

The Moderating Effects of Workplace Incivility
on the Relationship between Job Stressors and Worker Strain

by

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A Thesis Submitted to
Saint Mary's University, Halifax, Nova Scotia
in Partial Fulfillment of the Requirements for
the Degree of Master of Science in Applied Psychology
(Industrial/Organizational)

February 16, 2011, Halifax, Nova Scotia

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Your file *Votre référence*
ISBN: 978-0-494-81012-5
Our file *Notre référence*
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Acknowledgements

I wish to sincerely thank my thesis supervisor Debra Gilin Oore for her unsurpassed ability to clearly explain complex ideas, her extraordinary patience during our many exchanges, and her wise guidance in focusing this work. I simply could not have completed this thesis without Debra's support. I am grateful to my committee members, Arla Day and Camilla Holmvell, who provided valuable insights and thoughtful feedback that improved the quality of the study and strengthened the writing. I also wish to thank my external examiner, Michael Vallis, whose unique perspective of the healthcare industry helped me better understand the complexity of the research setting. Michael Leiter, Heather Laschinger, and the research teams behind the Enhancing the Quality of Workplace Environments research project generously allowed me to participate in the applied work and supported me throughout the process. Finally, I wish to thank the Social Sciences and Humanities Research Council of Canada and Saint Mary's University for their scholarship funding.

Enhancing the Quality of Workplace Environments was supported by funding from the Partnerships in Health Services Improvement of the Canadian Institutes for Health Research, the Nova Scotia Health Research Foundation, the Ontario Ministry of Health, and the Social Sciences and Humanities Research Council of Canada.

The Moderating Effects of Workplace Incivility
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by Diane Elizabeth LeBlanc

Abstract

A large sample (N=1124) of healthcare workers participated in a correlational study designed to examine the relationships of workplace incivility and worker strain. The Workplace Incivility Scale (Cortina et al., 2001) was modified to identify the agent of uncivil behaviour. A confirmatory factor analysis indicated the presence of 3 distinct facets of uncivil behaviour: supervisor incivility, coworker incivility, and instigated incivility. HLM analyses indicated that each of the 3 incivility facets were uniquely related to indices of worker strain (i.e., job satisfaction, mental health, and physical health). Furthermore, coworker incivility exacerbated the relationship between work overload and mental health symptoms, instigated incivility exacerbated the relationship between low job control and mental health symptoms, and supervisor incivility exacerbated the relationship between work overload and physical health symptoms. Future researchers should match investigative questions with the appropriate measure of workplace incivility.

February 16, 2011

The Moderating of Workplace Incivility on the Relationship between Job Stressors and Worker Strain

Defining the relationship between job stressors and worker strain is a fundamental concern of industrial/organizational psychology (Sonnetag & Freese, 2003).

Organizational stress is prevalent in many industries around the world (Jex & Beehr, 1991; Sonnetag & Freese, 2003). Moreover, organizational stress relates to a myriad of health complaints (Jex & Beehr, 1991; Sonnetag & Freese, 2003). Although there is sufficient empirical evidence to suggest that job stressors cause worker strain, more research exploring job stressors and moderators of the stress-strain relationship is needed (Sonnetag & Freese, 2003; Viswesvaran, Sanchez, & Fisher, 1999).

One job stressor and possible moderator of the stressor-strain relationship is workplace incivility. Workplace incivility has a direct relationship with worker strain (Blau & Andersson, 2005; Cortina, Magley, Williams, & Langhout, 2001; Lim, Cortina, & Magley, 2008; Pearson & Porath, 2005; Pearson, Andersson, & Porath, 2005; Yamada, 2000). In addition, workplace incivility may exacerbate the stressor-strain relationship by way of reduced social support. Social support is emotional and instrumental help that decreases negative feelings and enables workers to complete tasks more efficiently (Freese, 1999). Workplace incivility disrupts social support (Goffman, 1967). Moreover, social support attenuates the stressor-strain relationship (Viswesvaran et al. 1999). Therefore, workplace incivility is likely to exacerbate the stressor-strain relationship. The goal of this study is to examine the extent to which workplace incivility predicts worker strain and exacerbates the relationship between other job stressors and worker strain.

The present study examines workplace incivility within a sample of Canadian healthcare workers. In a recent survey, 45% of Canadian healthcare workers perceived high work stress as compared to 31% of the general population of Canadian workers (Wilkins, 2007). Across all industries, five of the six professions reporting the highest stress levels (i.e., nurse supervisors, medical lab technicians, specialist physicians, registered nurses, and registered nursing assistants) typically practice their professions in hospital settings (Wilkins, 2007).

Stress in the Workplace

Much of the research exploring stress in the workplace is founded in the transactional model (Lazarus & Folkman, 1984). The transactional model suggests that distress occurs when workers negatively appraise job stressors as a threat or challenge to their well-being (Lazarus, & Folkman, 1984). Distress gives rise to psychological and physical strain outcomes when job stressors are severe, relentless, and/or when workers lack cognitive or emotional resources to cope (Lazarus & Folkman, 1984). Understanding moderators of the stressor-strain relationship may assist theorists in accounting for unexplained variance in the stressor-strain relationship (Sonnetag & Freese, 2003).

Workplace Incivility

Workplace incivility is “low-intensity deviant behaviour with ambiguous intent to harm the target, in violation of workplace norms for mutual respect” (Andersson & Pearson, 1999, p. 457). Examples of uncivil behaviour include discounting a colleague’s opinion, excluding colleagues from social or professional events, and yelling at another person (Cortina et al., 2001). Since Andersson and Pearson’s (1999) seminal propositions on workplace incivility, researchers have established workplace incivility as a construct

distinct from workplace aggression and employee deviance (Blau & Andersson, 2005; Cortina et al., 2001; Martin & Hine, 2005), that is linked to undesirable outcomes (Cortina et al., 2001; Estes & Wang, 2008; Lim, Cortina, & Magley, 2008; Pearson, Andersson, & Porath, 2000; Yamada, 2000).

Initial studies exploring workplace incivility prompted respondents to report the frequency with which they were the target of uncivil behaviour at work, a construct that Blau and Andersson (2005) referred to as ‘experienced workplace incivility.’ In a somewhat divergent approach, the present study specifies three sources of workplace incivility: respondents’ supervisors, their coworkers, and themselves (instigated incivility). A multi-foci approach is found in other areas of research including organizational justice (e.g., Rupp & Cropanzano, 2002), and workplace aggression (for a review, see Hershcovis & Barling, 2010). However, there is little empirical evidence supporting the notion that identifying the source of uncivil behaviour taps into unique facets workplace incivility. Haines, Striker, and Duku (2007) reported findings based on slightly different subscales (physician, supervisor, and coworker); however, they do not report statistical analysis exploring the underlying factor structure. Blau and Anderson (2005) reported data from a confirmatory factor analysis indicating that instigated incivility items and experienced incivility items uniquely load on separate factors; however, this research did not distinguish between the source of experienced workplace incivility (i.e. supervisor and coworker were combined). The present study explores supervisor incivility, coworker incivility, and instigated incivility at once. I argue that, as found in organizational justice and workplace aggression research, workers form

different perceptions of workplace incivility based on the source of uncivil behaviours.

Thus, my first hypothesis is:

Hypothesis 1: Supervisor incivility, coworker incivility, and instigated incivility are distinct factors of workplace incivility.

Workplace Incivility Predicting Worker Strain

Workplace incivility is a job stressor. Experienced workplace incivility has been linked to psychological health symptoms and negative organizational outcomes, including depression and anxiety (Cortina et al., 2001), ruminating and worry (Pearson and Porath, 2005), mood swings and feelings of shame and guilt (Yamada, 2000), mental health symptoms and job dissatisfaction (Lim et al., 2008), and employee turnover (Pearson, Andersson, & Porath, 2000). In addition, experienced incivility is associated with physical health symptoms including sleep problems (Yamada, 2000), and general physical health problems (Lim et al., 2008).

Recently, researchers deconstructed experienced workplace incivility to identify the agent of uncivil behaviours. Haines et al., (2007) used a multi-foci approach, prompting respondents to report physician incivility, supervisor incivility, and coworker incivility. The researchers explored the relationship between safety climate and workplace incivility with 87 nurses in a surgical operating room setting (Haines et al, 2007). Results of this study indicated that increased frequency of both physician and supervisor incivility (but not coworker incivility) was related to poorer safety climate (Haines et al., 2007).

Other researchers have begun exploring instigated workplace incivility (i.e., being the *agent* of uncivil behaviour at work). Blau and Andersson (2005) investigated

instigated workplace incivility in longitudinal design with 142 medical technologists in a variety of healthcare settings. Lower job satisfaction and higher work exhaustion, measured at Time 1, predicted increased frequency of instigated incivility at Time 2 (Blau & Andersson, 2005). Cross-sectional results at Time 2 indicated that instigated incivility was associated with decreased job satisfaction and increased work exhaustion.

Taken together, the above studies indicate that various measures of workplace incivility relate to negative organizational outcomes and worker strain. What remains unclear is the relationship between the specific facets of workplace incivility (i.e., supervisor, coworker, and instigated incivility) and worker strain. Because there is little evidence to suggest that various facets of workplace incivility differentially relate to worker strain, I look to workplace aggression literature to inform specific predictions.

Workplace incivility is similar to workplace aggression. Both workplace incivility and workplace aggression are deviant behaviours that violate workplace norms (Andersson & Pearson, 1999). One characteristic that distinguishes the two related constructs is the agent's intention underlying these behaviours (Andersson & Pearson, 1999). With workplace incivility, the agent's underlying intent is ambiguous; with workplace aggression, the agent has a clear intention to harm the target. Because the two constructs are so closely related, it is relevant to consider workplace aggression findings when exploring possible advancements in workplace incivility research.

Measures that lump supervisor aggression together with coworker aggression may lead researchers to miss specific effects (Hershcovis & Barling, 2010). For example, supervisor aggression may relate to perceived job insecurity because supervisors have power to terminate employment (Frone, 2000). However, because coworkers lack

authority over their peers, it is less likely that a similar relationship between coworker aggression and job insecurity exists. An aggregated measure of supervisor and coworker aggression may gloss over these specific relationships (Hershcovis & Barling, 2010). In fact, a recent meta-analysis indicated that several outcomes, including job satisfaction, psychological distress, and physical well-being, had statistically different relationships to supervisor aggression as compared to coworker aggression (Hershcovis & Barling, 2010).

