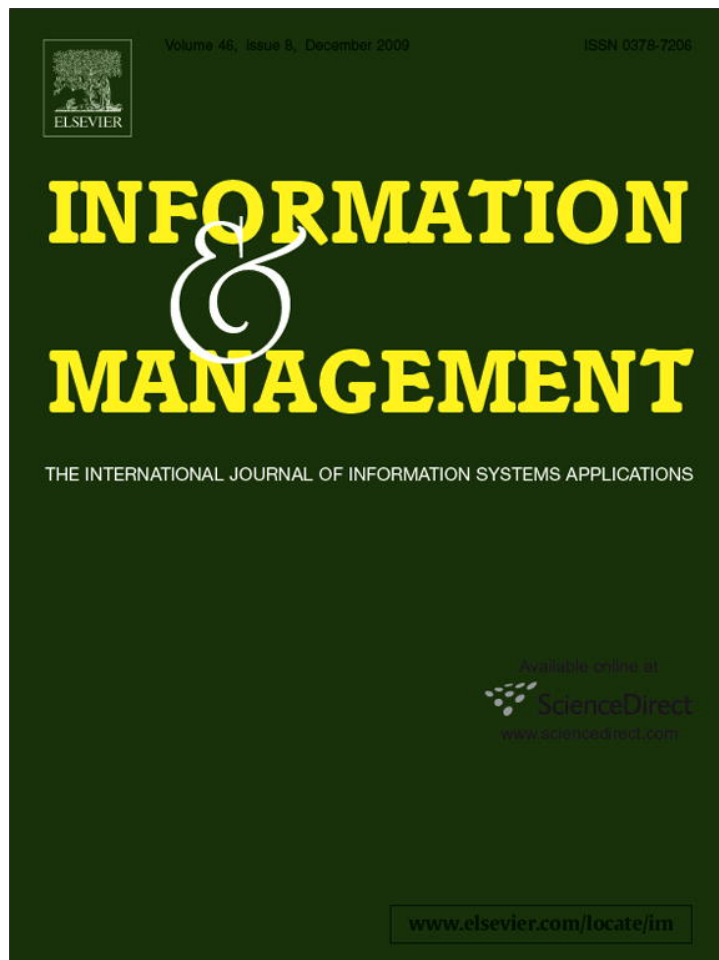


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Mind your E-manners: Impact of cyber incivility on employees' work attitude and behavior

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ABSTRACT

We examined cyber incivility in the workplace of Singapore and also examined its impact on employee job satisfaction, organizational commitment, quit intention, and workplace deviance. Data were collected from 192 employees. Results of the survey showed that male supervisors engaged in active forms of cyber incivility while female supervisors engaged in passive cyber incivility. Regression analyses also showed that cyber incivility was negatively related to employees' job satisfaction and organizational commitment. Employees who experienced cyber incivility were also more likely to quit their jobs or engaged in deviant behavior against their organization. Thus, cyber incivility has negative consequences on both individuals and organizations. Consequently, it is important that firms educate employees and have appropriate policies to discourage cyber incivility.

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1. Introduction

The Internet has changed the way we communicate and interact in the workplace. Electronic communication systems have reduced temporal and physical constraints, and increased horizontal and vertical communication in the organization [1]. Their ease, speed and efficiency has made them an increasingly popular medium of communication [11]. In particular, emails are the preferred form of communication in the workplace today [17].

But using emails to communicate may also be a double-edged sword; the increased reliance and dependency on them has allowed individuals to engage in incivility. Recently, Pearson and Porath [16] noted that fast-paced, high tech interactions may add to incivility, as people believe that they do not have time to be 'nice' and that impersonal contacts do not require courteous interaction. Despite the pervasiveness of email usage and its potentially erosive effect on interpersonal interaction, little research has been devoted to examining uncivil email encounters or cyber incivility in the workplace.

Cyber incivility is *communicative behavior exhibited in computer-mediated interactions that violate workplace norms of mutual respect*. There may or may not be an intention on the part of the perpetrator

of the cyber behavior to cause harm. Although the intent to harm may be ambiguous, the spillover effect of an uncivil interpersonal workplace encounter on others as well as the organization should not be underestimated; most users of websites admit to describing their uncivil encounters to someone else inside or outside their office. Indeed, employees who perceived themselves as victims of incivility are reported to decrease their work efforts, stopped offering assistance to newcomers or coworkers, and reduced their contribution to the organization [9]. Productivity is also affected, as victims lose work time worrying about an incident, and/or about future interaction with the perpetrator. Thus *perceptions* of employees receiving incivility play an important role in influencing how victims evaluate and respond to an incident. Indeed, studies focusing on interpersonal mistreatment have mostly examined the target's perceptions, rather than the intentions of the instigator, and found that the victim's perception of uncivil behavior, bullying, or mistreatment were strongly associated with reduced productivity, lower commitment, and greater absenteeism. Our research focused on the individuals' perception of the perpetrator's cyber behavior and its impact on the workplace.

