INTERNATIONAL JOURNAL OF OCCUPATIONAL AND ENVIRONMENTAL HEALTH
2018, VOL. 24, NOS. 1–2, 38–46
https://doi.org/10.1080/10773525.2018.1507867

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ARTICLE

Digging deeper into the shared variance among safety-related climates: the need for a general safety climate measure

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ABSTRACT

We combined three independent streams of workplace climate research, safety, violence prevention, and civility, to devise a general safety climate scale that explicitly addressed a variety of risks. A confirmatory factor analysis suggested that a higher-order factor may be responsible for the similarity in relationships across these safety-related climate measures with exposure to organizational hazards and resulting employee outcomes. As a result, a concise 10-item measure was developed and validated to assess a possible general safety climate factor. Further analyses suggested that the use of a general safety climate measure did not attenuate the relationships with workplace hazards and employee outcomes. Although different safety-related climate variables may be theoretically distinct, there may not be a measurable benefit in promoting one form of climate over others. Future studies should consider employing the general safety climate measure in place of domain-specific climate measures, unless the domain-specific climate is solely of interest.

ARTICLE HISTORY
Received 4 June 2016
Revised 14 November 2017
Accepted 31 July 2018

KEYWORDS
Organizational climate; safety climate; violence prevention climate; civility climate; workplace accidents; workplace mistreatment

Introduction

Workers across a variety of industries are frequently exposed to numerous physical and psychosocial (e.g. violence and incivility) workplace hazards that can lead to damaging outcomes. In addition to the prevalence of exposure to these hazards, research has also evaluated the direct impact of these hazards on employees such as physical injury and psychological strain (e.g. anxiety or depression at work) [1–3]. One workplace factor that has been consistently found to relate to exposure to workplace hazards is perceptions of workplace climate or organizational policies, practices, and procedures [3–7]. Workplace climate is an exceptionally broad construct that can be directly applicable to all areas of employees' workplace experiences. Even within the narrower domain of occupational safety, a vast number of policies, practices, and procedures can impact employees' workplace perceptions. As a result, in order to address the different organizational climate components that can impact the work environment, a diverse set of safety-related climate measures have been developed to independently address workplace accidents, violence, and mistreatment [2,8–10]. This has resulted in a somewhat disjointed literature in which different measures have been used to address different hazards. Our purpose in this paper is to introduce a generic safety climate measure that is explicitly designed to assess safety from both physical and psychosocial workplace hazards.

Most of the climate research concerning safety has related it to physical workplace hazards and associated outcomes such as accidents and injuries [3]. Although climate can be studied at both the organizational and the individual level [11], we chose to focus our initial research at the level of individual perceptions for two reasons. First, the majority of the safety climate literature assesses climate at this level. For example, in their meta-analysis of the safety climate literature, Beus, Payne, Bergman, and Arthur [12] found that about 61% of their effect sizes were at the perceptual level. Second, results from the Beus et al. meta-analysis found similar patterns of relationships with injuries between perceptual-level and organizational-level safety climate.

In recent years, the workplace climate literature has expanded to encompass other potential safety-related factors. As a part of these endeavors, additional safety-related climate measures were developed and validated. Two examples are *violence prevention climate* [13] and *civility climate* [14]. Although traditional safety climate scales have not explicitly excluded exposure to violence and uncivil behaviors from the domain of safety climate, these scales have not directly attempted to include these additional workplace hazards. It is reasonable to assume an employee reading an item from a traditional safety climate scale, such as "the safety of workers is a big priority with management where I work" [15], would not interpret the item as being relevant to experienced violence and uncivil behavior.