Examining supervisor incivility distinctly from coworker incivility is relevant when one considers that supervisors and coworkers have different relationships with workers. Supervisors have position power or authority over their subordinates. Employees with greater power have more ways to exhibit uncivil behaviour than employees with lesser power (Pearson & Porath, 2005). For example, supervisors can interrupt conversations and meetings, and can speak curtly to their subordinates without repercussion (Pearson & Porath, 2005). Furthermore, employees understand that supervisors are agents of organizations, placing added import and meaning on social support derived from supervisors (Eisenberger, Huntington, Hutchinson, & Sowa, 1986). Thus, one would expect the relationship between supervisor incivility and strain is stronger than the relationship between coworker incivility and strain. Furthermore, although prior research indicates that instigator incivility relates to strain (Blau & Andersson, 2005), interpretations based on this single study are limited. Andersson and Pearson (1999) suggested that uncivil workplace behaviours are transactions between workers. Thus, results may be confounded when analyses relate instigator incivility to strain outcomes without accounting for experienced incivility. In summary, empirical

evidence that supervisor, coworker, and instigated incivility relate to worker strain is limited and in need of clarification. Therefore, my second hypothesis is:

Hypothesis 2a: Supervisor, coworker, and instigated incivility each uniquely predict lower levels of job satisfaction, poorer mental health, and poorer physical health.

Hypothesis 2b: The correlations between supervisor incivility and job satisfaction, mental health, and physical health are stronger than the correlations between coworker incivility and job satisfaction, mental health, and physical health.

Workplace Incivility as a Moderator of the Stressor-Strain Relationship

There are no published studies that investigate the possibility that workplace incivility moderates the relationship between other job stressors and worker strain. Conceptually, there are two mechanisms with which incivility may intensify the stressor-strain relationship. First, targets of incivility tend to avoid agents in an effort to cope (Cortina & Magley, 2009). Avoidant behaviour is related to lower social support (Pettit & Joiner, 2006) and social isolation (Zapf & Gross, 2001). Because social support tends to attenuate the stressor-strain relationship (Viswesvaran et al., 1999), it follows that workplace incivility exacerbates the stressor-strain relationship.

The second mechanism by which workplace incivility may moderate the stressor-strain relationship involves the conservation of resources theory (Hobfoll, 1989). According to conservation of resources theory, individuals demonstrate heightened concern for protecting their access to required resources (Hobfoll, 1989). For employees, relevant resources include access to information, supplies, and help from other workers

needed to complete job tasks (Hobfoll, 2001). Because accessing such resources in the workplace often requires workers to relate with one another, and because incivility indicates a toxic quality in worker relations, employees who perceive incivility in the workplace may sense a threat to accessing resources. In a threatened state, individuals tend to have less ability to cope in with perceived stressors (Hobfoll, 2001). Therefore, conservation of resource theory suggests that uncivil behaviour is a threat that compounds one's negative appraisal of job stressors.

Theoretically, workplace incivility disrupts social support and heightens negative appraisal of job stressors. Therefore, uncivil behaviour has the potential to exacerbate the negative effect of other job stressors. Aggression research suggests that strain outcomes vary depending on the source of negative behaviours. Therefore, an exacerbating effect may vary depending on the source of workplace incivility.

Job stressors are any events or characteristics that have the potential to elicit worker strain (Sonnetag & Freese, 2003). Researchers have extensively studied several job stressors, including role ambiguity, organizational constraints, role conflict, workload, and job control (Spector, Chen, & O'Connell, 2000). Although other job stressors may be relevant to workplace incivility research, workload and job control are two of the most dominant variables explored in the employee stress literature (Spector et al., 2000). Because workload and job control have such well-established relationships with worker strain (Spector et al., 2000), I chose to begin exploring workplace incivility as a potential moderator of the stressor-strain relationship with these two job stressors.

Workload. Workload is the job characteristic of having too much work, or too little time to complete job tasks. Researchers have investigated the relationship between

workload and strain for at least three decades (Sonnentag & Frese, 2003). Recent findings indicate that workload relates to psychological health symptoms including depression and anxiety (Peterson et al., 2008), mental health symptoms (Noor, 1995), frustration (Spector et al., 2000), and job dissatisfaction (Newton & Keenan, 1990). In addition, workload is associated physical health symptoms (Carayon, 1993; Lambert, Lambert, & Ito, 2004; Spector et al., 2000).

Job control. A feeling of control over one's work life, or job control, is the perceived ability to control the prioritization, scheduling, and procedures used in carrying out one's work (Hackman & Oldham, 1976). The study of job control has a long history, and the relationship between lack of job control and worker strain is well-established (Sonntag & Frese, 2003). Recent studies indicate that lack of job control relates to psychological health symptoms, job dissatisfaction, and negative affect (Spector et al., 2000). In addition, lack of job control relates to physical health symptoms, including psychosomatic complaints (de Jonge, Bosma, Peter, & Siegrist, 2000; de Jonge, Dollard, Dormann, LeBlanc, & Houtman, 2000) and health complaints (Bernhard-Oettel, Sverke, & de Witte, 2005).

Because workplace incivility may strengthen the relationship between job stressors and worker strain via diminished social support and threatened access to resources, I hypothesize that as workplace incivility increases, the relationship between job stressors and worker strain will intensify. More specifically:

Hypothesis 3a: The negative relationship between job stressors and job satisfaction will be stronger when individuals experience higher incivility.

Hypothesis 3b: The negative relationship between job stressors and mental health will be stronger when individuals experience higher incivility.

Hypothesis 3c: The negative relationship between job stressors and physical health will be stronger when individuals experience higher incivility.

Method

The present research is part of a larger project designed to examine and improve working relationships in hospital settings. The larger project had a research component, Enhancing the Quality of Workplace Communities (EQWC), and an intervention component, Civility, Respect, and Engagement at Work (CREW). EQWC involved a series of pre- and post-intervention surveys conducted with financial support from the Canadian Institute of Health Research (Leiter, 2008). CREW involved training hospital personnel to present survey results and facilitate activities with the ultimate goal of creating a more respectful work environment (Leiter, 2009). CREW activities focused on improving nurse leadership and addressing uncivil behaviour among individuals at work (Leiter, 2009).

The present research uses data from the initial (baseline) EQWC survey. The initial survey was administered to healthcare work units (e.g., emergency departments, intensive care, acute care, operating rooms) within three regional health authorities located in Nova Scotia, and two healthcare organizations located in Ontario. The present study utilizes a cross-sectional design that explores the stressor-strain relationship of all survey participants prior to the CREW intervention.

Participants

The chief of nursing for each participating healthcare institution¹ provided a list of acute and long-term care units² for the research team to consider including in EQWC. All units volunteered for EQWC because they were interested in improving their work environments. The research team collaborated with on-site personnel and selected 8 to 10 units (300 – 500 healthcare workers) per healthcare institution from the list provided by the nursing chiefs. The research team selected units that had proportional representation of the many occupations found in hospital settings.

Researchers and administrators invited all employees and physicians in selected work units to complete the pre-intervention survey. As an incentive for survey completion, all participants were eligible to win a prize package valued at \$200.00. Researchers received completed questionnaires from 1169 participants representing 42 different units located in 5 different institutions (overall response rate of 38.7%). Participants ages ranged from 20 to 66, with a mean age of 42.5 (SD = 10.11), and median age of 43 (51 participants did not report their age). Over all of the units, 90.7% of the participants identified as Caucasian, and 86.0% were female. Most of the participants were full-time employees (65.0%), and the remaining participants were either part-time (25.4%), casual/temporary (5.9%), or did not report their employment status (3.7%). Organizational tenure ranged from less than 6 months to more than 30 years; mean

¹ Healthcare institutions are organizations that are typically located within multiple campuses or sites.

² Units are intact workgroups, such as palliative care and operating rooms, that represent functional areas within an institution.

organizational tenure was 4.8 years (SD = 3.4; 110 participants did not report their organizational tenure). Tenure in the particular unit ranged from less than 6 months to more than 30 years with a mean of 5 years (SD = 9.4; 418 participants did not report their unit tenure).

Participants represented more than 46 professions. The most represented groups were Registered Nurses (RNs; 51.7%), Registered Practical Nurses (RPNs; 6.3%), ward clerks (4.4%), physicians (3.9%), Licensed Practical Nurses (LPNs; 3.6%), and unit clerks (2.5%). Administrative assistants, pharmacists, physiotherapists, nurse managers, social workers, unit aides, and patient service associates represented another 6.8% of the sample. The remaining 17.1% represented various other healthcare workers (e.g., dietitians, clinical educators, occupational therapists) and 3.7% of participants did not report their profession. The majority (83.7%) of the participants had completed post-secondary education (college = 43.1%; bachelors = 33.7%; masters 5.0%, doctorate 2.0%) and 3.3% did not report their education level. The majority of participants worked the day shift (70.3%), while others worked the afternoon shift (8.6%) or the night shift (17.9%) and 3.2% did not report their shift worked.

Measures³

The present study utilizes a subset of the measures included in the EQWC baseline survey. Appendix A contains a list of all measures in the order they were presented.

³ Participants also completed other scales that are not used in the present study.

Workload. Workload was measured using 3 of the 6 items within the workload subscale of the Areas of Worklife Scale (AWS; Leiter & Maslach, 2004). Respondents indicated their level of agreement to these items (e.g., *I work intensely for long periods of time*) using a 5-point Likert scale ranging from 1 (strongly disagree), through 3 (hard to decide), to 5 (strongly agree). Higher scores indicate heavier perceived workloads. In this study, the Cronbach alpha reliability coefficient was low, $\alpha = .47$, an indication that the scale lacks internal consistency. Inter-item correlations were $r = .40$ (workload1, workload2); $r = .08$ (workload1, workload3); and, $r = .22$ (workload2, workload3). Close examination of the items revealed that the final item, *I leave my work behind when I go home at the end of the day*, may tap into work-life conflict. Therefore, I removed the final item and present results based on a two-item workload scale ($r^2 = .40$)⁴.

