

# Construction of a New Strengths Identification Scale

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**Abstract**— The aim of this study was to develop original strengths categories that correspond to Japanese culture, and to construct a strengths identification scale to assess individual strengths. Sixty strength categories were created and a strengths identification scale was constructed. Data were collected from 427 participants. The characteristics of each strength category were identified along five dimensions: direction, duration, range, processing, and action. The distribution of the strength categories by mean ranks is also given. Factor analyses were conducted, and four strength category groups established. From these analyses, reliable and valid strength categories and a strengths identification scale were developed, which will be able to serve as a fundamental framework and support for future research and practice in Japan.

**Keywords**- strengths; strengths identification; measurement; scale construction; culture

## I. INTRODUCTION

The value of personal strengths has been receiving increasing attention from researchers and practitioners in psychology and related fields, such as social work [1], education [2, 3], career development [4], and clinical settings [5, 6]. Using ones strengths has been shown to lead to positive outcomes. For example, people who use their strengths are happier [7, 8, 9] and less depressed [7], are satisfied with their lives [10], show higher levels of self-efficacy [8, 9] and self-esteem [8, 9, 11], experience less stress [12], and are more resilient [13].

To develop and use personal strengths efficiently, it is essential to first identify those strengths. Further, previous research has revealed that knowing about ones' personal strengths can increase self-confidence and strengthen belief in continual growth [14]. However, only about one third of people know what their personal strengths are [15, 16]. Therefore, few people understand the benefits of knowing and using their strengths.

### A. Ways to Identify Strengths

Linley identified the main methods for identifying strengths [17]. Linley claimed there were two approaches to identifying strengths. The first is a bottom-up approach, in which the signs of one's strengths are identified. Such identification methods include informal day-to-day observational techniques such as self-reflection and observing others, as well as open-ended free-flowing assessment techniques such as the Individual Strengths Assessment (ISA)

[17], the Dependable Strengths Articulation Process [18, 19], the Conversational Strengths Articulation Process [20], and the Identification of A-grade Activities [21]. These types of techniques are closely related to personal history and experiences, and so are able to identify and assess a wide range of strengths.

The second method is the top-down approach, which uses predetermined strengths classifications to assess them through strengths-based interviews or by using psychometric tools, both of which are discussed in the next section. Even though the strengths types assessed using these approaches are limited, a fundamental framework can be developed because these approaches have a shared language and understanding of the strengths. As mentioned, since only about one third of the population is consciously aware of their strengths, predetermined strengths classifications and assessments can be a good starting point to allow people to become consciously aware of their strengths as well as others'. In the following section, some major scales that identify strengths are introduced along with the models that conceptualize these strengths.

### B. The Major Strengths Identification Scales

In this section, three well-known strengths scales are introduced and discussed. As each of these scales has a slightly different view of what constitutes strengths, we provide a brief background of the underlying philosophy along with a description of each scale. According to Louis & Lopez [22], there are two major approaches to conceptualizing strengths: strengths as developed talents and strengths as elements of character.

In the talent-based strengths model, often known as the Gallup model, enhanced performance and success are considered to be important. This model sees strengths as developed talents and emphasizes performance enhancement through the use of these strengths. Talents are defined as naturally occurring patterns of thought, feeling, and behavior [23]. Through the acquisition of knowledge and skills, these talents can be developed into strengths. Based on this model, a tool called the Clifton Strengths Finder (CSF) was developed (the recent version is called the Strengths Finder 2.0) [23, 24]. The creators of the CSF interviewed thousands of top performers in several organizational contexts and analyzed the data to determine the success indicators. The CSF identifies a respondent's predominant talent themes, allowing them to

focus on obtaining the knowledge and skills to develop these talents into strengths.

