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Development of an Integrated Well-Being Scale for Japan

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Abstract

Background: Although multiple scales related to well-being have been developed mainly in Western countries, it is important to consider Japanese cultural and historical elements when considering the concept of well-being in Japan. This study attempted to develop an integrated scale that considers Japanese cultural elements and characteristics.

Methods: As a preliminary survey, several Western made well-being scales were evaluated and 2 scales had factor structures that were generally as expected. Therefore, including these 2 scales, a total of 54 items (40 new items that represent characteristics that are important to Japanese) were added as integrated scales in the main analysis. The data collected from 1,515 Japanese residents by the internet was analysed using exploratory factor analysis.

Results: After repeated analyses by excluding items with factor loading of .40 or less, the provisional scale was found to have 6 factors and 27 items. Reliability with α >0.77 was obtained for all factors.

Conclusions: The six factors are named "Gratitude and empathy", "Curiosity and Challenge", "Overcoming anxiety", "Balance and harmony", "Satisfaction with life" and "Calmness and acceptance". Although the results suggested that the integrated provisional scale has an acceptable factor structure and sufficient reliability, further research is needed to improve validity of the scale.

Keywords

Well-Being Scale, Japanese culture, Gratitude and empathy, Curiosity and Challenge, Overcoming anxiety, Balance and harmony, Satisfaction with life, Calmness and acceptance.

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MAIN TEXTS

Background

The concept of well-being has gained prominence in both organizations and in our daily lives. The term initially gained societal recognition in 1947, when it was used in the preamble to the World Health Organization's (WHO) constitution, where the WHO defined health as a "state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity." The Japanese WHO Association subsequently modified the definition to "not merely the absence of disease or frailty but a fulfilled state physically, mentally, and socially."

This "fulfilled state" equates to well-being, and the definition posits that an individual is considered "healthy" when they are fulfilled in physical, mental, and social aspects. In East Asian traditions, there exists the concept of mibyo (pre-disease), which the Kojien, an authoritative Japanese dictionary, describes as "a condition that is not disease but is also not health." This term encompasses states that do not meet the diagnostic criteria for disease, but in which individuals lack vitality and vigor. From a preventive medicine and health science perspective, mental *mibyo* is critically important, and highlights

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the importance of self-care and social support in this pre-disease stage.

Dr. Seligman, who has advanced the field of positive psychology, states that well-being comprises the essential elements needed for a happy life: positive emotions, personal growth, meaningful existence, positive relationships, and a sense of accomplishment. The concept of well-being is a psychosocial construct, and because individual subjectivity plays a role in what is considered a "good" or "fulfilled" state, some might find it incongruous to measure it using objective indicators. Nonetheless, defining the general concept of well-being can be meaningful and necessary for individuals to evaluate and consider their current lifestyle and thought patterns.

Several scales related to well-being have been developed, primarily in the fields of positive and applied psychology. These scales have been implemented to assess current states of well-being and happiness and develop strength-based programs. Instruments that have been validated for their reliability and validity include the subjective well-being scale, the psychological well-being scale, and the PERMA (positive emotion, engagement, relationships, meaning, and accomplishment) model. They have all been translated into Japanese and are being employed both academically and in clinical practice.

Cultural context profoundly influences an individual's concept of happiness and life philosophy. Cultural norms, religious beliefs, and aesthetic values handed down through generations all impact our thinking and values. For example, the Buddhist concept of bon-noh (worldly desires) is readily understood in Asian countries, where Buddhism is more prevalent. Similarly, cultural attitudes toward altruism and moderation, highly valued in Asia, may not be equally emphasized in Western countries, where there is a greater emphasis on individualism and uniqueness.

A study by Uchida and Kitayama (2009) on cultural differences in the concept of happiness suggests that while happiness is often linked to personal success in the United States, it may be more closely associated with social harmony and a broader societal perspective in Japan. Therefore, when considering the constitutive concept of well-being in Japan, it is essential to consider cultural and historical elements. Moreover, a comprehensive new scale that incorporates Japanese cultural and ethnic factors needs to be developed.

Against this background, this study aims to create a comprehensive provisional scale that incorporates existing standardized well-being scales along with cultural elements unique to the Asian context. We conduct an exploratory analysis using data collected from a Japanese population. This study serves as an initial report on the development of this provisional scale.

This study was reviewed and approved by the Ethical Review Committee of the Graduate School of Toyo University.