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Violence prevention climate is concerned specifically with employee perceptions of the organizational policies, practices, and pressures related to workplace physical and non-physical violence (e.g. verbal assaults). Violence prevention climate has consistently been found to negatively relate to the amount of violence and nonphysical mistreatment experienced by employees in the workplace [16,17]. In contrast, *civility climate* assesses the extent to which employees perceive organizational policies, practices, and pressures concerning civil interactions among people in the workplace. Civility climate has been found to relate to the frequency of exposure to uncivil behavior and interpersonal conflicts among employees and has also been linked to other important outcomes such as emotional strain [18]. Thus, the organizational climate literature has demonstrated that perceptions of a variety of safety-related climate forms, including those noted above, relate to both the frequency of safety hazard exposures and the severity of their associated outcomes [2,10].

Each safety-related climate variable has been designed with the intent to predict a unique set of workplace hazards and employee outcomes, and as a result, one might expect that each safety-related climate variable would relate most strongly to workplace hazards within its own domain (e.g. violence prevention climate with physical violence). However, Gazica and Spector [19] mostly failed to find evidence for such domain specificity. Their investigation found that safety climate, violence prevention climate, and civility climate shared a large portion of common variance and related similarly to most hazards and outcomes. The authors suggested that one possible explanation for the shared variance across safety-related climate forms might be a higher-order general safety climate factor that cuts across theoretically distinct safety-related climate variables. In other words, all safety-related climate variables have a portion of variance that ultimately reflects part of this general safety factor (see Figure 1).

As aforementioned, although established safety climate measures do not explicitly *exclude* workplace violence and uncivil behavior, there has not been a direct attempt to include these additional safety-related concerns in safety climate measures. Therefore, the current study attempts to demonstrate the benefit of expanding the content of safety climate items to overtly include items that assess a wide array of safety-related hazards. This current investigation builds upon previous research by creating a unidimensional, rather than multidimensional, general psychological safety climate scale that spans across the domains of accidents and injuries, physical and non-physical violence, and uncivil behavior. The study then assesses the relationship this general safety climate scale has with workplace hazards and their associated outcomes. Considering the evidence found by Gazica and Spector [19] supporting a general safety-related climate factor and the broad nature of workplace climate, a general climate measure should be similarly predictive across domains as the domain-specific climate constructs are within their domains. In order to examine this issue, the current study included both domain-specific safety-related climate measures and a newly developed general safety climate measure.

Hypothesis 1: The new general safety climate measure created in this investigation will result in a primarily unidimensional construct.

Hypothesis 2: Safety climate, violence prevention climate, and civility climate will share a higher-order factor.

Hypothesis 3: Safety climate, violence prevention climate, and civility climate will all be significantly related to both within- and across-domain outcome variables.

Hypothesis 4: The new general safety climate measure will be as strongly related to a set of workplace hazard and employee outcome variables as the domain-specific climate constructs.

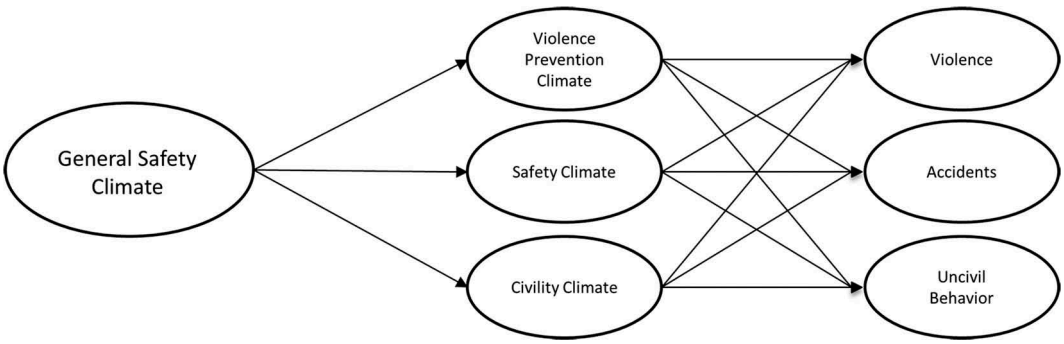

Figure 1. Theoretical influence of general safety climate factor.