Although subtle, cyber incivility is not a trivial issue; it is prevalent. For instance, Alonzo and Aiken [2] found that males tend to engage in online flaming more than females. In a similar vein, Johnson et al. [10] found evidence of cyber incivility during computer-mediated negotiation.

While experiences of cyber incivility directly affect individuals, cyber incivility can be detrimental to the organization. US \$5

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billion in health costs has been estimated to have been incurred by organizations due to stress-related illnesses of victims of rude emails. This is consistent with recent reports that negative online interactions are likely to generate a stronger adverse effect on victims than traditional face-to-face or phone encounters. This is because individuals lack the opportunity to seek immediate clarification or feedback as recipients may be separated from senders geographically and temporally [5].

We examine the impact of cyber incivility on employees' job satisfaction, organizational commitment, intention to quit and workplace deviant behavior. We also examined the effect of supervisors' gender on their type of cyber incivility. With such knowledge, managers can design and implement effective organizational intervention programs and policies to limit, or even, prevent the occurrence of cyber rudeness behavior. At this point, we acknowledge that cyber incivility can take many forms. In our study, we focus mainly on the actual email content and message.

2. Theoretical background and research hypotheses

2.1. Cyber incivility, work attitudes, and behavior

The relationship between cyber incivility, work attitude, and deviant behaviors can best be understood by theoretical perspectives found in research on work stress and relational evaluation. Our research framework is shown in Fig. 1.

Research on work stress has suggested that people monitor their work environment: stimuli and information are continually perceived and appraised. When either is perceived to be threatening, it will be seen as stressful and elicit a response from the individual. Cyber incivility is an unpleasant and aversive stimulus that undermines the dignity and self-esteem of employees [15].

Insights from research on dysempowerment theory (a process in which employees perceive certain work events as stripping them of their dignity, and affecting their sense of competence and self-efficacy) [13] help explain why cyber incivility and rudeness are stressful. In turn, this impairs the individual's trust and commitment to the organization, especially when the source of incivility stems from someone of a higher status, such as a supervisor. Thus, when employees perceive that others do not treat them as they deem desirable, they respond in ways that may be detrimental to the organization.

Withdrawal from stressful work situation is a common response in coping with stress. Sonnentag and Zijlstra [18] noted that stress created a noxious situation in the work environment and that employees tried to avoid such aversive situations by engaging in withdrawal behavior and quitting their jobs.

Employees who reported experiencing face-to-face incivility from their supervisors tended to have lower levels of job satisfaction and organizational commitment; they also reported higher levels of anxiety and poor mental health [6].

Given the prevalence of email usage at the workplace, it is important to examine whether incivility through an electronic medium would yield similar findings to incivility through face-to-face interactions. Thus, we posited:

H1. Cyber incivility is negatively related to job satisfaction and organizational commitment.

H2. Cyber incivility is positively related to workplace deviance and quit intention.

2.2. Cyber incivility and gender of supervisor

Studies on workplace incivility showed that men may respond to incivility in a different way from women. For example, male victims of workplace incivility were more likely to respond to the perpetrators, especially female ones, and attempt to ruin the perpetrators' reputation while female victims were more likely to avoid the perpetrators. Research on bullying helps to provide some insights on the effect of gender on types of bullying behavior. Women are socialized to be less self-assertive and less aggressive. Thus, men were found to engage in more aggressive bullying behaviors (shouting and humiliating the victims publicly). Women tend to engage in less direct bullying behaviors (spreading rumors or social exclusion). Therefore, we argued that male supervisors would be more likely to engage in active cyber incivility than female supervisors. Thus, we hypothesized:

H3. Male supervisors are likely to engage in active cyber incivility and female supervisors are likely to engage in passive cyber incivility.

3. Method

3.1. Sample and procedure

Data were obtained from employees in the banking and financial service industry in Singapore. Prior to administration of the main survey, a pre-test was conducted with 20 employees. This was intended to ensure the clarity of the instructions and overall presentation of the survey prior to its administration.