Study 1: Preliminary Research and Factor Analysis for an Integrated Version of Existing Scales Methods

Prior to the development of an Japanese well-being scale, a preliminary study was conducted to examine existing several well-being measures developed primarily in Western countries. A web-based survey was administered to 750 residents of Japan who were selected based on demographic factors, including age and gender. The scales used in this preliminary study were three validated and reliable western well-being measures: the Japanese translated version of the psychological well-being scale, the Japanese translated version of the PERMA-profiler, and the Japanese translated version of the subjective well-being scale. The number of items was reduced to minimize the psychological burden on respondents. Specifically, for psychological well-being scale and the PERMA-profiler, we selected items with high factor loadings for each subscale as indicated in the original papers. Given that the subjective

well-being scale only consists of five items, all the items were included. Based on a review of prior research, an initial scale comprising 57 items was created, incorporating other standardized measures related to happiness and well-being, such as mental health, perfectionism, and work engagement.

From the web survey data, 46 responses were excluded due to a lack of reliability, leaving 704 valid responses. A factor analysis was performed using maximum likelihood estimation and quartimin oblique rotation for the 34 items from existing well-being scales using SAS JMP14 software.

Results

Five eigenvalues exceeded 1, leading us to consider a five-factor structure. All the items exhibited factor loadings greater than .30. Although subjective and psychological well-being were generally aligned with anticipated factor structures, PERMA did not display the expected factor pattern, and instead coalesced into a single factor. Consequently, we decided to utilize the extracted items related to subjective and psychological well-being from existing well-being scales. Table 1 presents the factor patterns revealed through the item-level factor analysis.

Table 1: Results of the factor analysis (maximum likelihood method, quartimin oblique rotation) n=704

	Factor1	Factor2	Factor3	Factor4	Factor5	Communality
How frequently do you lose track of time while engaging in enjoyable activities?	0.829	-0.144	0.087	0.008	-0.094	0.578
Generally, how often do you experience pleasure?	0.813	0.113	-0.022	-0.057	-0.011	0.791
To what extent do you generally feel satisfied?	0.797	0.217	0.024	-0.059	-0.138	0.874
All things considered, how happy do you think you are?	0.770	0.265	0.029	-0.039	-0.185	0.863
How frequently are you engrossed in what you're doing?	0.756	-0.026	-0.075	-0.049	0.188	0.655
Generally, how much do you feel excited or interested in various things?	0.704	-0.010	0.030	-0.034	0.234	0.738
To what extent do you feel loved?	0.647	0.120	0.133	0.041	0.013	0.671
How satisfied are you with your current state of health?	0.634	0.092	-0.008	0.017	-0.028	0.456
Generally, how often do you feel positive?	0.599	0.081	0.151	-0.142	0.146	0.793
How satisfied are you with your interpersonal relationships?	0.593	0.115	0.245	-0.060	-0.071	0.713
Generally, to what extent do you feel that you lead a life with purpose and meaning?	0.589	0.178	0.001	-0.135	0.233	0.793
To what extent do you receive help or support from others when needed?	0.561	-0.025	0.080	0.110	0.052	0.364
To what extent do you feel you have a direction in life?	0.511	0.120	0.120	-0.168	0.303	0.847
How often are you able to achieve important goals you have set for yourself?	0.506	0.120	0.092	-0.085	0.296	0.734
How much time do you feel you are moving toward achieving your goals?	0.500	0.168	-0.056	-0.120	0.426	0.797
To what extent do you feel what you are doing is important and valuable?	0.497	0.139	0.078	-0.083	0.357	0.801
How often can you fulfill your responsibilities?	0.483	-0.034	0.249	-0.119	0.180	0.627
My life is in a wonderful state.	0.020	0.860	0.068	-0.034	0.010	0.851
In most aspects, my life is close to my ideal.	-0.066	0.840	0.094	0.021	0.118	0.781
I am satisfied with my life.	0.143	0.759	0.132	-0.035	-0.108	0.848
If I could live my life over, I would change almost nothing.	0.044	0.671	-0.039	0.047	-0.034	0.439
I have obtained the important things I want in life.	0.117	0.614	0.151	-0.052	0.017	0.661
I can adapt flexibly to improve situations.	-0.010	-0.081	0.901	-0.043	0.013	0.757
I can thrive by adapting well to my environment.	-0.044	0.037	0.857	-0.084	0.018	0.776
I feel affection and intimacy when I am with others.	0.093	0.099	0.603	0.130	0.079	0.547
I have warm and trustworthy friendships.	0.110	0.036	0.602	0.043	0.050	0.506
I can accept my lifestyle and personality as they are.	0.069	0.205	0.486	-0.061	-0.055	0.450
I like myself.	0.061	0.237	0.470	-0.144	-0.007	0.526
I feel as if I am wandering aimlessly through life at present.	-0.101	-0.224	0.036	0.714	-0.144	0.745
My life lacks purpose and I struggle to find a path to follow.	-0.128	-0.242	-0.050	0.660	-0.175	0.804
I rely on other people's judgment when making important decisions.	0.093	0.066	-0.046	0.564	-0.032	0.301
I am highly concerned about how society views me when I make decisions.	-0.059	0.082	0.003	0.546	0.175	0.315
Taking on new challenges and discovering new aspects of myself is enjoyable.	0.104	0.026	0.195	0.019	0.425	0.370
I want to continue to grow in various ways in the future.	0.113	-0.008	0.190	0.050	0.423	0.346
proportion of variance explained (%)	45.6	33.1	33.4	11.4	16.3	

