ORIGINAL ARTICLE

Assessing workplace civility: Validity and 1-year test-retest reliability of a Japanese version of the CREW Civility Scale

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Abstract

Objectives: This study aimed to examine the reliability and validity of the Japanese version of the eight-item CREW Civility Scale which measures workplace civility norms and compare the civility scores among various occupations.

Methods: A longitudinal study included all employees in a social care organization ($N = 658$) and a cross-sectional study included all civil servants in one city ($N = 3242$) in Japan. Structural validity was tested through confirmatory factor analyses (CFA). Construct validity was assessed through Pearson's correlations of civility with other variables. Internal consistency was assessed by Cronbach's alpha and 1-year test-retest reliability was assessed by the Intraclass Correlation Coefficient (ICC).

Results: The results of CFA showed an acceptable level of model fit (TLI =0.929; CFI =0.949; and SRMR =0.034). CREW Civility Scale scores were significantly positively correlated with supervisor support, co-worker support, and work engagement, while significantly negatively correlated with incivility, workplace bullying, intention to leave, and psychological distress, which were consistent with our hypotheses. Cronbach's alpha coefficient was 0.93 and ICC was 0.52. Younger, high-educated, and managerial employees and, childminder/nursery staff reported higher civility. High school graduates and respondents who did not graduate from high school, part-time employees, nurses, paramedical staff, and care workers reported lower civility.

Conclusions: The Japanese version of the CREW Civility scale is a reliable, valid measure of civility, appropriate for Japanese workplaces as well as for use in multi-national studies alongside other existing versions of this scale in English, Portuguese and Farsi.

1 | INTRODUCTION

Workplace mistreatments such as bullying occur frequently worldwide and various adverse health outcomes, as well as organizational outcomes, have been reported.[1] Even workplace incivility, which includes milder forms of workplace mistreatment than bullying, also has negative impacts on employees' outcomes; it is associated with greater psychological distress,[2] greater burnout,[2–4] lower job satisfaction and organizational commitment,[5] and higher turnover intentions.[5]

Although prevention of negative behaviors at the workplace is crucial, empirical intervention studies on workplace mistreatment are scarce and only a few studied interventions succeeded in reducing the number of negative acts.[6] On the other hand, focusing on strengthening the positive sides of the workplace tends to be more effective as an improvement target. For example, intervention studies in Canada showed that improving civility reduced healthcare employees' psychological distress, increased work engagement, and even increased patients' satisfaction.[3,4] Workplace civility means a social norm of maintaining at least a minimum level of polite communication and collaboration among workers, including those who are not personal friends. Lakoff[7] explained that "if politeness (whether positive or negative) is an offering of good intentions, civility is a withholding of bad ones, a decision not to do something negative that one might have otherwise done" (p. 25). Also, according to Gill and Sypher,[8] "Civility demands that one speaks in ways that are respectful, responsible, restrained, and principled and avoid that which is offensive, rude, demeaning, and threatening" (p. 55). Thus, incivility can be described as presenting conducting something negative to others, whether with or without intentions, while civility is not presenting something negative to others.

The 6-month intervention study, known as Civility, Respect, Engagement in the Workforce [CREW], demonstrated that workplace civility could be improved via paying intentional, focused attention to norms of mutual communication between workers. Of note, improvements in civility had no significant effect on co-worker incivility levels.[4] This suggests these two constructs are not simple opposites; increasing civility is not associated with a commensurate decrease in incivility, and vice versa. As reported previously,[6] since empirical studies aiming to decrease negative acts often failed, an intervention focusing on strengthening positive sides of the workplace has the potential to improve working environments.