Job control. Job control was measured using the 5-item job control subscale of the AWS; (Leiter & Maslach, 2004). Respondents indicated their level of agreement to these items (e.g., *I have control over how I do my work (R)*) using a 5-point Likert scale ranging from 1 (strongly disagree), through 3 (hard to decide), to 5 (strongly agree). Higher scores indicate decreased control over one's job. In this study, the Cronbach alpha reliability coefficient was $\alpha = .81$. Item-total correlations ranged from $r = .30$ to $r = .56$.

Workplace incivility. Workplace incivility was measured using 5 of the 7 items within the Workplace Incivility Scale (WIS; Cortina et al., 2001). In its original form,

⁴ Predictor and moderation analyses using the three-item workload scale were completed. These results are not presented here because using the three-item workload scale did not yield statistically different direct or indirect results.

WIS items prompt respondents to report the uncivil behaviours of their supervisors *and* coworkers (Cortina et al, 2001). In the present study, lead-in statements prompted participants to separately consider and report uncivil behaviour from coworkers, supervisors, and themselves. Thus, three workplace incivility scales were created: supervisor incivility, coworker incivility, and instigated incivility. Respondents indicated the frequency of these behaviours (e.g., *paid little attention to another person's statement or showed little interest in their opinion*) using a 7-point scale ranging from 1 (never), through 4 (regularly), to 7 (daily). Thus, higher scores indicate increased frequency of uncivil events. In this study, the Cronbach alpha reliability coefficients were high to moderate for supervisor ($\alpha = .84$), coworker ($\alpha = .85$) and instigated ($\alpha = .74$) incivility. Item-total correlations ranged from $r = .38$ to $r = .67$ for supervisor incivility; from $r = .42$ to $r = .66$ for coworker incivility; and from $r = .28$ to $r = .52$ for instigated incivility.

Job satisfaction. Job satisfaction was measured using a 5-item scale developed for the present study. Researchers derived this scale from other measures that have demonstrated reliability in measuring various components of job satisfaction (Hackman & Oldham, 1975; Tsui, Egan & O'Reilly, 1992). Respondents indicated their agreement with these items (e.g., *how satisfied you are with the feeling of accomplishment you get from doing your job?*) using a 7-point Likert scale from 1 (very dissatisfied), through 4 (neither satisfied nor dissatisfied), to 7 (very satisfied). Higher scores indicate greater levels of job satisfaction. In the present study, the Cronbach alpha reliability coefficient for job satisfaction was moderate ($\alpha = .71$). Item-total correlations ranged from $r = .14$ to $r = .76$.

Mental health. Mental health was measured using Ware and Sherbourn's (1992) mental health index (MHI-5). The instrument taps into negative mood, loss of behavioural or emotional control, and positive affect (McHorney & Ware, 1995). Respondents indicated the frequency of these items (e.g., *I have been a nervous person (R)*) using a 5-point scale from 1 (none of the time), through 3 (some of the time) to 5 (all of the time). Higher MHI scale scores indicate better mental health. In the present study, the Cronbach alpha reliability coefficient was moderate ($\alpha = .84$). Item-total correlations ranged from $r = .41$ to $r = .68$.

Physical health. Physical health was measured with the physical symptoms subscale of the Personal Risk Scale (Leiter, 2005). Respondents indicated the frequency of these items (e.g., *back strain*) using a 7-point scale from 1 (never), through 4 (regularly), to 7 (daily). For the present study, the scale values are reflected; higher scores indicate better physical health. The Cronbach alpha reliability coefficient was $\alpha = .77$. Item-total correlations ranged from $r = .27$ to $r = .60$.

Procedure

The design was cross-sectional and all measures were self-report. Research coordinators worked with hospital administrators to distribute the paper-based surveys to the selected work units. Participants completed an informed consent form before completing the survey. Participants returned the completed survey booklet directly to the research team using external mail service to assure privacy and confidentiality. See Appendix B for the complete questionnaire.

Results

Initial screening and analyses were conducted using SPSS Statistics Version 18. I omitted cases from scale calculations if one-third or more responses were missing within any scale, and cases that were missing scale values were deleted listwise during analyses. All three incivility subscales were severely and positively skewed. None of the transformations (square root, log, inverse, reflected inverse) recommended by Tabachnick and Fidell (2007) and Howell (2007), altered the pattern of distribution to approximate normal. Therefore, and in keeping with other researchers (e.g., Lim et al. 2008), analyses were conducted using untransformed workplace incivility data. Bivariate scatter plots depicting each predictor variable with each criterion variable supported the assumption of linearity between all pairs of these variables. There were no more than 10 (< .01%) univariate outliers (absolute residual values greater than 3.29) in any particular scale. To scan for multivariate outliers, multiple regression analysis using the procedures recommended by Tabachnick and Fidell (2007). I entered all of the predictor and moderator variables (workload, control, supervisor incivility, coworker incivility, and instigator incivility) with a dummy dependent variable (Participant ID). Next, I examined Mahalanobis distance, a χ^2 test with values greater than 20.515 indicate that the case is a possible outlier. I identified 44 (< 4%) multivariate outliers. Tabachnick and Fidell (2007) suggested that a small number of outliers are likely with large sample sizes; therefore, I did not remove any outliers from the dataset.

Factor Structure of the Workplace Incivility Scales.

Confirmatory Factor Analysis (CFA) using EQS Version 6.1 was conducted to test *Hypothesis 1*, that supervisor, coworker, and instigated incivility items represent

distinct facets of workplace incivility (see Table 1)⁵. The data indicate kurtosis (Mardia's Coefficient = 226.25); therefore, I report robust statistics. Chi-square tests the null hypothesis that model is a good fit for the data, therefore, a nonsignificant result is ideal (Tabachnick & Fidell, 2007). However, the chi-square test is sensitive to the large sample size; a significant finding does not eliminate the model as a possible good fit with the data. Therefore, I report Comparative Fit Index (CFI) and Root Mean Squared Error of Approximation (RMSEA) as recommended by Tabachnick and Fidell (2007). A CFI above .95 and an RMSEA below .06 (Hu & Bentler, 1999) indicate that the model is a good fit for the data. Because the models that follow are nested, I also report Chi-square difference tests (Tabachnick & Fidell, 2007).

Model 1 had 15 workplace incivility items loading on a single factor. The chi-square test was significant: $\chi_{indep}^2(92, N = 1126) = 1291.69, p < .01$. In addition, CFI and RMSEA results indicated that Model 1 was not a good fit for the sample data (CFI = .55, RMSEA = .11).

Model 2 was a 2-factor solution with experienced incivility items (5 supervisor incivility items and 5 coworker incivility items) loaded on factor 1 and instigated incivility items loaded on factor 2. Chi-square difference tests indicated that Model 2 was

⁵ In the data presented here, observations are nested within intact working groups. When data are nested, it is possible that measurement models vary among groups (Byrne, 2002). Methods to assess for invariance among groups are available (see Byrne, 2002). In the data presented here, interclass correlations (ICC) calculated to estimate variance between work units indicated that the vast majority of variance was between individuals. Specifically, between group ICC values were: job satisfaction = 6%, mental health = 1%, physical health = 5%. Therefore, invariance analysis was not conducted.

significantly better than Model 1 ($\chi^2_{diff}(1, N = 1169) = 38.77, p < .01$). However, fit indices (CFI = .67, RMSEA = .09) did not meet the suggested standard of a CFI value greater than .95 and an RMSEA value of .06 or less (Hu & Bentler, 1999).

In Model 3, a three factor solution, supervisor incivility items were loaded on factor 1, coworker incivility items were loaded on factor 2, and instigated incivility items were loaded on factor 3. There was a statistically significant improvement in the data fit to the model with 3 factors as compared the model with 2 factors ($\chi^2_{diff}(1, N = 1169) = 681.85, p < .01$). However, fit indices indicate that that the model is not a good fit for these data (CFI = .67, RMSEA = .09).

In Model 4, all three workplace incivility factors were allowed to correlate. Allowing the factors to correlate is reasonable for two reasons. First, each reported uncivil event represents an interaction between two or more people that may be a reference event for the other incivility scales. For example, a participant may report an uncivil exchange involving a coworker, their supervisor, and him or herself as coworker incivility, supervisor incivility, and/or instigated incivility. Second, individual differences such as high negative affect and low relationship development skills predict workplace incivility (Reio & Ghosh, 2009). Thus, an individual with high negative affect is more likely to report workplace incivility in any of the three facets measured in the present study. Moreover, the inter-factor correlations were statistically significant: Supervisor Incivility and Coworker Incivility $r = .44, p < .05$; Supervisor Incivility and Instigated Incivility $r = .34, p < .05$; Coworker Incivility and Instigated Incivility $r = .38, p < .05$.

Model 4 was a significant improvement over Model 3 ($\chi^2_{diff}(3, N = 1169) = 337.54, p < .01$). Model 4 approached the standard of good fit for a measurement model.

For this model fit, the CFI = .90, and does not meet the .95 standard. However, the RMSEA = .05, and does meet the standard of .06 or less, indicating a good fit (Hu & Bentler, 1999).

Generally, factor analysis parses out common item variance as a measure of an underlying construct, and unique variance as a measure of error (Green & Hershberger, 2000). Whereas unique variance is usually considered random measurement error, the expected correlation among error terms is zero (Byrne, 2006). Therefore, allowing item error terms to correlate is usually not recommended (Smolkowski, 2007). However, the phrasing for each of five workplace incivility items is almost identical. When item phrasing is similar, measurement error may tap into unspecified factors (Smolkowski, 2007). For example, in the present study, individuals who reported being left out of professional camaraderie by coworkers may also have reported being left out of professional camaraderie by supervisors because they are sensitive to such transgressions. Allowing items to correlate is generally acceptable if the correlations are low and theoretically justified (Smolkowski, 2007). Therefore, for sake of comparison and to be thorough, error terms for the nearly identical items were set to freely estimate in Model 5. Item error correlations ranged from .01 to .12.