The second main approach is known as the Values in Action (VIA) model, which views strengths as those character elements that emphasize positive psychological qualities or virtues. From an extensive literature review, 24 character strengths were identified, which were then classified into six virtues [25]. A strengths classification system called the VIA classification of strengths, and a strengths assessment tool called the VIA inventory of scales (VIA-IS) were developed based on this classification. In the VIA model, talents and character strengths are considered differently; talents are innate and non-moral, and can be wasted, whereas strengths are natural and are very rarely wasted [26]. Character strengths are defined as positive traits reflected in thoughts, feelings, and behavior [25, 27]. The VIA-IS provides information about a respondent's 24 character strengths in rank order. It has been suggested that if high-ranking character strengths or signature strengths are used more in daily life, people will have a more positive life. [26]

More recently, the Centre for Applied Positive Psychology (CAPP) developed an online strengths assessment tool called Realise2. The CAPP model sees strengths as the natural capacity for behaving, thinking, or feeling in a way that allows optimal functioning and performance in the pursuit of valued outcomes [28]. Realise2 has 60 attributes, and assesses respondents' strengths along three dimensions (energy, performance, and use) [29]. By combining these three dimensions, Realise2 provides information about the respondents' strengths, unrealized strengths, learned behaviors, and weaknesses. In this model, the emphasis is on development, optimal functioning, and performance. Therefore, through the use of this model, respondents are encouraged to continue using the strengths they are consciously using to perform well and feel energized, and to develop the unrealized strengths they are not consciously using.

Despite the fact that the strengths concepts in the CSF, VIA-IS, and Realise2 measures are different, each of these scales provides a clear framework for understanding and use a shared language of strengths, especially in the initial strength development stage. The shared language and mutual understanding that these scales provide can encourage further understanding and development of strengths by assisting people to look at their experiences in a particular way and by sustaining a dialogue with others [30].

### C. Purpose of this study

The CSF, VIA-IS, and Realise2 are well-known, reliable scales used globally. Since these scales are available online and have been translated into several languages including Japanese, millions of people across the globe have taken the tests. However, there are some limitations in the use of these scales in Japan. For example, they have a high number of questionnaire items: the CSF has 177 items, the VIA-IS has

240, and Realise2 has 180. In addition, as these tools are mostly available online, it can be difficult to administer them to a group of people. Further, use of these tools requires the payment of a fee. For example, to take the CSF, it is necessary to buy the book to obtain the access code; for Realise2, it is necessary to pay the fee online. These reasons make it inconvenient for practitioners and researchers to use them.

Moreover, these tools and the strengths models were developed in Western countries, even though the VIA reviewed Eastern culture research as well. Since individuals' cultural background affects how they view themselves and others, how they construe happiness, and what they value [31, 32, 33], it is necessary to add cultural aspects into the existing strengths concepts.

So, with this in mind, the purpose of this study is to create new strengths categories that correspond to Japanese culture, and to construct a strengths identification scale to assess individual strengths.

## II. METHOD

### A. Conceptualization of Strength Categories

To create our original strength categories, we referred to some existing strengths categories and scales. These were (a) the 24 VIA character strengths [25], (b) the 34 talent themes from the CSF [23], and (c) the 60 Realise2 strengths [29]. Moreover, to add values that the Japanese feel are culturally important, we included (d) 85 value cards often used in Cognitive Behavioral Therapy [34]. Then, we examined each of these 203 strength category candidates to determine whether they were well-known, familiar concepts in Japan and whether there was a shared understanding and validation of each in scientific research. This was done by using each of these strength category candidates as keywords in searches on websites and databases (e.g., PsychINFO and Web of Science). With the help of experts in clinical psychology and strengths identification, we developed an Affinity diagram (KJ method) [35] to categorize these 203 candidates with their meaning and to identify similarities.

Through this process, we identified 60 original strength categories, each of which was matched with a single Kanji (Chinese character) that represented its respective meaning (e.g., 愛 for the love strength category). Kanji was used for two main reasons. Firstly, as Kanji is part of Japanese culture, its use adds a cultural essence to our strength categories. Also, selecting and matching Kanji with strength categories derived primarily from western strengths concepts can bridge cultural differences. Secondly, as each Kanji has its own specific meaning, the Japanese can more easily understand the meaning of each strength category.

After the 60 strength categories were properly named, each Kanji was translated into a single English word by a Japanese-English bilingual to enable an examination of the names and the respective content. Based on these 60 strength categories, a

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60-item strengths identification scale was constructed, with one statement in Japanese describing each strength category.

