

Original

Workplace incivility in Japan: Reliability and validity of the Japanese version of the modified Work Incivility Scale

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Abstract: Objectives: Although incivility is a common interpersonal mistreatment and associated with poor mental health, there are few studies about it in Asian countries. The aim of this study was to develop the Japanese version of the modified Work Incivility Scale (J-MWIS), investigate its reliability and validity, and reveal the prevalence of incivility among Japanese employees in comparison with data on Canadian employees. **Methods:** A total of 2,191 Japanese and 1,071 Canadian employees were surveyed, using either the J-MWIS or MWIS. Japanese employees additionally answered questions on civility, worksite social support, workplace bullying, psychological distress, intention to leave, and work engagement to investigate construct validity. **Results:** At least one form of workplace incivility was experienced by both Japanese (52.3%) and Canadian (86.0%) employees in the previous month. Internal consistency reliability of the J-MWIS was acceptable ($\alpha=0.71-0.81$), and correlation analyses also confirmed its construct validity as expected. Workplace incivility was associated with lower workgroup civility, lower supervisor and coworker support, higher workplace bullying, higher psychological distress, higher intention to leave, and lower work engagement. Confirmatory factor analyses showed that the original three-factor model (supervisor incivility, coworker incivility, and instigated incivility) fitted moderately in both Japan and Canada data, though the privacy/overfamiliarity factor was additionally extracted from exploratory factor analysis for the J-MWIS. **Conclu-**

sions: The results of this study suggested that the J-MWIS has moderate internal consistency reliability and good construct validity.

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Introduction

For decades, workplace mistreatment, such as psychological aggression, bullying, violence, or interpersonal conflicts, has received worldwide attention. In contrast, it is only recently that workplace incivility has received increased attention^{1,2}. Workplace incivility was introduced into psychological research literature by Andersson and Pearson³, who defined incivility as “low intensity deviant behavior with ambiguous intent to harm the target, in violation of workplace norms for mutual respect. Uncivil behaviors are characteristically rude and discourteous displaying a lack of regard for others”³. It may seem to be a similar notion as psychological aggression, but it differs when the behavior lacks a clear and conscious intentionality⁴ because the key aspects of workplace incivility are norm violations, ambiguous intent, and low intensity⁵.

Workplace incivility is a common interpersonal mistreatment, and a high prevalence was reported in various workplaces. For example, 71% of 1,155 public-sector employees in the U.S.A. reported some experience of incivility at work in the previous five years¹. Among 659 nurses in the U.S.A., 85% of them have experienced incivility in the previous 12 months⁶. In Canada, 612 nurses also reported similar prevalence; 67.5% have experienced super-

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visor incivility, while 77.6% have experienced coworker incivility over the previous month²⁾. In summary, workplace incivility occurs frequently with 60-80% of workers experiencing some form of incivility at their workplace.

Although incivility is a “milder” form of interpersonal mistreatment in which its intensity is less apparent than aggression or bullying⁷⁾, it nevertheless negatively impacts employees’ health as well as organizational quality. Experiencing uncivil behavior at work has been known to associate with greater psychological distress^{1,7)}, poor mental health⁸⁾, greater burnout^{1,9,10)}, low levels of job satisfaction and organizational commitment²⁾, and high levels of turnover intentions^{2,11)}.

These studies used the Workplace Incivility Scale (WIS)¹⁾, the most widely used scale to measure workplace incivility^{1,2,7,10,12)}. It was developed by Corina et al., one of the key researchers in incivility research. It is a seven-item questionnaire that assesses participants’ experience of incivility from superiors or coworkers in the past five years. High internal consistency reliability was reported with Cronbach’s alpha coefficient ranged between 0.85-0.89^{1,2,7,12)}. Leiter, Nicholson, Patterson & Laschinger¹⁰⁾ modified this scale to five items, naming it the modified Workplace Incivility Scale (MWIS), which assesses participants’ experience of incivility from supervisors and coworkers, as well as their own uncivil behavior in the previous month. This modification enabled the scale to measure more recent experiences of workplace incivility compared to the original one, which was based on the previous five years to reduce recall bias or ambiguity. Also, it enabled the scale to measure the identity of the perpetrator, such as supervisors, coworkers, or oneself.