A short briefing of the employees was conducted at the company premises. We took great care to assure respondents that their responses would remain anonymous and that participation in the study was voluntary. After the briefing, the final questionnaire package containing the cover letter, survey instrument and stamped reply envelope was distributed to 250 employees. Respondents were requested to return the completed surveys in the sealed envelope provided.

One hundred and ninety-two employees provided usable data on all study variables (response rate of 76.8%). This response rate is comparable with those of other studies that have examined antisocial behavior at the workplace [3]. Sixty-three percent of respondents were women. The average age of the respondents was 30 years (SD = 7.4) and their average years of work experience was 7 (SD = 7.8). Thirty-nine percent of the respondents were married.

3.2. Instrument

3.2.1. Cyber incivility

To facilitate the development of a cyber incivility measure, a focus-group discussion was first held with 10 working adults who attended a management class in the MBA program at our university; its purpose was to create a pool of items that reflected uncivil behaviors that may be committed via emails in the workplace. The respondents were asked to write down email

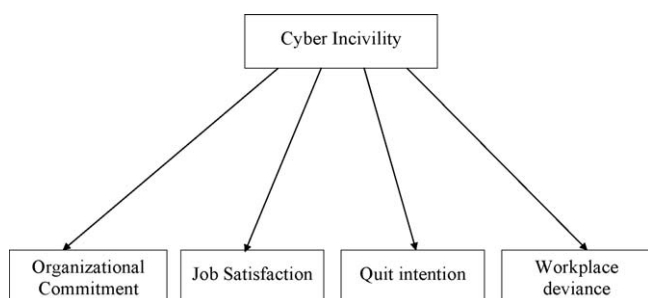


Fig. 1. Research framework.

behaviors they had experienced from their supervisors that they consider to violate their interpersonal norms of respect. A total of 20 items were obtained from this.

We then took some steps to increase the psychometric quality of this scale. First, the 20 items were pre-tested with two management professors and twenty MBA students. Comments and suggestions from the pre-test served as a basis for fine-tuning the scale. Subsequently, based on this feedback, we eliminated 6 items. This resulted in a scale of 14 items in the final questionnaire. Respondents were asked to indicate the extent to which they experienced each of the behaviors from their immediate supervisor during the past year. Items were anchored on a 5-point Likert scale ranging from (1) Not at all to (5) All the time.

Examples of items include the supervisor “Made demeaning or derogatory remarks about you through email”, “Put you down or was condescending to you in some way through email”. A high reliability coefficient of 0.95 was obtained for this scale.

3.2.2. Job satisfaction

Job satisfaction was measured with a scale developed by adapted from Luthans, Avolio, Avey and Norman [12] and Connolly and Viswesvaran [8]. This scale been extensively used in research on job satisfaction. Items were coded on a Likert scale from (1) Strongly Disagree to (7) Strongly Agree. In our study, the five items yielded a Cronbach's alpha of 0.85.

3.2.3. Organizational commitment

Chen and Francesco's [7] scale was used to assess organizational commitment. The scale included 9 items, such as. “I find that my values and the organization's values are similar” and “I really care about the fate of this organization”. Items were scored on a Likert scale from (1) Strongly Disagree to (7) Strongly Agree. A Cronbach's alpha of 0.95 was obtained, indicating high inter-item consistency.

3.2.4. Quit intention

This variable was measured with a 3 item scale developed by Brown et al. [4]. Items were scored on a Likert scale from (1) Strongly Disagree to (7) Strongly Agree. The items included “I often think about quitting my job”. This scale yielded a Cronbach's alpha of 0.94.

3.2.5. Workplace deviant behaviors

This was measured with the scale developed by Thau et al. [19]. This scale had 20 items which were scored on a Likert scale from (1) Never to (7) Daily. Examples of items included “putting little effort into your work” and “leaving work earlier than you should.” A Cronbach's alpha of 0.97 was obtained.

We also performed factor analyses to provide evidence of discriminant validity of our measures. Table 1 presents a summary of these and provides evidence that our measurement instruments had discriminant validity. Table 2 presents the descriptive statistics, average variance extracted (AVE), correlations, and reliabilities. The AVE values for all constructs were above 0.50. Further, the squares of the correlations among constructs were less than the AVEs, satisfying discriminant validity.

4. Analyses and results

4.1. Reported frequency and importance of email communications at work

Fig. 2 summarizes the frequency of email exchanges between employees and their supervisors in the workplace. Respondents were asked to indicate the average number of work-related emails that they receive from, and send to, their supervisors during a work day.

