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“Stop! In the Name of Civility”:
Testing the Effectiveness of an Intervention to Reduce Workplace Incivility

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“Stop! In the Name of Civility”:
Testing the Effectiveness of an Intervention to Reduce Workplace Incivility

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Abstract

Workplace incivility is a common problem within organizations. Recent data estimates that 96% of the total workforce population in the United States has experienced incivility at one time or another. Individual targets of incivility face detrimental effects to their psychological and professional well-being. Workplace incivility also leads to poor outcomes for workgroups and for organizations as a whole. Results are mixed for the use of formal training programs to curb incivility in organizations. A workshop designed to train employees on behaving in a civil manner in the workplace, as well as how to respond to workplace incivility, was implemented across multiple facilities of a healthcare organization. Pre- and post-training survey measures of team civility experiences, team cohesion, team-level norms for civility, interpersonal citizenship behaviors (OCB-I), and team performance served as dependent variables. Longitudinal data analysis methods using quasi-simplex four-wave cross-lagged panel analysis were employed to analyze the data. Results indicate that experiences of incivility may be reduced across time as a result of the civility intervention and that civility norms may be enhanced by the civility training.

Positive trends in proximal and distal outcomes were also observed, though additional research is needed to support the efficacy of civility interventions to positively impact these outcomes. Practical implications for organizations wishing to curb workplace incivility through implementation of an intervention are also discussed.
Incidents of workplace incivility are on the rise in the United States. In 2001, 70% of working adults in the U.S. reported experiencing incivility in their workplace (Cortina, Magley, Williams, & Langhout, 2001) and by 2010 that number had risen to 96% (Porath & Pearson, 2010). Incivility has been estimated to cost organizations approximately $14,000 per employee per year through sharp declines in employee performance and effort, lost time, and increased turnover (Porath & Pearson, 2010). Incivility is defined as a “low-intensity deviant behavior with ambiguous intent to harm the target, in violation of workplace norms for mutual respect” (Andersson & Pearson, 1999, p. 457). Incivility often includes such rude behaviors as interrupting a speaker, using a condescending tone, making remarks that demean the target, ignoring someone or giving them “the silent treatment,” and excluding the targeted individual from meetings (Andersson & Pearson, 1999; Cortina & Magley, 2009; Gallus, Bunk, Matthews, Barnes-Farrell, & Magley, 2014; Lim, Cortina, & Magley, 2008). Thus, incivility is a subtle form of workplace mistreatment that is milder than aggression, bullying, or harassment and for which the intention of the perpetrator is not always clear (Andersson & Pearson, 1999; Lim et al., 2008).

Individuals who are the target of incivility face detrimental effects to their psychological and professional well-being. These effects include job stress and psychological distress (Cortina et al., 2001; Lim & Cortina, 2005), withdrawal from work (Pearson, Andersson, & Wegner, 2001), decreased job satisfaction (Penney & Spector, 2005), diminished co-worker and supervisor satisfaction (Martin & Hine, 2005), lower afterwork psychological detachment and next-day recovery (Nicholson & Griffin, 2015), declines in task performance, creativity, and
helpfulness (Porath & Erez, 2007), higher turnover intentions (Wilson & Holmvall, 2013), lower marital satisfaction (Ferguson, 2012), negative health outcomes (Lim et al., 2008), and depression and higher conflict between work and family life (Lim & Lee, 2011). Incivility can also interrupt cognitive processes, such as memory, and deplete mental, emotional, and social resources that lead to a disruption of task performance (Porath & Erez, 2007). Kabat-Farr, Cortina, and Marchiondo (2016) found that these consequences were worst for the most committed employees.

In addition to adverse effects for the individual targets, incidents of workplace incivility lead to poor outcomes for workgroups and for organizations as a whole (Andersson & Pearson, 1999; Cortina, Kabat-Farr, Magley, & Nelson, 2017). First, research has found that targets of incivility may retaliate by engaging in incivility themselves, creating a spiral of workplace mistreatment (Andersson & Pearson, 1999; Rosen, Koopman, Gabriel, & Johnson, 2016) that may escalate into aggression, bullying, or workplace violence (Neuman & Baron, 1997; Pearson, Anderson, & Porath, 2000; Pearson, Andersson, & Porath, 2005). Moreover, if incivility is left unchecked, it can create a climate of incivility that affects the entire organization (Paulin & Griffin, 2017; Torkelson, Holm, Bäckström, & Schad, 2016; Walsh et al., 2012). An uncivil work climate can then serve as a frame of reference for employees and thus guide their normative and expected work behaviors, potentially leading to a recurring cycle of incivility (Probst, Brubaker, & Barsotti, 2008; Schneider, 1975).

To prevent the creation of an uncivil work climate, organizations must be aware of the individual and group level antecedents of workplace incivility. Moreover, organizations should accurately assess the uncivil behaviors that may already be occurring among their employees. Understanding the prevalence of uncivil behaviors and how these behaviors spread will facilitate
the creation of interventions to curb incivility within the organization. With that aim, this study serves two primary purposes. First, I will describe the methods organizations can use to create and implement training interventions to reduce incidents of workplace incivility. Second, I describe the results of such an intervention and its proximal and distal effects on group and organizational level outcomes. I begin the process of generating hypotheses by outlining the effects of incivility on team emergent states (specifically, team cohesion). Next, I describe the relationship between experiencing workplace incivility and its effect on overall job performance. Finally, I describe the aggregated effects of uncivil teams on establishing an organizational climate for civility, and I situate the study of incivility and its reduction within a multi-level framework.

**Incivility and Team Cohesion**

Although some research has examined incivility at the team level of analysis (e.g., Griffin, 2010; Lim et al., 2008), most extant research has focused primarily on the occurrence of incivility among dyads (Mao et al., 2017). The researchers who have begun to study incivility beyond the dyad recognize that individuals work in contexts that may influence whether one is the target, observer, or perpetrator of incivility and that certain contexts may facilitate the spread of uncivil behaviors (Foulk, Woolum, & Erez, 2016; Rosen et al., 2016). Results are mixed, however, as to if, when, and how incivility instigation spreads within and between teams and throughout an organization in response to incidents of workplace mistreatment (Cortina et al., 2017).

Teams are characterized by their interdependence, their shared goals, and the quality of social interactions among team members (Kozlowski & Bell, 2003; Mathieu, Maynard, Rapp, & Gilson, 2008). Overall team effectiveness is typically linked to a team’s success in managing
such team processes as task execution, goal creation and progress monitoring, coordination of team members and team resources, and managing interpersonal conflict and overall team affect (Marks, Mathieu, & Zaccaro, 2001). Information is arguably the most valuable resource in team settings, and successful exchange of this commodity is not only critical to organizational success (Itzkovich & Heilbrunn, 2016), but it is also positively associated with team cohesion (Aubke, Wöber, Scott, & Baggio, 2014). When information is not exchanged (such as when one is behaving in an uncivil manner by giving a co-worker “the silent treatment”), cohesion is diminished. Cohesion was originally proposed by Festinger (1950) and was defined as “the resultant of all the forces acting on the members to remain in the group” (p. 274). Cohesion, then, is the bond that exists among group members (Beal, Cohen, Burke, & McLendon, 2003).

The emergence of cohesion in teams is generally explained using social identity theory (Tajfel, 1974; Tajfel & Turner, 1986) and social exchange theory (Blau, 1964; Homans, 1961; Thibaut & Kelley, 1959). Social identity theory proposes that an individual’s membership in social groups influence’s the individual’s sense of identity (Tajfel, 1974; Tajfel & Turner, 1986). This is done when individuals compare the group they are in to other groups and then begin to incorporate their group membership into their self-identity and to bond with the group to satisfy their need to belong (Baumeister and Leary, 1995; Tajfel & Turner, 1979). The process of identifying with a new team is enacted through a series of social exchanges with other team members. These social exchanges then create norms within the team that influence the emergence of team cohesion (Kozlowski & Chao, 2012). Early exchanges set the tone for later exchanges within the group, and rewarding exchanges build team cohesion through the creation of positive relationships. Additionally, negative exchanges (such as the display of uncivil
behaviors) may deter future interactions, thereby precluding the development of team cohesion (Allport, 1954; Homans, 1974).

In the absence of cohesion, teams experience divergence of cognitive and attitudinal factors that may lead to declines in team performance (Mathieu, Kukenberger, D’Innocenzo, & Reilly, 2015; Roberson & Colquitt, 2005). For example, if team members experience divergent affective commitment regarding the accomplishment of team goals, then the team is less likely to be effective at achieving those goals (Aubé & Rousseau, 2005; Klein & Kim, 1998; Pearce & Ensley, 2004; Peralta, Lopes, Gilson, Lourenço, & Pais, 2015). From these divergent cognitive or affective factors, cohesive subgroups (or faultlines) may appear, and members of each subgroup may begin to use incivility to mark subgroup boundaries (Cortina et al., 2017). Such uncivil behaviors between subgroups may then escalate to form a climate of incivility that perpetuates the spread of these harmful behaviors (Foulk et al., 2016). Next, I shift the focus from the effects of workplace incivility on team interpersonal processes to discuss the results of incivility on team performance.