Respectfulness or politeness is one of the core cultures in Japan. However, restructuring and downsizing because of economic crises in the past two decades has created a strained atmosphere in the workplace. Thus, in the current society, uncivil behaviors are more likely to occur at work¹³⁾. In Japan, the Act on Promoting the Resolution of Individual Labor-Related Disputes was introduced in 2001, and labor departments in all prefectures in Japan have received free consultations on labor problems. In fact, the number of consultations from workers has been on the rise, especially on bullying and harassment. For example, the percentage of these cases was 5.7% in 2001 and increased to 22.4% in 2015 among all official consultations (245,125 cases) regarding labor problems within a year¹⁴⁾. Employees in local government bodies are also in the same situation. Since large-scale human resource adjustment plans and the downsizing of cities/towns were carried out in every prefecture in the past decade, employees in the public sector are expected to take on more responsibilities, and there are limited human resources compared to years ago. This situation may result in a higher rate of interpersonal mistreatment among civil servants¹³⁾.

To the best of our knowledge, most incivility research

has been conducted only within North America and there are no studies in Asia. Although other aggressive behaviors such as workplace bullying (“ijime” or “power harassment” in Japanese) have received increased attention in this decade¹⁵⁻¹⁷⁾, the prevalence of incivility in Japan and its psychometric property are still unknown. Various Asian countries including Japan have a more vertical, collective, and hierarchical workplace structure compared with North America^{18,19)}. This could result in a different prevalence of incivility. Also, patterns of workplace incivility may be different among countries, as suggested by different factor structures of the bullying scale reported in Japan²⁰⁾. For example, an item of “having key areas of responsibility removed or replaced with more trivial or unpleasant tasks” and “being ordered to do work below your level of competence” were extracted as separate factors, suggesting Japanese employees are more sensitive to occupational devaluation due to collectivism. The development of a Japanese version of the MWIS would contribute to understanding this mistreatment in the Japanese workplace, as well as at a global level.

The aim of this study was therefore to 1) develop the Japanese version of the MWIS (J-MWIS), 2) investigate its reliability and validity, and 3) assess the prevalence of workplace incivility among Japanese employees in the public sector. We also compared these data with the data on Canadian employees to explore the difference among Japanese and Canadian in terms of incivility experiences and factor structures.

Methods

Procedure and participants

The sample of this study consists of Japanese and Canadian employees. The surveys were conducted separately in Japan and Canada and the data from the J-MWIS and MWIS were subsequently combined for analyses to compare the factor structure and explore the best model fit. The prevalence of incivility measured by J-MWIS was also computed and compared with Canadian data measured by MWIS. The details of procedures and participants in this study were as described below.

Sample 1: Japanese workers

All employees (n=3,242) in a local government in Japan were invited to participate in the survey with a self-administered questionnaire, including J-MWIS, and a letter describing the aims and procedures of the study with assurance that the survey was non-mandatory. A total of 2,727 employees (84.1% response rate) completed the survey and returned it in sealed envelopes to researchers. Since we excluded respondents who had at least one missing entry in the questionnaire, 2,191 respondents were analyzed in this study. The Ethics Committees of the Graduate School of Medicine/Faculty of Medicine at

the University of Tokyo approved the study procedure.

The number of males and females among respondents was almost equal ($n=1,150$, 52.5% and $n=1,041$, 47.5%, respectively), with an average age of 42.2 (SD=11.6) years. Their occupational categories included administrator/clerk ($n=774$, 35.3%), technician ($n=187$, 8.5%), field worker ($n=290$, 13.2%), child-minder/nursery staff ($n=298$, 13.6%), public health nurse/nutritionist ($n=58$, 2.6%), medical technician ($n=63$, 2.9%), hospital nurse/midwife ($n=240$, 11.0%), fire defense personnel ($n=239$, 10.9%), and others ($n=42$, 2.0%). Most civil servants have worked full-time ($n=1,949$, 89.0%), while ten percent were part-timers ($n=225$, 10.3%).

Sample 2: Canadian workers

A cross-sectional study was conducted in the health care center in Canada. Research aims were explained, confidentiality was ensured, and participation was voluntary. A total of 1,173 civil servants completed the survey (response rate: 37.1%). Since we excluded respondents who had at least one missing entry in the questionnaire, 1,071 respondents were analyzed in this study.

Most respondents were female (male: $n=123$, 11.5% and female: $n=948$, 88.5%), with average age of 42.2 (SD=10.5) years. Employment status was primarily full-time ($n=770$, 72.0%), followed by part-time ($n=215$, 20%), casual ($n=79$, 7.3%), and temporary ($n=7$, 0.7%). The most prevalent occupational group was nursing. Respondents had worked in healthcare for an average of 16.1 years (SD=11.3).