Table 1
Factor analysis.

	1	2	3	4	5	6
active1	0.261	-0.182	0.770	0.215	0.035	0.090
active2	0.239	-0.131	0.840	0.065	0.047	-0.104
Active3	0.249	-0.170	0.790	0.231	0.060	0.089
Active4	0.211	-0.159	0.837	0.184	0.054	-0.059
Active5	0.344	-0.219	0.711	0.181	-0.012	0.039
Active6	0.269	-0.248	0.839	0.030	0.048	-0.030
Active7	0.309	-0.176	0.805	0.138	0.066	-0.044
Passive1	0.054	-0.081	0.072	0.793	0.045	-0.053
Passive2	0.011	0.007	0.099	0.793	0.074	-0.117
Passive3	0.127	-0.128	0.231	0.808	0.105	0.053
Passive4	0.007	0.012	0.078	0.821	-0.106	-0.037
Passive5	0.148	-0.129	0.224	0.790	0.117	0.096
Passive6	0.116	-0.145	0.164	0.818	0.064	0.152
Passive7	0.137	-0.108	0.007	0.842	0.083	0.043
oc1	-0.198	0.728	-0.155	-0.018	-0.116	0.204
oc2	-0.130	0.837	-0.130	-0.043	-0.070	0.070
oc3	-0.106	0.710	0.020	-0.095	-0.177	-0.202
oc4	-0.208	0.817	-0.114	0.026	-0.094	-0.054
oc5	-0.157	0.854	-0.152	-0.047	-0.086	0.097
oc6	-0.181	0.849	-0.135	-0.103	-0.069	-0.093
oc7	-0.148	0.852	-0.197	-0.065	-0.139	-0.046
oc8	-0.200	0.782	-0.113	0.003	-0.138	0.065
oc9	-0.174	0.807	-0.199	-0.152	-0.152	-0.151
jobsat1	-0.233	0.271	-0.210	-0.135	-0.426	0.581
jobsat2	-0.205	0.341	-0.188	-0.107	-0.481	0.562
jobsat3	-0.067	-0.019	-0.167	-0.182	-0.506	0.629
jobsat4	-0.120	0.008	-0.114	-0.128	-0.440	0.563
jobsat5	-0.107	0.082	-0.046	-0.098	-0.391	0.481
quit1	0.011	-0.290	-0.025	0.017	0.830	0.114
quit2	0.018	-0.375	0.010	0.067	0.843	0.027
quit3	0.016	-0.385	0.101	0.108	0.810	-0.065
orgde1	0.721	-0.073	0.155	0.020	-0.079	0.183
orgde2	0.678	-0.125	0.223	0.014	0.042	0.291
orgde3	0.814	-0.088	0.140	-0.080	0.038	-0.213
orgde4	0.701	-0.096	0.098	0.181	0.079	0.361
orgde5	0.639	-0.142	0.017	0.138	0.072	0.203
orgde6	0.816	-0.099	0.142	0.053	-0.001	-0.103
orgde7	0.789	-0.160	0.178	0.176	0.167	0.022
orgde8	0.761	-0.139	0.178	0.142	0.195	0.085
orgde9	0.814	-0.122	0.202	0.043	-0.057	-0.019
orgde10	0.756	-0.200	0.112	-0.113	0.040	-0.412
orgde11	0.846	-0.159	0.131	-0.096	0.047	-0.280
orgde12	0.801	-0.113	0.129	-0.032	0.052	-0.023
orgde13	0.738	-0.140	0.205	0.145	0.061	0.289
orgde14	0.769	-0.194	0.097	-0.037	-0.009	-0.363
orgde15	0.837	-0.178	0.108	-0.069	0.024	-0.368
orgde16	0.796	-0.128	0.118	0.120	0.015	-0.171
orgde17	0.787	-0.088	0.193	0.158	-0.029	0.075
orgde18	0.732	-0.073	0.249	0.141	0.024	-0.008
orgde19	0.736	-0.197	0.125	0.114	0.087	-0.010
orgde20	0.787	-0.186	0.144	0.171	-0.022	0.137

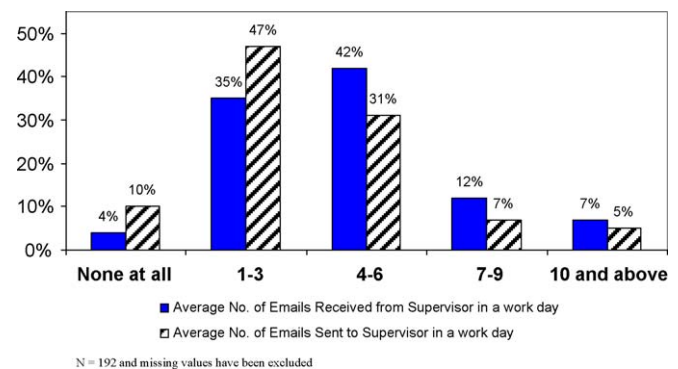


Fig. 2. Frequency of work-related email exchanges between supervisors and employees. N = 192 and missing values have been excluded.