#### *B. Participants*

427 undergraduate private university students in Japan volunteered to participate in this study. Of the participants, 194 were male and 231 were female with two participants failing to provide gender information. The sample had a mean age of 18.96 (SD = 1.91).

#### *C. Measurements*

The participants were given a two-part questionnaire. The first part was our original 60 items constructed to identify strengths. Participants were asked to judge the degree to which each statement represented their feelings about themselves. The scale uses a 5-point Likert scale ranging from “1 - not like me at all” to “5 - very much like me.”

With reference to Matsuo and Oda [36], the second part of the questionnaire asked participants to identify each of the strength categories along 5 dimensions. The dimensions were direction (inward–outward), duration (temporary–lasting), range (limited–universal), processing (emotional - cognitive), and action (passive–active). Five items for each of the 60

strength categories were created, so the number of items totaled 300. To reduce the participants’ burden, each participant was asked to respond to 20 randomly assigned items from one of the dimensions. Participants were then asked to evaluate each item using an 11-point Likert scale ranging from “1–inward / temporary / limited / emotional / passive” to “11–outward / lasting / universal / cognitive / active) with the central point being “6–cannot judge.”

#### *D. Procedure*

The participants were recruited from introductory psychology classes. Before conducting the survey, participants were informed that their cooperation was voluntary, their class grades would not be affected, they had the right to withdraw at any time, and their anonymity and confidentiality would be assured. After informed consent was obtained, participants were given instructions as to how to respond to each item.

### III. RESULTS

#### *A. Characteristics of Each Strength Category*

As shown in Table 1, the mean scores and standard deviations were calculated. We set the cutoff at 6 and categorized each item along the 5 dimensions.