Measurements

Incivility (MWIS)

MWIS^{1,10} was used for the Canadian samples. It has 15 items, which assesses the frequency of workers' experiences on received workplace incivility in the past month including disrespectful, rude, or condescending behavior from supervisors and coworkers, and also the frequency of instigated uncivil behaviors that the respondent has performed. The items responses were ranging from 0=*never* to 6=*daily*.

Incivility (J-MWIS)

J-MWIS was used for the Japanese samples. The English version of the MWIS was translated into Japanese by three experts in a job stress research field. Four experts in the field of workplace interpersonal mistreatment and three general affairs department staff checked the first translated version. We received their feedback and revised the language expressions accordingly. The second version was back translated by a third party, sent to the author who developed the MWIS, and confirmed that the back-translated J-MWIS was identical with MWIS. The present study used this confirmed version as the final version of J-MWIS.

Civility

The 8-item Civility, Respect, and Engagement at Work (CREW) Civility Scale²¹ measures the perceptions of civility within a workgroup and across an organization. The items responses were ranging from 1=*strongly disagree* to 5=*strongly agree*. The total score for this scale was calculated by averaging item scores. The internal reliability for civility was high in the current study ($\alpha=0.93$).

Worksite social support

A subscale of the Brief Job Stress Questionnaire (BJSQ)²² was used to measure worksite social support from supervisors and coworkers. The items responses ranged from 1=*never* to 4=*very much*. Internal reliability for supervisor support and coworker support were high in the current study ($\alpha=0.86$ and 0.84, respectively).

Workplace bullying

The 22-item Negative Acts Questionnaire-Revised (NAQ-R) measured workplace bullying^{20,23,24}. NAQ-R assesses how often respondents have experienced various negative acts in the past six months, where frequent occurrence might be considered as bullying. The items responses ranged from 1=*never* to 5=*daily*. Internal reliability for workplace bullying was high in the current study ($\alpha=0.92$).

Intention to leave

Intention to leave was measured by the three-item scale used in the study of Geurts, Schaufeli, and De Jonge²⁵. Respondents used a 5-point Likert scale ranging from 1=*I agree completely* to 5=*I disagree completely* to rate the extent to which they have the intention to leave their organization in the last month. Internal reliability was found to be high in the current study ($\alpha=0.85$).

Psychological distress

Psychological distress was measured by the K 6 scale^{26,27}, which consists of six items asking how frequently respondents experienced psychological distress symptoms in the past 30 days. The items responses ranged from 0=*never* to 4=*daily*. Internal reliability was found to be high in the current study ($\alpha=0.91$).

Work engagement

Work engagement was measured by the Utrecht Work Engagement Scale (UWES-9)^{28,29}. The UWES-9 assesses how frequently they experience engagement (dedication, vigor, and absorption) with their work. The items responses were ranging from 0=*never* to 6=*every day*. The total score for this scale was calculated by averaging item scores. Internal reliability was also high in the current study ($\alpha=0.85$).

Table 1. J-MWIS item mean scores and frequencies (%): Japanese sample (N=2,191)