Table 2
Descriptives, correlations and reliabilities.

	Mean	SD	AVE	1	2	3	4	5
(1) Cyber incivility	1.55	0.77	0.80	(0.95)				
(2) Organizational commitment	4.23	1.14	0.81	−0.44**	(0.95)			
(3) Job satisfaction	4.28	1.24	0.57	−0.40**	0.73**	(0.85)		
(4) Quit intention	4.21	1.60	0.83	0.19*	−0.51**	−0.62**	(0.94)	
(5) Workplace deviance	1.59	0.71	0.77	0.38**	−0.39**	−0.35**	0.13	(0.97)

N = 192. Reliabilities are shown in parentheses along the diagonal.

* $p < 0.05$.
** $p < 0.01$.

Table 3
Hierarchical regression analyses.

Independent variables	Organizational commitment		Job satisfaction		Quit intention		Workplace deviance	
	Step 1 (β)	Step 2 (β)	Step 1 (β)	Step 2 (β)	Step 1 (β)	Step 2 (β)	Step 1 (β)	Step 2 (β)
Covariates								
Age	0.13*	0.07	0.22*	0.17*	−0.26*	−0.24*	−0.03	0.05
Social desirability	0.14*	0.12*	0.09	0.07	0.04	0.64	−0.11*	−0.08*
Main variables								
Cyber incivility		−0.43**		−0.38**		0.17*		0.54**
R^2	0.04	0.22	0.06	0.20	0.07	0.10	0.05	0.33
ΔR^2		0.18**		0.14**		0.03*		0.28**

N = 192.
* $p < 0.05$.
** $p < 0.01$.
+ $p < 0.10$.

Results suggest that majority of respondents (42%) received an average of 4–6 work-related emails from their supervisors per work day, while 47% reported sending an average of 1–3 work-related emails to their supervisors. Taken together, these suggest that the majority of employee-supervisor dyads in the Singapore workforce exchanged about 5–9 emails at the workplace on a typical work day. These figures put emails as the second most frequently used communication channel between employees and supervisors.

We also found that 30% of the respondents reported that they used emails most often to communicate with their supervisors. Face-to-face communication was ranked first, with 40% of respondents reporting that it was used most frequently for interaction with their supervisor at work. Office phones and mobile phones were ranked third (17%) and fourth (13%) respectively.

4.2. Cyber incivility and employees' work attitudes and behaviors

We used hierarchical regression analyses to test the hypothesized relationships between cyber incivility and work attitudes. Two control variables, age and social desirability, were first entered into the equation. The independent variable, cyber incivility, was then entered into the second step of the equation for each of the dependent variable. Entering the independent variables simultaneously into the second equation allowed us to test for the possible differential impact of active and passive incivility on each of the individual responses.

Results of regression analyses are shown in Table 3; they suggest that cyber incivility is significantly and negatively related to organizational commitment ($\beta = -0.43, p < 0.01$) and job satisfaction ($\beta = -0.38, p < 0.01$). Thus, H1 is supported. Results also showed that cyber incivility was positively associated with workplace deviance ($\beta = 0.54, p < 0.01$), and quit intention ($\beta = 0.17, p < 0.05$). Thus, H2 was also supported.

While not formally hypothesized, we also performed regression analyses of the two types of cyber incivility on the various work-related outcomes (as advised by an I&M reviewer). Results of the regression analyses showed that active cyber incivility was

negatively and significantly related to organizational commitment ($\beta = -0.57, p < 0.01$), job satisfaction ($\beta = -0.49, p < 0.01$) and positively related to intention to quit ($\beta = 0.21, p < 0.10$) and workplace deviance ($\beta = 0.51, p < 0.00$). Passive cyber incivility was negatively and significantly related with job satisfaction ($\beta = -0.23, p < 0.05$) and positively and significantly related to intention to quit ($\beta = 0.26, p < 0.05$). The relationships between passive cyber incivility and organizational commitment ($\beta = -0.10, N.S$) and workplace deviance ($\beta = 0.01$) however, were not statistically significant.

