-being among middle-aged and older employed people" was supported.

When Model 2, which divided CA into subscales, was used as an independent variable, "concern and curiosity" had a significant positive impact (β = 0.248, $p < 0.001$). "Control and confidence" had no significant effect (Table 3).

Therefore, Hypothesis 2, "Among the subscales of CA among middle-aged and older employees, concern and curiosity will have a positive influence on subjective well-being, while control and confidence will not have a significant impact", was supported.

3.4. CA and Subjective Well-Being by Employment Stage

To test Hypotheses 3 and 4, we divided the hypotheses into three employment stages at the time of the second wave survey (general, position-retirement, and reemployment), and further divided the general (neither position-retirement nor reemployment) into managerial and non-managerial positions, which were analyzed in four groups.

The means and standard deviations of the CA and subscales and SWLS by employment stage are shown below (Table 4).

Table 4. Means and standard deviations of CA and SWLS by employment stage.

		1. General (Non-Managerial)	2. General (Management)	3. Position Retirement	4. Reemployment
		N = 1901	**N = 800**	**N = 245**	**N = 521**
CA Total (T1)	Mean	30.26	30.50	30.42	30.40
	SD	0.58	0.59	0.55	0.57
Control and Confidence (T1)	*Mean*	30.42	30.64	30.57	30.60
	SD	0.62	0.63	0.60	0.61
Concern and Curiosity (T1)	*Mean*	30.11	30.38	30.30	30.22
	SD	0.64	0.62	0.59	0.62
SWLS (T2)	*Mean*	170.68	190.74	190.45	190.38
	SD	50.93	50.24	50.80	50.53

3.5. The Impact of CA on Subjective Well-Being by Employment Stage

To test Hypotheses 3 and 4, we conducted multiple regression analysis in the same model with four groups of employment stages (general non-managerial, general managerial, position retirement, and reemployment at retirement age), demographics as control variables, CA subscales as independent variables, and SWLS as the dependent variable. Multiple regressions were conducted for the four employment stages (general non-managerial, general management, position retirement, and reemployment at retirement age).

The results of the multiple regression analysis are shown in Table 5. At all employment stages, only concern and curiosity had a significant ($p < 0.001$) positive impact, while control and confidence had no significant impact.

Table 5. Results of multiple regression analysis for SWLS with CA as an independent variable by employment stage.

		SWLS							
		General (Non-Managerial)		**General (Management)**		**Post-Retirement**		**Reemployment**	
		***N* = 1901**		***N* = 800**		***N* = 255**		***N* = 521**	
		β		**β**		**β**		**β**	
Demographics	Gender (female dummy)	0.020		0.034		0.055		−0.004	
	Age	0.005		0.03		0.040		−0.008	
	Marital status (married dummy)	0.158	***	0.06		0.190	***	0.069	
	Household income Log	0.092	***	0.145	***	0.171	***	0.038	
	Health status	0.263	***	0.237	***	0.308	***	0.253	***
Career Adaptability	Control and Confidence	−0.025		0.006		−0.138		0.022	
	Concern and Curiosity	0.266	***	0.206	***	0.214	***	0.226	***
F-value		670.1	***	200.6	***	90.0	***	120.6	***
Adjusted R^2		0.219		0.161		0.201		0.150	

β: Standardized coefficient ***: $p < 0.001$.

In summary, the effect of CA on SWLS did not differ significantly among the four groups.

Hypothesis 3: *Among the four dimensions of career adaptability, concern and curiosity positively affected subjective well-being, while control and confidence negatively affected subjective well-being for position-retired persons; this was partially supported by the fact that concern and curiosity had a positive impact on the SWLS, but control and confidence had no significant impact.*

Hypothesis 4: *Among the four dimensions of CA, curiosity will positively affect subjective well-being, but concern, control, and confidence will not in the post-retirement rehired persons, could not be verified because the results of the factor analysis indicated that "interest and curiosity" was one factor.*

4. Discussion and Conclusions

The purpose of this study was to determine the impact of CA on subjective well-being among middle-aged and older employers. There are four theoretical implications of this study.

First, it was observed that CA, a central concept in career construction theory, has a positive impact on the subjective well-being of middle-aged and older workers. This result is consistent with previous research indicating that CA is positively related to occupational well-being and general well-being and that CA is also positively related to job satisfaction among older workers [48]. Previous studies on the relationship between CA and well-being have been limited to middle-aged and older adults compared to younger adults, and none have been conducted in Asian countries. In particular, it would be significant to confirm that readjustment to a career leads to individual well-being among the middle-aged and older age groups, which is the maintenance period in Super's life-span development theory [39].