	Mean (SD)	Frequencies (%)						
		Never	Sporadically	Now and then	Regularly	Often	Very often	Daily
<i>Supervisor incivility</i>								
S1 Paid little attention...	0.56 (1.03) **	67.4	19.5	7.4	2.7	1.6	1.0	0.4
S2 Addressed you in unprofessional terms...	0.17 (0.69) **	91.7	4.4	1.8	0.8	0.4	0.4	0.4
S3 Ignored or excluded you...	0.11 (0.51) **	93.7	3.9	1.4	0.6	0.1	0.3	0.1
S4 Doubted your judgment...	0.35 (0.84) **	78.3	14.7	3.7	1.3	1.2	0.5	0.3
S5 Made unwanted attempts to draw you...	0.24 (0.74)	86.5	8.2	2.6	1.3	0.6	0.7	0.1
<i>Coworker Incivility</i>								
C1 Paid little attention...	0.37 (0.83) **	76.7	14.7	5.7	1.1	1.1	0.6	0.1
C3 Ignored or excluded you...	0.11 (0.52) **	93.2	4.6	1.2	0.4	0.4	0.1	0.2
C2 Addressed you in unprofessional terms...	0.11 (0.49) **	93.3	4.0	1.8	0.5	0.1	0.3	-
C4 Doubted your judgment...	0.27 (0.71) **	81.9	12.8	3.5	0.7	0.5	0.3	0.2
C5 Made unwanted attempts to draw you...	0.17 (0.57) **	88.1	8.6	2.0	0.6	0.4	0.1	0.1
<i>Instigated Incivility</i>								
I1 Paid little attention...	0.41 (0.72) **	70.1	21.5	6.7	1.2	0.3	0.1	-
I2 Addressed another person in unprofessional...	0.20 (0.61) **	86.9	9.2	2.6	0.5	0.6	0.1	0.1
I3 Ignored or excluded another person...	0.10 (0.41) **	93.2	4.6	1.5	0.6	0.1	0.1	-
I4 Doubted another person's judgment...	0.42 (0.81) **	70.4	21.6	5.3	1.0	1.1	0.3	0.1
I5 Made unwanted attempts to draw...	0.15 (0.45)	88.2	9.6	1.6	0.4	0.1	0.1	-

** Statistically different between Japanese and Canadian samples (t-test, $p < 0.001$).

Statistical analyses

First, Cronbach's alpha coefficients were calculated for each subscale of J-MWIS and MWIS to examine internal consistency reliability. Second, Pearson's correlation coefficients were calculated between each subscale of J-MWIS and workplace bullying, intention to leave, psychological distress, civility, supervisor support, coworker support, and work engagement to assess construct validity. The J-MWIS scores were expected to have positive associations with workplace bullying, intention to leave, and psychological distress. Civility, supervisor support, coworker support, and work engagement were expected to have negative associations with the J-MWIS, because respondents who experience incivility at their workplace could have a lowered perception of receiving civility behaviors or social support from workplace members, as well as low engagement into their work.

Each of the 15 items in the J-MWIS or MWIS was entered into an exploratory factor analysis (maximum likelihood method) and also into a confirmatory factor analysis in order to test structural validity. In the exploratory factor analysis with a promax rotation, we used eigenvalues of more than 1.0 as the criterion to define a factor. In the confirmatory factor analysis, three underlying factors were expected based on earlier research and theoretical notions: supervisor incivility, coworker incivility and in-

stigated incivility¹⁰. Also, theoretically, every three item of the subscale of MWIS is nearly identical. For instance, the first items of supervisor incivility, coworker incivility, and instigated incivility (S1, C1, and I1), all questioned whether supervisor/coworker/you paid little attention to your/another person's statement or showed little interest in your/another person's opinion. Thus, we freed the error correlations accordingly in the confirmatory factor analysis. Model fit was assessed using a combination of fit indices including the Goodness of Fit Index (GFI), the Adjusted Goodness Fit Index (AGFI), the Comparative Fit Index (CFI), the Root Mean Square Error of Approximation (RMSEA), the Akaike's Information Criterion (AIC), and the Expected Cross-Validation Index (ECVI). The acceptability of model fit was judged by the following criteria: GFI, AGFI, and CFI > 0.90 and RMSEA < 0.05 ³⁰. The level of significance used was 0.05 (two-tailed). SPSS 23.0J and Amos 23.0J for Windows were used for statistical analyses.

Results

Prevalence of workplace incivility

Table 1 presents the frequencies of each item in the J-MWIS. The most frequent item among Japanese sample was from supervisor incivility: "Supervisor paid little at-

Table 2. MWIS item mean scores and frequencies (%): Canadian sample (N=1,071)