Method

Participants

This study surveyed 420 individuals employed in a variety of occupations and industries including healthcare, government services, retail, and finance. All surveyed employees worked a minimum of 20 h a week and were recruited through courses in the psychology department of a large southeastern university in the United States. Employees had a job tenure ranging from 2 months to 25 years, with an average of two and a half years at the time of completing the survey. Eighty-one percent of the individuals who completed the survey were female. Ages ranged from 18 to 52 years old, with a mean age of 23 years. Although the individuals in our sample were recruited through the psychology department of a university, previous research investigating violence prevention climate has found similar strength in the relationships between violence prevention climate and workplace aggression when using either employees recruited through university courses or registered nurses [16,20,21].

Recruitment

Participants were recruited from the university's department of psychology human subjects pool. The pool is a web-based system that exchanges participation in research studies for credit towards an academic course. All participants were informed of the nature and content of the questionnaire prior to participation. The data collection procedure required all participants to answer each item of each measure before participants could continue. This procedure resulted in no missing data. Participants had the option to opt out of the survey at any point and prevent their responses from being recorded. There was no mechanism to assess how many participants chose to withhold their survey responses. Two attention checks that asked survey respondents to choose a specific response (e.g. choose response option 3) were also included in the survey to reduce random responses. If participants failed either check, their responses were removed from subsequent data analyses. A total of 81 participants were removed due to failed attention checks, resulting in a total of 339 complete surveys.

Measures

General safety climate measure scale construction

In order to generate a pool of potential items for a unidimensional general safety climate scale, the authors compiled an exhaustive list of items from previously established safety-related climate measures available in the extant literature. In total, 22 climate scales from a variety of different industries, applications, and literatures were collected and catalogued. Two subject matter experts (i.e. Ph.D. graduate students with a concentration in occupational health) then examined and discussed the content of the climate scales to identify themes and construct a shared framework across these climate constructs. Using this framework, a set of 42 unique items was created to measure perceptions of an organization's generalized safety climate. These items were created with the express purpose of encompassing a diverse set of harmful workplace hazards. Some items were adapted by modifying or combining previously established climate items, whereas other items were entirely created by the authors. Item content focused on the perceptions of policies, practices, and procedures to reduce and prevent workplace hazards originating from the organization as a whole, organizational insiders, or organizational outsiders.

In order to test the viability of a general safety climate measure, the psychometric qualities of the items were evaluated. The internal consistency reliability of the full item pool was high ($\alpha = .98$), suggesting that items possessed a great deal of unidimensionality, or in other words, the items were measuring one general underlying construct rather than multiple safety-related climate constructs. In order to formally test this hypothesis, the 42 items were entered into an exploratory factor analysis (EFA) using maximum likelihood estimation and an oblique rotation (promax). Our analyses found that all 42 items were generally unidimensional, with the first factor accounting for 56% of the total variance. Each of the five other factors extracted (eigenvalues >1.0) accounted for less than 5% of the remaining variance independently. In addition to their low explained variance, these additional factors were non-interpretable. As hypothesized, the results of this EFA provide evidence that suggests that our newly created generalized safety climate scale is unidimensional even though the content of the items spans multiple safety-related domains.

As noted previously, the primary goal of this investigation was to create a concise psychological climate measure that included a diverse set of items spanning a variety of workplace hazards originating from variety of sources. Because a 42-item measure is too long for practical use, we reduced the scale to a 10-item measure. To accomplish that goal, we conducted an item analysis. Specifically, all 42 items were sorted by their item-total correlations, which ranged from .33 to .84. Once the items were sorted, the items with the highest item-total correlation were then evaluated for their content. In order to keep item content diverse, if an item was too similar in content to another with a higher item-total correlation, the

Table 1. Ten-item general safety climate scale.