Team Performance and Incivility

The negative emotions and psychological states that result from experiencing incivility can have deleterious effects on job performance and team effectiveness (Ellis, Moore, Varner, & Ottaway, 1997; Ellis, Varner, Becker, & Ottaway, 1995; Judge, Thoresen, Bono, & Patton, 2001). First, following an incident of incivility, the target may replay the act over and over in his or her mind to assess the legitimacy of the perpetrator’s actions and to review the potential consequences had the target chosen an alternative response to the mistreatment (Porath, Overbeck, & Pearson, 2008). As the employee engages in this mental exercise, cognitive resources are depleted, thereby diminishing task performance. In addition, the employee may be
exerting cognitive resources to plan a revenge scenario in retaliation for the perceived violation of organizational fairness norms. Such retaliation may satisfy the target’s need to repair a damaged identity, restore justice, or prevent future threats to his or her identity (e.g., Aquino, Tripp, & Bies, 2001; Baumeister, Smart, & Boden, 1996; Felson, 1982; Gilligan, 1996; McLean Parks, 1997; Tedeschi & Felson, 1994; Tripp & Bies, 1997; Tripp, Bies, & Aquino, 2002). Furthermore, Weiss and Cropanzano’s (1996) affective events theory argues that events that occur on the job influence behaviors through affective reactions. Of the possible work events that could occur, negative work events are especially strong influencers of affective responses. Additionally, affective events theory posits that “negative emotions affect performance because they serve as signals that something in the environment is problematic” (Porath & Erez, 2007, p. 1182). Appraising the situation to identify the sources of the problem requires significant cognitive resources and this disruption results in decreased job performance.

Experiencing incivility can negatively affect one’s mood immediately following the incident (Barling, 1996; Cortina & Magley, 2009; Lazarus & Folkman, 1984). Research examining the effects of mood on job performance found that overall, negative moods led to poorer job performance than did neutral moods (Ellis et al., 1997). Individuals experiencing negative moods also did not learn or recall knowledge as well as their neutral mood peers, and they were not able to comprehend or use prior knowledge (Ellis et al., 1995, 1997). These effects were more pronounced for people experiencing anger caused by provocation (Zillmann, 1979, 1983, 1988, 1993; Zillmann, Bryant, Cantor, & Day, 1975). Cognitive theories of attention state that individuals possess finite amounts of attention and that they must selectively allocate this supply of limited cognitive resources (Kahneman, 1973). When engaged in a task, employees must decide whether to focus their attention on the task or off the task. Experiencing incivility
may then pull attention off the task and direct it towards emotional processing of the event, subsequently resulting in diminished task performance (Kanfer & Ackerman, 1989).

Not all components of job performance are compulsory. In fact, researchers hypothesize that job performance is actually comprised of three facets: task performance, counterproductive work behaviors, and organizational citizenship behaviors (Dalal, Lam, Weiss, Welch, & Hulin, 2009; Ng & Feldman, 2009; Rotundo & Sackett, 2002; Sackett & Lievens, 2008; Viswesvaran & Ones, 2000). Counterproductive work behaviors (CWBs) consist of a wide range of volitional, deviant behaviors perpetrated by an employee and directed towards either co-workers or the organization with the intent to harm the target (Sackett, Berry, Wiemann, & Laczo, 2006; Spector & Fox, 2002; Spector et al., 2006). Many of the antecedents and outcomes of CWBs are similar to those of incivility (Bennett & Stamper, 2001; Dalal, 2005; Neuman & Baron, 1998; Spector & Fox, 2005). Thus, CWBs have been theorized to belong to the same nomological network as workplace incivility, though CWBs are a more severe form of deviant workplace behavior which may be the result of long-term incivility occurrence (Andersson & Pearson, 1999; Aquino et al., 2001; Mao, Chang, Johnson, & Sun, 2017).

At the opposite end of the same spectrum as CWBs are organizational citizenship behaviors (OCBs; see Dalal, 2005 for meta-analysis). OCBs are extra-role, volitional behaviors enacted by employees that are meant to improve the functioning of the organization (Organ, 1988; Organ & Paine, 1999; Schnake, 1991). Smith, Organ, and Near (1983) reported a two factor model of OCBs based on the target of the behaviors: an interpersonal dimension (OCB-I) and an organizational dimension (OCB-O). Examples of an OCB-I include volunteering to help a co-worker or sharing knowledge with a co-worker, whereas praising the organization to an outsider is an example of an OCB-O. Antecedents of OCBs are similar to those of incivility and
CWBs, but with positive relationships observed between job attitudes and OCBs (Dalal, 2005; Hunter & Gerbing, 1982). Thus, an employee who is high in job satisfaction, organizational commitment, and engagement is more likely to exhibit OCBs (Becker, 1992; Dekas, Bauer, Welle, Kurkoski, & Sullivan, 2013; Hollinger, 1986; O’Reilly & Chatman, 1986; Organ, 1977). Conversely, an employee who experiences incivility is less likely to display OCBs (Chen et al., 2013; Cropanzano, Rupp, & Byrne, 2003; Pearson, Andersson, & Porath, 2000; Sliter, Sliter, & Jex, 2012), while an employee who works in a positive work climate relatively free of incivility is more likely to engage in OCB-I towards coworkers and members of one’s workgroup (Mackey, Bishoff, Daniels, Hochwarter, & Ferris, 2017; Organ, Podsakoff, & Podsakoff, 2011). Thus, OCB-I serve to strengthen interpersonal relationships among employees, and OCB-I develop within teams when team members display behaviors that encourage OCB-I to persist (Ehrhart & Naumann, 2004). The nature of teams is to be highly interdependent, so helping behaviors such as OCB-I are critical determinants of team performance. In fact, organizational citizenship behaviors have been empirically linked to both the quantity and quality of team performance (Hu & Liden, 2015; Podsakoff, Ahearne, & MacKenzie, 1997). Additionally, team-level OCBs predicted firm performance in longitudinal studies such that organizational profits in year two were predicted by the presence of workgroup OCBs in year one (Koys, 2001). When incivility occurs within a team, however, team performance plummets. For example, team members will no longer share information critical to team success, nor will team members help each other complete important tasks. Recent research has quantified these losses in team effectiveness, finding that teams with uncivil team members experienced 14% fewer helping behaviors and 9% less information sharing than other teams. These negative results of incivility experiences were also found to hold when teams were exposed to uncivil behavior occurring
from employees existing outside the team, with team members displaying a 15% decrease in helping behaviors and a 10% decrease in information sharing (Porath & Erez, 2007; Porath, Foulk, & Erez, 2015). Thus, the presence of OCB-I can strengthen team processes and improve team performance, whereas exposure to incivility can result in detrimental effects to team effectiveness. Once a team has become uncivil and unproductive, strong interventions will be required to reduce incivility and return the norm to one of mutual respect (Walsh et al., 2012).

**Incivility Interventions**

Recent research has uncovered potential interventions for curbing workplace incivility, many of which involve formal training interventions to enhance civil behaviors (Osatuke et al., 2009) or reduce occurrences of workplace mistreatment (Keashly & Neuman, 2009; Kirk, Schutte, & Hine, 2011). Work done by Kozlowski and Salas (1997), however, conclude that formal training interventions will not be effective unless these interventions contain content that support practices that are already in place within the organization. Thus, formal training programs to improve workplace civility may only be effective if structural support for civility is already in place.

Interventions designed to curb workplace incivility have focused on individuals dispersed across multiple organizations (e.g., Kirk, Schutte, & Hine, 2011) or loosely interdependent intact workgroups (e.g., Leiter, Day, Oore, & Spence Laschinger, 2012; Leiter, Laschinger, Day, & Oore, 2011). Few studies to date have tested effects of civility interventions across time or across multiple levels of an organization (Foulk et al., 2016). Coultas, Driskell, Burke, and Salas (2014) recommend that research conducted on any team emergent state (such as team level incivility) should include within-team changes across time and should ensure that relevant referents are included in the measurement of the focal team emergent state.
Leiter and colleagues (2011, 2012) tested a civility training intervention among 1,173 healthcare employees in three hospitals in Canada. This intervention was centered around relationship strengthening activities, and these activities varied according to each hospital’s specific needs around creating a civil workplace. Known as CREW (Civility, Respect, and Engagement in the Workplace; Osatuke et al., 2009), this client-centered intervention incorporated the following principles: (1) civility should be established through the use of direct conversations on the work unit’s observed uncivil behaviors; (2) employees should be taught new ways of interacting with one another through exercises meant to model civil behaviors; (3) each hospital’s leadership team should provide employees with explicit support to use the behaviors learned in the civility training workshops; and (4) each employee should be encouraged to take ownership of her or his own civil behaviors. Underlying these principles is the proposition that people benefit from membership in social groups that confirm each person’s self-worth, security, and trust of others (Aquino & Thau, 2009; Baumeister & Leary, 1995; Stevens & Fiske, 1995). Moreover, poor interpersonal relationships are theorized to persist when employees lack the skills required to address the mistreatment with the perpetrator of the behaviors or when they do not otherwise feel comfortable appealing to a supervisor to stop the mistreatment (Olson-Buchanan & Boswell, 2008). Incorporating the principles from these theoretical frameworks into a civility intervention, Leiter and colleagues (2012) found that civility and job attitudes improved and were sustained one year following their initial intervention. Thus, the use of an intervention to improve interpersonal relationships to reduce incidents of workplace incivility shows tremendous empirical promise.