	Mean (SD)	Frequencies (%)						
		Never	Sporadically	Now and then	Regularly	Often	Very often	Daily
<i>Supervisor incivility</i>								
S1 Paid little attention...	1.29 (1.54) **	42.9	22.1	16.9	7.6	4.9	3.6	2.2
S2 Addressed you in unprofessional terms...	0.37 (0.95) **	80.8	10.0	4.6	2.2	0.9	1.1	0.4
S3 Ignored or excluded you...	0.54 (1.18) **	75.0	11.9	5.9	2.9	2.0	1.1	1.3
S4 Doubted your judgment...	0.64 (1.16) **	66.0	18.6	7.8	2.8	2.6	1.6	0.6
S5 Made unwanted attempts to draw you...	0.21 (0.70)	87.3	8.2	2.4	1.1	0.2	0.4	0.4
<i>Coworker Incivility</i>								
C1 Paid little attention...	1.16 (1.15) **	33.6	32.7	24.3	4.6	3.4	1.0	0.5
C2 Addressed you in unprofessional terms...	0.58 (0.98) **	65.2	19.1	10.9	2.7	1.2	0.7	0.2
C3 Ignored or excluded you...	0.76 (1.10) **	56.6	23.3	13.1	3.6	2.0	1.1	0.3
C4 Doubted your judgment...	0.87 (1.06) **	46.9	30.7	15.9	3.5	1.9	1.0	0.2
C5 Made unwanted attempts to draw you...	0.64 (1.04) **	61.5	23.1	9.2	3.7	1.4	0.7	0.5
<i>Instigated Incivility</i>								
I1 Paid little attention...	0.89 (0.31) **	36.1	45.6	14.0	2.8	0.8	0.4	0.3
I2 Addressed another person in unprofessional...	0.31 (0.65) **	76.1	19.0	3.3	1.2	0.3	0.2	-
I3 Ignored or excluded another person...	0.32 (0.62) **	74.2	21.3	3.6	0.6	0.1	0.1	0.1
I4 Doubted another person's judgment...	1.00 (0.98) **	33.5	43.0	17.4	3.8	1.0	1.0	0.2
I5 Made unwanted attempts to draw...	0.17 (0.47)	85.6	12.4	1.5	0.3	0.1	0.1	-

** Statistically different between Japanese and Canadian samples (t-test, $p < 0.001$).

attention to your statement or showed little interest in your opinion” (S1). The second most frequent item was from instigated incivility: “You paid little attention to another person’s statement or showed little interest in their opinion” (I1). The third one is also from instigated incivility: “You doubted another person’s judgment on a matter over which the other person has responsibility” (I4). A total of 52.3% of respondents have experienced at least one incivility at their workplace during the previous month. In detail, 39.8% experienced supervisor incivility, 30.8% experienced coworker incivility and 44.7% experienced instigated incivility. Most item mean scores of the J-MWIS were statistically lower than those of Canadian sample except for two items (S5 and I5) (t-tests, $p < 0.001$).

Table 2 presents the frequencies of each item in the MWIS. The most frequent item among Canadian employees was from instigated incivility: “You doubted another person’s judgment on a matter over which the other person has responsibility” (I4). The second most frequent item was from coworker incivility: “Paid little attention to your statement or showed little interest in your opinion” (C1). The third item is also from instigated incivility: “You paid little attention to another person’s statement or showed little interest in their opinion” (I1). A total of 86.0% of respondents have experienced at least one incivility at their workplace during the previous month. In de-

tail, 62.3% experienced supervisor incivility, 75.4% coworker incivility, and 79.6% instigated incivility. The average scores and SD for MWIS were 0.61 (0.89) for supervisor incivility; 0.80 (0.87) for coworker incivility; and 0.54 (0.52) instigated incivility. The scores were statistically higher than the results of Japanese sample as shown in Table 1 (t-tests, $p < 0.01$).

Reliability of J-MWIS

Cronbach’s alpha coefficients of J-MWIS were 0.76 for supervisor incivility, 0.81 for coworker incivility and 0.71 for instigated incivility (Table 3). These Cronbach’s alpha coefficients were slightly lower than the MWIS; 0.89 for supervisor incivility, 0.86 for coworker incivility and 0.74 for instigated incivility, respectively.

Constructive validity of the J-MWIS

Levels of each subscale of J-MWIS were positively and significantly correlated with workplace bullying, intention to leave and psychological distress ($p < 0.001$, Table 3). Higher levels of each subscale of the J-MWIS were also negatively and significantly correlated with civility, supervisor support, coworker support, and work engagement ($p < 0.001$).