1. My organization shows an interest in my health and safety.
2. My organization makes it a priority to prevent violence in the workplace.
3. My organization has established a safe and respectful workplace.
4. My employer is concerned with keeping us safe from both physical and psychological harm.
5. My supervisor promotes policies that encourage physical and psychological safety.
6. My supervisor does not ignore violations that may cause physical or psychological harm.
7. My supervisor makes sure his/her subordinates are kept safe from harm at work.
8. My coworkers are knowledgeable about policies that promote health and safety in the workplace.
9. My coworkers do not disregard safety procedures for the sake of productivity.
10. My workplace responds quickly to instances of interpersonal conflict.

item was excluded for the item with the next highest item-total correlation. In total, only three items were excluded from the final measure using this procedure. The item-total correlations of the remaining 10 highest items ranged from .77 to .85, and the new measure demonstrated high internal consistency reliability nearly as high as the 42-item measure (α = .96). The items for the 10-item version of this scale can be found in Table 1.

Safety-related climate measures

In order to compare to our newly created general safety climate measure, participants were instructed to report their climate perceptions across three previously established safety-related climate measures.

Traditional safety climate was assessed with the unidimensional 6-item measure developed for the National Institute for Occupational Safety and Health (NIOSH) by Hahn and Murphy [15]. This measure included four response options ranging from *strongly disagree* to *strongly agree*. Employee responses were aggregated to an overall safety climate composite. The measure was found to be internally consistent (α = .89).

Violence prevention climate was assessed with the multidimensional 12-item measure developed by Kessler, Spector, Chang, and Parr [13]. The violence prevention climate measure has three factors. A separate composite was constructed for each factor: organizational violence prevention policies (α = .94), violence prevention practices (α = .92), and organizational pressure for unsafe practices (α = .90). There were six response choices for this measure from *strongly disagree* to *strongly agree*.

Workplace civility climate was assessed with the 13-item measure developed by Ottinot [18]. Civility climate has demonstrated a less consistent lower-order factor structure but is generally treated as a unidimensional construct [14,18]. All employee responses were averaged to create an overall civility climate composite (α = .91). All item scales had six response options ranging from *strongly disagree* to *strongly agree*.

Workplace hazard variables

A variety of variables were included to assess employees' exposure to negative workplace hazards or stressors over the past year:

Interpersonal conflict was assessed using a 4-item interpersonal conflict scale developed by Spector and Jex [22]. This measure included five response options ranging from *never* to *daily*. Items were averaged to form an overall composite (α = .78).

Workplace aggression was assessed with the 14-item Workplace Aggression Research Questionnaire (WAR-Q) [23]. This scale included items measuring both physical and verbal violence and consisted of six response options ranging from *never* to *daily*. Items were averaged to form an overall composite (α = .86).

Exposure to uncivil behavior was assessed with a 6-item incivility scale [18]. This measure included six response options ranging from *never* to *several times a day*. Items were averaged to form an overall composite (α = .90).

Outcome variables

Several outcomes that have been consistently found to relate to safety-related climate constructs were included in this investigation.

Workplace accidents were assessed with three separate items that asked participants whether they had three different accident-related experiences over the past year [24]. Specifically, participants were asked if they had experienced and reported an accident at work, experienced an accident at work but did not report it, or experienced a near-accident at work that could have potentially caused injury or harm. All three items included five response choices ranging from *never* to *four or more times*.

Safety behaviors and motivation for safety behavior were assessed using nine items measuring three separate constructs. Specifically, this included 3-items measuring safety compliance, 3-items measuring safety participation, and 3-items measuring safety motivation [25]. Safety compliance is specifically concerned with performing mandatory safety behaviors, such as using safety equipment, whereas safety participation is concerned with behaviors such as promoting the safety program within the organization. Safety motivation assesses motivation to perform both forms of safety behaviors [26,27]. All items in these measures included five response options ranging from *strong disagree* to *strongly agree*. Additionally, the safety compliance (α = .92), safety participation (α = .87), and safety motivation (α = .88) measures all demonstrated adequate internal consistency reliability.