Note 1: Items with factor loadings of absolute value greater than .40 are indicated in bold.

Note 2: Eng.: Engagement, Accom.: Accomplishment, SWB: Subjective well-being, PWB:Psychological wellbeing.

Study 2: Development of a Preliminary Integrated Well-Being Scale Methods

In Study 2, we constructed a preliminary integrated well-being scale by incorporating new items. Initially, we engaged in a comprehensive review, such as Uchida and Kitayama (2009); Oishi (2009) and discussion of existing research by utilizing the KJ-method developed by Jiro Kawakita and drawing on insights from academics specializing in psychology (M.K. 2nd author), mental health professionals (K.S., 1st author), and 3 graduate students. This process identified the key elements deemed necessary

for conceptualizing well-being in a manner consistent with Japanese cultural values, and included concepts such as life fulfillment (ikigai), cooperativeness, emotional stability, resilience, acceptance of imperfection, hope, equanimity, balance, and gratitude.

Based on these findings, we extracted 23 items from existing psychological scales that embody these concepts ("ikigai" from Imai et al., 2012; "hope (sense of coherence)" from Togari 2011; "resilience" from Hirano (2010); "agreeableness" and "emotional stability" from TIPI-J (Oshio et al., 2012); "self-efficacy" from Sakano & Tojo, 1986), integrated an additional 17 original items (acceptance of imperfection, balance, and gratitude), and included two items from the subjective well-being scale used in Study 1, while considering the results and ease of response. These items were then combined with the psychological well-being scale used in Study 1 to create a composite preliminary scale consisting of 54 items. The respondents were instructed as follows: "Please consider how much each of the following questions applies to you currently and choose the most appropriate option." Responses were based on a six-point Likert scale ranging from 1 ("Not applicable at all") to 6 ("Extremely applicable").

Results

The analysis was based on a sample of 1,299 respondents after excluding 216 respondents due to a lack of reliability in their responses. The psychological scales used included those from Study 1, as well as the ikigai-9 scale, the sense of coherence scale, and resilience scales. Additionally, items for which no standardized scale existed were designed by us as original items.

A factor analysis on these 54 items, using maximum likelihood extraction and quartimin oblique rotation, identified eight factors. Subsequent analyses, which excluded items with factor loadings below .40, identified six factors. This iterative process, which involved the exclusion of items with factor loadings below .40, culminated after four iterations in a six-factor, 27-item factor structure, as shown in Table 2. Reliabilities of each factor are $\alpha = 0.833$ (Factor1); $\alpha = 0.832$ (Factor2); $\alpha = 0.833$ (Factor3); $\alpha = 0.832$ 0.775 (Factor 4); $\alpha = 0.899$ (Factor 5); and $\alpha = 0.857$ (Factor 6); consequently.

Table 2: Results of factor analysis for integrated preliminary scale items (maximum likelihood, quartimin oblique rotation), n=1,299