When comparing correlations, the correlation of supervisor incivility with supervisor support vs coworker sup-

Table 3. Descriptive, correlations and Cronbach's alpha values among Japanese sample (N=2,191) †

Variables §	Mean	SD	Cronbach α	1	2	3	4	5	6	7	8	9
1 Supervisor incivility (J-WIS: 0-6)	0.28	0.55	0.76	1								
2 Coworker incivility (J-WIS: 0-6)	0.21	0.48	0.81	0.53	1							
3 Instigated incivility (J-WIS: 0-6)	0.25	0.43	0.71	0.41	0.47	1						
4 Workplace bullying (NAQ-R: 23-115)	26.20	7.21	0.92	0.59	0.53	0.34	1					
5 Intention to leave (1-5)	2.30	1.00	0.85	0.26	0.22	0.21	0.35	1				
6 Psychological distress (K6: 0-24)	5.16	5.07	0.91	0.37	0.36	0.30	0.45	0.48	1			
7 Civility-workgroup (CCS: 1-5)	3.94	0.72	0.93	-0.28	-0.32	-0.23	-0.38	-0.37	-0.32	1		
8 Supervisor support (BJSQ: 4-16)	8.67	2.68	0.86	-0.34	-0.21	-0.12	-0.32	-0.34	-0.30	0.39	1	
9 Co-worker support (BJSQ: 4-16)	9.37	2.24	0.84	-0.20	-0.28	-0.14	-0.27	-0.36	-0.34	0.40	0.61	1
10 Work engagement (UWES: 0-9)	3.17	1.33	0.96	-0.15	-0.11	-0.13	-0.20	-0.58	-0.40	0.35	0.36	0.33

† Adjusted for sex and age. All correlations are significant ($p < 0.001$).

§ J-WIS: the Japanese version of the Work Incivility Scale (using original three-factor model); NAQ-R: Negative Acts Questionnaire-Revised; CCS: CREW (Civility, Respect, and Engagement at Work) Civility Scale; BJSQ: Brief Job Stress Questionnaire; UWES: Utrecht Work Engagement Scale.

Table 4. Exploratory factor analysis of 15 items of J-MWIS using maximum likelihood method and promax rotation among 2,191 Japanese civil servants (Model 2)

Item wording	Factor 1	Factor 2	Factor 3	Factor 4
<i>Coworker Incivility</i>				
C4 Coworker doubted your judgment on a matter over which you have responsibility.	0.830	-0.009	0.142	-0.073
C3 Coworker ignored or excluded you from professional camaraderie.	0.768	-0.088	-0.047	0.104
C1 Coworker paid little attention to your statement or showed little interest in your opinion.	0.758	0.059	0.140	-0.120
C5 Coworker made unwanted attempts to draw you into a discussion of personal matters.	0.428	0.128	-0.160	0.365
<i>Instigated Incivility</i>				
I4 You doubted another person's judgment on a matter over which the other person has responsibility.	0.048	0.703	0.030	-0.149
I1 You paid little attention to another person's statement or showed little interest in their opinion.	0.052	0.647	0.126	-0.087
I3 You ignored or excluded another person from professional camaraderie.	0.017	0.590	-0.084	0.077
I5 You made unwanted attempts to draw another person into a discussion of personal matters.	-0.092	0.485	-0.017	0.244
I2 You addressed another person in unprofessional terms, either publicly or privately.	-0.104	0.481	-0.007	0.184
<i>Supervisor Incivility</i>				
S4 Supervisor doubted your judgment on a matter over which you have responsibility.	0.025	-0.035	0.842	0.076
S1 Supervisor paid little attention to your statement or showed little interest in your opinion.	0.033	0.119	0.695	-0.004
S3 Supervisor ignored or excluded you from professional camaraderie.	0.194	-0.115	0.470	0.229
<i>Privacy/overfamiliarity</i>				
S2 Supervisor addressed you in unprofessional terms, either publicly or privately.	-0.066	-0.052	0.211	0.547
S5 Supervisor made unwanted attempts to draw you into a discussion of personal matters.	-0.149	0.067	0.293	0.527
C2 Coworker addressed you in unprofessional terms, either publicly or privately.	0.252	0.070	-0.166	0.485
Variance explained (eigenvalue) (%)	30.4 (5.1)	6.3 (1.7)	8.0 (1.3)	4.2 (1.2)

Bold figures indicate factor loadings greater than 0.35.

port was different ($z=4.63$, $p < 0.05$). Although the correlation of coworker incivility with supervisor support vs coworker support differed ($z=2.32$, $p < 0.05$), the correlation of instigated incivility with supervisor support vs co-

worker support did not differ ($z=0.66$, $p > 0.05$). These correlation differences suggest that the incivility measures are specific to supervisors or to coworkers and that instigated incivility is not.