Summary and Hypotheses
The intervention designed for this study, Civility Among Healthcare Professionals (CAHP), integrates many components used in the design of the CREW intervention, including context-specific features, which have been found to reduce workplace incivility within a healthcare setting. Therefore, I make the following hypothesis about the efficacy of the civility intervention used in this study:

**Hypothesis 1:** The CAHP workshop will be effective at increasing experiences of civility within workgroups across time.

Besides using context-specific factors in designing the civility intervention for this study, the CAHP intervention described interpersonal behaviors that improve social interactions among employees, especially employees who work closely together in teams (Walsh et al., 2012). Strong interpersonal relationships often result in greater team cohesion, and cohesion has been meta-analytically linked to improvements in job performance (Mathieu et al., 2015). Therefore, I predict the following relationships:

**Hypothesis 2:** The CAHP workshop will increase the display of team civility experiences, which will result in an increase in team cohesion.

**Hypothesis 3:** The increased feelings of team cohesion will further result in more displays of team civility experiences.

**Hypothesis 4:** Improvements in team cohesion that result from the CAHP intervention will yield enhancements in team performance.

Organizational citizenship behaviors are critical components of effective organizational functioning (see Podsakoff, Whiting, Podsakoff, & Blume, 2009 for meta-analysis). When employees perceive that they have experienced incivility, they are less likely to engage in organizational citizenship behaviors, especially towards co-workers (Mackey et al., in press).
Conversely, employees who engage in organizational citizenship behaviors as a result of feeling engaged, satisfied, and committed to their organization are more likely to exhibit civil behaviors towards their co-workers (Dalal, 2005). Therefore, I predict the following relationships:

**Hypothesis 5:** The increase in team cohesion as a result of the CAHP workshop will yield increased displays of employees’ OCB-I.

**Hypothesis 6:** Employees who complete the CAHP workshop will display more civil behaviors, thereby increasing their display of OCB-I.

Workplace incivility is linked to poor work outcomes, such as declines in task performance, creativity, and helpfulness. Incivility can also interrupt cognitive processes such as memory, and deplete mental, emotional, and social resources that lead to a disruption of task performance (Porath & Erez, 2007). Therefore, I predict the following about the CAHP intervention:

**Hypothesis 7:** The CAHP intervention will increase displays of workplace civility, resulting in improvements in team performance.

Team contexts influence employees’ behaviors and outcomes (Ehrhart, Schneider, & Macey, 2014; Paulin & Griffin, 2017) by making salient the norms, attitudes, and expectations that are rewarded or supported surrounding civil treatment of one’s team members (Paulin & Griffin, 2015). Recent research has found that civility interventions may be effective at changing group norms by disrupting the norms surrounding dominant dysfunction within a workgroup and replacing those norms with more constructive alternatives (Leiter et al., 2011). Therefore, I propose the following relationship concerning the implementation of a civility intervention:

**Hypothesis 8:** The civility intervention will facilitate the creation of team civility norms by increasing displays of civil behaviors among team members across time.
Rewarding exchanges (including the types of behaviors learned in a civility intervention) can build team cohesion and increase helping behaviors through the creation of positive relationships. This team cohesion may then lead to the development of team civility norms as civility within the team becomes predominant (Leiter et al., 2011; Paulin & Griffin, 2017) and team civility norms may increase the displays of OCB-I. Thus, I propose the following:

**Hypothesis 9:** The civility intervention will be effective at increasing team cohesion for workgroups who have completed the civility workshop, and this increase in cohesion within the team will result in the establishment of team civility norms.

**Hypothesis 10:** The creation of team civility norms will result in an increase in OCB-I.

Please refer to Figure 1 for a model of these hypothesized relationships.

**Method**

**Study Overview**

Civility Among Healthcare Professionals (CAHP) was a project created to enhance interpersonal relationships in a prison healthcare setting in a northeastern state in the United States. Small team workshops were utilized to implement this training framed as an incivility intervention. Employees who participated in the workshops represented 22 facilities within the focal prison healthcare system, and they worked primarily in health, dental, or mental health occupations. Prior to executing the civility intervention, baseline surveys were administered to all employees from the organization to gauge the current civility climate within the system of prison healthcare facilities. This information was then used to inform the content developed for the CAHP workshops.

After the baseline surveys were administered, employees nominated themselves or others to serve as workshop trainers (known as civility coaches) for each facility. Employees were
asked to consider leadership styles and sensitivity to interpersonal treatment when making their nominations for coaches. Each nominee was then screened to ensure that she or he had no current or prior disciplinary action. Coaches from the organization were then trained by the CAHP research team. During the training session, civility coaches were asked to participate in the workshop just as if they were the regular workshop attendees. Sessions began with an overview of the CAHP project, and coaches were provided with the materials they would need to facilitate their own civility workshops. Coaches were then provided with time to practice delivering the workshop. Once they had completed the train-the-trainer session, coaches began scheduling and delivering the workshops in each of their respective facilities. Participation in the civility workshops were made mandatory for each employee by organizational leadership, though participation in either the pre- or post-training survey was voluntary.

**CAHP Civility Workshop Data Collection**

**Civility Workshop Participants.** Facilities were randomly assigned to complete the civility training during one of two training waves, with 50% of employees completing training during each wave of training. The final sample consisted of 123-288 participants measured across four waves of data collection. Participants remained in the sample for hypothesis testing if they completed all focal measures and were not identified as outliers. Participants were clustered into facilities, work groups, disciplines, and shifts based on answers they provided on the pre-training survey. Participants were predominantly female (74%), Caucasian (72%), 43-51 years of age on average, worked primarily in medical/dental occupations (69%), worked first shift (72%), and had an average organizational tenure of 7.69 years.

**Civility Workshop Procedures.** The workshops were presented in classrooms by trained civility coaches, and they utilized multiple methods to deliver the training material (e.g., lecture,
in-class discussions, and role playing). Each workshop was designed to last 90 minutes and covered such topics as (1) differences between civility and incivility, (2) examples of civil and uncivil behavior, with an emphasis on specific uncivil behaviors exhibited within the focal organization, (3) general outcomes of uncivil work environments and specific effects of incivility behaviors within the specific healthcare setting, (4) outline of a three-step process to respond to uncivil treatment, and (5) information on organization-specific policies, including the organization’s code of conduct and non-retaliation policy.

Following completion of the civility workshop, participants completed a survey assessing team civility experiences, team civility norms, team cohesion, OCB-I, and team performance. Additional follow-up surveys were administered such that by the end of the study, four waves of data had been collected within the span of four years. Specifically, the baseline survey was administered first and then 50% of the employees working for the organization participated in the civility intervention. Then, the second survey was administered six months after the baseline survey. Following the administration of this second survey, the remaining 50% of employees were trained such that before the third wave of data collection, 100% of employees had received the civility intervention. The third survey was administered six months after the second survey, and the final survey was administered 14 months following the third survey (refer to Figure 2 for a model depicting survey administration and the timing of the two training waves).

**Measures.** Upon consenting, participants were provided with questionnaires to assess cohesion in their workgroups, job performance, and perceptions and experiences of workgroup incivility (see the appendix for a list of specific items). Unless otherwise noted, participants utilized a 7-point Likert-type scale to indicate their level of agreement with the item (1 = *Strongly disagree* to 7 = *Strongly agree*).
Workplace Incivility Scale (WIS). Cortina, Magley, Williams, and Langhout (2001) developed an 11-item measure to assess individual experiences being the target of incivility. The WIS was designed to capture the various forms of uncivil behavior, including those acts perpetrated by co-workers or supervisors within the past year. Respondents used a frequency scale ranging from “0” (Never) to “5” (Many times), with higher scores indicating higher frequencies of incivility experiences. To aid in interpreting correlations and means, items from this scale were reverse-coded so that higher values reflected experiences of civility at work.

Team/Work Group Cohesion. Four items were derived from the Defense Equal Opportunity Organizational Climate Survey (DEOCS) to measure employees’ individual perceptions of the bonds between them and the members of their work group. Sample items included: “We work well together as a team” and “We pull together to get the job done.”