Job satisfaction was measured with a 3-item job satisfaction scale from the Michigan Organizational Assessment Questionnaire [28]. This measure included six response options ranging from *strong*

disagree to *strongly agree*. Items demonstrated adequate internal consistency reliability (α = .93).

Turnover intentions were assessed using a single item [29]. Survey respondents were asked how often they had seriously considered quitting their current job. The item included six response choices ranging from *never* to *extremely often*.

Musculoskeletal disorders (MSDs) over the past year were assessed with the 9-item Standardized Nordic Questionnaire [30]. Participants were asked to respond yes or no if they had experienced an injury at work within the past year on nine separate body parts (neck, shoulders, elbows, hands, upper back, lower back, hip, knee, and foot). Responses across items were summed into a composite variable where a higher number represented a greater amount of reported MSDs.

Results

In order to test for a latent general safety climate factor, safety climate, civility climate, and the three violence prevention climate lower-order factors were included in a higher-order confirmatory factor analysis (CFA). The fit statistics of the higher-order CFA suggest that the hypothesized model demonstrated fair fit, χ^2 (429) = 1289.07, CFI = .88, RMSEA = .07 [31]. After inspecting the residual variances, it appeared that the majority of the model misfit was a result of the factor structure of the civility climate scale. Several civility climate items had residual variances that correlated with other civility climate items' residual variances. This suggested the existence of shared variance that was not completely accounted for by the general safety climate factor.

There are at least two possible explanations for the shared residual variances found in the civility climate measure. First, the shared residual variances may be a methods factor resulting from the use of both positively and negatively worded items in the measure. Further inspection of the correlated residuals in the civility climate scale did uncover that the negatively worded items were coming together to form their own factor. Negative items forming their own artificial factor has been studied extensively in other psychological self-report measures like the Rosenberg Self-Esteem measure [32,33]. Nevertheless, longitudinal research suggests that these potential method factors may remain stable within individuals over time and, as a result, could be substantively meaningful differences in individual response style [34]. At the very least, these method factors have demonstrated some relationship with personality variables [32]. Another possible explanation is that these two civility climate factors are the result of meaningfully different lower-order factors. In other words, the civility climate measure could be composed of two separate climate factors: One that promotes civility and one that promotes incivility. This distinction would be similar to the difference between negative and positive affectivity [35].

The current investigation has no direct method of evaluating the appropriateness of the lower-order factor structure of the civility climate measure. However, in order to thoroughly evaluate the possibility of a tenable higher-order general safety climate factor, civility climate was treated as being composed of two factors. One factor corresponded to the positively worded items (civility climate) and one factor corresponded to negatively worded items (incivility climate). As a result, six lower-order factors were used to estimate a general safety climate factor: traditional safety climate, the three violence climate factors (i.e. policies, practices, and pressures), civility climate, and incivility climate. The fit statistics of this revised higher-order CFA were better than the model that treated civility climate as a unidimensional construct, χ^2 (429) = 1062.28, CFI = .91, RMSEA = .06 [31]. All six of the lower-order climate factors had a significant factor loading onto the general higher-order factor (see Figure 2). Overall, the results of this higher-order CFA complement the findings of Gazica and Spector [19] and further support the existence of a broad general safety climate factor.