Table 5. Exploratory factor analysis of 15 items of MWIS using maximum likelihood method and promax rotation among 1,071 Canadian health care workers (Model 1)

Item #	Factor 1	Factor 2	Factor 3
<i>Supervisor incivility</i>			
S3	0.837	0.074	-0.095
S4	0.801	0.024	0.020
S1	0.733	-0.006	0.030
S2	0.693	-0.099	0.093
S5	0.590	-0.004	-0.009
<i>Coworker Incivility</i>			
C4	-0.021	0.854	-0.027
C3	0.049	0.837	-0.096
C1	-0.007	0.826	0.001
C2	-0.029	0.658	0.114
C5	-0.017	0.417	0.242
<i>Instigated Incivility</i>			
I1	0.019	0.058	0.664
I4	-0.028	0.035	0.642
I3	0.034	0.026	0.599
I2	0.007	-0.018	0.590
I5	0.014	-0.042	0.507
Variance explained (%)	32.7	11.5	6.0

Bold figures indicate factor loadings greater than 0.35.

Factor structure of the J-MWIS and MWIS

Exploratory factor analysis for the J-MWIS yielded a four-factor model, which consisted of a different factor structure from the models expected (Table 4). Four of the five items for coworker incivility showed the greatest factor loading on Factor 1 (eigenvalue=5.1). Factor 2 consisted of all items from instigated incivility (eigenvalue=1.7) and Factor 3 consisted of three of the five items from supervisor incivility (eigenvalue=1.3). Factor 4 consisted of three items: two items from supervisor incivility (S2 and S5) and one item from coworker incivility (C2), mainly concerning privacy and overfamiliarity (eigenvalue=1.2). When analyzing separately, exploratory factor analysis showed every subscale of MWIS (supervisor incivility, coworker incivility and instigated incivility) comprised of a single factor.

In contrast, exploratory factor analysis for the MWIS yielded an original three-factor model (Table 5). All five items for supervisor incivility showed the greatest factor loading on Factor 1. Factor 2 consisted of all items from coworker incivility and Factor 3 consisted of all items from instigated incivility.

Among the Japanese sample, confirmatory factor analysis showed non-optimal fits for both of the models (Table 6). However, the original three-factor model was a better fit than four-factor model. Among Canadian sam-

ple, the three-factor model was the best fit. These results suggested that the J-MWIS is possible to be used as an original three-factor model.

Discussion

A total of 52.3% of Japanese employees have experienced at least one form of incivility at their workplace during the previous month compared with 86.0% of Canadian employees. The J-MWIS had moderate internal consistency reliability and good construct validity. Although four factors were extracted from exploratory factor analysis for the J-MWIS, confirmatory factor analyses showed that the original three-factor model (supervisor incivility, coworker incivility, and instigated incivility) was more appropriate for the data. Overall, the J-MWIS has a good level of reliability and validity comparable to that of MWIS.

The prevalence of workplace incivility among Japanese civil servants was lower than Canadian employees in this study. This prevalence was also lower than the results found in the studies on 612 nurses in Canada²⁾ and 659 nurses in the U.S.A.⁶⁾. Additionally, it was lower when compared to the results of 1,155 public-sector employees in the U.S.A.¹⁾. One possible reason for the lower prevalence in the Japanese sample is that high prevalence of workplace mistreatment is often reported in the health care sector³⁾. Since the majority of the Japanese sample in this study were civil servants and only 30% of them were health care workers, it may have contributed to the lower prevalence found. However, this finding is in line with the study on workplace bullying in Japan where it suggested that the prevalence of workplace mistreatment in Japan might be lower than other countries²⁰⁾. Although the number of consultations for bullying and harassment from workers is increasing in Japan¹⁴⁾, the prevalence of workplace bullying and harassment was found to be lower (6%) in the national representative sample compared with the average prevalence rate (17.4%) reported in a global meta-analysis^{17,32)}. Nevertheless, even at a lower prevalence compared with other countries, incivility behaviors exist in the Japanese community. With 52.3% of Japanese employees experiencing at least one form of incivility at their workplace in the previous month, such prevalence warrants prevention measures against uncivil behaviors in the workplace.

