

Materials

Development of a Japanese version of the Career Adaptability Scale: Reliability and validity testing with young workers

Reliability and Validity of the Japanese Version of the Career Adapt-Abilities Scale Among Young Employees

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[Summary

In this study, based on Savickas & Porfeli (2012), we developed a Japanese version of the Career Adaptability Scale (CAAS-J) with the permission of the original authors, and tested the reliability and validity of the scale by surveying young workers. An Internet survey was conducted in February 2023 on 1,034 employees in their 20s, and the responses were analyzed. Results of factor analysis

As in Savickas & Porfeli (2012), a four-factor, 24-item model with career adaptability as a higher-order factor showed a high degree of fit. Cronbach's *alpha* coefficient was .97, indicating internal consistency. Correlation analyses with self-esteem and self-efficacy were conducted to verify criterion-related validity, and correlation analyses with protian and boundary-less career were conducted to verify convergent validity, and both results indicated that the instrument had validity. Based on these results, the CAAS-J is considered to be a sufficiently reliable and valid instrument.

Keywords: career adaptability, scale development, reliability, validity

Abstract

The purpose of this study was to develop Japanese version of the Career Adapt-Abilities Scale (CAAS) by Savickas & Porfeli (2012) and to test its After getting permission from the original authors, we conducted the web-based survey among 1,034 young employees in As aligned with Savickas & Porfeli (2012), we performed secondary factor analysis, and the result Cronbach's coefficient alpha was .97. Criterion-related validity and convergent validity were also confirmed. Accordingly, these results indicate that the Japanese version of CAAS has good reliability and validity as an appropriate measure of career adaptability. adaptability.

Keywords: Career Adaptability, Scale Development, Reliability, Validity

1. question (e.g. on a test)

In response to market and environmental changes, companies increasingly need to reorganize their business structures.

(Cappelli, 2008). In order to cope with such changes in business structure over the medium to long term, some Japanese companies are promoting employee transfer management and the acquisition of newly required knowledge and skills (Ministry of Economy, Trade and Industry, 2020). Specifically, they are reviewing the quantity and skills of personnel who are responsible for the execution of their duties, such as by redefining the duties required in their organizations (METI, 2020). In today's highly uncertain world, where the assumption that jobs are stable over the long term has collapsed, the performance of a job within a company is becoming more like the performance of a fixed-term project.

(Savickas, 2011). With this transformation in the nature of jobs, in terms of employment management in organizations, companies have an increasing need to hire and train personnel flexibly and quickly (Cappelli, 2008).

The changing business structure of companies has also required changes in the careers of individuals. In an era of rapid change, where the nature of one's job is frequently transformed, individuals are expected to manage their careers on their own (Hirschi, 2012). As a result of not entrusting their careers to organizations, individuals may choose to move out of their organizations. To assist individuals in making these career choices, career consultants were made nationally certified in 2016, and the job market is being developed.

However, according to a survey on employment trends conducted by the Ministry of Internal Affairs and Communications in 2020, the ratio of personnel who entered the workforce by changing jobs from other companies has remained at around 10% since 2006, and in the most recent year, 2020, it was 9.2%, showing no increasing trend (MIC, 2020). Although the overall trend of employment mobility has not increased, it is also clear that the behavioral trends related to job change differ by age group. According to MIC (2022), although the number of job changers itself has not shown an increasing trend, data on the rate of job changers by age indicate that the rate of job changers among those aged 24 and below and

those aged 25-34 is higher than the overall average. In other words, it can be said that job changes in the younger age group tend to be greater than those in the middle and later age groups. According to the Japan Productivity Center (2019), which surveys the reasons for choosing a company when a new graduate joins a company, the ratio of those who choose their first job based on the future potential of the company has been steadily declining since the mid-1990s, when the employment ice age began, while the ratio of those who choose based on whether their abilities can be utilized has been increasing and is at the highest level recently. The percentage of those who choose their first job based on whether or not they can make use of their abilities has been increasing, and is the highest in recent years. Therefore, young workers are not conscious of the fact that they are going to work for a company, but rather that they are going to work for a company.