TABLE I. DESCRIPTIVE STATISTICS FOR EACH DIMENSION

No.	Strengths Categories	Direcion		Duration			Range			Processing		Action				
		Mean	SD	Inward/ Outward	Mean	SD	Temporary/ Lasting	Mean	SD	Limited/ Universal	Mean	SD	Emotional/ Cognitive	Mean	SD	Passive/ Active
1	信 confidence	5.64	(2.64)	inward	7.15	(2.21)	lasting	5.61	(2.65)	limited	3.80	(2.10)	emotional	4.85	(2.34)	passive
2	軸 authenticity	5.34	(2.52)	inward	7.70	(2.29)	lasting	6.68	(2.69)	universal	4.43	(2.36)	emotional	5.85	(2.85)	passive
3	律 self-control	5.25	(2.10)	inward	7.07	(2.65)	lasting	6.46	(2.44)	universal	6.71	(2.83)	cognitive	6.93	(2.23)	active
4	悟 understanding	5.33	(2.94)	inward	7.19	(2.37)	lasting	6.63	(2.45)	universal	6.21	(2.75)	cognitive	5.11	(2.60)	passive
5	容 self-acceptance	5.13	(2.32)	inward	6.92	(2.09)	lasting	6.32	(2.38)	universal	5.03	(2.60)	emotional	5.63	(2.47)	passive
6	寬 open-mindedness	5.61	(2.04)	inward	5.96	(2.97)	temporary	6.54	(2.08)	universal	6.07	(2.76)	cognitive	6.26	(2.12)	active
7	素 simplicity	6.18	(1.85)	outward	5.65	(2.84)	temporary	6.48	(2.13)	universal	7.17	(2.31)	cognitive	5.56	(2.30)	passive
8	奉 service-oriented	7.11	(2.06)	outward	6.65	(2.51)	lasting	7.18	(2.11)	universal	6.37	(2.63)	cognitive	7.59	(2.36)	active
9	忍 tolerance	4.75	(1.70)	inward	6.56	(2.50)	lasting	6.21	(2.45)	universal	5.86	(2.71)	emotional	6.19	(2.21)	active
10	知 knowledge	5.96	(2.77)	inward	6.96	(2.61)	lasting	6.32	(2.42)	universal	8.47	(1.86)	cognitive	6.30	(2.24)	active
11	等 equality	6.93	(2.52)	outward	7.62	(2.35)	lasting	7.11	(2.30)	universal	6.43	(3.08)	cognitive	7.56	(2.39)	active
12	義 honor	6.57	(2.68)	outward	6.88	(2.65)	lasting	6.67	(2.24)	universal	7.83	(2.56)	cognitive	7.37	(2.47)	active
13	勇 courage	5.41	(2.45)	inward	5.96	(2.71)	temporary	5.93	(2.55)	limited	4.20	(2.23)	emotional	6.81	(2.48)	active
14	確 precision	6.13	(2.10)	outward	6.27	(2.28)	lasting	6.00	(2.36)	universal	7.27	(2.41)	cognitive	6.33	(2.83)	active
15	集 collection	6.46	(2.86)	outward	7.73	(2.18)	lasting	7.43	(2.44)	universal	5.10	(2.94)	emotional	7.59	(2.13)	active
16	謙 modesty	5.82	(2.28)	inward	6.31	(1.88)	lasting	6.93	(1.84)	universal	6.40	(2.70)	cognitive	6.00	(1.89)	active
17	競 competitive	5.54	(2.34)	inward	5.96	(2.30)	temporary	5.67	(2.88)	limited	5.40	(2.43)	emotional	6.63	(2.18)	active
18	希 hope	4.89	(2.74)	inward	6.77	(2.82)	lasting	6.75	(2.80)	universal	4.03	(2.37)	emotional	6.85	(2.61)	active
19	挑 challenge	5.39	(2.68)	inward	5.88	(2.76)	temporary	6.29	(2.45)	universal	3.60	(2.01)	emotional	7.00	(2.48)	active
20	伝 talking	5.98	(2.19)	inward	5.62	(2.60)	temporary	6.75	(2.47)	universal	8.30	(1.81)	cognitive	7.07	(1.96)	active
21	表 expression	6.43	(2.75)	outward	6.00	(2.62)	lasting	6.04	(2.53)	universal	5.40	(2.55)	emotional	6.50	(2.71)	active
22	聽 empathic	6.97	(2.63)	outward	6.52	(2.25)	lasting	6.54	(3.02)	universal	6.56	(2.43)	cognitive	6.39	(3.00)	active
23	共 sympathy	6.43	(2.56)	outward	6.59	(2.30)	lasting	6.89	(2.77)	universal	6.12	(3.09)	cognitive	6.89	(2.82)	active
24	創 creativity	5.73	(2.54)	inward	5.78	(1.89)	temporary	5.81	(2.61)	limited	5.24	(2.35)	emotional	6.39	(2.47)	active
25	誠 sincerity	7.33	(2.29)	outward	7.15	(2.32)	lasting	7.85	(2.34)	universal	6.42	(2.34)	cognitive	7.25	(2.68)	active
26	協 cooperation	7.77	(2.45)	outward	6.93	(2.77)	lasting	7.68	(2.54)	universal	7.32	(2.41)	cognitive	7.71	(2.58)	active
27	愛 love	6.67	(2.24)	outward	6.69	(3.37)	lasting	6.54	(2.63)	universal	4.80	(2.76)	emotional	7.41	(2.81)	active
28	学 learning	6.60	(2.36)	outward	6.19	(2.06)	lasting	6.75	(2.43)	universal	6.80	(2.83)	cognitive	6.82	(2.38)	active
29	率 leadership	6.28	(2.96)	outward	6.00	(2.37)	lasting	5.46	(2.41)	limited	8.08	(2.51)	cognitive	6.96	(2.41)	active