Although the Japanese version of the civility scale does not exist so far, several English versions of the scales measure workplace civility, e.g., the eight-item CREW Civility Scale[9] or the four-item Civility Norms Questionnaire–Brief (CNQ-B).[10] The CREW Civility Scale was developed specifically for evaluating the CREW initiative in the U.S.A's Veterans Health Administration (VHA). This scale assesses courteous and considerate behaviors within the workgroup (groups of people working together and reporting to the same supervisor); results can be aggregated across organizations. The CNQ-B was designed to measure workgroup civility climate in general, defined as "employee perceptions of norms supporting respectful treatment among workgroup members".[10] Although Walsh et al.[10] pointed out that some of the items in the CREW Civility Scale push the boundaries of the civility construct (e.g. teamwork which is akin to workgroup cohesion; also diversity acceptance and organizational tolerance of discrimination which are similar to diversity climate[11]), the CREW Civility Scale had the strongest correlations with outcomes conceptually related to civility. The CREW Civility Scale correlations with an intention to quit, general job satisfaction, satisfaction with supervision, satisfaction with coworkers, and affective organizational commitment were stronger compared to CNQ-B.[10]

Civility or politeness has been long known as a core spirit in Japanese society. It can be traced back historically to the report by Engelbert Kaempfer, a German physician attached to the embassy of the Dutch East India Company and came to Japan in 1690. His book *The History of Japan* described the Japanese society as being "as civil, as polite and curious a nation as any in the world." He stated that "behavior of the Japanese, from the meanest countryman up to the greatest Prince or Lord, is such that the whole Empire might be called a School of Civility and good manners."[12] (p. 20). Although whether or not this culture of civility still exists in the current Japanese society

is unknown, it is the case that we also have a dark side of interpersonal relationships, which can manifest itself even in the adult world through workplace mistreatment. For instance, about 6%–10% of workers have experienced bullying or harassment at the workplace in Japan.[13,14] Workplace incivility is also frequently experienced among Japanese workers.[15]

One of the possible reasons for interpersonal mistreatment issues in the historically polite and civil Japanese society is highly cohesive and hieratical Japanese working culture.[12] Cohesion has beneficial effects especially in adverse situations such as natural disasters[16] because people help each other which prevents adverse outcomes. However, cohesion sometimes reduces diversity and may enhance social exclusion, which is a so-called "dark side of social capital".[17] Although current Japan is not as collectivist as before, strong group identification continues to be appreciated.[18] In such collectivist cultures, individuals are supposed to be sensitive to the nuanced aspects of the social context and encouraged to comply with the group norm.[19] As in a Japanese proverb "the nail that sticks up, gets hammered down," a person who is slightly different or unique easily becomes a target to be bullied or excluded.[20] In this context, preventing discrimination and accepting diversity, maybe a key for preventing workplace mistreatments in Japan; thus, diversity acceptance may be an integral part of civility in Japanese settings. Nevertheless, civility research is lacking in Japan, which we believe is at least partly caused by a lack of reliable and valid civility scales. Thus, Japanese translations of validated scales are required. Since the CREW Civility Scale evaluates including diversity acceptance as aforementioned, developing the Japanese version of the CREW Civility Scale would contribute to assessing civility norms of Japanese working environments more appropriately.

The aim of the current study was to develop the Japanese version of the CREW Civility Scale[9] and investigate its reliability and validity, to boost interventions in Japanese workplaces as well as a collaboration of civility research with other countries. We also sought to assess the current status of civility in the public and private healthcare sectors in Japan by comparing the civility scores. Based on the previous studies,[4,9] we hypothesized that the scale is a one-factor model, is positively associated with supervisor support, co-worker support, and work engagement, and is negatively associated with incivility, bullying, intention to leave, and psychological distress. This is because respondents who experience workplace civility likely have higher perceptions of social support from co-workers and particularly of fair treatment by supervisors. Since healthcare workplaces have a higher prevalence of negative acts,[21] we also hypothesized healthcare workers

rate civility lower than do other professionals such as administrators or engineers.

2 | METHODS

2.1 | Procedure and participants

2.1.1 | Sample 1

A cross-sectional study was conducted as the follow-up survey of a 1-year prospective cohort study for all civil servants in one city in the Kanto region, Japan.[1] This study only included the cross-sectional data since civility was measured only at follow-up. The questionnaires were distributed as a part of the Working Conditions and Stress Survey, with a letter describing the aims and procedure of the study assuring that the survey was non-mandatory and no individual would be identified in reporting the data. A total of 3242 questionnaires were distributed through eight safety and health committees and 2727 civil servants returned completed questionnaires in sealed envelopes to the first author (KT) (84.1% response rate). To encourage them to evaluate their working environments honestly, no one in their workplaces saw another person's written individual questionnaire; only the first author (KT) opened the envelopes and analyzed the data.