	Factor1	Factor2	Factor3	Factor4	Factor5	Factor6	Communality
Warmth factor of gratitude and compassion							
I try to interact with people with compassion.	0.833	-0.054	-0.004	0.104	-0.058	-0.015	0.654
I try to interact with people with gratitude.	0.763	-0.014	-0.012	0.106	0.008	-0.009	0.625
I consider myself a kind person who is considerate of others.	0.716	-0.014	0.006	-0.011	-0.023	0.102	0.532
When I am with others, I experience feelings of love and intimacy.	0.560	0.152	0.003	-0.118	0.087	0.019	0.482
I have established warm and trustworthy friendships.	0.527	0.076	-0.036	-0.046	0.174	0.053	0.483
I am good at forming relationships with people.	0.424	0.142	-0.021	-0.202	0.153	0.276	0.556
Growth factor of challenge, curiosity, and challenge							
I find it enjoyable to discover a new self by taking on new challenges.	-0.040	0.798	-0.054	0.058	0.025	0.027	0.664
I am interested in a variety of things.	0.012	0.729	-0.026	0.072	-0.046	-0.005	0.534
I like new things and think I have unique ideas.	-0.045	0.680	0.009	-0.083	0.019	0.141	0.514
I want to continue growing in various aspects moving forward.	0.059	0.667	-0.048	0.189	0.039	-0.088	0.565
I aim for the highest standard in everything I do.	0.104	0.541	0.139	-0.210	0.069	0.052	0.431
Factor of overcoming fearfulness and timidity							
I feel like I'm wandering aimlessly at the moment.	-0.131	-0.030	0.713	0.034	-0.170	0.180	0.615
I do not have much purpose in my life and cannot find a way forward.	-0.098	-0.173	0.678	-0.017	-0.199	0.225	0.643
I often become anxious that things will not go well when I try to do something.	-0.044	-0.005	0.652	0.155	-0.081	-0.178	0.591
I think I'm a worrier and easily flustered.	-0.001	-0.100	0.605	0.083	0.030	-0.326	0.602
When making decisions, I am concerned about how society views me.	0.110	0.037	0.590	-0.168	0.163	-0.025	0.369
I sometimes feel anxious that I am leaving something undone.	-0.005	0.116	0.584	0.102	-0.092	-0.202	0.474
Balanced factor of moderate roominess							
I think life requires mental spaciousness.	0.079	0.048	0.016	0.729	-0.042	-0.034	0.576
Instead of aiming for complete perfection, I believe it is necessary to be content to a certain extent.	-0.046	-0.050	0.034	0.718	0.118	0.125	0.517
I believe it is important to have a sense of balance and not to be extreme in everything.	0.060	0.076	-0.006	0.654	0.036	0.107	0.511
I think it is important to respect all living beings.	0.371	0.097	-0.023	0.426	-0.039	-0.087	0.425
Factor of life satisfaction							
I am satisfied with my life.	0.005	-0.026	-0.034	0.082	0.895	0.033	0.822
My life is in an excellent state.	-0.018	0.051	-0.014	0.054	0.884	-0.001	0.814
Adult factor of calmness and acceptance							
I can step back and look at events objectively.	0.121	0.142	-0.065	0.132	0.001	0.655	0.666
Even when something unpleasant happens, I can control my emotions.	0.127	0.150	-0.129	0.048	0.081	0.615	0.686
I think I am calm and emotionally stable.	0.082	0.058	-0.185	0.085	0.248	0.519	0.635
I can accept things that are incomplete or lacking.	0.134	0.125	0.024	0.232	0.073	0.503	0.509
proportion of variance explained (%)	21.162	19.812	13.301	8.965	16.701	13.728	

Note 1: Items with factor loadings of absolute value greater than .40 are indicated in bold.

Discussion

When evaluating the conceptual framework for a well-being scale for Japan, it is essential to consider the cultural and historical elements that shape this construct. Furthermore, we posit that it is necessary to develop a new integrated measurement scale that incorporates cultural and ethnic aspects when evaluating well-being in Japanese context.

To this end, we provisionally constructed an integrated scale that not only incorporates existing standardized well-being measures but also considers cultural and characteristic aspects unique to Japan. We conducted an exploratory analysis using data collected from a Japanese sample. The results yielded a six-factor, 27-item structure. Each factor was named based on their underlying constructs: "Warmth factor of gratitude and compassion" (six items), "Growth factor of challenge, curiosity, and challenge" (five items), "Factor of overcoming fearfulness and timidity" (six items), "Balanced factor of moderate roominess" (four items), "Factor of life satisfaction" (two items), and "Factor of calmness and acceptance" (four items). Regarding the Factor of "overcoming fearfulness and timidity," we considered the original source scale to be composed of reverse-coded items and, in the context of the Wellbeing concept, we chose to express Fearfulness and Timidity as something to be "overcome," treating them as reversecoded items.

Initially, we hypothesized that, in addition to the existing Western conceptualization of well-being, distinctively Japanese perspectives would be incorporated into the constitutive concepts of well-being for the Japanese population. In other words, our hypothesis suggests that a more comprehensive understanding of well-being and happiness for the Japanese involves not only Western elements such as, growth through challenges, life satisfaction, but also Japanese perspectives such as, gratitude, resilience, and a sense of spaciousness. The results of the factor analysis in this study generally adhere to this hypothesis, as each item, including the newly introduced Japanese well-being concepts, is allocated among six factors. Therefore, it is considered that the results of these factor analyses partially support the validity and reliability of the assumed six-dimensional nature of the integrated well-being proposed in this study.

In the future, it will be necessary to further confirm the detailed validity of the proposed scale by examining the conceptual validity with other relevant measures and considering aspects such as testretest reliability.

Conflict of interest

We have no conflicts of interest to disclose.

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