Consistent with the existence of a higher-order factor, all domain-specific climates (i.e. safety climate, violence prevention climate, and civility climate) were related to a wide variety of workplace hazards and outcome variables. Table 2 shows the bivariate correlations between all measured variables included in this investigation. All of the domain-specific safety-related climate variables were related to at least one form of workplace accidents, MSDs, intention to quit, interpersonal conflict, job satisfaction, workplace aggression, uncivil behavior, safety behavior, and motivation to be safe. The significant relationships between all domain-specific organizational climate variables and a variety of workplace hazards and employee outcomes across domains supported the notion of a great deal of shared common variance among the domain-specific climates. Additionally, the new general safety climate measure was significantly correlated with all of the established safety-related climate scales: safety climate (r = .63), violence prevention climate practices (r = .67), policies (r = .55) and pressure (r = .29), civility climate (r = .72), and incivility climate (r = .59). Further, the new scale assessing general safety climate was significantly correlated with all of the organizational hazards and outcome variables related to other domain-specific climates. All climate measures were significantly correlated with one another except for violence prevention pressures and violence prevention policies. One explanation for this finding is that

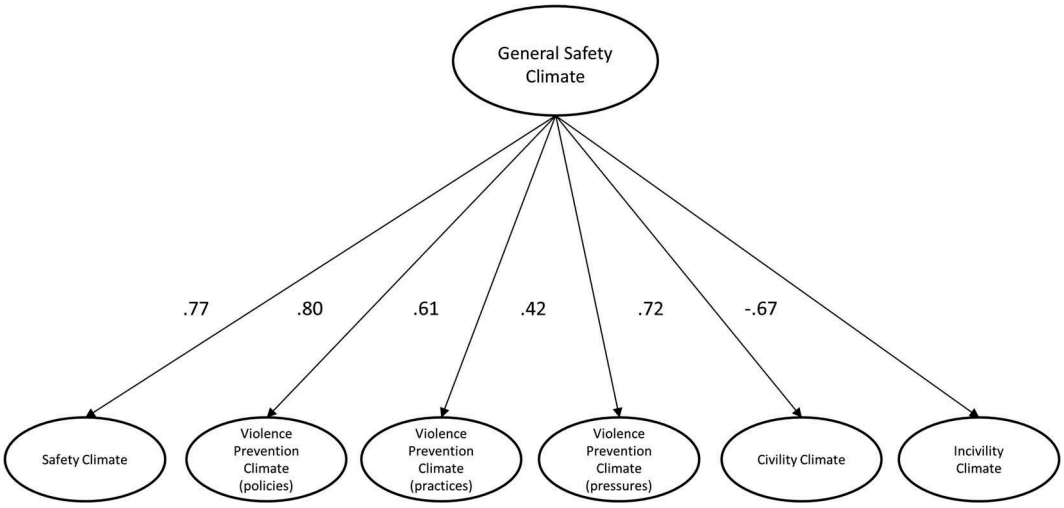

Figure 2. Higher-order loadings from general safety climate higher-order confirmatory factor analysis (CFA).

although both pressures and policies work together to shape the violence prevention climate of an organization, they often do so independently based on other situational factors, such as direct supervisor behaviors. The weaker correlations between the violence prevention pressure factor and other domain-specific climate variables are consistent with the results of the higher-order CFA, which found that the violence prevention pressure factor had the weakest loading onto the general safety climate factor (see Figure 2 for higher-order loadings).

A series of dependent sample *t*-tests were conducted to assess if the correlations between the domain-specific climate variables and the workplace hazards and outcome variables were significantly larger than the correlations between our new general safety climate measure and these variables. In Table 3, the fist column presents the correlation between the general safety climate measure and the workplace hazards and outcomes, whereas the second column shows the correlation between the most relevant domain-specific climate and the matching domain-specific workplace hazards and outcome variables. The third column assesses if there is a significance difference between these two correlations. When multiple relevant domain-specific variables were available (e.g. in the case of the three-factor violence prevention climate), the lower-order factor with the highest correlation was compared to the general safety climate measure. For the workplace hazard variable set, it was only in the case of workplace aggression that a domain-specific climate variable (i.e. violence prevention climate practices) had a significantly larger correlation than the general safety climate measure. The correlations for the other two workplace hazard variables were not significantly different. Similarly, the analyses of the organizational outcome variables found that the domain-specific organizational climate variables had a significantly stronger relationship with only one outcome variable. Specifically, traditional safety climate had a significantly stronger relationship with safety motivation. As for the other five outcome variables, there was no significant difference in the magnitude of the relationship between the new general safety climate measure and the domain-specific climate variables with any of the included outcome variables. These finding suggests that in the great majority of cases, domain specificity did not result in stronger relationships with the included workplace hazard and outcome variables.