30	間 balance	5.60	(1.98)	inward	6.59	(2.06)	lasting	6.75	(2.34)	universal	7.50	(2.33)	cognitive	5.54	(2.28)	passive
31	笑 humor	6.10	(2.76)	outward	6.22	(2.57)	lasting	6.73	(2.50)	universal	5.32	(2.54)	emotional	6.79	(2.55)	active
32	唯 uniqueness	6.83	(2.62)	outward	6.92	(2.42)	lasting	7.46	(2.65)	universal	6.60	(2.59)	cognitive	6.89	(2.34)	active
33	熱 passion	6.27	(3.28)	outward	6.52	(3.07)	lasting	6.07	(3.42)	universal	4.40	(2.59)	emotional	7.71	(2.23)	active
34	守 conservativeness	7.37	(2.21)	outward	6.33	(2.39)	lasting	6.79	(2.65)	universal	7.52	(2.23)	cognitive	7.07	(2.58)	active
35	勤 persistence	6.27	(2.68)	outward	6.58	(2.57)	lasting	5.50	(3.10)	limited	4.43	(2.63)	emotional	6.61	(2.32)	active
36	熟 expert	6.63	(2.95)	outward	7.63	(2.31)	lasting	5.61	(2.74)	limited	5.00	(2.83)	emotional	6.25	(2.81)	active
37	柔 flexibility	5.30	(2.13)	inward	6.48	(2.44)	lasting	7.36	(2.50)	universal	6.16	(2.59)	cognitive	6.14	(2.49)	active
38	昇 growth	5.83	(2.38)	inward	6.69	(2.46)	lasting	6.56	(2.57)	universal	5.28	(2.49)	emotional	6.89	(2.38)	active
39	結 mediator	6.90	(2.71)	outward	5.07	(2.69)	temporary	6.89	(2.83)	universal	6.32	(2.53)	cognitive	7.75	(2.79)	active
40	考 consideration	5.53	(2.64)	inward	6.37	(2.41)	lasting	7.32	(2.56)	universal	6.68	(2.87)	cognitive	5.57	(2.97)	passive
41	理 rationality	5.83	(2.46)	inward	6.76	(2.39)	lasting	7.03	(2.26)	universal	8.04	(2.43)	cognitive	4.90	(2.40)	passive
42	応 adaptability	6.50	(2.35)	outward	4.97	(2.92)	temporary	6.52	(2.91)	universal	7.39	(2.08)	cognitive	8.02	(2.57)	active
43	動 action-oriented	7.10	(2.84)	outward	6.07	(2.96)	lasting	7.23	(2.65)	universal	4.32	(2.33)	emotional	8.86	(2.43)	active
44	慈 compassion	6.43	(2.91)	outward	7.31	(2.23)	lasting	7.32	(2.69)	universal	6.15	(2.94)	cognitive	6.34	(3.01)	active
45	任 responsibility	5.93	(2.98)	inward	8.17	(2.26)	lasting	7.50	(3.03)	universal	4.93	(2.95)	emotional	7.66	(2.19)	active
46	崇 religiousness	4.53	(3.01)	inward	6.14	(3.21)	lasting	5.16	(2.98)	limited	3.57	(2.61)	emotional	4.17	(2.36)	passive
47	興 curiosity	6.90	(2.96)	outward	6.55	(2.61)	lasting	7.87	(2.23)	universal	3.43	(2.37)	emotional	7.28	(2.08)	active
48	危 risk-taking	6.87	(2.74)	outward	5.86	(2.45)	temporary	5.87	(2.47)	limited	4.43	(2.95)	emotional	7.00	(2.42)	active
49	恩 gratitude	7.00	(2.79)	outward	8.52	(2.57)	lasting	8.29	(2.49)	universal	4.41	(2.97)	emotional	5.93	(3.02)	passive
50	感 sensitivity	5.90	(2.47)	inward	7.41	(1.87)	lasting	7.45	(2.41)	universal	3.46	(2.41)	emotional	5.45	(3.25)	passive
51	改 improbability	6.80	(2.32)	outward	7.28	(1.87)	lasting	7.10	(2.73)	universal	5.89	(2.73)	emotional	7.14	(2.61)	active
52	決 judgment	6.03	(2.41)	outward	6.76	(2.13)	lasting	6.74	(2.91)	universal	5.81	(2.96)	emotional	5.83	(2.74)	passive
53	注 concentration	5.03	(2.32)	inward	7.55	(1.90)	lasting	7.87	(2.51)	universal	5.75	(2.69)	emotional	6.24	(2.91)	active
54	整 arrangement	5.37	(1.97)	inward	6.22	(2.32)	lasting	6.26	(2.65)	universal	7.29	(2.34)	cognitive	6.86	(2.54)	active
55	未 futuristic	5.67	(2.34)	inward	7.26	(2.30)	lasting	6.77	(2.77)	universal	7.59	(2.70)	cognitive	5.41	(2.77)	passive
56	企 planning	5.80	(2.14)	inward	6.79	(2.73)	lasting	6.63	(2.54)	universal	7.82	(2.56)	cognitive	7.21	(2.14)	active
57	閃 inspiration	5.77	(2.03)	inward	5.83	(2.65)	temporary	5.90	(2.52)	limited	4.46	(2.49)	emotional	6.55	(2.39)	active
58	德 morality	7.03	(2.17)	outward	8.07	(2.00)	lasting	7.77	(2.24)	universal	7.25	(2.60)	cognitive	6.97	(2.77)	active
59	安 stability	5.10	(2.56)	inward	7.54	(2.35)	lasting	7.32	(2.16)	universal	4.89	(2.45)	emotional	4.83	(3.05)	passive
60	促 encouraging	7.33	(2.64)	outward	5.86	(2.27)	temporary	6.48	(2.75)	universal	5.79	(2.77)	emotional	7.00	(2.59)	active