Job Performance. Employee job performance was measured before and after the civility training workshop using two distinct scales. First, employees were asked to assume the perspective of their supervisors and then indicated how their supervisors would rate them on work quality, quality of interactions with co-workers, quality of interactions with patients, and overall work performance. Utilizing this approach has been found to reduce social desirability in self-reporting job performance, thereby increasing the accuracy and validity of employee ratings of their own performance on the job (Conway, 2002; Schoorman & Mayer, 2008). Second, individual employee job performance was measured using two items from a scale designed to assess employee citizenship behaviors towards their co-workers (Williams & Anderson, 1991). Citizenship behaviors fit into the tripartite model of job performance that includes task performance, counterproductive work behaviors, and more organization-centered citizenship behaviors (Dalal, Baysinger, Brummel, & LeBreton, 2012). The two items used in this study to
assess interpersonal citizenship behaviors were: (1) “I take a personal interest in the well-being of others (e.g., help new employees),” and (2) “I pass along work-related information to others.”

**Civility Norms Questionnaire-Brief (CNQ-B).** The **CNQ-B** was developed by Walsh and colleagues (2008, 2012) as a four item measure meant to assess workgroup climate for civility. Civility climate encompasses employee perceptions that the norms of the workgroup support respectful treatment of one another. This measure was initially developed as a seven item measure during the baseline survey administration in the current study, and the original seven items were retained in subsequent waves of data collection to maintain survey consistency.

Sample items used to assess employee perceptions of civility norms include: (1) “Rude behavior is not accepted by your coworkers,” (2) “Angry outbursts are not tolerated by anyone in your unit/workgroup,” (3) “Respectful treatment is the norm in your unit/workgroup,” and (4) “Your coworkers make sure everyone in your unit/workgroup is treated with respect.” **CNQ-B** items are all worded positively, so higher scores on this measure indicate a more positive climate for civility.

**Results**

**Data Preparation and Aggregation**

Missing data occurred at the item level such that respondents would skip particular questions on each construct, but ultimately answered enough questions (more than 50%) to compute a scale score. Thus, following the advice of Newman (2014), I calculated scale scores for individuals with missing item responses, and substituted scale scores (means of the items for each scale) for the missing values. This method of dealing with missing data is effective for scales that have high values for Cronbach’s alpha (Graham, 2009; Newman, 2009), such as the
scales used to measure the focal constructs of this study (refer to Table 2 for reliability estimates and agreement indices for each scale at the individual and team level across time).

Data were aggregated to the workgroup level (workgroup n = 23-38) for each of the four waves of data collected. A workgroup was defined as containing a minimum of two employees who likely shared similar perceptions of the workplace. These shared perceptions were based on the quality of their social interactions as typified by their shared focus on providing health care to prisoners. Workgroups were further defined as containing a minimum of two employees since dyads are sufficient for interpersonal phenomena to emerge (Kozlowski & Ilgen, 2006). Following recommendations from Mathieu and Chen (2011), additional information beyond structural factors was also collected to aid in the assignment of employees to workgroups. For example, qualitative information was collected during employee focus group meetings which provided insight into how employees interacted in a typical workday. Additionally, members of the research team visited prison sites to observe employee interactions. During this process, the research team found that employee interactions varied as a function of facility size, time of day (since more arrests occurred during the evening than during the day), and the nature of the work (i.e., patient care versus clerical work). Thus, employees were assigned to the same workgroup if they: (1) were employed in the same primary facility, (2) worked the same shift, and (3) worked in similar disciplines. Employees who worked in either medical or dental occupations were grouped together as similar disciplines. Mental health occupations were grouped with medical and dental occupations if there was only one employee in this role within the facility; otherwise, mental health occupations were grouped into their own workgroups. Employees who identified their discipline as “clerical” or “other” were split by shift (i.e., first, second, or third shift), rather than by discipline, such as at smaller facilities, or were asked which healthcare discipline they
most regularly interacted with so as to be assigned to an appropriate workgroup. This aggregation to the workgroup level was necessary because individual employee responses to the surveys could not be tracked across the four waves of data collection. The baseline survey asked employees to include employee IDs to track participants across time, but response rates were negatively impacted when respondents were asked to provide this information. Thus, the research team felt that improved response rates for subsequent time points justified not being able to track individuals across time. Furthermore, the constructs of interest (e.g., team cohesion, team civility experiences, team civility norms, OCB-I, and team job performance) are conceptualized at the workgroup level of analysis. Please refer to Table 1 for employee composition by discipline and work shift across time by Training Wave.

Participants’ responses to each of the measures were thus aggregated using grand mean and group-centered mean indices. Reliability indices (ICC1, ICC2) and within-group agreement indices for multiple items ($r_{WG(j)}$) were calculated to establish whether this aggregation was statistically warranted.¹ Use of these indices follows the suggestion of Coultas, Driskell, Burke, and Salas (2014) to aggregate team emergent states unless studying unconnected groups of people who do not engage in shared collective tasks (such as passengers on public transportation or neighbors in a neighborhood). LeBreton and Senter (2008) also assert that before a construct can be aggregated to a higher level construct, researchers must first demonstrate that individuals at the lower level are in agreement with one another and that measures show consistency across judges. Agreement and reliability indices were calculated using the tool for computing IRA and IRR estimates (version 1.5) developed for Microsoft Excel by Biemann, Cole, and Voelpel (2012), and intraclass correlations (ICC1 and ICC2) were calculated using SPSS (IBM Corp, 2017).
The necessary first step in calculating within-group agreement ($r_{WG(J)}$) is to calculate the expected variance of a specified null distribution which shows a total lack of agreement among raters. In the past, researchers have opted for uniform (rectangular) distributions that show an equal likelihood of each response being selected for each item. Using this null distribution implies that there is no expected response bias and that it is theoretically appropriate to use the same value for the expected variance in the denominator of the equation for calculating within-group agreement. Because the uniform distribution has been found to produce inflated values for $r_{WG(J)}$ (as it results in larger estimates of error variance), it creates an upper-bound estimate of $r_{WG(J)}$. Thus, researchers have recommended using “a small but inclusive set of null distributions when computing $r_{WG(J)}$-based indices” (Biemann et al., 2012, p. 72; James, Demaree, & Wolf, 1984; LeBreton & Senter, 2008). These null distributions should come from previous research, or in the absence of previous data, should come from similar construct domains (James et al., 1984). Information regarding the shape of the distribution of each construct in the current study thus came from the papers which outline the creation of the instrument, as well as from additional studies which used the instrument (where available). For example, Cortina et al. (2001) described the distribution of the Workplace Incivility Scale (WIS) as being skewed for both men and women (Women: Mean = 5.27, SD = 5.57, Men: Mean = 4.16, SD = 5.18), and Walsh et al. (2008, 2012) described the distribution of the Civility Norms Questionnaire as being negatively skewed (Mean = 4.77, SD = 1.25). Thus, within-group agreement was calculated using a slightly skewed null distribution as a lower-bound estimate and with a uniform (rectangular) null distribution as an upper-bound estimate. The true amount of within-group agreement, then, can be found to reside somewhere within this range (Biemann et al., 2012). Researchers then suggest considering within-group agreement in terms of: “lack of agreement” =
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.00 to .30, “weak agreement” = .31 to .50, “moderate agreement” = .51 to .70, “strong agreement” = .71 to .90, and “very strong agreement” = .91 to 1.00 (Biemann et al., 2012; LeBreton & Senter, 2008). Although team civility norms showed weak to moderate agreement at Time 2 ($r_{WG(7)} = 0.49$), the range of mean $r_{WG(J)}$ values for the remaining constructs demonstrated moderate to strong agreement across the four time points for even the lower-bound mean estimate when comparing it to the slightly skewed null distribution (range of $r_{WG(J)} = 0.54 - 0.90$).

Along with calculating values for $r_{WG(J)}$ to determine consensus among team members, I also calculated intraclass correlations (ICC) which provide information about both interrater agreement and interrater reliability (LeBreton, Burgess, Kaiser, Atchley, & James, 2003; LeBreton & Senter, 2008). Two measures of ICC exist for multilevel analysis based on one-way random effects ANOVA (ICC1 and ICC2), and each of these are a measure of absolute consensus that function technically as both absolute rater consensus and relative rater consistency. Thus, ICCs may be interpreted as “the proportion of observed variance in ratings that is due to systematic between-target differences compared to the total variance in ratings” (LeBreton & Senter, 2008, p. 822). ICCs, then, provide further evidence for determining whether aggregation from the individual level to the team level is warranted. Because ICC(1) is a measure of effect size, typical conventions following interpretation of effect sizes is followed. Thus, a value of ICC(1) < .10 would represent a small effect, an ICC(1) between .10 and .25 represent a medium effect, and an ICC(1) > .25 might be considered a moderate-to-large effect (Murphy & Myors, 1998, p. 47). ICC(2) is a measure of team-level agreement and reliability and so there will be a larger number of judges and targets factored into its computational equation (LeBreton & Senter, 2008). This indicates that values of ICC(2) will typically be larger than
those values of ICC(1). Although convention dictates using .70 as the cutoff for the minimum acceptable level of reliability (Nunally, 1978), Lance, Butts, and Michels (2006) assert that many researchers utilize this cutoff blindly and without considering the appropriateness of this value. What is critical to keep in mind when interpreting these values is that a lower value for ICC(1) provide the ability to detect Level 1 direct effects, whereas higher values for ICC(1) or ICC(2) support the power to detect cross-level direct effects (Raudenbush & Liu, 2000). Using the output from conducting one-way analyses of variance (ANOVA) in SPSS (IBM Corp. 2017), I used the between- and within-subjects variance to calculate ICC(1) and ICC(2) values for each of the study’s variables across all four time points (Bliese, 2000). Values for ICC(1) show a range of -0.04-0.19 across all variables, and values for ICC(2) show a range of -0.12-0.55 across all constructs. Together, these indices provide statistical support for aggregating the focal constructs of this study (see Table 2 for values of $r_{WG(j)}$, ICC(1), and ICC(2) estimates by workgroup across each time point).