Discussion

The purpose of this investigation was to test for the viability of a general safety climate factor and create a concise scale to measure this construct. This was accomplished by integrating three independent streams of organizational climate research: traditional safety climate, violence prevention, and workplace incivility. The initial correlational analyses and higher-order CFA analysis suggest that a general safety climate factor may be responsible for the shared common variance across safety-related organizational climate constructs found in previous research [19]. Additionally, this investigation found that using domain-specific organizational climate measures does not necessarily lead to significantly stronger relationships with the majority of domain-specific workplace hazards and employee outcome variables. Although new safety-related climate variables may be theoretically distinct, it is possible that organizations do not choose just one particular form of safety-related climate to promote in their organizations. On the contrary, organizations likely attempt to promote all forms of safety-related

Table 2. Correlation matrix.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1. General safety climate	.96																			
2. Safety climate	.63**	.89																		
3. Violence prevention climate (policies)	.55**	.42**	.94																	
4. Violence prevention climate (practices)	.67**	.58**	.47**	.92																
5. Violence prevention climate (pressures)	.29**	.32**	.06	.39**	.90															
6. Civility climate composite	.74**	.50**	.49**	.53**	.26**	.91														
7. Civility climate	.72**	.46**	.52**	.51**	.18**	.94**	.90													
8. Incivility climate	.59**	.43**	.32**	.42**	.32**	.82**	.59**	.82												
9. Safety motivation	.39**	.48**	.23**	.47**	.21**	.24**	.23**	.18**	.88											
10. Safety compliance	.43**	.50**	.30**	.42**	.19**	.22**	.23**	.15**	.65**	.92										
11. Safety participation	.38**	.42**	.38**	.33**	.05	.23**	.27**	.10*	.54**	.72**	.87									
12. Uncivil behavior	–.43**	–.38**	–.29**	–.32**	–.15**	–.48**	–.41**	–.48**	–.12*	–.15**	–.15**	.90								
13. Aggression	–.22**	–.26**	–.13*	–.31**	–.13*	–.18**	–.14*	–.22**	–.23**	–.15**	–.09	.34**	.87							
14. Job satisfaction	.55**	.48**	.31**	.42**	.17**	.55**	.50**	.48**	.17**	.22**	.19**	–.46**	–.2**	.93						
15. Interpersonal conflict	–.43**	–.36**	–.25**	–.29**	–.13*	–.42**	–.36**	–.42**	–.15**	–.20**	–.16**	.64**	.37**	–.38**	.78					
16. Turnover intentions	–.43**	–.40**	–.26**	–.30**	–.08	–.41**	–.35**	–.40**	–.12*	–.16**	–.14**	.45**	.17**	–.80**	.37**	-				
17. MSD	–.18**	–.12*	–.15**	–.18**	–.16**	–.13*	–.11*	–.14**	–.11*	–.09	–.07	.19**	.23**	–.23**	.24**	.29**	-			
18. Reported accidents	–.02	–.01	.04	.01	–.08	–.01	.02	–.07	–.01	–.01	–.01	.13*	.11*	–.02	.07	.07	.14*	-		
19. Non-reported accidents	–.15**	–.15**	–.07	–.20**	–.10	–.09	–.07	–.11*	–.14*	–.27**	–.21**	.14*	.12*	–.12*	.14*	.11*	.18**	.36**	-	
20. Near-accidents	–.15**	–.18**	–.14*	–.05	–.14*	–.15**	–.13*	–.15**	–.07	–.21**	–.19**	.28**	.07	–.15**	.26**	.13*	.19**	.42**	.35**	-

*Correlation is significant at the .05 level (two tailed). **Correlation is significant at the .01 level (two tailed).

climates simultaneously. As a result, employees may be likely to make general assessments by perceiving their organization as promoting their health and safety overall or not at all [36]. In this way, the general safety climate factor by itself can be understood as individual employees perceptions of the overall policies, procedures, and practices of the organization that are working to promote their broader health and safety rather than just one specific facet of their safety.