**B. Strengths Distribution**

Means and standard deviations were calculated for each item in the first part of the questionnaire (Table 2). The mean scores for “集 (collection) ( $M = 4.10 \pm 0.88$ ),” “熱 (passion) ( $M = 4.03 \pm 0.89$ ),” “唯 (uniqueness) ( $M = 3.92 \pm 0.76$ ),” “協 (cooperative) ( $M = 3.91 \pm 0.85$ ),” “恩 (gratitude) ( $M = 3.89 \pm 0.87$ ),” and “共 (sympathy) ( $M = 3.89 \pm 0.81$ )” were the highest. The scores for “伝 (talking) ( $M = 2.72 \pm 1.06$ ),” “知 (knowledge) ( $M = 2.79 \pm 0.97$ ),” and “危 (risk-taking) ( $M = 2.81 \pm 1.02$ )” were the lowest in our participants.

**TABLE II. DISTRIBUTION OF STRENGTH CATEGORIES BY MEAN RANKS**

No.	Strengths Categories	Mean	SD	No.	Strength Categories	Mean	SD
15	集 collection	4.10	(0.88)	51	改 improvability	3.40	(0.93)
33	熱 passion	4.03	(0.89)	5	容 self-acceptance	3.37	(1.08)
32	唯 uniqueness	3.92	(0.76)	8	奉 service-oriented	3.37	(0.87)
26	協 cooperation	3.91	(0.85)	52	決 judgment	3.36	(1.06)
49	恩 gratitude	3.89	(0.87)	42	応 adaptability	3.35	(0.99)
23	共 sympathy	3.89	(0.81)	37	柔 flexibility	3.33	(0.97)
2	軸 authenticity	3.87	(0.84)	54	整 arrangement	3.29	(1.04)
40	考 consideration	3.79	(0.94)	55	未 futuristic	3.26	(0.98)
58	徳 morality	3.78	(0.91)	11	等 equality	3.25	(1.06)
22	聴 empathic	3.77	(0.88)	7	素 simplicity	3.24	(1.07)
47	興 curiosity	3.75	(1.00)	59	安 stability	3.22	(1.12)
44	慈 compassion	3.72	(0.82)	30	間 balance	3.19	(0.94)
50	感 sensitivity	3.69	(0.97)	39	結 mediator	3.18	(1.19)
53	注 concentration	3.66	(0.96)	6	寛 open-mindedness	3.17	(1.00)
25	誠 sincerity	3.64	(0.86)	43	動 action-oriented	3.13	(0.99)
34	守 conservativeness	3.62	(0.91)	57	閃 inspiration	3.11	(1.06)
12	義 honor	3.58	(0.91)	19	挑 challenge	3.10	(1.09)
9	忍 tolerance	3.54	(0.97)	21	表 expression	3.10	(1.01)
3	律 self-control	3.54	(0.93)	60	促 encouraging	3.06	(0.93)
27	愛 love	3.52	(1.02)	46	崇 religiousness	3.03	(1.17)
41	理 rationality	3.49	(0.95)	56	企 planning	2.99	(1.11)
31	笑 humor	3.48	(0.96)	24	創 creativity	2.97	(0.97)
28	学 learning	3.48	(0.91)	18	希 hope	2.93	(1.25)
1	信 confidence	3.46	(0.93)	17	競 competitive	2.93	(1.12)
36	熟 expert	3.45	(1.10)	14	確 precision	2.86	(1.03)
4	悟 understanding	3.44	(0.96)	13	勇 courage	2.82	(1.00)
35	勤 persistence	3.42	(1.01)	29	率 leadership	2.82	(1.01)
38	昇 growth	3.41	(0.98)	48	危 risk-taking	2.81	(1.02)
45	任 responsibility	3.41	(1.02)	10	知 knowledge	2.79	(0.97)
16	謙 modesty	3.40	(0.77)	20	伝 talking	2.72	(1.06)