**Between-Profile Differences**

Facilities were randomly assigned to complete training at one of two time points (between Time 1 & Time 2 surveys, or between Time 2 & Time 3 surveys). Because of this, comparison groups are available to compare effects of the training between groups when half of the employees had received training and the other half had not (Time 2). A profile analysis to compare the effects of receiving or not receiving the civility intervention on team civility experiences, team cohesion, interpersonal citizenship behaviors (OCB-I), team job performance, and team civility norms was conducted using SPSS Version 25.0 software (IBM Corp. 2017). Profile analysis is a special type of multivariate approach to repeated measures analysis of variance (ANOVA) in which the goal is to determine whether between-profile differences exist
among multiple dependent variables collected at the same time (Schmit, Watson, & Schmit, 2018; Tabachnick & Fidell, 2013). A profile depicts performance on scales or other measures and describes their shape and pattern. Profiles can be used to summarize means, variance, and relationships among dependent variables for groups and to outline the strengths and weaknesses of an intervention based on the constructs being measured (Watkins, Glutting, & Youngstrom, 2005). When conducting a profile analysis, a researcher is testing three distinct null hypotheses. First, the researcher is testing parallelism, or whether the profile pattern and shape will be similar and symmetrical between groups. Next, the researcher is testing level, or the degree of similarity in grand means of scores across all the dependent variables across all groups. Third, the researcher is testing the null hypothesis of flatness, in which scores in a specific profile will be similar to one another (Tabachnick & Fidell, 2013). Profile plots are generated by SPSS to allow the researcher to more explicitly view the profile pattern and shape.

First, to prepare the data for profile analysis, I assigned a dummy code to workgroups, with “1” indicating those facilities which participated in the first wave of training, and “2” for those facilities having completed the training during the second wave. Data were arranged such that each of the five constructs (team civility experiences, team civility norms, team cohesion, interpersonal citizenship behaviors, and team job performance) across each of the four time points served as the within-subjects factor and Training Wave (dummy coded as “1” or “2”) was entered as the between-subjects factor. Tables 3 and 4 show the descriptive statistics for each within-subject factor by Training Wave. The results of the multivariate tests for within-subject factors were statistically significant for each of the five constructs, $F(15, 44) = 2.57, p < .05$, partial $\eta^2 = .47$. These results indicate that the null hypothesis of profile flatness can be rejected and that there is a within-group main effect such that scores within each profile are different and
change across time. Additionally, the results of the tests of between-subject factors (Training Wave) were statistically significant, $F(5, 54) = 2.81, p < .05$, partial $\eta^2 = .21$. This finding points to a rejection of the null hypothesis of level and that there is a between-subject main effect such that the effect of the civility intervention across the four time points is based on whether workgroups received the civility training at Training Wave 1 or Training Wave 2. Taken together, the change in scores is likely due to the different timespans between completion of the intervention and when the scores were subsequently assessed for each of the groups. This indicates that there may be predictable patterns of within-group behaviors and attitudes at specific time points for employees who participate in a civility intervention. The result of the analysis of the between-subjects factor thereby provides support for the appropriateness of modeling each Training Wave as a distinct sample using two different datasets (Williams & Kibowski, 2016). Finally, a multivariate test of the interaction between the within-subject factors (the five focal constructs) and the between-subjects factor (Training Wave) was not statistically significant, thereby supporting the null hypothesis of parallelism which states that the profile pattern and shape will be similar and symmetrical between groups, $F(15, 44) = 1.72, p > .05$, partial $\eta^2 = .37$. Thus, scores for each of the five focal constructs for each group changed in the same direction across time and at the same relative magnitude. Figures 3-7 feature profile plots for the results of each of the five focal constructs across time for each Training Wave.

Review of each profile plot shows general changes in each construct in predictable directions demonstrating overall efficacy of the civility intervention. Surprisingly, employee scores on team civility experiences (CIV), team civility norms (CNQ), team cohesion (COH), and team job performance (PERF) demonstrated noticeable differences between each Training Wave at Time 1 before the civility intervention had been delivered. There was evidence of
within- and between-group agreement on these measures at Time 1, and reliability estimates were high ($\alpha > .70$) for each scale (refer to Table 2). Thus, it is likely that outliers affected mean scores of these measures for one or both Training Waves.

The profile plots also show that decay was present for two of the five focal constructs and that the other three constructs continued to show marked improvement across time. Experiences of civility showed decay for Training Wave 1 at Time 2 of survey administration, which was the time point immediately following delivery of the civility intervention for Training Wave 1. The likely explanation for this decay is that employees were not aware that behaviors occurring in their organization constituted incivility until after learning the characteristics of uncivil treatment during the training workshop. This new knowledge of what constitutes uncivil behavior may have then led employees to become more accurate at perceiving the incident rates of mistreatment in their workgroups, resulting in a decline of employee ratings of team civility experiences. Employees who received the civility training during Training Wave 2 also showed slight declines in scores on CIV at Time 3, which immediately follows the point at which they received the civility intervention. Both Training Waves demonstrated strong decay in scores on CIV between Time 3 and Time 4. Employee scores on CNQ, however, continued to increase across Times 2, 3, and 4, and this may indicate that experiences of civility might begin to show signs of increase had the survey been administered to employees at time points beyond Time 4. Team cohesion also showed decay across time, but this outcome was only observed for Training Wave 1 and it occurred between Time 2 and Time 3, but scores on cohesion improved between Time 1 and Time 4. Finally, each plot shows that each Training Wave had similar scores on most measures at Time 4, and many of these scores were in the predicted direction which shows potential for the efficacy of the civility intervention. One notable exception to this finding was in
the differences in observed scores at Time 4 on team job performance, but teams in both Training Waves ended with higher scores on this metric than when the study began. Because workgroups varied in the amount of agreement for each construct, profile analysis of standard deviations was also conducted, but results did not meaningfully differ from those results found when conducting profile analyses using means.

**Hypothesis Testing**

I tested hypotheses with a series of autoregressive structural equation models (SEM) using Mplus 8.0 software (Muthén & Muthén, 2017; the table of bivariate correlations used for these analyses can be found in Tables 3 and 4). Each of the following described analyses were conducted separately for each Training Wave (Training Wave 1 \( n = 156 \), Training Wave 2 \( n = 132 \)). First, I set up a model to assess stability of the constructs over time. This model included autoregressive paths of each variable at Time 1 regressed on themselves at Times 2-4 (Dicke, Stebner, Linninger, Kunter, & Leutner, 2018; McCoach, 2018). In addition, all variables were allowed to correlate with one another, and error variances for each construct were set to be equal to one another. Constraining error variances to be equal to one another is crucial to making autoregressive models identified so that the parameters can be uniquely estimated (Kenny & Milan, 2012; McCoach, 2018). Disturbances in the model were constrained to be equal because disturbances represent random shocks to the system that can have similar effects across the model at all time points (Biesanz, 2012; McCoach, 2018). Numerous model fit indices are reported for the baseline and subsequent autoregressive models, including the value for \( \chi^2 \), the Comparative Fit Index (CFI; Bentler, 1990), the Tucker-Lewis Index (TLI), the Root Mean Square Error of Approximation (RMSEA), and the Standardized Root Mean Square Residual (SRMR). Many of these fit indices describe incremental fit of the model, and if certain fit
thresholds are met, respecification of the structural model is not necessary. For CFI and TLI, values of .90 or higher indicate satisfactory fit, whereas values greater than .95 represent excellent model fit (Hu & Bentler, 1999; McDonald & Marsh, 1990). Values of RMSEA ≤ .05 signify good model fit, and RMSEA values between .05 and .08 show adequate fit (Browne & Cudeck, 1993). Confidence intervals are typically reported for RMSEA values, and if the lower bound value of the 95% confidence interval includes or is near zero and the upper bound value is less than 0.10, the RMSEA value can be determined to appropriately represent model fit (McCoach, 2018). The SRMR value is the standardized difference between the observed and predicted covariance matrix, and this value is an absolute fit index in which perfect model fit yields values of zero. SRMR < .08 implies adequate model fit (Browne & Cudeck, 1989; McCoach, 2018). Reporting these multiple fit indices follows the advice of researchers (e.g., Hu & Bentler, 1999; McCoach, 2018) to use combined cutoffs to better assess specification of models under various conditions (i.e., when sample size is large, degrees of freedom are low, or the model is estimating a large number of parameters).