The second significant implication of this study is that it clarified the different aspects of CA among middle-aged and older workers compared to younger workers. The results of the factor analysis of CA revealed that Savickas and Porfeli's [40] four dimensions were two factors, "concern and curiosity" and "control and confidence". Detailed examination of the items indicated that control and confidence expressed confidence in the future based on past and present experiences, while concern and curiosity expressed the expectation of future growth and change. The results of this factor analysis differed from those of previous studies. For example, in Ishiyama's [56] study of Japanese college students, confidence and concern were one factor, with a three-factor structure of curiosity and control, while Lee et al. [49] indicated that Japanese and Korean college students had a two-factor structure of concern and confidence, and control and curiosity. In both cases, concern and confidence were one factor, whereas in the present study, concern and curiosity were one factor. The difference is that for college students before entering professional life, self-confidence is the basis for concern in their future careers, whereas for the middle-aged and older employers surveyed in this study, self-confidence may turn to past professional accomplishments with control, and curiosity may lead to concern in the future.

The third significant implication of this study is that it revealed differences in the impact of Savickas's [14,15] four dimensions of CA on well-being among middle-aged and older workers; the results of the factor analysis of CA revealed that Savickas's four dimensions were two factors, "concern and curiosity" and "control and confidence". In this study, only concern and curiosity affected SWLS, while control and confidence did not affect SWLS. This differs from Ramos and Lopez's [17] study in which concern and control influenced life satisfaction (SWLS) in both young and middle-aged workers, and Lee et al.'s [49] study comparing Japanese and Korean college students, in which concern and control had a higher correlation with life satisfaction (SWLS) than curiosity and confidence among Japanese college students. In the case of Japanese college students entering professional life, control related to self-determination and autonomy leads to life satisfaction, but for middle-aged and older workers who have been in the job market for

some time, curiosity about accepting a role is more important than self-determination for life satisfaction. Our results suggest that this may be the case. In other words, middle-aged and older workers with high levels of concern and curiosity experience life satisfaction by actively responding to new roles as well as their previous roles in their professional lives. However, life satisfaction, including good relationships with others, was not always high for middle-aged employees with high control and confidence, which could be interpreted as not displaying a significant impact because of their commitment and confidence in their professional lives. The difference between this finding and the study by Ramos and Lopez [17] may be influenced by the cultural differences between Japan and the United States. In Japan, interpersonally engaged positive emotions (e.g., friendly feeling) are more likely to be associated with general positive emotions, whereas, in the US, non-interpersonally engaged positive emotions (e.g., pride) are associated with general positive emotions [57].

The fourth significant implication of this study is the observation of the importance of CA in the transition period. It was confirmed that the impact of CA on SWLS is not different from that of general employees, even in the final stage of employment, which is position-retirement and reemployment. This indicates that CA is important even in the final stage of professional life, which is a transition period for those who are retired or rehired. In particular, the fact that concern and curiosity were observed to have an impact on well-being in this study may provide important suggestions for readjustment during the transition period of life.

The practical implication of this study is that the findings highlight the importance for human resource management to encourage readaptation of middle-aged and older employees to their new roles. Specifically, human resource development that stimulates middle-aged and older employees' interest in transition, flexible careers, and curiosity to acquire new knowledge and skills in relation to others is likely to affect employee well-being, beyond their career. Further, this endeavor may have long-term benefits for the well-being of middle-aged and older employees, contributing to sustainable human resource management.

This study is based on an Internet survey of registered monitors, and bias in the population is unavoidable. Internet surveys are known to have a particularly large bias in elderly samples [58], and a large bias is thus expected in the sample of those who have been rehired at retirement age.

In addition, it is not possible to distinguish between those who were previously in a managerial position and those who were not. Because the present analyses revealed differences in CA and subjective well-being between managerial and non-managerial positions, it is important to analyze the former managerial positions and non-managerial positions separately for those who have been rehired after retirement.

In the present analyses, the SWLS was used as an index of subjective well-being, focusing on only the cognitive aspect of well-being and not on positive and negative emotions. It has been suggested that emotional control is also important for psychological adjustment among the elderly [10,38], and it is expected that more research will be conducted on the effects of CA on positive and negative emotions.

The analyses in this study used data at two time points, but it is not clear what changes in CA and subjective well-being may have resulted due to changes in employment stage. Further research on the psychological change process after retirement and reemployment is expected.

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