**C. Exploratory Factor Analysis**

The total item pool of 60 items was subjected to an exploratory factor analysis. The results suggested that the one-factor model was appropriate since the items had high commonality and a high Cronbach’s alpha ( $\alpha = .95$ ).

**D. Confirmatory Factor Analysis**

With the theoretical background and from the results of the KJ method conducted in the scale construction process across the 5-dimensional characteristics in each category, the 60 strength categories were categorized into four groups: cognitive and emotional strengths that tended to be directed inward and cognitive and emotional strengths that tended to be directed outward. For each group, confirmatory factor analyses were conducted to examine the goodness of fit of each group. The results are presented in Tables 3 and 4. The Cronbach’s alpha is also shown in Table 4.

**TABLE III. GOODNESS OF FIT FOR EACH GROUP**

Group	$\chi^2$	df	p	$\chi^2/DF$	CFI	RMSEA
Cognitive - Inward	337.63	77	<.01	4.39	0.81	0.09
Emotional - Inward	318.50	65	<.01	4.90	0.84	0.09
Cognitive - Outward	556.52	119	<.01	4.68	0.76	0.09
Emotional - Outward	356.71	104	<.01	3.43	0.84	0.07

**TABLE IV. THE STRENGTHS IDENTIFICATION SCALE FACTOR LOADINGS**

Cognitive - Inward ( $\alpha = 0.84$ )		Emotional - Inward ( $\alpha = 0.86$ )		
55	未 futuristic	0.64	19 挑 challenge	0.67
41	理 rationality	0.63	1 信 confidence	0.63
30	間 balance	0.61	18 希 hope	0.63
20	伝 talking	0.60	13 勇 courage	0.62
37	柔 flexibility	0.58	38 昇 growth	0.60
54	整 arrangement	0.56	24 創 creativity	0.58
56	企 planning	0.54	53 注 concentration	0.55
10	知 knowledge	0.54	57 閃 inspiration	0.55
3	律 self-control	0.47	2 軸 authenticity	0.55
40	考 consideration	0.46	9 忍 tolerance	0.54
4	悟 understanding	0.46	5 容 self-acceptance	0.54
6	寛 open-mindedness	0.45	45 任 responsibility	0.52
7	素 simplicity	0.45	59 安 stability	0.45
15	集 collection	0.30		
Cognitive - Outward ( $\alpha = 0.86$ )		Emotional - Outward ( $\alpha = 0.84$ )		
25	誠 sincerity	0.65	43 動 action-oriented	0.73
22	聴 empathic	0.61	51 改 improvability	0.65
26	協 cooperation	0.61	27 愛 love	0.61
23	共 sympathy	0.59	31 笑 humor	0.57
12	義 honor	0.59	21 表 expression	0.56
44	慈 compassion	0.57	52 決 judgment	0.54
32	唯 uniqueness	0.54	47 興 curiosity	0.53
39	結 mediator	0.54	36 熟 expert	0.52
8	奉 service-oriented	0.54	50 感 sensitivity	0.52
58	徳 morality	0.54	35 勤 persistence	0.50
28	学 learning	0.52	33 熱 passion	0.50
34	守 conservativeness	0.46	49 恩 gratitude	0.43
11	等 equality	0.46	60 促 encouraging	0.42
42	応 adaptability	0.43	48 危 risk-taking	0.42
29	率 leadership	0.42	17 競 competitive	0.36
14	確 precision	0.40	46 崇 religiousness	0.20
16	謙 modesty	0.36		