Initial model fit for the baseline stability model for each Training Wave was poor, Training Wave 1: $\chi^2 = 189.92$, $df = 140$, $p < .01$, CFI = 0.87, TLI = 0.82, RMSEA = 0.05, 90% confidence interval = 0.029-0.064, $p > .05$, SRMR = 0.12, Training Wave 2: $\chi^2 = 196.14$, $df = 140$, $p < .01$, CFI = 0.85, TLI = 0.81, RMSEA = 0.06, 90% confidence interval = 0.035-0.073, $p > .05$, SRMR = 0.14. These fit indices indicate a lack of stability of each construct and point to measurement non-invariance across the four waves of data collection. Trimming the paths that were not significant and conducting a chi-square goodness of fit test yielded a slightly better fitting model, though stability was still poor: Training Wave 1: $\chi^2 = 214.13$, $df = 169$, $p < .05$, CFI = 0.88, TLI = 0.86, RMSEA = 0.04, 90% confidence interval = 0.021-0.057,
$p > .05$, SRMR = 0.13, Training Wave 2: $\chi^2 = 222.52$, $df = 167$, $p < .01$, CFI = 0.86, TLI = 0.84, RMSEA = 0.05, 90% confidence interval = 0.031-0.067, $p > .05$, SRMR = 0.14.

The source of measurement invariance and low values for CFI and TLI for the baseline model and for the model with trimmed paths is likely due to the weak correlations among the measures across the four waves. The pattern of the baseline model used to test measurement invariance follows a simplex pattern such that repeated measures of each of the five variables are expressed as a function of their preceding value plus random disturbance. Put differently, true scores operate as a function of prior values, and true scores which are temporally adjacent to one another are more similar to each other than they are to other, more remote true scores. Random change within the true score is also introduced at each subsequent time point. This means that autoregressive models will eventually yield correlations close to zero between the first and last time point, if the construct is measured long enough (McCoach, 2018). For the current study, it would make sense to find small correlations at later time points, but the measurement non-invariance is most likely the result of small correlations occurring across all time points. Regardless of whether each training wave was analyzed separately or together, correlations at Time 1 should have been high, given that no employees had yet received the civility intervention. What was found, instead, was that correlations remained low across all time points even when employees were separated by Training Wave. Typically, results of measurement non-invariance would indicate that subsequent tests of measurement invariance using nested models cannot be completed and would require reevaluation of the factor structure, the indicators, or how the theoretical constructs are being operationalized (Edwards & Wirth, 2009, 2012). Reviewing the reliability estimates of each measure across time, however, pointed to highly reliable measures that function the same across time and across groups and that the items on each
of the scales fit well together (Bliese, Maltarich, Hendricks, Hofmann, & Adler, 2018; Cortina, 1993; LeBreton & Senter, 2008). Thus, additional models analyzing direct effects of the constructs can still be run despite the finding of measurement non-invariance (J. Mathieu, personal communication, March 4, 2019).

To determine whether levels of team civility experiences (CIV) changed over time (Hypothesis 1), I started with the trimmed paths baseline model of stability and then regressed scores of CIV at Time 1 on Time 2. I then added cross-lagged paths from Time 2 to Time 3 and then from Time 3 to Time 4. For Training Wave 1, the path from Time 1 to Time 2 was statistically significant, but none of the other paths were statistically significant, Time 1 on Time 2: $\beta = -0.25$, S. E. = 0.11, $p < .05$, Time 2 on Time 3: $\beta = 0.06$, S. E. = 0.12, $p > .05$, and Time 3 on Time 4: $\beta = -0.01$, S. E. = 0.15, $p > .05$. For Training Wave 2, none of the cross-lagged paths of CIV were statistically significant, Time 1 on Time 2: $\beta = -0.12$, S. E. = 0.12, $p > .05$, Time 2 on Time 3: $\beta = 0.004$, S. E. = 0.13, $p > .05$, and Time 3 on Time 4: $\beta = -0.19$, S. E. = 0.17, $p > .05$ (see Table 5 for the results of hypothesis testing for Training Wave 1, and refer to Table 6 for the Training Wave 2 results). Overall, these results do not lend support for Hypothesis 1, and the CAHP intervention did not lead to meaningful changes in the amount of civility employees experienced over time.

Next, I tested the hypothesized reciprocal relationship between team cohesion (COH) and CIV (Hypotheses 2 and 3) by regressing COH at Time 1 on CIV at Time 2, COH at Time 2 on CIV at Time 3, and COH at Time 3 on CIV at Time 4. I then tested the reverse cross-lagged paths of CIV on COH at each subsequent time point. For Training Wave 1, the only statistically significant path was from COH at Time 3 on CIV at Time 4, $\beta = 0.28$, S. E. = 0.11, $p < .01$. The path from CIV at Time 3 to COH at Time 4 was statistically significant for Training Wave 2, $\beta =$
-0.61, S. E. = 0.15, \( p < .01 \), but no additional paths were significant. These results, then, provide partial support for Hypotheses 2 and 3 and indicate that the reciprocal relationship between CIV and COH may take time to develop as employees become accustomed to observing and experiencing civil behaviors and the positive social exchanges that result in feelings of cohesion.

I then added cross-lagged paths for testing Hypothesis 4 which predicted that improved COH as a result of the civility intervention would positively impact team performance (PERF). None of the cross-lagged paths between COH and PERF were statistically significant for either Training Wave, so Hypothesis 4 was rejected. Hypothesis 5 predicted that improvements in COH would result in a greater number of displays of interpersonal citizenship behaviors (OCB-I). None of the paths from COH to OCB-I were statistically significant for Training Wave 1, but the cross-lagged path from COH at Time 3 to OCB-I at Time 4 was significant for Training Wave 2, \( \beta = -0.37, \) S. E. = 0.14, \( p < .01 \). The significant relationship between COH at Time 3 and OCB-I at Time 4 was not in the hypothesized positive direction, so Hypothesis 5 was rejected. The magnitude of the relationship between COH and OCB-I was strengthened during the span of the study, indicating a potential need to measure this relationship at more time points than was included in this study.

I then tested Hypothesis 6, which predicted that an increase in CIV would result in an increase in OCB-I. None of the cross-lagged paths were statistically significant for Training Wave 1, but the path from CIV at Time 3 to OCB-I at Time 4 was significant for Training Wave 2, \( \beta = 0.30, \) S. E. = 0.12, \( p < .05 \). Because this statistically significant path was in the hypothesized direction, partial support was found for Hypothesis 6. Thus, there is some evidence that a civility intervention can improve OCB-I across time. Next, I tested the cross-lagged paths of earlier scores on CIV on later scores of PERF (Hypothesis 7), and there were mixed results for
each Training Wave such that for Training Wave 1, the path was significant from CIV at Time 2 to PERF at Time 3, $\beta = 0.35$, S. E. = 0.10, $p < .01$, and for Training Wave 2 the cross-lagged path was significant from CIV at Time 1 to PERF at Time 2, $\beta = -0.22$, S. E. = 0.11, $p < .05$, and from CIV at Time 2 to PERF at Time 3, $\beta = -0.22$, S. E. = 0.11, $p < .05$. The hypothesized relationship between CIV and PERF was both positive and negative, and thus partial support for Hypothesis 7 was found. It appears that the declines in perceptions of employee civility that accompanied increased awareness in the types of behaviors that constitute incivility may have had a greater negative impact for teams in Training Wave 2. The positive effect of increased CIV on PERF for teams in Training Wave 1 occurred later than the observed effects between these variables for teams in Training Wave 2, which provides additional support for the need to measure these constructs at times beyond the times used in this study. Finally, Hypotheses 8, 9, and 10 predicted positive cross-lagged relationships between CIV and team civility norms (CNQ), COH and CNQ, and CNQ and OCB-I respectively. None of these paths were statistically significant for either Training Wave, thereby resulting in a rejection of Hypotheses 8, 9, and 10.