In addition, it can be inferred that the respondents are trying to develop their careers by making job selections based on their awareness of whether they can demonstrate their abilities in their jobs.

Thus, young workers' career choices and attitudes toward their careers are undergoing a change. However, without understanding this change, there are cases in which companies fail to respond to individual career development (Hanada, 2006). Although companies should provide opportunities for individuals to exercise their abilities through their jobs in accordance with their career aspirations, many companies are facing problems in responding to these needs. As a result, it is believed that this is causing young workers to leave their jobs voluntarily. In order for companies to respond to the career development needs of young workers, they must realize career autonomy and express their career-related needs to the organization. What is career autonomy?

"Based on self-awareness, a sense of one's own values, and an awareness of the need to proactively shape one's own career (psychological factors) one acts independently and continuously engages in career development while adapting to changes in the environment (career-autonomous behavior)"

(Horiuchi and Okada, 2009, p. 16).

The idea of career autonomy is based on the concept of "protian career" (Hall, 1996) and "boundaryless career," which have been advocated in the U.S. since the 1990s.

(Arthur & Rousseau, 1996). A protégé career is a career that is advanced by an individual, not an organization, and is renewed over time as people and the environment change (Hall, 1996) (Hall, 1996).

(Arthur & Rousseau, 1996) Therefore, the concept of career autonomy tends to assume the existence of individuals who develop their own careers without being bound by corporate or organizational boundaries. Hanada et al. (2003) who introduced career autonomy research in Japan, emphasized the shift of the subject of career development from organizations to individuals. On the other hand, in conventional Japanese companies, organizational-led career development has been conducted based on the idea that companies manage the careers of their

employees, including young workers. In such companies, the human resource department has a strong power to enforce transfers due to employment practices (Hirano, 2006) While this creates advantages such as training and employment retention through transfers, it also increases the possibility of inhibiting opportunities for young workers and other employees to face their own careers.

In recent years, in Japan, career development has been

Although an increasing number of companies are reassessing the role of individuals, company-initiated transfers that do not reflect the opinions and wishes of individuals still occur in 60.3% of companies (National Institute for Labour Policy and Training, 2020). Against this background, in order for individuals to realize career autonomy, they ~~acquire~~ develop their own careers for the future while working and cooperating with others in their current jobs and contributing value (Hanada et al., 2003). Career autonomy based solely on protégé career or boundary-less career tends to focus on the individual's orientation and deals with long-term career development without being bound by the organization, thus weakening the perspective of adaptation to the current job. On the other hand, the Japan Institute for Labour Policy and Training (2023), based on a survey on the current status of career and skills development in Japanese companies, found that 83.8% of companies place the responsibility for skills development on the company. In light of the current situation in Japanese companies, an approach that allows individuals to develop their own careers while adapting to changes in the environment surrounding them, including their current jobs, is required, rather than relying solely on the orientation of individuals.

Therefore, in this study, we propose a career construction theory that emphasizes the subjective meaning of one's own career through the process of adapting to changes in the environment surrounding one's job and job duties.

(Savickas, 2013). Career construction theory conceptualizes human development as being facilitated by adaptation to the social environment with the goal of integrating the individual and the environment (Savickas & Porfeli, 2012).

~~Saba~~ (2013), in his theory of career construction, identifies the following career adaptation strategies to developmental challenges that arise in achieving career goals by individuals: adaptive readiness, such as characteristics and intentions; adaptive resources, which are psychosocial resources; adaptive responses, which manifest themselves as behaviors; and adaptive outcomes, which occur as consequences. Sabickas states that individuals adapt to changes in the environment by self-adjusting in the following four orders: adaptive

readiness, adaptive resources, adaptive responses, and adaptive outcomes.

Hirschi et al. (2015) clearly distinguished four elements in Sabicas' career adaptation strategy and further discussed the relationship between each. Adaptive readiness precedes adaptive resources and is "the psychological characteristic of attempting to cope with unfamiliar, complex, and ill-defined problems posed by career development challenges, career transitions, and occupational trauma with appropriate responses" (Hirschi et al., 2015, p. 2). Next, adaptive resources are obtained on the basis of adaptive readiness.