These findings suggest that active cyber incivility were more significant predictors of negative work attitudes and behavior than passive cyber incivility. As active forms of cyber incivility are typically more direct and openly targeted at victims compared to passive forms, it is not surprising that this type of cyber incivility displayed a stronger and more significant relationship with victims' work attitudes and behavior than to passive cyber incivility.

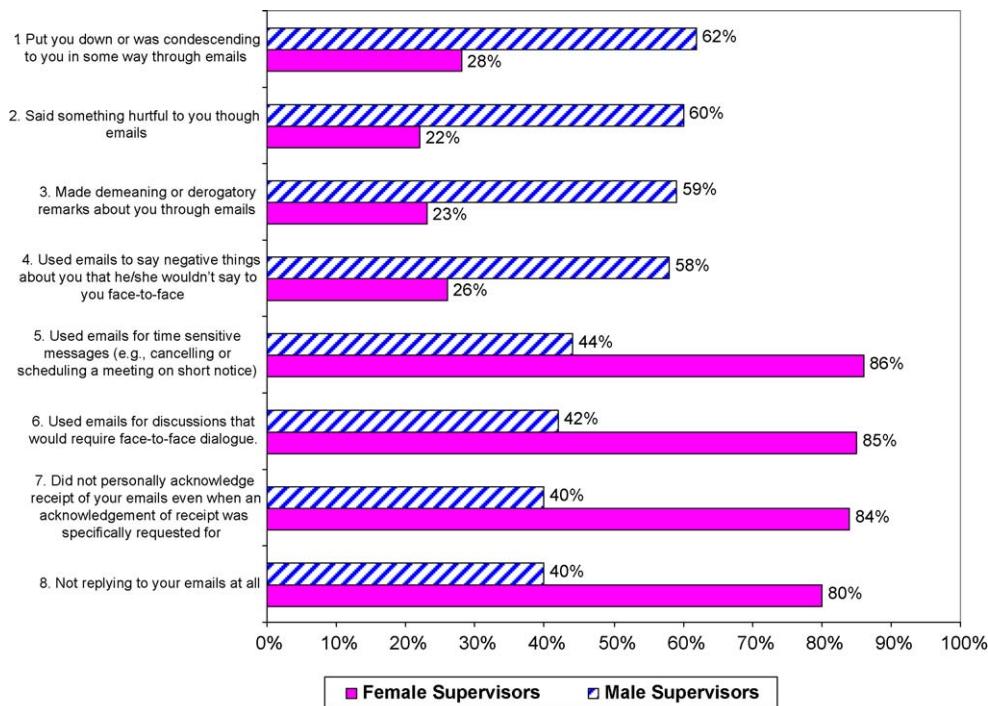
4.3. Cyber incivility and gender of supervisor

The majority of respondents (91%) reported experiencing cyber incivility from their supervisors at the workplace. 47% reported they worked under male supervisors and 53% reported working

Table 4
t-Tests comparing cyber incivility between male and female supervisors.

	Male supervisors	Female supervisors	t-Test
	Mean (SD)	Mean (SD)	
Male employee			
Active cyber incivility	1.94 (1.01)	1.37 (0.52)	2.88**
Passive cyber incivility	1.90 (0.94)	2.56 (0.88)	3.01**
Female employee			
Active cyber incivility	1.70 (0.84)	1.26 (0.46)	3.69***
Passive cyber incivility	1.80 (0.89)	2.30 (0.81)	3.28**

** $p < 0.01$.
*** $p < 0.001$.



N = 174 (Only respondents who have experienced cyber incivility). Missing values have been excluded

Fig. 3. Respondents who have experienced cyber incivility from supervisors at the workplace. N = 174 (only respondents who have experienced cyber incivility). Missing values have been excluded.

under female supervisors. We performed *t*-test to examine H3. Results of these are given in Table 4.

Interestingly, our findings suggested that the type of cyber incivility behaviors experienced by employees depended on the gender of their supervisor. Male employees with male supervisors reported higher levels of active cyber incivility (mean = 1.94) compared to those with female supervisors (mean = 1.37). Similarly, female employees with male supervisors reported experiencing higher levels of active cyber incivility from male supervisors (mean = 1.70) than with female supervisors (mean = 1.26). *t*-Test showed that the difference in levels of active cyber incivility from male and female supervisors was statistically significant. Table 4 also showed that both male (mean = 2.56) and female (mean = 2.53) employees experience higher levels of passive forms of cyber incivility from female supervisors than male supervisors. This difference was also statistically significant. *t*-Test results therefore, supported H3.