Overall, these findings suggest that it may be practical for future research to employ the general safety climate measure presented in this investigation in place of domain-specific climate measures unless a domain-specific climate is solely of interest. The use of a more general safety climate measure appears to not attenuate the relationships with workplace hazards and outcome variables in the majority of cases. The evidence of a general higher-order factor supported this suggestion. All domain-specific climate factors were found to load significantly onto the general factor. The general safety climate scale may be particularly useful for studies that examine various outcomes that exceed more than one safety domain (e.g. violence- and accident-related safety). Additionally, future researchers can save valuable participant time and survey space by employing a 10-item measure of general safety climate, rather than including numerous domain-specific climate measures.

Limitations and conclusions

The inability to test the directionality of the effect of climate on outcome variables is one limitation of this investigation that is a necessary implication of its cross-sectional design. Nevertheless, it should be noted that assessing directionality was not the primary purpose of this investigation. Previous research using longitudinal data has consistently found that safety-related climate influences employee outcomes [20,37]. The conclusiveness of previous research suggests that we can be more confident in the findings of this study. Another possible limitation is our use of a single-source sample recruited through a university subject pool. Although the participants in our sample represent a variety of different industries and occupations, future research should consider utilizing a sample that represents individuals who are the most at risk of unsafe work climates, such as health-care professionals.

The selection of workplace hazards and outcome variables included in this investigation may also represent another limitation of this study. Although great care was taken in selecting a wide variety of relevant domain-specific employee outcomes for each

Table 3. Dependent correlation *t*-tests.

	General safety climate	Domain-specific climate	χ^2 difference test
Workplace hazards			
Interpersonal conflict	−.43	−.42	n.s.
Aggression	−.22	−.31	$p < .05$
Uncivil behavior	−.43	−.48	n.s.
Safety-related and individual outcomes			
Reported accidents	−.02	−.08	n.s.
Non-reported accidents	−.15	−.20	n.s.
Near-accidents	−.15	−.18	n.s.
Safety compliance	.43	.50	n.s.
Safety participation	.38	.42	n.s.
Safety motivation	.39	.48	$p < .05$
Job satisfaction	.55	.55	n.s.
Turnover intentions	−.43	−.41	n.s.
MSD symptoms	−.18	−.18	n.s.

MSD: musculoskeletal disorder; n.s.: not significant.

of the domain-specific organizational climate variables, not all relevant hazards and outcomes could be included as a result of survey length concerns. Future research should consider investigating other organizational hazards and employee outcomes relevant to safety-related climate research.

In sum, although domain specificity would suggest that domain-specific climate measures would be more strongly related to outcome variables within their domain, our current study, in combination with Gazica and Spector [19], suggests that this is not the case. A robust general factor across safety-related organizational climate variables appears to fuel the strength of these across-domain relationships. Many of our established safety-related climate scales share a substantial amount of variance. Although the current investigation focused on expanding safety climate to explicitly include violence and uncivil behaviors, future research may consider including other well-being-related or health promotion climate forms [38–40]. It is possible that organizations that put forward the effort to improve a domain-specific climate form will improve other safety-related climate forms by influencing the general safety climate perceptions of employees. Future research may benefit from utilizing our concise general safety climate measure that explicitly includes a wider amount of theoretically relevant employee safety-related climate constructs.

Disclosure statement

No potential conflict of interest was reported by the authors.

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