Adaptive resources are "psychosocial strengths that condition self-regulation in coping with challenges, change, and trauma.

(Hirschi et al., 2015, p. 2). Adaptive resources then prompt adaptive responses, resulting in adaptive outcomes (Rudolph et al., 2017). Adaptive responses are "the performance of adaptive behaviors to cope with changing circumstances" and adaptive outcomes are "the results of adaptive behaviors" (Hirschi et al., 2015, p.2).

Savickas & Porfeli (2012) position adaptive resources as internal resources that are easy to develop and accumulate, with adaptive readiness and adaptive resources to achieve desired adaptive outcomes through adaptive responses. Career adaptability is positioned as an adaptive resource and

(Savickas, 2013) and numerous empirical studies have been conducted (Koen et al., 2012; Guan et al., 2013; Maggiori et al., 2013; Zacher, 2014; Jiang, 2017). Career adaptability is defined as "an individual's psychosocial resources for coping with current and anticipated future career development tasks, occupational transitions, and work traumas that have some impact on social bonding" (Savickas, 2013, p. 157). In other words, increasing career adaptability, an adaptive resource, is thought to promote the desired effects listed for adaptive responses and adaptation outcomes. Therefore, in this study, we focus on career adaptability, which is proposed by Savickas as a psychological resource for mid- to long-term career development of individuals in career construction theory.

Career adaptability consists of four factors: interest in one's career future, control, which indicates an attempt to prepare for one's future, curiosity, which indicates an attempt to explore one's possibilities and future scenarios, and confidence, which indicates a desire to pursue one's hopes (Savickas & Porfeli, 2012). Savickas & Porfeli, 2012).

Savickas & Porfeli (2012) developed the Career Adapt-Abilities Scale (CAAS), which measures career adaptability using 24 items in a four-factor structure with higher-order factors. The CAAS was developed through international comparative surveys in 13 countries, including the U.S., France, and China, but not in Japan. Although some studies have attempted to translate the CAAS into Japanese, all of them were conducted on students (Kitamura, 2021; Lee et al., 2021), and there is no Japanese-language CAAS that has been translated after obtaining official permission from the original authors and confirming detailed nuances of the wording with the original authors.

An empirical study using CAAS reveals the relationship between career adaptability and other concepts.

Rudolph et al. (2017), is a career a meta-analysis of previous studies on adaptability reveals the relationship between adaptive readiness, which is a factor that precedes career adaptability and is positioned as an adaptive resource in career construction theory, adaptive responses, which are the effects of career adaptability, and adaptive outcomes. Adaptive readiness that precedes career adaptability includes psychological traits such as self-esteem, core self-esteem, and future orientation (Rudolph et al., 2017). In addition, the effects of career adaptability include adaptive responses and adaptive outcomes, and adaptive responses have been found to be related to career planning, career exploration, and self-efficacy

(Rudolph et al., 2017). Furthermore, the positioning of adaptation outcomes that are influenced directly from career adaptability or through the mediation of adaptation responses has been tested in significant relationships with career satisfaction, organizational commitment, and turnover intentions and engagement

(Rudolph et al., 2017). Career adaptability has been shown to be influenced by adaptive readiness and to have effects on variables listed as adaptive responses and adaptive outcomes.

2. Objective.

The purpose of this study is to develop a Japanese version of the CAAS. Research using career adaptability has increased since the development of the CAAS, and research accumulation has progressed internationally. In order to further develop career adaptability research, a career concept that is considered to be highly relevant to Japanese companies, it is necessary to develop a Japanese version of the CAAS scales that have been accumulated in other languages. In this study, since the attitudes of young workers toward employment show a different trend from those of the previous studies, we developed a Japanese version of the CAAS, which has been accumulated in other languages.

(We will test the reliability and validity of the Japanese version of the Career Adaptability Scale (CAAS-J) by conducting a survey of young workers, who are the generation that will play an active role in companies in the future (Japan Institute for Labour Policy and Training, 2022), excluding those

① advance preparation other than those of the relevant age from the survey. Through this study, we expect to make progress in career research that is suited to Japanese employment practices.

3. method scale translation

In developing the Japanese version of the Career Adaptability Scale, we referred to the procedure for scale translation (Inada, 2015).