Further analyses were conducted to determine if male and female supervisors engage in specific forms of active incivility. Fig. 3 shows the top four commonly experienced active incivility and top four commonly experienced passive incivility. Of the respondents who have male supervisors, 62% reported receiving emails that *put them down or were condescending* in some way (Item 1), while another 60% received emails with *hurtful comments* (Item 2). Following close behind, 59% of respondents with male supervisors were *subjected to demeaning or derogatory remarks through emails* (Item 3), while 58% reported that their male supervisors used emails to say *negative things about them that they would not say face-to-face* (Item 4).

Compared to employees with male supervisors, only 28% of employees with female supervisors reported receiving emails that put them down or were condescending in some way (Item 1), and 22% of respondents with female supervisors reported receiving emails with hurtful comments (Item 2). Only 23% of employees with female supervisors reported receiving demeaning or deroga-

tory emails (Item 3), and 26% reported that their female supervisors used emails to say negative things about them that they would not say face-to-face (Item 4).

In contrast, an overwhelming 86% of respondents with female supervisors complained that their supervisors used emails for *time-sensitive messages, such as cancelling or scheduling a meeting on short notice* (Item 5). While 85% reported that their female supervisors *tended to use emails for discussions that would require face-to-face dialogue* (Item 6), while another 84% reported that their female supervisors *did not personally acknowledge receipt of their emails even when an acknowledgement of receipt was specifically requested* (Item 7). Another 80% of respondents also reported that their female supervisors *tend not to reply to their emails at all* (Item 8). While these four uncivil behaviors (Items 5–8) were common among respondents with female supervisors (80% and above responses), these behaviors were experienced by less than 45% of respondents who had male supervisors.

These findings suggest that male and female supervisors engage in cyber incivility in different ways: male supervisors tend to display active and direct forms (being condescending, demeaning, saying something hurtful) while female supervisors were more likely to engage in passive forms (using emails for time-sensitive messages, not acknowledging receipt of emails, not replying to emails). Maybe males are more assertive and more prone to direct their displeasure openly towards their targets. On the other hand, women tend to be less confrontational and avoid direct conflict.

5. Discussion

We examined the effects of cyber incivility on employees' work attitudes and behavior in Singapore. Our results suggest that experiences of cyber incivility from immediate supervisors engender different negative attitudes and behaviors from the victims. This result supports findings of previous studies suggesting that disrespectful and uncivil cyber behaviors are perceived as

a source of threat and harm to personal well-being and elicit some kind of response. This result also reinforces the conclusions of previous studies that low intensity, uncivil behaviors violate norms of mutual respect and have the potential to cause harm. Indeed, our study provided empirical evidence that incivility need not occur in the context of face-to-face interactions. Even emails that contain rude messages can invoke perceptions of incivility and trigger negative work-related outcomes. Results show that victims of cyber incivility would be likely to respond with lower levels of organizational commitment, job satisfaction, and workplace deviant behaviors that may harm the organization. Victims of cyber incivility were also more likely to quit the organization.

Our findings also show that male and female supervisors engage in different types of cyber incivility. Men engage in active forms of cyber incivility-email behaviors that are directly targeted at the victims, confrontational, and displayed openly. Women engage in more passive forms of cyber incivility-email behavior that is exclusionary, ignoring and showing little interest in the sender.

6. Implications

Results offer several theoretical and practical implications for managers and organizations. First, it builds on and contributes to research on workplace incivility. In doing so, our study furthers our understanding of how rude cyber behaviors from supervisors can affect employees' work attitudes and behaviors.

Second, our finding that cyber incivility triggers negative work attitudes and behaviors has practical relevance; email users need to be mindful of their netiquette when communicating via emails at the workplace. Due to a lack of contextual and social cues, there is little opportunity for email recipients to seek immediate clarification and feedback [14]. Thus, senders of emails have to be careful with the tone of their messages at all times.

Third, organizations should consider creating a platform where employees can discuss any difficulties that they face when communicating via emails. For instance, employees unfamiliar with the norms and conventions of email use may discuss their problems and obtain information from others who are more experienced with the electronic medium. By allowing employees opportunities to contribute and air their views, there will be greater knowledge and consensus regarding netiquette and acceptable behavior in electronic communication.