2.1.2 | Sample 2

A 1-year longitudinal study included all employees in a social care organization that has a hospital and a nursing home in the Kinki region, Japan. This study was a part of a three-wave (2-year) prospective cohort study and several studies using the baseline data have been published.[22,23] A total of 658 questionnaires were distributed through the human resource department at baseline, explaining the survey was non-mandatory and no individual would be identified in reporting the data. A total of 600 employees completed the baseline survey and 432 completed a 1-year follow-up (91.2% and 72.0% response rate, respectively). All questionnaires in sealed envelopes were directly collected by the researchers.

2.2 | Measurements

2.2.1 | Japanese Version of the CREW Civility Scale

The eight-item CREW Civility Scale measures workplace civility aspects through employee ratings of receiving

personal interest and respect from co-workers, observing cooperation or teamwork in the workgroup, fair conflict resolution, no tolerance for discrimination, and valuing of individual differences by co-workers and supervisors at their workplace.[9] The item examples are shown in Table 1. The original English version[9] was translated into Japanese and modified, using plain Japanese language expressions, by a group of three independent experts in job stress research (KT, AS, and KS). The first author (KT) used these materials to develop the first translated version, which was tested with four experts in occupational mental health and three human resource department staff members. Their feedback was incorporated in the revisions. The second version was then back-translated and sent to the author (KO) of the original version, who confirmed the back-translated Japanese version had exactly the same meaning as the original scale in English. This final version was used in the present study. The items were rated on a 5-point Likert scale from 1 = *strongly disagree* to 5 = *strongly agree*. The total score was calculated by averaging item scores.

2.2.2 | Worksite social support

A subscale of the Brief Job Stress Questionnaire (BJSQ)[24] was used to measure worksite social support from supervisors and co-workers. Respondents used a 4-point Likert scale from 1 = *never* to 4 = *very much* (e.g., "When you are in trouble, how much is your immediate supervisor reliable?"). In the present study, each sum-scale was used in the statistical analyses (score range: 4–16; a higher score means receiving greater support from supervisors or co-workers).

2.2.3 | Workplace incivility

The Modified Workplace Incivility Scale (MWIS)[2,3,15] has 15 items and assesses the frequency of experienced incivility at work including disrespectful, rude, or condescending behaviors from supervisors and co-workers in the previous month (e.g., "Paid little attention to your statement or showed little interest in your opinion," "Made unwanted attempts to draw you into a discussion of personal matters"). The MWIS also assesses the frequency of the same uncivil behaviors instigated by the respondent in the previous month. The items were rated on a 7-point Likert scale from 0 = *never* to 6 = *daily*. In the present study, each sum-scale was used in the statistical analyses (score range: 0–6; a higher score means experiencing more uncivil behaviors from supervisors or co-workers or conducting more uncivil behaviors toward supervisors or co-workers).

TABLE 1 Confirmatory factor analysis results for the Japanese Version of the CREW Civility Scale ($N = 2983$)

Standardized factor loadings for civility				
Item #	Observed variable	Whole sample[a]	Sample 1	Sample 2
1	People treat each other with respect	0.832	0.831	0.837
2	A spirit of cooperation and teamwork	0.831	0.833	0.822
3	Disputes or conflicts are resolved fairly	0.810	0.816	0.767
4	The people I work with take a personal interest in me	0.766	0.763	0.764
5	The people I work with can be relied on when I need help	0.776	0.779	0.748
6	This organization does not tolerate discrimination	0.717	0.727	0.652
7	Differences among individuals are respected and valued	0.820	0.824	0.792
8	Managers/supervisors/team leaders work well with employees of different backgrounds in my work group	0.758	0.765	0.709
Model fit indices				
TLI		0.925	0.929	0.892
CFI		0.946	0.949	0.923
RMSEA		0.112	0.119	0.138
SRMR		0.035	0.034	0.046
df		20	20	20
Chi square		907.412**	744.574**	219.867**

[a]Total number of Sample 1 ($n = 2457$) and Sample 2 ($n = 526$).