When we started the translation work, we obtained permission from the original authors of the CAAS to create a Japanese version. At that time, we confirmed that the Japanese version of the scale authorized by the original author did not exist.

① sequential translation

Two translators whose native language was Japanese and who were familiar with the language of the original version were assigned to the project. The first author served as the project leader and explained to the two translators the outline of the original scale development paper and the background and purpose of this study, after which the two translators translated the paper independently.

② adjustment

The two translators compared and reviewed the forward translations, and the project manager also participated in the discussion. The terminology used was adjusted to conform to that of the original version and integrated into a single forward-translated version.

③ back-translation

The back translation was performed by a translator with experience in back translation who was not involved in the forward translation work.

④ Review and Harmonization of Reverse Translation

The back-translated version was compared with the original version and checked with the original author to review whether the two versions were equivalent. The original author and the first author exchanged information on the words used that differed between the original and back-translated versions, and repeated explanations and corrections were made until agreement was reached on the content, after which the final version was prepared.

⑤ Cognitive Debriefing

We asked the subjects who were close to the target of this study to read the translated version and confirmed that there were no parts that were difficult to answer.

⑥ Final Report

The finalized translated version and the back-translated version were sent to the original authors, and permission was obtained to use them in the survey after confirming the contents.

survey of the members of the monitors of research firm A. In order to target young workers in Japan, the screening conditions were as follows: (1) reside in Japan, (2) work for a private company with at least 300 employees, (3) be in their 20s, and (4) be a university-graduate employee. Note that there are differences in employment practices between large and small firms, and most of the career development research in Japan has been conducted in large firms (Hirano, 1999; Wakabayashi, 1987; Yamamoto, 1999). Therefore, we considered it appropriate to target employees working in large firms, and we conducted a study on employees working in small and medium-sized firms.

survey procedure

In February 2023, we conducted an Internet

Based on the definition in empirical studies (Kawasaki-Takahashi, 2018; Nakahara-Yasuda, 2021), which set condition (2) to exclude those working for small and medium-sized firms. The male-female ratio was assigned to be 50:50, and valid responses were finally obtained from 1,034 respondents.

Although the Ministry of Health, Labour and Welfare's Survey of Employment of Young People defines young workers as those aged 15 to 34, it is difficult to regard workers in their 30s as being at the same career stage as those in their 20s, given the timing of managerial appointments at large Japanese companies. Therefore, following previous studies (Ogata, 2016; Ikeda et al., 2020), which had similar objectives regarding the subjects to those of this study and aimed to address the attitudes and behaviors of young workers, we define employees in their 20s as young workers.

Survey Contents

This study was designed to examine the reliability and validity of the Japanese version of the Career Adaptability Scale. For this purpose, we conducted a survey using the Japanese version of the Career Adaptability Scale as well as several other scales.

First, to test criterion-related validity, self-esteem and self-efficacy, which have been positively correlated with career adaptability in Rudolph et al. (2017)

Rudolph et al. (2017), which is a self

Lee et al. (2021) used self-esteem and self-efficacy for criterion-related validity in the development of a translation scale of the CAAS for college students. In light of the career adaptation strategies in career construction theory, it is important to clarify the relationship between self-esteem, which promotes the adaptive resource of career adaptability, and self-efficacy, which occurs as a response to career adaptability, in order to examine criterion-relevant validity.

The reason for this may be that the authors determined that the data were appropriate in terms of the The Root Mean of the Root, CFI (Comparative Fit Index), and RMSEA (Root Mean Lee et al. (2021) is the target population for this study. The same argument for college students was used to examine the criterion-related validity for young workers, although it differs from the

The Japanese version of general self-efficacy is a 10-item, 4-item scale, with higher scores indicating higher self-esteem. The Japanese version of general self-efficacy is a 10-item, 4-item scale, with higher scores indicating higher self-efficacy.