Model 5 fit the data significantly better than Model 4 ($\chi^2_{diff}(1, N = 1169) = 190.34, p < .01$). Model 5 was a good fit for the sample data; CFI = .97 was better than the .95 standard and RMSEA = .03, was better than the .06 standard (Hu & Bentler, 1999). Model 4 and Model 5 provide evidence that *Hypothesis 1*, that is, supervisor, coworker, and instigated workplace incivility are distinct facets of workplace incivility, was supported by the sample data. For the sake of parsimony, and because Model 4

approximated a good fit, Model 4 is depicted in Figure 1. Table 2 contains standard deviations, Cronbach's alpha coefficients, and Pearson correlations for all scales.

Incivility Predicting Strain.

The observations within this dataset are nested; they represent employees within intact work units. When individual observations are nested within groups, higher within-group correlations (intraclass correlations) lead to reduced standard errors and increase the likelihood of Type 1 errors in linear multiple regression hypotheses tests (Hox, 2002). Hierarchical Linear Modeling (HLM) fits a regression equation to individual level data while allowing parameters of the regression equation intercepts (means) and slopes (associations between IVs and DVs) to vary between groups (Tabachnick & Fidell, 2007). Thus, HLM analysis is not sensitive to intraclass correlations and does not inflate the likelihood of Type 1 errors when data are nested (Tabachnick & Fidell, 2007). Thus, HLM Version 6.0 was used to test *Hypothesis 2a*, that Supervisor, Coworker and Instigated Incivility each uniquely predict lower levels of job satisfaction, poorer mental health, and poorer physical health.

Four participants did not identify their work unit and an additional 41 cases were missing data for one or more scales. Because HLM is sensitive to missing data, the 46 cases with missing data were omitted from analysis ($N = 1124$). Level 1 variables included the three facets of workplace incivility, job satisfaction, mental health, and physical health. Level 2 variables were supervisor, coworker, and instigated incivility. Level 2 variables are required for HLM, however, only single-level analyses were conducted to test *Hypothesis 2a*. In each analysis, I entered the particular DV (job satisfaction, mental health, physical health) as the outcome variable, and then added all

three facets of workplace incivility as uncentered predictor variables. Table 4 displays coefficients, standard errors, T-ratios, and R^2 values for the HLM analyses.

Results supported *Hypothesis 2a*, that individual level supervisor, coworker, and instigated incivility uniquely and significantly predict worker strain (i.e., job satisfaction, mental health, and physical health). All slopes were in the expected direction; as the frequency of supervisor, coworker, or incivility increased, participants reported lower levels of job satisfaction, poorer mental health, and poorer physical health (see Table 3). Because there are no available methods for calculating unique contribution of R^2 for each predictor in HLM, SPSS estimates are presented⁶. The effect sizes indicated that the relationships between measures of incivility and strain were weak to moderate (ranges from $R^2 = .21$ to $R^2 = .45$). The unique contributions were small, ranging from $R^2 < .01$ to $R^2 = .10$.

Hypothesis 2b posited that the relationship between supervisor incivility and strain would be stronger than the relationship between coworker incivility and strain. Again, SPSS was used to calculate correlations. To assess whether or not differences in correlations were statistically significant, *Fisher's Z-test* and methods recommended by Howell (2007) were used. As predicted, the relationship between supervisor incivility and job satisfaction ($R^2 = .45$) was significantly stronger than the relationship between coworker incivility and job satisfaction ($R^2 = .35$); $z(1124) = -3.33, p < .01$.

⁶SPSS R^2 calculations are presented because the vast majority of variance was between individuals and not between groups. The between group intraclass correlations calculated using HLM were: job satisfaction = 94%, mental health = 99%, physical health = 95%.

Table 1

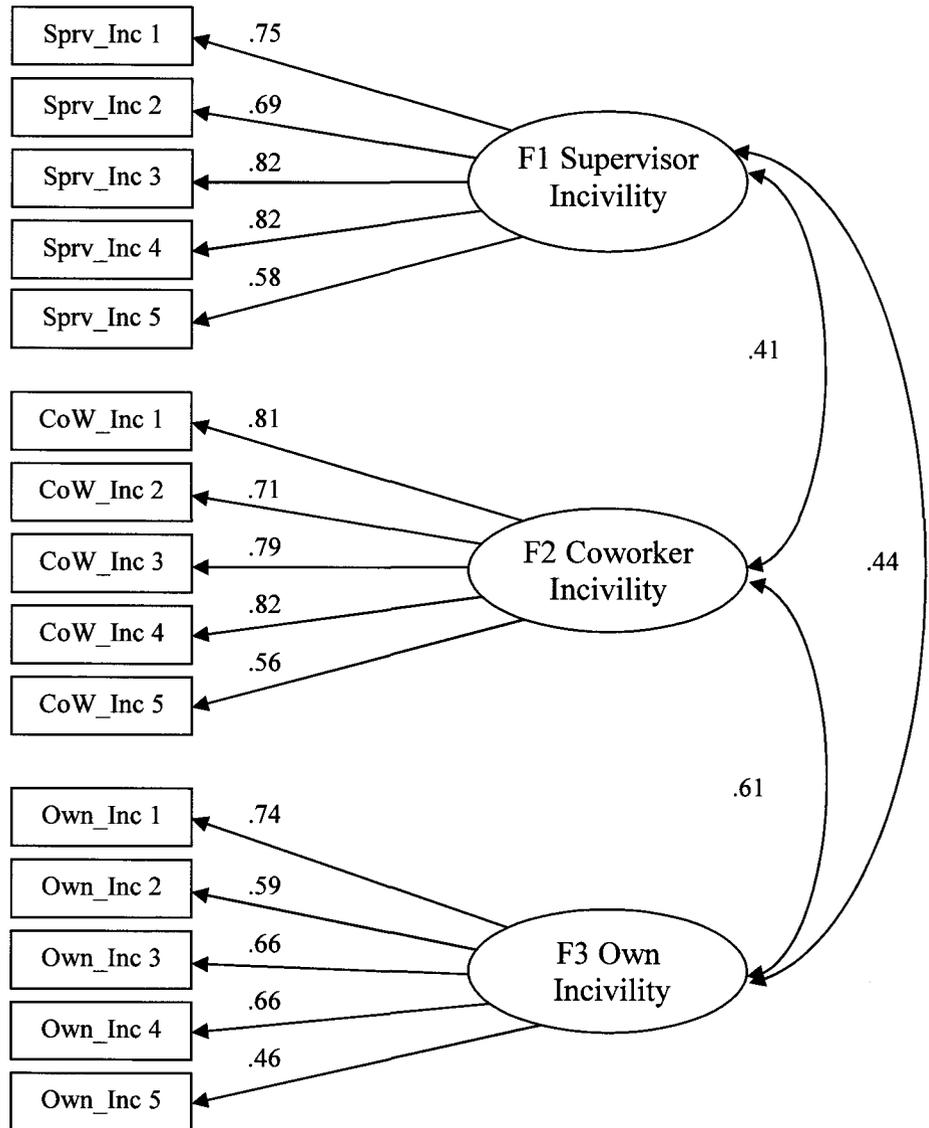
Fit Indices for Workplace Incivility Nested Factor Models.

| Model | Satorra-Bentler χ^2 | NFI | NNFI | CFI | RMSEA | χ^2_{diff} |
|--|--------------------------|-----|------|-----|-------|-----------------|
| 1. One factor | 1291.69* | .53 | .48 | .55 | .11 | |
| 2. Two factors: experienced & instigated incivility | 1252.92* | .67 | .64 | .69 | .09 | |
| Difference between Model 2 & Model 1 | | | | | | 38.77 |
| 3. Three factors: supervisor, coworker & instigated incivility | 671.07* | .77 | .76 | .80 | .07 | |
| Difference between Model 3 & Model 2 | | | | | | 681.85 |
| 4. Three factors, correlated | 333.50* | .88 | .88 | .90 | .05 | |
| Difference between Model 4 & Model 3 | | | | | | 337.54 |
| 5. Three factors, correlated, errors for same items correlated | 143.16 | .95 | .96 | .97 | .03 | |
| Difference between Model 5 & Model 4 | | | | | | 190.34 |

Note: Satorra- Bentler χ^2 = chi-square; CFI = comparative fit index; NFI = normed fit index; NNFI = non-normed fit index; RMSEA = root mean square error of approximation, χ^2_{diff} = chi-square difference.

* $p < .01$

Figure 1: Confirmatory Factor Analysis (CFA) of Incivility Subscales for Model 4: 5
 Items Loading on 3 Factors with no Correlated Errors.



Note. All factor loadings and correlations are significant at $p < .05$.

Table 2:

Means, Standard Deviations, Reliabilities, and Correlations for Study Variables

| Scale | Mean | S.D. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|--------------------------|------|------|--------------------|-------|-------|-------|-------|-------|-------|-------|
| 1. Workload | 3.35 | 0.87 | (.40) ^a | | | | | | | |
| 2. Job Control | 2.78 | 0.77 | .19 | (.81) | | | | | | |
| 3. Supervisor Incivility | 1.61 | 0.88 | .24 | .32 | (.84) | | | | | |
| 4. Coworker Incivility | 1.79 | 0.84 | .10 | .18 | .36 | (.85) | | | | |
| 5. Instigated Incivility | 1.53 | 0.53 | .09 | .16 | .36 | .52 | (.74) | | | |
| 6. Job Satisfaction | 5.27 | 1.0 | -.21 | -.48 | -.45 | -.35 | -.31 | (.71) | | |
| 7. Mental Health | 4.03 | 0.64 | -.28 | -.26 | -.29 | -.35 | -.31 | .41 | (.84) | |
| 8. Physical Health | 3.88 | 1.29 | -.30 | -.27 | -.28 | -.29 | -.21 | .37 | .52 | (.77) |

Note. All correlations are significant at $p \leq .001$. $N = 1126$. Missing data are deleted listwise. Alpha coefficients are shown in parentheses, except for the workload scale.

^a R^2 value presented for 2-item workload scale.

Contrary to *Hypothesis 2b*, the relationship between supervisor incivility and mental health ($R^2 = .29$) was weaker than the relationship between coworker incivility and mental health ($R^2 = .35$); $z(1121) = 1.91, p < .01$. The relationship between supervisor incivility and physical health ($R^2 = .28$) was not significantly different from the relationship between coworker incivility and physical health ($R^2 = .29$; $z(1124) = 0.31, p > .05$). In summary, results regarding job satisfaction supported, results regarding mental health contradicted, and results regarding physical health did not support *Hypothesis 2b*.