**P < .01.

2.2.4 | Workplace bullying

Workplace bullying was measured by the 22-item Negative Acts Questionnaire-Revised (NAQ-R).[14] NAQ-R assesses how often respondents have experienced various negative acts during the previous six months, which when occurring frequently might be considered as bullying (e.g., "Spreading of gossip and rumors about you", "Persistent criticism of your work and effort"). Respondents used a 5-point Likert scale from 1 = *never* to 5 = *daily*. We used a sum-scale of the NAQ-R in the correlational analyses (score range: 22–110; a higher score means experiencing more workplace bullying).

2.2.5 | Intention to leave

Intention to leave was measured by the three-item scale developed by Geurts et al.[25]; the Japanese version was developed by the author.[1] Respondents used a 5-point Likert scale from 1 = *I agree completely* to 5 = *I disagree completely* to rate the extent to which they felt leaving their organization in the last month (e.g., "I consider my decision to work for this employer as an obvious mistake"). In the current study, a sum scale was used in the analysis (score range: 3–15; a higher score means having greater intention to leave).

2.2.6 | Psychological distress

Psychological distress was measured by the K6 scale,[26] which includes six items asking how frequently respondents have experienced psychological distress symptoms in the past 30 days (e.g., "About how often did you feel so depressed that nothing could cheer you up?"). Respondents used a 5-point Likert scale from 0 = *never* to 4 = *daily* and a K6 sum scale was used for statistical analyses (score range: 0–24; a higher score means having greater psychological distress).

2.2.7 | Work engagement

Work engagement was measured by the 9-item Utrecht Work Engagement Scale (UWES-9).[27] The UWES-9 assesses three constructs: dedication, vigor, and absorption. Respondents used a 7-point Likert scale from 0 = *never* to 6 = *every day* to rate how frequently they experienced engagement with their work (e.g., "At my work, I feel bursting with energy", "I am proud of the work that I do", "I feel happy when I am working intensely"). The total scale score was calculated by averaging item scores (score range: 0–6; a higher score means having greater work engagement).

2.3 | Statistical analysis

The reliability and validity of the CREW Civility Scale were tested according to COSMIN (COnsensus-based Standards for the selection of health Measurement INstruments) reporting guidline.[28] First, we conducted confirmatory factor analysis (CFA) to test structural validity. Based on earlier research and theory, one factor was expected so that we set simple regression models with each CREW Civility scale item as a dependent, the latent variable ("Civility") as an independent, and the errors for each equation. Since the observed variables are continuous, we used maximum likelihood (ML) estimation. Model fit was assessed through a combination of fit indices: chi-square, df, Tucker Lewis Index (TLI), Comparative Fit Index (CFI), Root Mean Square Error of Approximation (RMSEA), and Standardized Root Mean Square Residual (SRMR), which have been reported to be relatively robust to the large sample inflation effect.[29]

To test hypotheses for construct validity and criterion-related validity, Pearson's correlation coefficients were calculated between the scale score of the CREW Civility Scale and supervisor support, co-worker support, workplace incivility, workplace bullying, intention to leave, psychological distress, and work engagement. We used only Sample 1 data in this analysis because we did not measure workplace bullying in Sample 2.

To examine internal consistency, Cronbach's alpha coefficients were calculated for all items of the Japanese version of the CREW Civility Scale. In addition, we calculated Intraclass Correlation Coefficient (ICC) (1, 1) using longitudinal data of Sample 2 to investigate 1-year test-retest reliability.

Finally, we compared mean civility scores among all employees using a *t*-test or one-way analysis of variance (ANOVA). The 0.05 (two-tailed) significance level was used. Analyses were conducted in SPSS 27.0J and Amos 27.0J for Windows.