Next, for the purpose of testing convergent validity, we used two measures, the Protean Career (Takeishi et al., 2014) and Boundaryless Career (Takeishi et al., 2014). Protean career and boundaryless career, which indicate an individual's career orientation, are positioned within the framework of career construction theory, as is career adaptability, and their correlation with each is evident in previous studies (Johnston, 2018; Savickas, 2021). Another reason for its selection is that it is a concept shared with career adaptability in the sense that individuals take ownership of their personal career development, rather than organizations managing their personal careers. The Protean Career is a 14-item scale consisting of two factors, the Self-Orientation Scale and the Value Priority Scale, and was measured using the five-item method. The Boundaryless Career is a "Boundaryless Thinking Scale."

The "Preference for Mobility Scale" consists of two factors and 13 items, and is measured using a five-item scale.

Analysis Method

First, the Japanese version of the Career Adaptability Scale

The frequency distribution of each item of the "ceiling effect" was checked, and then the mean and standard deviation of each item were calculated to confirm the ceiling and floor effects.

Next, content validity was confirmed in the process of developing the Japanese version in line with the scale translation procedure based on the original version. To verify construct validity, higher-order factor analysis was conducted on 24 items in a four-factor structure with career adaptability as a higher-order factor, in accordance with the original version. As a specific index of model fit, the χ^2

(Square Error of Approximation).

The results of this study are shown in Figure 1. To test for criterion-related and convergent validity, a Japanese version of the Career

Adaptability Scale with high

Rudolph et al. (2017) using both concepts
the statement. selected based on

In this study, self-esteem and self-efficacy were also
selected to test criterion-related validity.

Two scales were used: the Japanese version of the
Rosenberg Self-Esteem Scale (Sakurai, 2000) and the
Japanese version of the General Self-Efficacy (Ito et al.,
2005). The Japanese version of the Rosenberg
Self-Esteem Scale consists of 10 items and 4
items.

The second-order factor and the Rosenberg Self-
Esteem Scale (Japanese version), the
Correlation analyses were conducted for the
Japanese version of the General Self-Efficacy,
Protean Career, and Boundaryless Career subscales.

To verify reliability, Cronbach's *alpha* coefficient
was calculated to confirm internal consistency.
SPSS Statistics Ver. 28.0.1.1 and SPSS Amos Ver.
27.0.0.0 were used in the analysis.

Table 1 Personal Characteristics of Survey Subjects

		n (%)	Mean (standard deviation)
gender	male	507 (49.0)	26.7 (1.8)
	female	527 (51.0)	
age	and female		
last education	graduate school of a	910 (88.0)	
	four-year	124 (12.0)	
	university	241 (23.3)	
		89 (8.6)	
background	Sales and Service	71 (6.9)	
	Skilled and Skilled	270 (26.1)	
	Workers	307 (29.7)	
type of occupation	General work	14 (1.4)	
	clerical	42 (4.1)	
	work	915 (88.5)	
	Professional	88 (8.5)	
	and technical	12 (1.2)	
	management	9 (0.9)	
	and	3 (0.3)	
	administration	1 (0.1)	
	Other		
	General		
employment	employee/employee		
ent	Chief/leader		
position or rank	equivalent Section		
	chief equivalent		
	Section		
	Manager		
	Equivalent		
	nt		
	Department		
	Manager		
	Equivalent		
	nt		
	Business Manager		
	Equivalent		
	Other	6 (0.6)	

4. Result t Survey Subject

Of the 1,034 subjects surveyed, 507 (49.0%) were male and 527 (51.0%) were female, with a mean age of 26.7 years (standard deviation: 1.8). The most common final education was a four-year university (88.0%). The most common occupational category was professional/technical (29.7%), followed by clerical (29.7%), administrative (29.7%), and management

(29.7%).

(26.1%) and sales/service (23.3%). The most common job position was general employee (88.5%) (Table 1).

Higher-order factor analysis

After confirming the absence of ceiling and floor effects from the basic statistics of each item of the Japanese version of the Career Adaptability Scale (Table 2), we conducted a higher-order factor analysis on 24 items in a four-factor structure with career

adaptability as the higher-order factor as in the original version (Figure 1). Model fit was chi-square = 1207.678 ($p = .000$), $CFI = .951$, and $RMSEA = .061$.

The mean and standard deviation for the higher order factors were 3.25 ± 0.73 (Table 3).