While the J-MWIS has good Cronbach's alpha coefficients of 0.81 for coworker incivility, it has modest reliabilities of 0.76 and 0.71, respectively, for supervisor incivility and instigated incivility. These Cronbach's alpha coefficients are slightly lower than the WIS^{1,2,7,12)} but are similar to MWIS¹⁰⁾. Coefficients of 0.70 are suggested to be acceptable by Nunnally³³⁾ for internal consistency reliability especially in the early stage of research, therefore, the J-MWIS is deemed to have a modest level of reliabil-

Table 6. Model fit index from confirmatory factor analysis

	GFI	AGFI	CFI	RMSEA	AIC	ECVI	Chi Square	df
<i>Japanese sample</i>								
Three-factor model (Original)	0.953	0.922	0.941	0.066	854.28	0.390	758.28	82
Four-factor model	0.906	0.865	0.864	0.093	1733.29	0.791	1661.29	84
<i>Canadian sample</i>								
Three-factor model (Original)	0.969	0.949	0.973	0.049	350.30	0.327	254.30	72
Four-factor model	0.886	0.837	0.843	0.108	1211.73	1.132	1139.73	84

GFI: Goodness of Fit Index; AGFI: Adjusted Goodness Fit Index; CFI: Comparative Fit Index; RMSEA: Root Mean Square Error of Approximation; AIC: Akaike's Information Criterion; ECVI: Expected Cross-Validation Index; df: degrees of freedom.

ity comparable to MWIS.

The findings of the present study supported the construct validity of this scale. For instance, high J-MWIS scores were associated with lower workgroup civility, lower supervisor and coworker support and higher workplace bullying. This finding is consistent with studies that showed workplace incivility is one form of workplace mistreatments and an opposite variable for workplace civility or job resources such as worksite social support^{3,21}. High J-MWIS scores were also associated with higher psychological distress, higher intention to leave and lower work engagement, as expected theoretically. This finding is consistent with previous studies that reported workplace incivility was correlated with poor mental health, high intention to leave and low work engagement^{1,2,8,11,12}.

Exploratory factor analysis for the J-MWIS yielded a four-factor model, instead of the original three-factor model of the MWIS. The fourth factor consists of three items, that is, "Supervisor or coworker addressed you in unprofessional terms, either publicly or privately" and "Supervisor made unwanted attempts to draw you into a discussion of personal matters," which could be interpreted as overfamiliarity or privacy. This finding indicated that these three items are unique forms of incivility in Japan. In the collective Japanese workplace, people are expected to share responsibilities and maintain harmony^{18,19}. In such cultures, being overfamiliar may appear particularly rude. Another possible reason is that these three items may be recognized as some form of sexual harassment. Some participants might imagine name-calling when they come across the "in unprofessional terms, either publicly or privately" item. "A discussion of personal matters" could also be perceived to include sexual topics. However, as the sample in this study only included local government employees, the factor structure may be different when using other samples such as industry workers in Japan. The factor structure of the J-MWIS needs to be reexamined with a more diverse sample of employees including those in the private sector. Since confirmatory factor analyses showed that the original three-factor model fitted the data moderately, using the

original three-factor model would be a better solution for the J-MWIS for a while.

Finally, various potential limitations should be considered. First, the lack of health care workers in the Japanese samples may have altered the findings when making comparison with the Canadian samples. Second, MWIS items were correlated with each other so error correlations might result in high modification indexes, which may lead to poor model fit in confirmatory factor analysis. Also, there is a possibility that J-MWIS might have missing items on relevant uncivil behaviors frequency occurred in the Japanese culture, such as gender harassment. Further examination of the wordings or contents of J-MWIS may be needed. Moreover, the present study did not examine the test-retest reliability, which should also be tested in a future study. Finally, although the present sample was from various occupations, it was limited to one particular local government organization, which may limit the generalizability of the findings. The reliability and validity of the scale should be tested in other samples, such as private companies, as mentioned above, or in a nationally representative sample of workers in Japan.

In spite of the limitations, this is the first study to investigate the prevalence of workplace incivility in Japan using the newly developed scale. The results in this study showed uncivil behaviors are common in the Japanese workplaces, though the prevalence itself was lower than other countries. Future studies are needed to investigate the antecedents and outcomes of incivility in the Japanese workplaces, as well as other Asian countries that have little research in terms of workplace incivility.

Conclusion

A total of 52.3% of Japanese employees have experienced at least one form of incivility at their workplace during the previous month and it was lower compared with 86.0% of Canadian employees. This study confirmed the internal consistency reliability and concurrent and construct validity of the 15-item J-MWIS. The J-MWIS may be a useful measure to investigate the prevalence, as-

sociated factors and impact on health of workplace incivility in Japan, which should contribute to identification, control, and prevention of this common workplace mistreatment.

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