Supplemental Analyses

Incivility and other forms of workplace mistreatment have been empirically tied to gender in healthcare settings such that women tend to be the targets and perpetrators of uncivil behaviors at higher rates than their male colleagues (Bartholomew, 2006; Bray, 2001; Farrell, 2001; Kivimaki, Eloainio, & Vathera, 2000; Wilkins, 2014). For this reason, supplemental analyses were conducted to examine the effects of gender in the present study. First, gender composition in workgroups was assessed to determine the number of women in each workgroup across all 22 facilities. Results of these analyses found that women were the simple majority in most workgroups across all four time points (Time 1 = 76% of workgroups, Time 2 = 77% of
workgroups, Time 3 = 83% of workgroups, and Time 4 = 65% of workgroups). Next, I conducted a profile analysis to test for between- and within-subject differences by gender across the four waves of data collection. Results of the multivariate tests for within-subject factors were not statistically significant by gender for each of the five constructs across the four time points, $F(15, 44) = 1.58, p > .05$, partial $\eta^2 = .35$. These results indicate that the null hypothesis of profile flatness can be accepted and that there is not a within-groups main effect by gender. Additionally, the results of the tests of between-subject factors (gender) were also not statistically significant, $F(5, 54) = 1.45, p > .05$, partial $\eta^2 = .12$. This finding points to an acceptance of the null hypothesis of level and that there is no between-subject main effect of gender. Next, a multivariate test of the interaction between the within-subject factors (the five focal constructs) and the between-subject factor (gender) was not statistically significant, thereby supporting the null hypothesis of parallelism which states that the profile pattern and shape will be similar and symmetrical between groups, $F(15, 44) = 1.55, p > .05$, partial $\eta^2 = .35$. Finally, because significant main effects were observed within-subjects and between-subjects when profile analysis was used to compare scores by Training Wave, additional analyses were conducted for gender within Training Wave 1 and Training Wave 2. Of the employees who received the civility intervention during Training Wave 1, the within-subject factors were not statistically significant by gender for each of the five constructs across the four time points, $F(15, 14) = 1.55, p > .05$, partial $\eta^2 = .62$. In addition, the results of the tests of between-subject factors (gender) were also not statistically significant, $F(5, 24) = 0.82, p > .05$, partial $\eta^2 = .15$, nor were the tests of the interactions between the within-subject factor (focal constructs) and the between-subject factor (gender), $F(15, 14) = 1.41, p > .05$, partial $\eta^2 = .60$. Profile analysis could not be run to compare gender profiles for Training Wave 2 because assumptions of normality and
assumptions of sphericity could not be met (O’Brien & Kaiser, 1985). Standard tests for correction such as the Greenhouse-Geisser or Huynh-Feldt were conducted, but critical values for these tests which would indicate continuing with further analyses could not be reached (Field, 2013; Howell, 2002). Refer to Figures 8-12 for profile plots depicting scores on each construct by gender for Training Wave 1.

**Discussion**

The current study was conducted to determine the effectiveness of a training intervention to reduce workplace incivility among workgroups in a prison healthcare system. By improving civility among workgroups, the research team hoped to increase feelings of cohesion within workgroups which would ultimately result in more frequent displays of OCB-I, create norms for mutual respect, and result in overall improvements in team-level job performance. This study did not find support for previous research examining the effectiveness of an intervention to reduce workplace incivility (Leiter et al., 2011, 2012; Osatuke et al., 2009). Namely, results of this study demonstrated that client-focused civility interventions may not be successful at improving employee relationships across time in all contexts. Although there was observed improvement between Time 1 and Time 2 in experiences of civility for those teams who received the civility training during Training Wave 1, no additional improvements in experiences of civility were found during the course of this study. There were noticeable effects on additional team outcomes as a result of the civility training, however, and effects were present to support the relationship between team civility experiences and team cohesion. Additionally, there was a moderate, negative relationship between team cohesion and OCB-I and both positive and negative relationships were observed between team civility experiences and team performance. Other notable, yet non-significant, outcomes of the civility intervention were that norms for civility
were strengthened across time and the amount of OCB-I perceived by employees were increased by the final time point of the study.

Results of the analyses of the intervention’s effects on proximal and distal outcomes were thus mixed, and this study provides some evidence that the intervention increased team members’ feelings of team cohesion and that this change may be the mechanism which accounts for the enhanced norm for civility that emerged following the intervention. When employees experience positive social exchanges with other members of their team (such as experiencing civil behavior from their coworkers), team cohesion is built and enhanced through the creation of positive relationships (Allport, 1954; Homans, 1974). Research on norm formation has proposed that these early respectful relationships can then form the basis for expectations among team members for future interactions. If left unchallenged, respect develops as the norm within the group and subsequent intentions to challenge the norm, such as engaging in uncivil behavior, will be ignored or sanctioned (Bettenhausen & Murnighan, 1991; Walsh et al., 2012). Numerous studies point to the ability for affective states present within a team to spread through social or emotional contagion processes and to have lasting effects on macro-level organizational processes (Dasborough, Ashkanasy, Tee, & Tse, 2009; Harvey, Treadway, & Heames, 2007; Tee, 2015). The findings of this body of research underscore the need for organizations to invest resources to improve team affective states since these can ostensibly influence organizational outcomes.

Although the team emergent states of cohesion and norms for civility were found to improve as the result of the present study, team job performance and OCB-I were not impacted by the civility intervention consistently across time. This is most likely due to a ceiling effect of scores on these measures that allowed for only marginal improvements in these scores. A robust
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body of organizational psychology literature points to the leniency bias inherent in self-report measures of socially desirable traits, such as engaging in helping behaviors (OCB-I) or performing well in one’s job (e.g., Farh & Dobbins, 1989; Kwan, John, Robins, & Kuang, 2008; Robins & Paulhus, 2001; Wayne & Liden, 1995), and this tendency toward self-enhancement has been found to be culturally universal (Ng, Koh, Ang, Kennedy, & Chan, 2011; Xie, Roy, & Chen, 2006). This is especially true in work settings where negative consequences such as not receiving a promotion or losing one’s job may occur for owning up to negative behaviors or poor performance. As outlined in the next section, additional methods can be employed in future research to alleviate the potential for participant self-enhancement bias.

Limitations and Future Research

Interpretation of the effectiveness of the intervention to improve workplace civility may be affected by the study’s limitations. First, participant responses could not be tracked at the individual level of analysis across the four waves of data collection. This resulted in an inability to determine if the large amount of participant attrition evident in this study was due to random or systematic influences. Determining the cause of attrition is crucial when deciding how to cope with missing data as it dictates which missing data technique to employ (i.e., pairwise deletion, single imputation, or maximum likelihood; Newman, 2014). For the present study, employees may have left the organization between waves, new employees may have been hired, or employees may have been moved to different workgroups to respond to changes in organizational needs. Thus, it cannot be ruled out that a different sample of participants completed the survey at each time point, and this fact may have contributed to the difficulty in finding the predicted changes in the focal constructs across time. Future research will need to ensure that individual employees can be tracked across multiple time points. One widely used
method for tracking individual survey responses is to assign identification codes to participants. Self-generated identification codes have been found to be especially useful, albeit imperfect, at securing respondent anonymity, reducing social desirability bias, and tracking respondents across multi-wave studies (Schnell, Bachteler, & Reiher, 2010). Newman (2014), however, warns of using participant identification keys to increase participant response rates as they may threaten participant confidentiality, and participant identification codes have a relatively small impact on improving survey response rates ($r = .18$). Therefore, future research can seek to ascertain more effective means of tracking individual response rates across time. Furthermore, the ability to track individuals across time would have allowed for individual-level variables associated with civility (i.e., job satisfaction, engagement, burnout, commitment, additional demographic characteristics, etc.) to be studied to determine whether the civility intervention impacted these constructs as well.

Next, evaluating the effectiveness of interventions to improve civility among employees may require more time than was used in this study. Many of the effects observed following the intervention occurred more than one year following delivery of the civility training. Based on the trajectory of these constructs, it may be that they continued to improve after this study concluded. Indeed, research examining the efficacy of training interventions have noted the importance of conceptualizing time appropriately for the constructs being measured (e.g., Bollen & Curran, 2006; Ilies, Scott, & Judge, 2006; Ployhart & Vandenberg, 2010; Singer & Willett, 2003; Vancouver, Thompson, & Williams, 2001). Appropriate conceptualization includes using prior theories of the nature of the change of the focal construct(s) to determine the number and spacing of repeated measures (Ployhart & Vandenberg, 2010). Besides improving reliability, statistical power, and explanatory power, repeated measures designs and models of trajectory
allow researchers to “differentiate between (a) relatively trivial events that have an immediate but no lasting effects, (b) events that have a relatively small immediate effect but compound over time to produce meaningful effects, or (c) impactful events that have both an immediate and compounding effect over time” (Korsgaard, Kautz, Bliese, Samson, & Kostyszyn, 2018, p. 2). Thus, future research can explore the dynamic nature of civility and its proximal and distal outcomes by measuring these constructs across longer periods of time and at more measurement occasions.

Finally, the measures used in this study demonstrated appropriate overall agreement and reliability for aggregating the constructs to the team level of analysis. Interestingly, teams differed greatly on their amount of within-group agreement for each construct, with some teams showing complete lack of agreement while others demonstrated almost complete agreement. Research on norms within groups has demonstrated that a team’s strongest norms are those for which team members hold the highest level of consensus (Jackson, 1965; O’Reilly, 1989). For the present study, then, it could be that norms other than civility could be more important for those teams who expressed low consensus on measures of civility experiences. For example, it could be that teams low in civility experiences placed greater value in achieving performance outcomes than in maintaining interpersonal relationships. Thus, to get the job done, these teams may compromise any commitment toward civility (see Kessler et al., 2008). Furthermore, sub-group differences (faultlines) may exist within these groups such that the team members enacting uncivil behaviors report few incivility experiences, whereas those who are the target of the mistreatment are the team members reporting greater experiences of incivility. Additionally, team members who report higher identification and commitment to their team are more likely to embrace the norms that reside within the group (Christensen, Rothgerber, Wood, & Matz, 2004),
and this effect is greatest when the norms are centered around positive emotions (Wood, Christensen, Hebl, & Rothgerber, 1997) and prosocial behaviors (Anderson & Dunning, 2014). Thus, future research should focus on individual attitudes within teams to identify individual drivers of team civility norms. Moreover, subsequent research can explore how norms spread across teams and whether certain types of norms, especially the norm for civility, are more likely to emerge and persist at the organizational level.