Criterion-Related Relevance

Rosenberg for validation of criterion-relevant validity.

The Japanese version of the Self-Esteem Emotion Scale (Sakurai, 2000) and the Japanese version of the General Self-Efficacy (Ito et al., 2005) were used. First, a highly significant correlation was found between the Japanese version of the general self-efficacy

(Table 3).

Next, the Japanese version of the Rosenberg Self-Esteem Scale was interpreted as having a one-factor structure by Sakurai(2000), but the results of the present study revealed a two-factor structure as suggested by Koshio et al. (2016), with subscales for the aspirational and success dimensions. A high degree of significant correlation was shown for the aspirational aspect, while the success aspect was shown to have a significant correlation, albeit with somewhat lower values (Table 3).

convergent validity

Two scales were used to test convergent validity: the Protian Career (Takeishi et al., 2014) and the Boundaryless Career (Takeishi et al., 2014). The Self-Orientation Scale and the Value Priority Scale, which are subscales of the Protian Career, and the Boundaryless Thinking Scale, which is a subscale of the Boundaryless Career, showed moderate or higher positive correlations. On the other hand, it was shown to be negatively correlated with the Preference for Mobility scale, another subscale of Boundaryless Carriers (Table 3).

Table 2 Japanese Career Adaptability Scale Basic Statistics

	Lower Scale Strength	Mean	Standard Deviation	
目目、	1 Thinking about how your future will look like.		3.12	0.97
	2 Recognize that the choices you make today will shape your future		3.12	0.99
	3 Preparing for the future		3.06	1.00
	4 Awareness that you must make your own educational and professional choices		3.19	0.94
	5 Planning how to achieve your objectives.		3.14	0.95
	6 Be interested in your career		3.23	0.99
女学生	7 Maintaining an upbeat attitude		3.16	1.04
	8 Making your own decisions		3.31	0.96
	9 Take responsibility for your actions		3.44	0.91
	10 Stick to your beliefs		3.34	0.95
	11 Believe in yourself		3.22	1.00
	12 Doing what is right for you		3.46	0.93
女学生、	13 Exploring your immediate surroundings		3.31	0.93
	14 Finding opportunities to grow as a person		3.26	0.98
	15 Examine your options before making a choice.		3.37	0.95
	16 Observing diverse ways of getting things done.		3.24	0.92
	17 Digging deeper into your questions.		3.27	0.97
	18 Be curious about new opportunities		3.30	1.01
自信	19 Efficient operations.		3.36	0.96
	20 Be attentive to how things work out.		3.38	0.90
	21 Learning new skills		3.17	0.94
	22 To the best of one's ability		3.19	0.94
	23 Overcoming difficulties		3.18	0.94
	24 Solving problems		3.25	0.92