3 | RESULTS

3.1 | Demographic description of the participants

Sample 1 included a total of 2727 civil servants who completed the survey. After eliminating those with missing values for main variables ($n = 270$), we used the data of 2457. The gender proportions were almost equal (male:

$n = 1257$, 51.2%; female: $n = 1185$, 48.2%). The mean age was 42.7 (SD = 11.8) years. In terms of education, 25% graduated high school ($n = 614$), 34.0% junior college/technical school ($n = 835$), and 40.5% college/graduate school ($n = 995$). Respondents' occupations varied, including administrator/clerk ($n = 853$, 34.7%), engineer ($n = 201$, 8.2%), field worker ($n = 313$, 12.7%), fire defence personnel ($n = 262$, 10.7%), child-minder/nursery school staff ($n = 348$, 14.2%), public health nurse/nutritionist ($n = 64$, 2.6%), physician ($n = 12$, 0.5%), hospital nurse/midwife ($n = 282$, 11.5%), medical technician ($n = 68$, 2.8%) and others ($n = 39$, 1.6%). Their job ranks also varied, including manager ($n = 46$, 1.9%), middle manager ($n = 203$, 8.3%), assistant manager ($n = 644$, 26.2%), general employee ($n = 1,157$, 47.1%), post-retirement re-employment ($n = 90$, 3.7%), part-time ($n = 282$, 11.5%), and others ($n = 21$, 0.9%).

In Sample 2, a total of 600 employees completed the baseline survey and 432 completed a 1-year follow-up. After eliminating those with missing values for main variables at baseline ($n = 74$), we used 526 records for cross-sectional analysis. For test-retest analysis, we used the longitudinal data of 356 records after additionally eliminating those with missing values for civility items at the follow-up. Mean age at baseline was 45.9 (SD = 11.6) and 18.8% of respondents graduated high school ($n = 99$), 42.2% junior college/technical school ($n = 222$), and 36.7% college/graduate school ($n = 193$). Their occupations were mostly healthcare professionals, i.e., physician ($n = 29$, 5.51%), nurse ($n = 196$, 37.3%), other paramedical ($n = 82$, 15.6%), and care worker and helper for the elderly ($n = 121$, 23.0%), but included administrator/clerk ($n = 98$, 18.8%). Given the large number of nurses and care workers, this sample was more female dominated than Sample 1 (male: $n = 118$, 22.4%; female: $n = 408$, 77.6%). We did not ask about job ranks.

3.2 | Structural validity of the CREW civility scale

The CFA for Sample 1 showed the best model fit for one-factor model (TLI = 0.929; CFI = 0.949; SRMR = 0.034; df = 20; Chi square = 744.574), although RMSEA was higher than 0.05 (Table 1).

3.3 | Construct validity of the CREW civility scale

As shown in Table 2, CREW Civility Scale scores were significantly positively correlated with supervisor support, co-worker support, and work engagement ($P < .001$). CREW Civility Scale scores were also significantly negatively correlated with incivility, workplace bullying, intention to leave, and psychological distress ($P < .001$).

3.4 | Reliability of the CREW Civility Scale

The internal consistency reliability of the CREW Civility Scale (Cronbach's alpha coefficient) was 0.93 both for Sample 1 and 2 (Table 2). ICC (1, 1) of the baseline and follow-up CREW Civility Scale score was 0.52 (95% Confidence Interval [CI]: 0.44–0.59).

3.5 | Comparison of civility scores across participants

The mean score on the Japanese version of the CREW Civility Scale was 3.91 (SD = 0.71) among all participants. Although we did not find gender differences, there were between-group differences for age, education, job rank, and occupation (Table 3). Younger employees (20–24 years old) rated their workgroup as more civil than middle-aged employees (40–44 years old) did. In terms of job rank, middle managers had a higher perception of civility than assistant managers, general employees (non-managers), and part-time employees. Among various occupations, childminders or nursery school staff reported higher civility, while hospital nurses or midwives, other paramedical staff, and care workers or helpers for the elderly reported lower civility.

4 | DISCUSSION

This study aimed to examine the reliability and validity of the Japanese version of the CREW Civility Scale. The findings suggest that the Japanese version of the CREW Civility Scale has good levels of reliability and validity for measuring workplace civility in the Japanese context. This study is the first to find moderate 1-year test-retest reliability, which shows civility is moderately stable to measure.