Incivility as a Moderator of the Relationship between Stressors and Strain.

HLM calculates the proportions of variance that are within- and between-groups as an estimate of the individual and group level effect sizes (Roesch, 2010). A high proportion of between-group variance indicates the presence of group effects and the need to use HLM to accurately conduct hypothesis tests (Roesch, 2010). To calculate between-group variance, the formula: $\sigma^2(\text{intercept only}) - \sigma^2(\text{random-coefficients}) / \sigma^2(\text{intercept only})$ was used (Roesch, 2010). HLM models revealed between-group variance of .06, .05, and .01 for job satisfaction, mental health, and physical health, respectively. Thus 94% of the variation in job satisfaction, 95% of the variation in mental health, and 99% of the variation in physical health is at the level of individual workers (Level 1). Furthermore, HLM analysis using the three facets of workplace incivility as group level (Level 2) variables revealed no statistically significant results. Therefore, only individual level (Level 1) moderation results are reported.

To test *Hypothesis 3*, that workplace incivility (supervisor, coworker, and instigated) moderates the relationships between job stressors (workload and job control) and worker strain (job satisfaction, mental health, and physical health); I conducted a

series of 18 moderator analyses (see Table 4 for a list of moderator analyses) using methods recommended by Aiken and West (1991). SPSS was used to prepare the data for analyses. I standardized all predictor and moderator variable scores, and then computed a cross-product of each predictor with each moderator (adding 6 new variables to the dataset). Because the observations in this dataset are nested within intact working units, HLM was used to conduct moderator analyses.

Following the instructions provided by Hox (2002), in each of the analyses, in turn, job satisfaction, mental health, and physical health variables were entered as the dependent variable in an intercepts-only model. The standardized predictor variable, the standardized moderator variable, and the cross-product of the standardized relevant predictor and standardized moderator variables were then entered in each of the 18 moderator analyses. Statistically significant results are reported in Table 5.

Analyses testing *Hypothesis 3* indicated mixed findings. There was no evidence to suggest that supervisor incivility, coworker incivility, or instigated incivility moderated the relationship between either workload or job control and job satisfaction. Thus, *Hypothesis 3a* was not supported. *Hypothesis 3b*, that workplace incivility moderates the relationship between job stressors and mental health, was only partially supported. Specifically, coworker incivility moderated the relationship between workload and mental health symptoms ($\beta = .05$, $\Delta R^2 < .01$ $t(40) = 2.63$, $p < .01$). In addition, instigated incivility moderated the relationship between job control and mental health symptoms ($\beta = .04$, $\Delta R^2 < .01$ $t(40) = 2.00$, $p < .01$). Regarding *Hypothesis 3c*, that workplace incivility moderates the relationship between job stressors and physical health, only one of six analyses was statistically significant.

Table 3:

Summary of HLM Robust Results for Supervisor, Coworker, and Instigated Incivility Predicting Job Satisfaction, Mental Health, and Physical Health.

| Job Satisfaction | | | | | | |
|-----------------------|-----------------------|-------------|---------|----------|-----------------------|-----------------|
| Fixed Effects | | | | | | |
| Effect | HLM Robust Statistics | | | | SPSS Statistics | |
| | <i>B</i> | <i>SE B</i> | T-ratio | <i>p</i> | <i>R</i> ² | ΔR^{2A} |
| Intercept | 6.53 | 0.09 | 72.83 | .000 | | |
| Supervisor Incivility | -0.38 | 0.03 | -13.21 | .000 | .20 | .10 |
| Coworker Incivility | -0.19 | 0.04 | -4.12 | .000 | .12 | .03 |
| Instigated Incivility | -0.20 | 0.07 | -2.91 | .006 | .10 | .001 |

| Mental Health | | | | | | |
|-----------------------|-----------------------|-------------|---------|----------|-----------------------|-----------------|
| Fixed Effects | | | | | | |
| Effect | HLM Robust Statistics | | | | SPSS Statistics | |
| | <i>B</i> | <i>SE B</i> | T-ratio | <i>p</i> | <i>R</i> ² | ΔR^{2A} |
| Intercept | 4.78 | 0.07 | 72.88 | .000 | | |
| Supervisor Incivility | -0.13 | 0.03 | -4.91 | .000 | .08 | .02 |
| Coworker Incivility | -0.13 | 0.03 | -3.86 | .001 | .12 | .04 |
| Instigated Incivility | -0.20 | 0.05 | -4.33 | .000 | .10 | .01 |

Physical Health

| Fixed Effects | | | | | | |
|-----------------------|-----------------------|-------------|---------|------|-----------------|---------------------------|
| | HLM Robust Statistics | | | | SPSS Statistics | |
| | <i>B</i> | <i>SE B</i> | T-ratio | p | R ² | ΔR^2 ^A |
| Intercept | 5.08 | 0.12 | 43.79 | .000 | | |
| Supervisor Incivility | -0.31 | 0.05 | -5.84 | .000 | .08 | .03 |
| Coworker Incivility | -0.29 | 0.05 | -5.33 | .000 | .08 | .03 |
| Instigated Incivility | -0.13 | 0.07 | -1.94 | .060 | .04 | .001 |

Note. *df.* = 40

^A Because there is no available method for calculating ΔR^2 for each predictor in HLM, SPSS multiple regression statistics are presented

Table 4:

List of Moderator Analyses

| | Independent Variable | Moderator Variable | Dependent Variable |
|-----|----------------------|-----------------------|--------------------|
| 1. | Workload | Supervisor Incivility | Job Satisfaction |
| 2. | Workload | Coworker Incivility | Job Satisfaction |
| 3. | Workload | Instigated Incivility | Job Satisfaction |
| 4. | Job Control | Supervisor Incivility | Job Satisfaction |
| 5. | Job Control | Coworker Incivility | Job Satisfaction |
| 6. | Job Control | Instigated Incivility | Job Satisfaction |
| 7. | Workload | Supervisor Incivility | Mental Health |
| 8. | Workload | Coworker Incivility | Mental Health |
| 9. | Workload | Instigated Incivility | Mental Health |
| 10. | Job Control | Supervisor Incivility | Mental Health |
| 11. | Job Control | Coworker Incivility | Mental Health |
| 12. | Job Control | Instigated Incivility | Mental Health |
| 13. | Workload | Supervisor Incivility | Physical Health |
| 14. | Workload | Coworker Incivility | Physical Health |
| 15. | Workload | Instigated Incivility | Physical Health |
| 16. | Job Control | Supervisor Incivility | Physical Health |
| 17. | Job Control | Coworker Incivility | Physical Health |
| 18. | Job Control | Instigated Incivility | Physical Health |

Table 5:

Robust HLM Results for Incivility Moderating the Stressor-Strain Relationship.

| <i>Hypothesis 3b: DV - Mental Health</i> | | | | | |
|--|----------------|-----------|---------------------|-----------|-------------------|
| | HLM Statistics | | | | SPSS Statistics |
| | <i>B</i> | <i>SE</i> | T-ratio | <i>df</i> | ΔR^2 |
| Intercept | 4.0 | .02 | 181.38 ^a | 40 | |
| Slopes | | | | | |
| Control | .13 | .02 | 5.67 ^a | 40 | |
| Coworker Incivility | -.18 | .02 | -9.04 ^a | 40 | |
| Control x Coworker Incivility | .05 | .02 | 2.63 ^a | 40 | .003 ^b |
| Intercept | 4.03 | .02 | 189.11 ^a | 40 | |
| Slopes | | | | | |
| Control | .14 | .02 | 6.77 ^a | 40 | |
| Instigated Incivility | -.18 | .02 | -7.82 ^a | 40 | |
| Control x Instigated Incivility | .04 | .02 | 2.00 ^a | 40 | .003 ^b |

| <i>Hypothesis 3c: DV - Physical Health</i> | | | | | |
|--|----------------|-----------|--------------------|-----------|-------------------|
| | HLM Statistics | | | | SPSS Statistics |
| | <i>B</i> | <i>SE</i> | T-ratio | <i>df</i> | ΔR^2 |
| Intercept | 3.89 | .05 | 71.28 ^a | 40 | |
| Slopes | | | | | |
| Workload | .32 | .03 | 11.63 ^a | 40 | |
| Supervisor Incivility | -.27 | .04 | -7.42 ^a | 40 | |
| Workload x Supervisor Incivility | .09 | .03 | 2.78 ^a | 40 | .005 ^b |

^a $p < .05$

^b Because there is no available method for calculating ΔR^2 in HLM, SPSS estimates are presented.

Supervisor incivility moderated the relationship between workload and physical health symptoms ($\beta = -.09$, $\Delta R^2 < .01$ $t(40) = 2.78$, $p < .01$). In summary, 3 of 18 moderator analyses were statistically significant, indicating weak support for the hypotheses that workplace incivility moderates the relationships between job stressors and measures of worker strain (see Table 5).

To assess whether or not the manner with which incivility moderates the relationship between stressors and strain was as hypothesized, the three statistically significant moderations were estimated and charted in Microsoft Excel 2007. The equation: $Z = \beta_0 + \beta_1X + \beta_2Y + \beta_3XY$, where β_0 is the intercept, β_1 is the slope of the predictor X (stressor), β_2 is the slope of the moderator Y (incivility), β_3 is the slope of the predictor (stressor) and moderator (incivility) cross product XY was used (Aiken & West, 1991). Because participants reported incivility infrequently, the distribution of incivility scale scores was strongly positively skewed. The data presented here included a floor effect that was so powerful that there were no observed values lower than 1 standard deviation from the mean in any of the incivility scales. Therefore, rather than inspecting three groups: low (-1 SD), moderate (mean) and high (+ 1 SD) levels of the moderator, as is customary and recommended by Aiken and West (1991), an alternative method was used. Regression lines were estimated using the differential prediction of mental and physical health from workload and control for two meaningful values of incivility as suggested by Preacher, Curran, and Bauer (2006): never (Likert score = 1) and often (Likert score = 5).