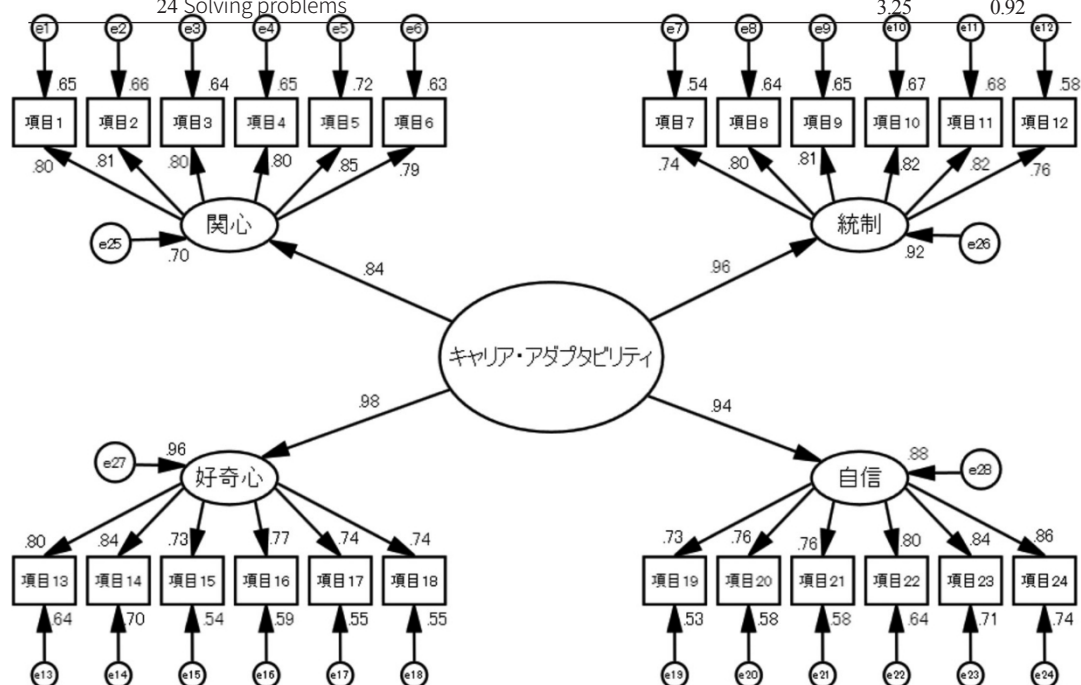


Figure 1 Higher-order factor analysis

Table 3 Correlations between the Japanese version of the Career Adaptability Scale and other scales

	CAAS-J
Mean $\pm$ Standard deviation	3.25 $\pm$ 0.73
Self-efficacy	.719**
self-esteem	
Aspirational Aspects	.628**
Successful Aspects	.251**
Protian Carrier	
Self-orientation scale	.702**
Value Preference Scale	.625**
boundary-less carrier	
Boundaryless Thinking Scale	.667**
Preference Scale for Mobility	-.322**

Pearson's correlation coefficient ** $p < .01$

internal consistency

Cronbach's *alpha* coefficient for the higher-order factor of the Japanese version of the Career Adaptability Scale was .97.

5. consideration

Higher-order factor analysis

The model goodness-of-fit indices obtained from the results of the higher-order factor analysis are *CFI* $> .90$ and *RMSEA*

$< .08$ (Hooper et al., 2008). Therefore, the factorial validity of the model was confirmed with 24 items in a four-factor structure with career adaptability as a higher-order factor.

Criterion-Related Relevance

The correlations with self-esteem and self-efficacy, which have been shown to be significantly correlated with career adaptability in previous studies, are discussed.

First, the results in this study show that the carrier-adapter

The Japanese version of general self-efficacy is .72, and the Japanese version of general self-efficacy is .72.

Lee et al.(2021)found a positive correlation of .55 between self-efficacy and career adaptability, which is positioned as an adaptive response, in a study of Japanese subjects, and Rudolph et al. (2021) showed a high positive correlation of .55 between self-efficacy and career adaptability,

Lee et al.(2021) and Rudolph et al. (2017)considered self-esteem positioned in readiness to adapt as a one-factor construct, and found a significant positive correlation of .63 with career adaptability and .25 with success dimensions (Table 3) A significant positive correlation coefficient of .18 for the former and .42 for the latter with career adaptability was revealed. Based on the results of this survey, the correlation with the success dimension, a subscale, is rather weak. It is thought that the correlation with career adaptability, which is considered as a psychological resource, was somewhat low because the questions that comprise the success dimension include those related to external criteria such as other people and social norms. On the other hand, the correlation coefficient between the aspirational aspect and career adaptability, which includes items related to internal criteria, was .63, which is similar to Rudolph et al.

(2017), which is higher than the results of (2017).The characteristics of the two subscales may have affected the correlation coefficients with career adaptability, but the overall results capture and Rudolph (2017) shows a large difference between et al(the results

which is positioned as an adaptive response, in a survey of Japanese subjects, and Rudolph et al.

We found no disagreement.

From these results, we conclude that criterion-related validity has been verified.

Next, we examine two subscales of self-esteem, the aspirational side aspects and successful aspects are discussed in relation to their correlation with career adaptability. Aspirational Aspects and

convergent validity

First, a significant positive correlation of .70 was found with the Protean Career subscale, the Self-Orientation Scale (Table 3); Chan et al. (2015) and Uy et al. (2015), both the Self-Orientation Scale and the Cali

A positive correlation of .56 has been found between a-adaptability and the previous studies in this study.