**Practical Implications**

Interventions designed to reduce workplace incivility have important implications for organizations. Incivility continues to be a problem in many organizations, and uncivil workplaces can result in high costs as employee productivity declines (Porath & Pearson, 2010), employee absences increase (Leiter et al., 2011), and increases in employee burnout (Cortina et al., 2001) and employee turnover (Chiaburu & Harrison, 2008; Lim et al., 2008) require organizations to spend unbudgeted funds to hire and train new employees. Empirical support exists for the efficacy of interventions to reduce workplace incivility (e.g., Leiter et al., 2011, 2012; Osatuke et al., 2009). Additionally, research has found that civility interventions also impact proximal outcomes such as improving the quality of social relationships in organizations (Leiter et al., 2011, 2012), reducing employee burnout (Leiter et al., 2011), increasing employee trust towards coworkers and towards the organization (Holste & Fields, 2010), and enhancing employee attitudes, including job satisfaction (Simon, Judge, & Halvorsen-Ganepola, 2010), work engagement (Bakker, Albrecht, & Leiter, 2011), and organizational commitment (Wanberg, Kammeyer-Mueller, & Marchese, 2006). Indeed, a recent report conducted by the National Academy of Sciences, Engineering, and Medicine (NASEM; 2018) highlighted the importance of creating civil climates as a means of reducing incidents of sexual harassment. This
is because organizational climates that place value on respect and civility are climates that can “support policies and procedures to prevent and punish sexual harassment, while a culture that does not [value respect and civility] will counteract efforts to address sexual harassment” (p. 163). This report, prepared in partnership with the Equal Employment Opportunity Council (EEOC), concludes with a call for effective training interventions that are supported by scientific evidence to raise the level of respect and interpersonal civility within teams and organizations.

Civility interventions may also improve organizational climate and culture by facilitating the creation and maintenance of norms for mutual respect, leading to lasting workgroup- and organizational-level change (Leiter et al., 2011, 2012; Osatuke et al., 2009). A civil climate begins, however, with behavior from the top. A study completed in 2016 by Owens and Hekman concluded that a leader who demonstrates prosocial behaviors, such as respect or humility, will draw focus to others’ strengths, encourage others to share their perspectives, possess a willingness to acknowledge his/her own limitations, and support others’ growth and achievement. As a result, a prosocial leader will inspire follower loyalty and commitment (Basford, Offermann, & Behrend, 2014), reinforce job satisfaction, work engagement, and employee retention (Owens, Johnson, & Mitchell, 2013), leading to more positive follower outcomes. These prosocial emotions are contagious, and members of the leader’s team will begin imitating these behaviors through cooperative social exchanges and improved interpersonal interactions (Owens, Wallace, & Waldman, 2015). These results, then, point to the possibility that delivering civility interventions to leaders first may have a more positive impact on the training’s effectiveness for the organization as a whole.

From the employee perspective, organizations must foster a civil climate by including programs that facilitate employees’ reports of incidents of incivility without fear of retaliation, in
addition to sponsoring workplace interventions to reduce incidents of incivility. Furthermore, organizations may need to adopt selection practices that result in the hiring of more respectful leaders and employees. Reducing workplace incivility will require system-wide changes in practices within organizations. This study hopes to demonstrate that those changes can begin with a little kindness and respect.
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Footnote

1 Tables of descriptive statistics, reliability estimates, and agreement indices by workgroup for each construct at each wave of data collection are available from the author upon request.
Table 1

*Discipline Composition By Shift Across Time By Training Wave*

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### Table 2

**Agreement Indices and Reliability Estimates for Study Variables By Time Point**

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<th>rWG/J vs Uniform</th>
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<th>Median</th>
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*p < 0.05. **p < 0.01*
Table 3

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Note: CIV = Team Civility Experiences, CNQ = Team Civility Norms, COH = Team Cohesion, OCB-I = Team Interpersonal Citizenship Behaviors, PERF = Team Job Performance, and T = Time

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**Grand Means, Standard Deviations, and Correlations Across All Four Waves For Training Wave 2**

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*p < .05

**p < .01
### Table 5
Results From Hypothesis Testing: Training Wave I

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Note: CIV = Team Civility Experiences, CNQ = Team Civility Norms, COH = Team Cohesion, OCB-I = Team Interpersonal Citizenship Behaviors, PERF = Team Job Performance, and T = Time

*p < .05, **p < .01, ***p < .001
Table 6

Results From Hypothesis Testing: Training Wave 2

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*p < .05, **p < .01, ***p < .001
**Figure 1.** Model of Hypothesized Relationships

![Model of Hypothesized Relationships](image)

**Figure 2.** Timing of Civility Training Workshop and Survey Administration

![Timing of Civility Training Workshop and Survey Administration](image)
Figure 3.

![Team Civility Experiences Across Time By Training Wave](image)

Figure 4.

![Team Civility Norms Across Time By Training Wave](image)
Figure 5.

![Team Cohesion Across Time By Training Wave](image)

Figure 6.

![Team OCB-I Across Time By Training Wave](image)
Figure 7.

![Team Job Performance Across Time By Training Wave](image)

Figure 8.

![Team Civility Experiences Across Time By Gender–Training Wave 1](image)
**Figure 9.**

![Team Civility Norms Across Time By Gender—Training Wave 1](image1)

**Figure 10.**

![Team Cohesion Across Time By Gender—Training Wave 1](image2)
**Figure 11.**

![Graph showing Team OCB-I Across Time By Gender—Training Wave 1](image)

**Figure 12.**

![Graph showing Team Job Performance Across Time By Gender—Training Wave 1](image)
Appendix

Survey Items

Climate For Civility Items

*Civility Norms Questionnaire*

Instructions: Please rate the extent to which you agree or disagree with each of the following statements about your WORK GROUP.

1. We would be taken seriously if we complained about disrespectful treatment.
2. Rude behavior is not accepted in our work group.
3. We would have career problems if we were rude to others.
4. Angry outbursts are not tolerated by anyone in our work group.
5. Respectful treatment is the norm in our work group.
6. We make sure everyone in our work group is treated with respect.
7. People treat one another with respect in our work group.

Items are evaluated on a scale ranging from “1” (*Strongly disagree*) to “7” (*Strongly agree*).
Workplace Incivility Experiences Items

Instructions: During the PAST YEAR [PAST THREE MONTHS for Waves 2-4], were you ever in a situation in which any of your supervisors or coworkers...

1. Gave you hostile looks, stares, or sneers.
2. Addressed you inappropriately or unprofessionally.
3. Interrupted or “spoke over” you.
4. Yelled, shouted, or swore at you.
5. Made insulting or disrespectful remarks to you.
6. Ignored you or failed to speak to you (for example, “the silent treatment”).
7. Stared at or leered at you in a way that made you feel uncomfortable.
8. Accused you of stupidity or incompetence.
9. Made jokes at your expense.
10. Physically threatened or intimidated you.
11. Put you down or were condescending to you.

Items are evaluated on a scale ranging from “0” (Never) to “5” (Many times).
Workgroup Cohesion Items

Instructions: The following statements refer to the people you work with that you identified on the previous page. In the items, “WE” and/or “WORK GROUP” refer to those individuals.

Please rate the extent to which you agree or disagree with each of the following statements.

1. We work well together as a team.

2. We pull together to get the job done.

3. We really care about each other.

4. We trust each other.

Items are evaluated on a scale ranging from “1” (Strongly disagree) to “7” (Strongly agree).
Job Performance Items

*Self-Reported Job Performance Items*

Instructions: How do you feel your performance is viewed by the SUPERVISOR who covers your functional unit and has some input or influence over your evaluation? What does your clinical supervisor (i.e., not you) think of …

1. … the quality of your work?
2. … the quality of your interactions with coworkers?
3. … the quality of your interactions with patients?
4. … your overall work performance?

Items are evaluated on a scale ranging from “1” *(Poor)* to “5” *(Excellent)*

*Organizational Citizenship Behavior (Toward Co-Workers) Items*

Instructions: The following statements refer to YOU AND YOUR WORK EXPERIENCES.

Please rate the extent to which you agree or disagree with each of the following statements.

1. I take a personal interest in the well-being of others (e.g., help new employees).
2. I pass along work-related information to others.

Items are evaluated on a scale ranging from “1” *(Strongly disagree)* to “7” *(Strongly agree).*