Examination of the three statistically significant moderator analyses indicated that the moderating effects of incivility on the stressor-strain relationships are as expected. In

all cases, the stressor-strain relationship intensified when incivility *often* occurred as compared to when incivility *never* occurred. Figure 2 indicates that when participants perceived higher levels of uncivil behaviour, low job control was more strongly associated with poorer mental health. Figure 3 illustrates a similar moderating effect. As instigated incivility became more frequent, low job control more strongly predicted poorer mental health. Finally, Figure 4 indicates that as supervisor incivility increased, work overload was more strongly associated with poorer physical health. In summary, for all three statistically significant findings, when workplace incivility was present the stressor-strain relationship was exacerbated.

Discussion

The present study provides evidence that supervisor, coworker, and instigated incivility are distinct facets of workplace incivility that differentially predict worker strain. Further, the results provide some indication that particular facets of workplace incivility may moderate specific stressor-strain relationships. Although most of the moderator analyses yielded no significant results, several found significant moderation in the direction expected, such that incivility exacerbated the stressor-strain connection. The present findings indicate that identifying the agent group of workplace incivility may be relevant when examining workplace incivility as a moderator of the stressor-strain relationship.

Figure 2: Coworker Incivility as a Moderator of the Relationship between Job Control and Mental Health.

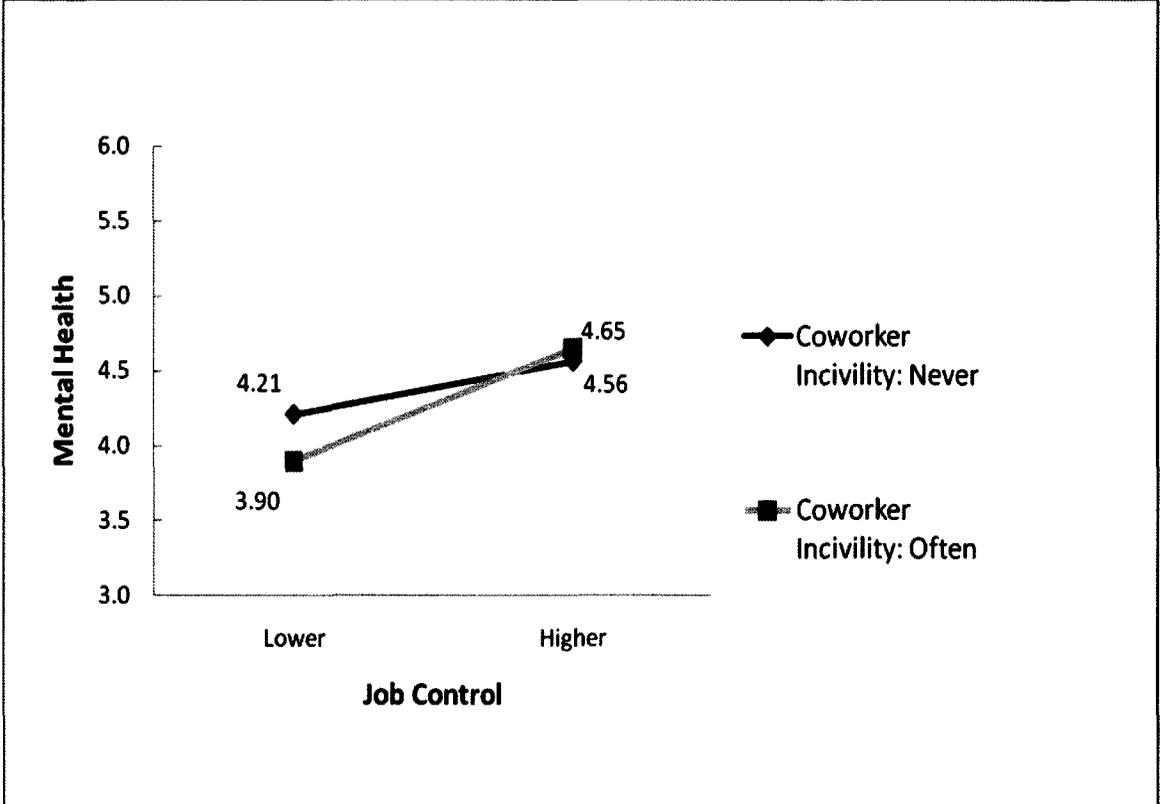


Figure 3: Instigated Incivility as a Moderator of the Relationship between Job Control and Mental Health.

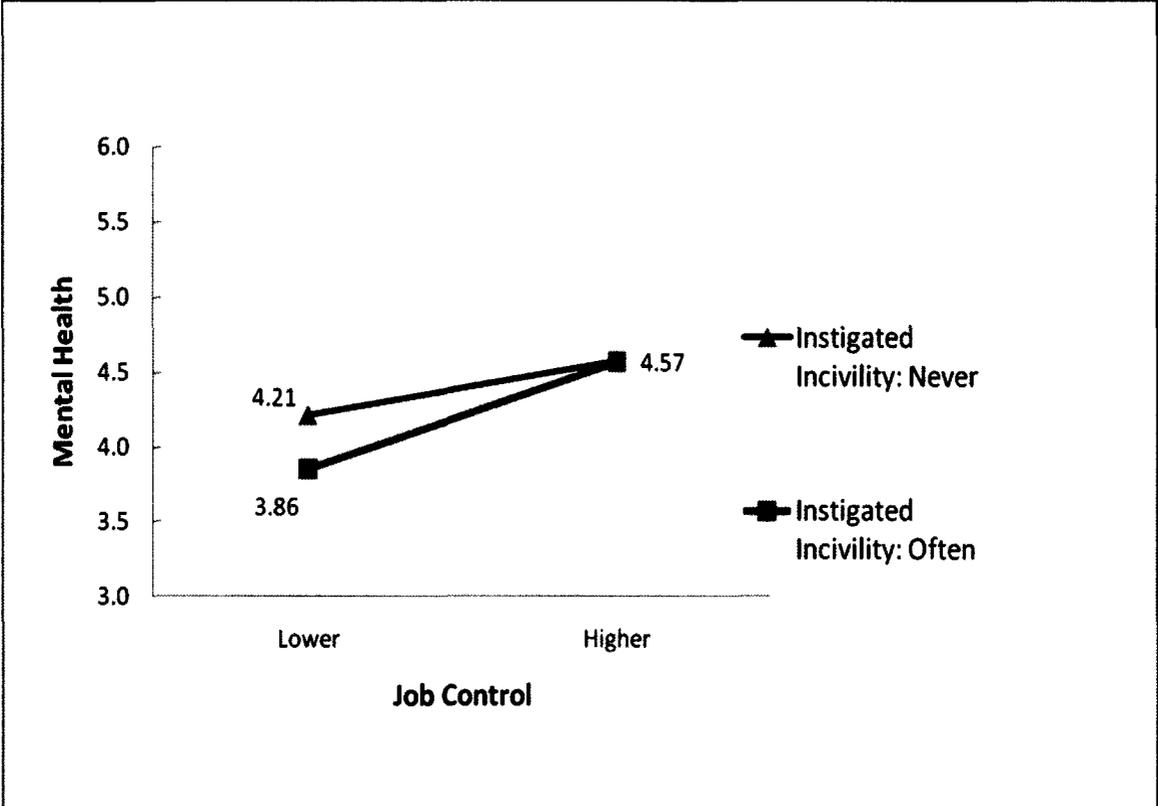
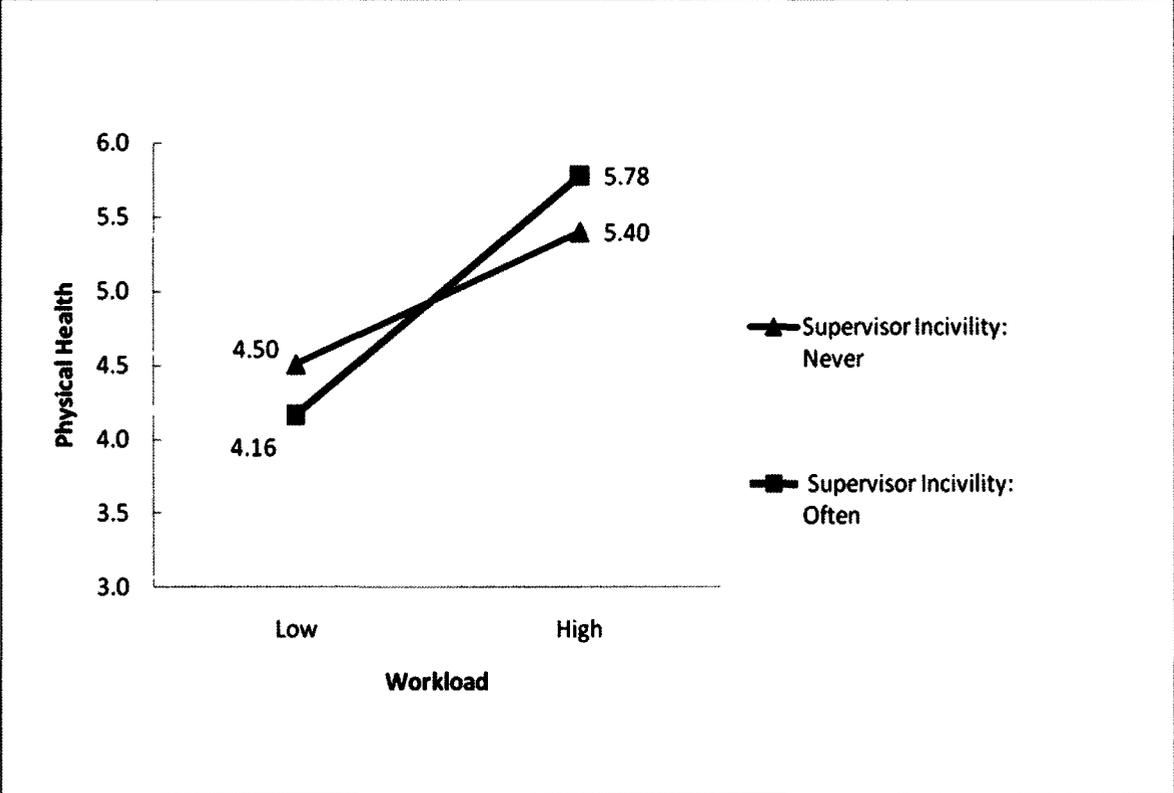


Figure 4: Supervisor Incivility as a Moderator of the Relationship between Workload and Physical Health.