Finally, since individuals do not usually report incivility perpetrated by supervisors to the organization, human resource managers may need to encourage employee feedback on their supervisors. This would facilitate early identification of the perpetrators and may help to prevent any problem from escalating. Early detection would allow human resource managers to counsel the offending manager appropriately.

7. Limitations and conclusion

First, the study's cross-sectional nature precludes drawing definite causal inferences about the relationships among variables. Second, data were collected using a single source, self-reported method. Although the nature of the variables rendered the use of self-reporting as appropriate, relying fully on such data raises the possibility that results may be inflated due to common method variance. To overcome this limitation, we conducted a Harmon one-factor test to see if there was a common factor running across all the items. We did not find any such overarching factor.

Third, incivility is a complex phenomenon that can be affected by many factors. The level of interpersonal incivility prevalent in the work environment may have an impact on employees' morale and productivity, which in turn may affect how they react to uncivil emails from their supervisors. This would help us ascertain

the impact of a hostile work environment arising from interpersonal mistreatment on people's responses to cyber incivility.

A fourth limitation of our research was its focus on an Asian setting. Specifically we examined the impact of cyber incivility on employees' work attitude and behavior in Singapore. Given that cultural differences in email usage and policies may exist, we must be aware that the findings should be interpreted within this boundary. Developing a body of related works in other non-Western and Western settings could provide light on the possible cultural differences in cyber incivility and advance our understanding of its impact on the employee and organization.

In conclusion, we note that cyber incivility is not a trivial issue. Our study contributed to and extended the focus of this stream of research. Since the use of emails pervades most workplaces, their potential problems remain an issue that warrants our attention. Our research represented an initial step in examining the impact of cyber incivility on individual work attitudes and behavior.

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Appendix A. Appendix A: Measures used:

Cyber incivility

1. Said something hurtful to you through email.
2. Used emails to say negative things about you that he/she would not say to you face-to-face.
3. Made demeaning or derogatory remarks about you through email.
4. Inserted sarcastic or mean comments between paragraphs in emails.
5. Put you down or was condescending to you in some way through email.
6. Sent you emails using a rude and discourteous tone.
7. Used CAPS to shout at you through email.
8. Not replying to your email at all.
9. Ignored a request (e.g., schedule a meeting) that you made through email.
10. Replied to your emails but did not answer your queries.
11. Used emails for time-sensitive messages (e.g., canceling or scheduling a meeting on short notice).
12. Paid little attention to a statement made by you through email or showed little interest in your opinion.
13. Not acknowledging that he/she has received your email even when you sent a "request receipt" function.
14. Used email for discussions that would require face-to-face dialogue.

Job satisfaction

1. I am generally very satisfied with my job.
2. I am generally satisfied with the kind of work I do in this job.
3. I *seldom* think of quitting my job.
4. Very few people on this job feel that the work is useless or trivial.
5. Most people on this job are very satisfied with the job.

Quit intentions

6. I will probably leave my organization within the next 1–2 years.
7. I will probably look for a new job in the next year.
8. I will actively look for a new job in the next year.

Organizational commitment

1. I am willing to put in a great deal of effort beyond that normally expected in order to help this organization be successful.
2. I tell my friends that this is a great organization to work for.
3. I would accept almost any type of job assignment in order to keep working for this organization.
4. I find that my values and the organization's values are similar.
5. I am proud to tell others that I am part of this organization.
6. This organization really inspires the very best in me in the aspect of my job performance.
7. I am extremely glad that I chose this organization to work for over others that I was considering at the time I joined.
8. I really care about the fate of this organization.
9. For me, this is the best of all possible organizations to work for.

Workplace deviance

1. Taken property from work without permission.
2. Spent too much time fantasizing or daydreaming instead of working.
3. Falsified receipts/time sheets to get more money for business expenses/overtime.
4. Taken an additional or longer break than is acceptable.
5. Came in late without permission.
6. Littered your work environment.
7. Intentionally worked slower than you could.
8. Putting little effort into your work.
9. Discussed confidential company information with unauthorized persons.
10. Used an illegal drug or consumed alcohol on the job.
11. Delayed work in order to get overtime.
12. Made long personal calls (including mobile phone) at work.
13. Wasted company time socializing with coworkers.
14. Accepted money, gifts and kickbacks from others.
15. Intentionally damaged/vandalized company property or equipment.
16. Withheld information from people who needed it.
17. Left work earlier than you should.
18. Put projects off till the last minute.
19. Called in sick when not ill.
20. Took company supplies home without permission.

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