In this study, both TLI and CFI were close to 0.95 and SRMR was <0.09, indicating an acceptable model fit. A cut-off value close to 0.95 for TLI and CFI; 0.06 for RMSEA; and 0.08 for SRMR has been reported to result in lower Type II error rates.[30] Also, a combination with a cut-off value close to 0.95 for TLI/CFI and SRMR >0.09 resulted in the least sum of Type I and Type II error rates.[30] Although RMSEA was greater than 0.06 in this study, a

TABLE 2 Descriptive, correlations, and Cronbach's alpha coefficients ($n = 2457$, sample 1)

Variables (scale: score range)	Mean	SD	Cronbach α	1	2	3	4	5	6	7	8	9
1 Civility (CREW-CS: 1–5)	3.91	0.71	0.93									
2 Supervisor support (BJSQ: 4–16)	8.48	2.78	0.87	0.44								
3 Co-worker support (BJSQ: 4–16)	9.22	2.33	0.85	0.47	0.61							
4 Supervisor incivility (MWIS: 0–6)	0.31	0.58	0.77	−0.32	−0.29	−0.19						
5 Coworker incivility (MWIS: 0–6)	0.23	0.52	0.82	−0.32	−0.20	−0.28	0.54					
6 Instigated incivility (MWIS: 0–6)	0.26	0.44	0.74	−0.23	−0.10	−0.14	0.43	0.50				
7 Workplace bullying (NAQ-R: 22–110)	26.5	7.84	0.93	−0.41	−0.28	−0.26	0.58	0.53	0.35			
8 Intention to leave (3–15)	2.33	1.00	0.85	−0.41	−0.30	−0.33	0.26	0.23	0.21	0.36		
9 Psychological distress (K6: 0–24)	5.34	5.20	0.92	−0.33	−0.25	−0.29	0.36	0.36	0.28	0.48	0.49	
10 Work engagement (UWES: 0–6)	3.14	1.33	0.95	0.39	0.29	0.28	−0.13	−0.09	−0.11	−0.20	−0.57	−0.38

Note: All correlations are significant ($P < .001$).

Abbreviations: BJSQ, Brief Job Stress Questionnaire; CREW-CS, CREW Civility Scale; MWIS, Modified Workplace Incivility Scale; NAQ-R, Negative Acts Questionnaire-Revised; UWES, Utrecht Work Engagement Scale.

recent study reported SRMR produced more accurate tests of close fit and confidence intervals than RMSEA.[31] Overall, the results of CFA are consistent with the original English version,[9] interpreting this factor to reflect the concept of civility.

Although we found excellent internal consistency reliability for the scale (Cronbach's alpha coefficient = 0.93), 1-year test-retest reliability was moderate, possibly because test-retest was conducted with a 1-year time lag. This is relatively long because empirical studies have reported incivility experiences change over time.[32] This might affect our 1-year test-retest reliability.

High scores on the Japanese version of the CREW Civility Scale were associated with lower workgroup incivility. This is consistent with previous studies where workplace civility was inversely related to workplace incivility.[10,33] This inverse relationship is well-substantiated in previous research, even though the debate is ongoing on whether the civility construct is, or is not, the direct opposite of incivility. Considering this debate, our findings are more consistent with the argument that civility and incivility, although inversely related, are different constructs and not simply two opposite ends of the same construct.[34] In our data, a correlation between civility and supervisor or co-worker incivility was not strong ($r = -.32$). Since similar results have been reported in other studies: $r = -.36$ for incivility experiences,[10] $r = -.49$ for co-worker incivility; $r = -.35$ for supervisor incivility,[3] it suggests the importance of measuring both civility and incivility to capture workplace environments precisely.

Our findings overall supported the construct validity of this scale. For instance, high scores on the Japanese version of the CREW Civility Scale were associated with higher supervisor and co-worker support and lower workplace bullying. This is consistent with a previous study that showed a negative association between worksite social support and workplace bullying.[14] Among organizational recourses, co-worker support had the strongest correlation with civility. This is probably because three items describe co-worker support in the CREW Civility Scale: "A spirit of cooperation and teamwork exists in my workgroup (#2)," "The people I work with take a personal interest in me (#4)," and "The people I work with can be relied on when I need help (#5)." In other words, the operational definition of civility that we used in the current study emphasized the aspect of co-worker support which likely explains this finding of the strongest correlation between civility and co-worker support. As this finding suggests, enhancing supervisor and co-worker support might contribute to improving civility at the workplace.