Supervisor, Coworker, and Instigated Incivility: Distinct Facets.

Although one prior study indicated that experienced incivility is distinct from instigated incivility (Blau & Andersson, 2005), evidence that supervisor, coworker, and instigated incivility are distinct facets was lacking. The CFA analyses provide evidence that a three-factor solution is a better fit than either a one- or a two-factor solution. Thus, the three sources of uncivil behaviour form distinct facets of workplace incivility. One possible explanation for finding that the three workplace incivility facets are correlated is that supervisor, coworker, and instigated incivility covary, an indication that individuals engage in uncivil exchanges in the workplace. This interpretation supports Andersson and Pearson's (1999) proposition of a spiral of incivility – one uncivil act relates to another uncivil act in the workplace. However, other explanations are equally plausible.

Individual differences may increase the likelihood that workers who report uncivil behaviour arising from one source are more likely to report similar behaviour arising from a second or third source. Indeed, prior research suggests that negative affect and lack of relationship development skills predict workplace incivility (Reio & Ghosh, 2009).

Supervisor, Coworker, and Instigator Incivility Predicting Worker Strain.

Prior studies indicate that workplace incivility is a job stressor. Results of the present study provide further evidence that workplace incivility is a powerful predictor of worker strain. In addition, the results of the present study extend the stress literature. The present findings indicate that supervisor, coworker, and instigated incivility each uniquely predict worker strain. Identifying the source of the uncivil behaviour enabled examination of specific and statistically significant stressor-strain relationships.

Admittedly, many of these relationships are very weak and may not be practically significant.

Examining the patterns of the unique relationships between supervisor, coworker and instigated incivility and strain may indicate that there are two distinct and interrelated constructs: experienced and instigated incivility. The present findings indicate that both supervisor and coworker incivility (experienced incivility) have stronger unique relationships with all three measures of strain ($r^2 = .02$ to $.10$) when compared with instigated incivility ($r^2 = .01$ to $.001$). Recall that uncivil workplace behaviour is an interaction between workers; a single event could be reported as both experienced and instigated incivility. Thus, studies that examine instigated incivility without controlling for experienced incivility may overstate relationships. One such study reported strong relationships between instigated incivility and strain outcomes (i.e., job satisfaction $r^2 = -.47$, work exhaustion $r^2 = .49$; Blau & Andersson, 2005). The present study diverges from these findings and suggests that more research is needed to fully understand the instigated incivility-strain relationship.

Interestingly, results comparing supervisor incivility and coworker incivility with worker strain were mixed. First, supervisor incivility was stronger than coworker incivility in predicting job satisfaction. Although supervisors' power over subordinates places them in a position of having more ways to express uncivil behaviour (Pearson & Porath, 2005), supervisor incivility ($M = 1.61$, $SD = .88$) occurred less frequently than coworker incivility ($M = 1.79$, $SD = .84$). The difference in frequency may relate to the frequency of personal interactions, as coworkers likely have more frequent contact with one another than with their supervisors. Nonetheless, job satisfaction is a key predictor in

employee engagement and organizational functioning (Spector, 1997) and a fundamental goal of employee supervision (Buckingham & Coffman, 1999). That uncivil supervisors seemingly undermine their own goal of improving workers' job satisfaction should be of concern to employers and of interest to researchers.

The finding that supervisor incivility is weaker than coworker incivility in predicting mental health is contrary to prior research and *Hypothesis 3b*. In the present study, supervisor incivility was strongly related to lower job satisfaction and weakly related to mental health symptoms. That the strength of supervisor incivility predicting job satisfaction does not carry over to mental health is surprising given that job satisfaction is an attitudinal response to work that precedes mental health (Sonnetag & Freese, 2003). I speculate that because supervisors are organizational agents, workers assess supervisors' incivility as 'part of the job.' In attributing supervisor incivility to the job, workers effectively cope with the job stressor, diminishing the potential strain. Conversely, coworkers are not agents of the organization; they are part of workers' own peer group. Incivility arising from within one's own group may give rise to negative reactions that workers cannot dismiss as part of the job.

It is also possible that supervisor incivility might have a more detrimental effect on mental health if there are higher levels of supervisor incivility in the workplace. Within this sample, supervisor incivility was infrequent: 38% of participants reported that supervisor incivility never occurs and additional 44% reported that supervisor incivility occurs only sporadically. In workplaces where subordinates are the daily target of supervisor incivility, subordinates may have insufficient time to recover and may feel trapped in an untenable situation. Thus, when supervisor incivility is frequent,

subordinates negative reactions may overwhelm their ability to cope. Further studies are needed to clarify the exact nature of supervisor and coworker incivility as they relate to worker strain.

Workplace Incivility as a Moderator of the Relationship Between Stressors and Strain.

The results of the present study indicate that facets of workplace incivility moderate the relationship between some job stressors and aspects of worker strain. The three significant findings indicate that: (1) coworker incivility exacerbates the relationship between low job control and poorer mental health; (2) instigated incivility exacerbates the relationship between low job control and poorer mental health; and (3) supervisor incivility exacerbates the relationship between work overload and poorer physical health. Previous research indicates that heavy workloads and lack of job control, two well researched job stressors, cause worker strain (Sonnentag & Frese, 2003; Viswesvaran et al., 1999). The present study adds to understanding this relationship by providing evidence that incivility, a less intense form of aggression (Andersson & Pearson, 1999), may exacerbate the effects of two job stressors in predicting mental and physical health symptoms.

Coworker relations are particularly important in the healthcare industry. In healthcare settings, multiple professions hold proprietary knowledge that must be pieced together to develop care plans and deliver quality patient care. The collaborative practice among healthcare workers is a critical and dominating feature of providing quality patient care (Gaboury, Bujold, Boon, & Moher 2009). In the terms of conservation of resource theory, collaboration is a *resource* from which healthcare workers draw support needed

to fulfill their job duties (Hobfoll, 1989). Conservation of resources theory suggests that strain increases when access to resources are threatened or blocked (Hobfoll, 1989). When coworkers are uncivil, workers may be less able to tap into collaboration resources. Furthermore, workers may worry about the effect that lack of collaboration has on the quality of patient care. The results of this study indicate that coworker incivility intensifies the relationship between job control and mental health but not workload and mental health. Therefore, support for conservation of resources theory seems to be specific to the job stressor. More research exploring specific relationship and moderating effects is needed to support or falsify the conservation of resources theory.

The finding that instigated incivility exacerbates the relationship between job control and one's own mental health is as predicted. Job control theorists suggest that workers attempt to manipulate their environments as part of an innate need to gain personal control (Greenberger & Strasser, 1986). It is possible that workers experiencing low levels of job control use uncivil behaviour in an attempt to manipulate their environment and increase perceived control. However, because incivility induces negative emotions and cognitions that are unpleasant and potentially upsetting to the instigator (Baron & Neuman, 1996), such attempts at control may relate to increased mental strain.

The finding that supervisor incivility exacerbates the relationship between workload and physical health is intriguing. One possible explanation is that, in this healthcare setting, workers rely on their supervisors' instrumental support for physically demanding tasks (e.g. lifting patients). The presence of supervisor incivility may strain the relationship between workers and their supervisor and interfere with instrumental

help within these relationships. That is, workers may become reluctant to ask for their supervisor's help as a way of avoiding rudeness.

Two-thirds of the moderation models were not significant. One possible explanation for these results concerns the frequency of reported incivility. Participants rated the frequency of incivility from 1 (never) to 7 (daily). The mean scores for supervisor, coworker, and instigated incivility (1.61, 1.79, & 1.53) indicate participants infrequently report being the target or agent of workplace incivility. The data derived from the incivility scales have a powerful floor effect that may increase the likelihood of Type 2 error. On the other hand, the statistically significant moderation effects presented here were small ($\Delta R^2 < .01$) and future studies replicating these findings are needed before ruling out Type 1 errors.

Limitations and Future Research

The data were derived from single source, self-report measures. Self-report measures tend to overstate the relationships among constructs as a result of common method variance bias (Spector & Brannick, 2009). Therefore, future research should measure uncivil behaviour using other methods such as direct observation. Although workers may be inclined to stifle unseemly behaviour under direct observation in the field, there are two characteristics of workplace incivility that lend it to direct observation. First, workplace norms partially govern uncivil behaviour. Thus, workers may relax into their normative interactions even when a researcher is observing their behaviour. Second, by definition, workplace incivility is of ambiguous intent. Therefore, workers may be unaware that others perceive their behaviour as uncivil. Lack of awareness is likely to curb observation effects.

The findings of this study are derived from cross-sectional data; therefore, interpretations that depend on directionality of the relationships between job stressors and worker strain are unfounded. Whereas it is reasonable to conclude that job stressors are precursors to employee strain, it is also reasonable to conclude that employee strain predisposes workers be hyper-alert to job stressors. Although longitudinal studies are typically offered to resolve issues of directionality, a recent review of the literature suggests that the levels of job stressors and worker strain increase and decrease concurrently (Sonnetag & Frese, 2003). A possible alternative is to assess uncivil events and strain symptoms at a micro level, perhaps with a daily diary study, to clarify the direction of these relationships.

The large sample size ($N = 1124$) provides powerful statistical tests making even very small effect sizes statistically significant. Some of the reported predictor and moderator effect sizes were weak. Yet, these effects may have practical significance when one considers that incivility is a 'mild' form of aggression that precedes verbal aggression and violence (Andersson & Pearson, 1999). Thus, identifying and addressing incivility may decrease workplace aggression and prevent further deterioration of workplace behaviour norms.

Previously, researchers reported demographic differences that are also relevant to the present research. Cortina et al. (2001) reported that women were more likely than men to report workplace incivility and that gender differences accounted for 1% of the variation in workplace incivility. Adding participants' job position as a predictor accounted for an additional 7% of the variation in workplace incivility (Cortina et al., 2001). The researchers report that ethnicity and age were not significant after accounting

for gender and job position (Cortina et al., 2001). In the present study, analysis exploring demographic differences based on gender, job position, ethnicity and age indicated that only age significantly predicted supervisor incivility ($t(1032) = -2.14, p = .03, R^2 = .003$); coworker incivility ($t(1040) = -3.45, p < .01, R^2 = .01$), and instigated incivility ($t(1042) = -2.08, p = .04, R^2 = .004$). These results indicate that as workers age, they experience and instigate *slightly* less workplace incivility.