**IV. DISCUSSION**

In this study, 60 original strength categories and a strengths identification scale were developed through a careful construction process and focused statistical analyses. The characteristics of each strength category were defined across five domains: direction (inward-outward), duration (temporary-lasting), range (limited-universal), processing (emotional-cognitive), and action (passive-active).

The distribution of the strength categories by mean rank revealed that the top five strengths in the Japanese university students were “集 (collection),” “熱 (passion),” “唯 (uniqueness),” “協 (cooperation),” “恩 (gratitude),” and “共 (sympathy).” These strengths have some similar characteristics as they tend to be directed outward, have longer durations, can be used in a wide range of settings, and lead to active behavior. Highly ranked strengths in other studies share similar characteristics. For example, in a study examining the distribution of character strengths, the most common strengths identified in Japan were curiosity, learning, and fairness (similar to “等 (equality)” in our categories) [37]. Another study with a larger sample identified gratitude, kindness (similar to “慈 (compassion)” in our categories), fairness, and love to be the four main character strengths in the Japanese [38].

The least common strengths in our participants were talking, knowledge, and risk-taking. In [37], religiousness, self-regulation (similar to “律 (self-control)” in our categories), and modesty were identified as the least common character strengths in Japanese young adults. These strengths are characterized as inward-directed and intrapersonal type of strengths.

These findings indicate that the Japanese people are more likely to have strengths that can be easily seen in day-to-day interpersonal settings, as against intrapersonal strengths that are difficult to observe. This could be interpreted as typical to the Japanese cultural background, as observations show that Japanese people tend to care more about the people around them and to maintain stable relationships because these strongly affect their happiness and well-being [31]. Taking this into account, it could be effective and meaningful for Japanese people to develop interpersonal strengths.

We also conducted factor analyses to examine the group structures within the 60 strength categories. From the result of this exploratory factor analysis, the strength categories were observed to fall into one broad factor, "the strengths." However, we attempted to organize the strength categories into four theoretically driven groups to identify the common factors and to summarize the 60 strength categories. Four groups were defined along two axes, depending on whether the strengths were related more to cognition or emotion, and whether the strengths were inwardly or outwardly directed. From this analysis, 14 strength categories were identified in the cognitive - inward group, 13 in the emotional - inward group, 17 in the cognitive - outward group, and 16 in the emotional - inward group. The results of the confirmatory factor analyses revealed enough goodness of fit for each group and strength category factor loadings. Since the strength category characteristics in each group were different, the approaches needed to effectively develop strengths would also be different. For example, strengths in outward groups could be better realized and used in interpersonal situations, such as in conversations with others and while working on a group project, whereas strengths in the inward groups may be realized in situations such as thinking about oneself and may be used to achieve individual goals. Further research is needed to identify suitable approaches to effectively develop strengths for the different groups.

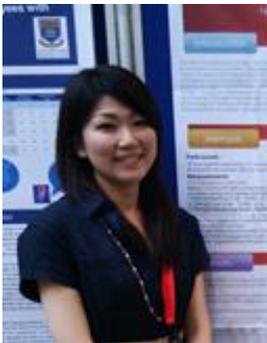
Although this study provides the initial framework for strengths research and practice in Japan, there are some limitations. First, our participants were limited to undergraduate students interested in Psychology. Further research with larger samples is necessary to generalize our findings. Second, we did not examine the criterion-related validity of the strengths identification scale in this study. Therefore, further examinations of the reliability, validity, and usability of these scales are required. Third, we arranged the strength categories into four theoretically driven groups in this study. However, some of the strength categories did not demonstrate high factor loadings in the confirmatory factor analyses. In further research, these strengths may be moved to other groups to create better and more accurate models.

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