The results showed a similar relationship with the results of the Boundaryless Career subscale. Next, a positive correlation of .67 was revealed with the Boundaryless Thinking Scale, a subscale of the Boundaryless Career

Chan et al. (2015), a positive of .52

correlations have been shown, and (2015), .53 Uy et al.

The same trend was shown in the present study, given that the positive correlations between the Self-Orientation Scale and the Boundaryless Thinking Scale and career adaptability were shown to be positive. Thus, the results of the correlations between the Self-Orientation Scale and the Boundaryless Thinking Scale and career adaptability suggest that convergent validity could also be verified.

This section discusses the relationship between the Value Preference Scale, a subscale of the Protean Career and the Preference for Mobility Scale, a subscale of the Boundaryless Career, and career adaptability, which has not been revealed in previous studies. First, there was a positive correlation of .63 between the value-preference scale and career adaptability, similar to the trend of the self-orientation scale and the boundaryless thinking scale. On the other hand, the Preference for Mobility scale showed a negative correlation of .32 with Career Adaptability. These trends are close to the relationship between prothian and boundaryless careers and career satisfaction examined by Takeishi et al. (2014). Takeishi et al. (2014) analyzed the relationships between the Self-Orientation Scale and the Value Priority Scale, which are subscales of the Protian career, and the Boundaryless Thinking Scale and the Preference for Mobility Scale, which are subscales of the Boundaryless career, and career satisfaction. The results show that there is a weak positive correlation with the Self-Orientation Scale, the Value Priority Scale, and the Boundaryless Thinking Scale, and a weak negative correlation with the Preference for Mobility Scale.

(2017) found a positive correlation of .42 between career adaptability, an adaptive resource, and career satisfaction, which is positioned as an adaptive

6. Conclusion.

This study was able to verify the reliability and validity of the Japanese version of the Career Adaptability Scale.

The values of the factor loadings from the higher-order factors to the subscales were as follows. The values of the factor loadings from the higher-order factors to the subscales are

Although slightly higher than Savickas & Porfeli (2012), the number of

outcome. Therefore, the correlation between career adaptability and the four subscales of protian and boundaryless career in this study is consistent with the relationship with career satisfaction in Takeishi et al. (2014).

reliability

To verify the reliability, the Cronbach's *alpha* coefficient of the higher-order factor of the Japanese version of the Career Adaptability Scale was determined. The result was .97, which indicates sufficient internal consistency.

The trends of the values were similar. Therefore, the internationally used Savickas & Porfeli (2012), which is a contribution of this study. In the future, we can expect further research development, such as clarifying the characteristics of employee career adaptability in Japanese firms through international comparisons.

The first limitation of this study is that the survey was limited to young workers. Although it is significant that the survey was conducted among those who will play important roles in the future, it is desirable to conduct further research on a more diverse range of subjects, such as mid-career employees and senior employees. Second, only individuals working in companies with 300 or more employees were included in the survey. The issues of career development in small and medium-sized firms may be different from those in large firms, and future research is expected.

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Appendix Japanese version of the Career Adaptability Scale

Japanese version of the Career Adaptability Scale

Different people use different strengths to build their careers. No one is good at everything, and each of us values our strengths more than others. Please rate the extent to which you have developed each of the strengths listed below.

5 = Wearing fairly well

4 = Wearing

3 = Wearing a little

2 = Not worn much

1 = Hardly worn

forte

Thinking about what your future will look like.

Recognize that the choices you make today will

shape your future Prepare for the future

To be aware of the educational and professional choices you

must make To plan how to achieve your goals

Maintain an interest in your

career Maintain a cheerful

attitude

Make your own decisions.

Take responsibility for your

actions Stand up for your

beliefs

Believe in yourself.

Doing what is right for you.

To explore what's around me, to find

opportunities to grow as a person.

Examine your options before making a choice.

To observe diverse ways of getting things

done To dig deep into your own

questions

Be curious about new

opportunities Work

efficiently

Paying attention to making things

work, learning new skills.

To perform to the best of one's

ability To overcome difficulties

Solving problems

-He's

a

good