High scores on the Japanese version of the CREW Civility Scale were also associated with lower psychological distress or lower intention to leave and with higher

TABLE 3 Comparison of civility scores among all participants in this study ($N = 2983$)[†]

	n (%)	Civility score Mean (SD)	P[§]
Gender			.742
Male	1375 (46.1)	3.89 (0.73)	
Female	1593 (53.4)	3.88 (0.71)	
Age (years)			.004
18–24	148 (4.96)	4.01 (0.72)	
25–29	309 (10.4)	4.01 (0.69)[a*]	
30–34	321 (10.8)	3.97 (0.77)	
35–39	439 (14.7)	3.88 (0.75)	
40–44	364 (12.2)	3.83 (0.73)[a*]	
45–49	311 (10.4)	3.83 (0.76)	
50–54	411 (13.8)	3.86 (0.73)	
55–59	415 (13.9)	3.86 (0.64)	
60–64	202 (6.77)	3.85 (0.67)	
over 65	21 (0.70)	3.79 (0.52)	
Education			<.001
High school graduate	713 (23.9)	3.81 (0.72)[a**]	
Junior college/technical school graduate	1057 (35.4)	3.87 (0.72)	
University/graduate school graduate	1188 (39.8)	3.95 (0.71)[a**]	
Job rank[‡]			.002
Manager	46 (1.54)	4.18 (0.47)	
Middle manager	203 (6.81)	4.09 (0.58)[b*c*d*]	
Assistant manager	644 (21.6)	3.90 (0.70)[b*]	
General employee	1157 (38.8)	3.91 (0.76)[c*]	
Post-retirement re-employment	90 (3.02)	3.93 (0.67)	
Part-time	282 (9.45)	3.85 (0.75)[d*]	
Others	21 (0.70)	3.82 (0.77)	
Occupation			<.001
Administrator/clerk	951 (31.9)	3.92 (0.75)[a**b*]	
Engineer	201 (6.74)	3.93 (0.62)[c*]	
Field worker	313 (10.5)	3.78 (0.73)[d**]	
Fire defense personnel	262 (8.78)	3.86 (0.73)[e**]	
Childminder/nursery school staff	348 (11.7)	4.15 (0.67)[a**c*d**e**f**g**h**]	
Public health nurse/nutritionist	64 (2.15)	3.97 (0.63)	
Physician	41 (1.37)	4.05 (0.66)	
Hospital nurse/midwife	478 (16.0)	3.75 (0.72)[b*f**]	
Other paramedical	150 (5.03)	3.76 (0.69)[g**]	
Care worker/helper	121 (40.6)	3.77 (0.56)[h**]	
Others	39 (1.31)	3.96 (0.76)	

Note: [abcd]*$P < .05$, **$P < .01$. Post hoc test by Tukey.

Abbreviation: SD, standard deviation.

[†]Sample 1 ($n = 2457$) and Sample 2 ($n = 526$) combined.

[§]T-test or one-way ANOVA.

[‡]Only Sample 1 ($n = 2457$).

work engagement, as expected theoretically. This is consistent with previous reports where workplace civility was correlated with reduced distress, better mental health, higher work engagement, and lower intention to leave.[4,9,10]

The overall mean civility score for our participants was 3.91, similar or relatively higher than in the previous reports using the English language scale. Previous studies reported 3.46 at pre-intervention,[9] 3.58 and 3.72 at pre-intervention,[4] and also 3.98.[10] In this study, the civility scores were similar to or even higher than the post-intervention in the previous studies. The results suggest that polite and civil culture still exists in Japanese workplaces to some extent.[12]

Our findings suggest that even within the same organizations, civility scores likely vary by occupation and status. For example, we found higher civility scores were observed in high-educated employees, managers, and childminder/ nursery school staff, while high school graduates and respondents who did not graduate from high school, nurses, paramedical staff, and care workers reported lower civility. Since employees with higher positions are less likely to experience workplace mistreatment,[13] the difference in rating appears reasonable. Similarly, since negative interpersonal relationships are often observed among healthcare workers[21] or low socio-economic status employees,[13] it is not surprising such employees perceive their workplace as less civil. Although the reason why childminder or nursery school staff reported the highest civility score in this study was unknown, it is probably because our participants are civil servants and worked in public daycare or nursery schools. In Japan, the salary and working years in public day-care or nursery schools are higher/longer and the turnover rate is also lower than private (7% vs. 12%).[35] This might have contributed to higher civility norms of their workplaces.

Validated versions of the CREW Civility scale are already available in English, Portuguese,[36] and Farsi[37] and have been used to evaluate workplace interventions in these settings. As an outcome of our study, this same scale is now also available and supported for use in Japanese work settings. This allows studying workplace civility across several national cultures, including Japan, which offers potential for generating and testing multiple new hypotheses. For example, cultural norms for workplace civility, structural components of the civility construct, relationships of civility to other workplace characteristics, and so forth, can be examined in parallel for English-speaking, Portuguese-speaking, and now also Japanese-speaking workers. Given the previous research and theory regarding cultural differences in work-related values,[38,39] this potential direction of research may afford a better understanding of civility and,

more broadly, establish whether or how work-related values inherent within specific national cultures can influence workers' perceptions of the same construct, measured with the same scale. The addition of the Japanese version to the existing English, Portuguese and Farsi versions of the same scale afford studying such questions empirically. Possibilities include contrasting different national samples by country (e.g. U.S.A., U.K., Canada, Portugal, Brazil, Iran, Japan), by geography (North America, Latin America, Europe, Asia), and by Hofstede's culture value dimensions.[38,39]

Our study includes some limitations. First, test-retest was conducted with a 1-year lag, which is relatively long and working environments among participants may have changed in ways that we did not evaluate. These changes might have affected civility ratings. Of note, this limitation worked against our hypotheses, making it harder to establish the reliability of the scale. Second, although our sample included various occupations, the survey venue was one particular local government and one social care organization, which may limit the generalizability of the findings. The reliability and validity of the scale should be replicated, e.g. in additional private companies or nationally representative samples of workers in Japan.

Although there are several limitations, one of the strengths of our study is using two samples with high response rates (84.1% and 91.2%). That only researchers opened the sealed envelopes and saw the individual questionnaires may have contributed to the high response rate because generally employees tend to hesitate to evaluate their working environments honestly especially on the negative sides. In the collective and hieratical culture such as in Japan, expressing negative opinions openly is not welcomed because keeping harmony with other people is highly appriciated.[40] Future studies need to consider that careful study procedures might affect the response rate in such a culture.

5 | CONCLUSION

This study confirmed the internal consistency reliability as well as structural and construct validity of the 8-item Japanese version of the CREW Civility Scale. This scale may be a useful measure of the current status of civility which can contribute to enhancing civility norms in Japanese workplaces. Additionally, this scale can be used as part of international comparative studies that include workers across different countries and examine similarities and differences in civility norms as well as in structural characteristics of the civility construct across multinational settings.

DISCLOSURE

Approval of the research protocol: The Ethics Committees of the Graduate School of Medicine, The University of Tokyo, approved the study of Sample 1 (#2772-[2]). The Ethics Committees of the Graduate School of Medicine, the University of Tokyo (#10125-3), Ethics Committee of Medical Research, University of Occupational and Environmental Health, Japan (#H25-019), and the Ethics Committees of the School of Medicine, Wakayama Medical University (#1281) approved the study of Sample 2. *Informed Consent*: Informed consent was obtained from all participants when answering the questionnaire. *Registry and the Registration No. of the study/trial*: N/A. *Animal studies*: N/A. *Conflict of interest*: Authors declare no Conflict of Interests for this article.

AUTHOR CONTRIBUTIONS

K.T., A.S., K.O., and K.S. conceived the ideas; K.T., E.A., A.I., and S.K. collected the data; K.T. analyzed the data and wrote the first draft; and N.K. supervised the study.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author, K.T., upon reasonable request.

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