Thus, the present findings examining demographic differences diverge from past research. Specifically, Cortina et al. (2001) reported that gender predicted differences in incivility among employees in the United States legal system whereas the present findings indicate that age predicts differences among employees in the Canadian healthcare system. It is possible that workplace norms vary in different settings. Future studies should examine demographic variables as they relate to workplace incivility in various research settings.⁷

Although there is no absolute cut-off for determining whether or not a scale is reliable, a coefficient alpha of .70 is usually often cited as adequate (Schmitt, 1996). The coefficient alpha for the three-item workload scale ($\alpha = .47$) indicated that the reliability of this scale is low. After examining the inter-item correlations and carefully considering item phrasing, I concluded that this scale may not be unidimensional and I removed the final item. However, the inter-item correlation between the two remaining items was also

⁷ Controlling for age in analysis of workplace incivility predicting strain did not alter the significance or direction of results and effect sizes were within $r^2 = .02$. Similarly, controlling for age did not alter significance or direction of moderator results.

low ($r = .40$), an indication that the two-item scale is an inadequate measure of the true workload levels in this sample. In applied workplace settings, researchers strive to reduce the length of surveys in sincere respect for workers' time. It appears that, in this survey, reducing the number of items in the workload scale for the sake of brevity resulted in a low reliability of this scale. Low reliability attenuates the relationship among constructs (Schmitt, 1996), increasing the likelihood of Type 2 errors. Therefore, future researchers interested in exploring the interaction between workload and workplace incivility in predicting strain should not be dissuaded by the null findings reported here and should consider a more robust measure of workload.

Improvements to the measure of workplace incivility may help future researchers seeking to clarify the effect of uncivil behaviour on worker strain. Although it is possible that uncivil behaviour is an infrequent event, it is also possible that workers are reluctant to 'tell on' their supervisors and coworkers in a form of leniency bias. In addition, social desirability bias suggests that workers will be reluctant to admit their own uncivil behaviour. Data from the present study suggest that social desirability bias may be present as instigated incivility ($M = 1.53$, $SD = .53$) was less frequently reported than either coworker incivility ($M = 1.79$, $SD = .84$) or supervisor incivility ($m = 1.61$, $SD = .88$). One tactic to solve this potential problem is to add a lead-in statement (e.g., *many people report uncivil behaviour at work...*) that normalizes negative behaviours under the focus of investigation. Alternatively, a measure of civility (rather than incivility) may yield results that more adequately approximate normal distribution because asking workers to report perceptions of positive behaviours does not strongly evoke social desirability and leniency that may bias responses.

Future investigators should carefully consider their research questions and include appropriate measures of workplace incivility. If researchers wish to examine whether or not uncivil behaviour arising from particular agent groups have differential effects on strain or other outcomes of interest, then identifying the source of uncivil behaviour is reasonable. If the research question is more general, it is more parsimonious to include a measure of experienced incivility (not specifying the agent). Investigators probing the effects of instigated incivility on agents are cautioned against using self-report survey design as the low frequency reported here suggests that agents are either unaware or unwilling to report of their own uncivil behaviour.

The low response rate to the present survey poses a threat to the external validity of the reported findings. Low response rate poses the greatest threat when the nonresponse distorts the effect of interest (Schlam & Kelloway, 2001). Schlam and Kelloway (2001) suggest that surveys attract those participants who are most interested in the research topic area and oversample individuals with extreme perceptions and opinions. This sampling bias would increase the likelihood of Type I error (Schlam & Kelloway, 2001). For the present study, an oversampling of extremes would result in overrepresentation of workers with higher workloads, lower job control, more frequent uncivil interactions, and greater strain. If this is the case, the correlations and effect sizes reported here are inflated and significant hypotheses tests may be erroneous. However, it is also possible that workers with extreme perceptions and opinions are underrepresented in this sample. For example, workers with higher workloads may not complete surveys because they are simply too busy; workers who are frequent targets of uncivil behaviour may not volunteer to complete surveys as a way of avoiding uncivil agents, and workers

experiencing high levels of mental and physical health symptoms may be absent from the workplace. If this is the case, the effect sizes reported here are deflated and Type II errors limit statistical power for finding direct and/or indirect effects. Unfortunately, it is impossible to know from the present data which, if any, of these possibilities are at play. In either case, the low response rate poses a challenge when inferring sample results to the broader population of workers.

To investigate the possibility that non-response biases are present, future researchers could examine the participation rates and effect sizes within a large nested sample such as the one reported here. In the present study, response rates among units ranged from 6.8% to 61.5%. Analysis regressing variables of interest on response rates may provide empirical evidence of potential non-response bias. However, even if low response rates do not pose a threat to external validity, there are practical reasons to find ways of improving participation in research projects.

Researchers should explore ways of increasing participation in applied research because research projects have the potential to improve the working environment. In *Enhancing the Quality of Working Communities*, facilitators presented survey results to workers on the unit as a way of increasing working groups' and individuals' self-awareness of the detrimental effects of workplace incivility. Participating in this survey was one way for workers to see themselves as part of the problem, creating a compelling case for behaviour change. Roth and DeVier (1998) and more recently Anseel (2010) provide empirical evidence and practical suggestions for improving response rates.

The present study focused on the relationships among workplace incivility, job stressors, and worker strain. A suggestion for future research is to investigate workplace

incivility as it relates to negative appraisal. For example, instigated incivility may relate to worker's mental health by way of negative emotion. It may be helpful to directly assess negative emotions or state negative affect arising from instigated incivility as a more proximal measure of strain.

Future research should explore the direction of paths among facets of workplace incivility and strain outcomes. Prior research suggests that strain is a precursor to instigated incivility (Blau and Andersson, 2005). Specifically, lower levels of job satisfaction and higher levels of work exhaustion predicted increased frequency of instigated incivility three years later (Blau & Andersson, 2005). The results presented here indicate that both supervisor incivility and coworker incivility are stronger than instigator incivility in predicting strain. Thus, it is possible that experiencing incivility results in strain that, in turn, increases instigator incivility. On the other hand, the spiral of workplace incivility suggests a circular pattern of uncivil behaviour – one worker behaves uncivilly, a coworker responds in kind, and bystanders model observed behaviours (Andersson & Pearson, 1999). Structured equation modeling with cross-sectional data and/or short duration (one to two weeks) longitudinal designs that prompt agent and target dyads to report daily perceptions of incivility and aggression may help flesh out patterns of uncivil and aggressive behaviour.

Practical Implications of the Present Study

Although only 3 of a possible 18 stressor-strain relationships were moderated by workplace incivility, these results are important. The current work environment is becoming more complex, and complex work environments give rise to uncivil behaviour (Andersson & Pearson, 1999). Although there is little that coworkers and supervisors can

do to make the work environment less complex, people can take care to monitor their own behaviour and supervisors can take steps to enforce workplace civility norms. Respecting civility norms may allow social support to thrive, buffering the effect of job stressors on worker strain.

In summary, the results of the present study support or extend the current literature in three ways. First, supporting current literature, the presented findings indicate that being the target of workplace incivility relates to worker strain. Second, the present study provides evidence that one's own uncivil behaviour predicts strain even after accounting for supervisor and coworker incivility. Third, the present study provides some evidence that facets of workplace incivility moderate the relationship between two job stressors and worker's mental health and physical health. These moderating effects vary depending on the source of workplace incivility (supervisor, coworker, or oneself). Taken together, these results help clarify the role of workplace incivility as a job stressor and workplace characteristic that intensifies the stressor-strain relationship.

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Appendix A

Measures Presented in Order of Appearance in the Survey

| # | Measure | # of Items |
|-----|--|------------|
| 1. | Demographics and Participation Preferences | 14 |
| 2. | * Areas of Worklife | 20 |
| 3. | Turnover Intention | 5 |
| 4. | Respect | 3 |
| 5. | Supervisor Satisfaction | 3 |
| 6. | Organizational Citizenship Behaviours | 24 |
| 7. | Conditions of Work Effectiveness | 12 |
| 8. | Trust | 12 |
| 9. | * Job Satisfaction | 5 |
| 10. | Burnout | 16 |
| 11. | Engagement | 4 |
| 12. | Rudeness Rationales | 8 |
| 13. | * Physical Illness | 6 |
| 14. | Supervisor Events | 4 |
| 15. | Co-worker Events | 4 |
| 16. | Patient Events | 4 |
| 17. | * Mental Health Index | 5 |
| 18. | * Supervisor Incivility | 5 |
| 19. | * Co-worker Incivility | 5 |
| 20. | * Participant Incivility | 5 |
| 21. | Civility and Respect in the Workplace | 8 |

* included in the present study

Appendix B

Participant Survey

Demographics

Age:

Gender: Male
 Female

Highest Educational Credential:
 High School
 College Diploma
 Bachelor's Degree
 Master's Degree
 Doctorate
 Other:

Employment Status:
 Full Time
 Part Time
 Casual
 Temporary

Preferred Employment Status:
 Full Time
 Part Time
 Casual
 Temporary

Ethnicity: Arab
 Black
 Caucasian
 Chinese
 Filipino
 Japanese
 Korean
 Latin American
 North American Aboriginal
 (e.g. Innu, Mik'maq, Maliseet)
 South Asian
 (e.g. Indian, Sri Lankan)
 Southeast Asian
 (e.g. Indonesian, Vietnamese)
 West Asian
 (e.g. Afghan, Iranian)
 Other (please specify below)

 Unknown
 Decline to answer

Are you a member of a council that considers professional issues in healthcare?

- Yes No

What is your occupation?

- | | |
|---|---|
| <input type="radio"/> Administrative Assistant | <input type="radio"/> Audiologist |
| <input type="radio"/> Clinical Therapist | <input type="radio"/> Continuing Care Assistant |
| <input type="radio"/> Counselor | <input type="radio"/> Dental Assistant |
| <input type="radio"/> Dental Hygienist | <input type="radio"/> Dentist |
| <input type="radio"/> Dietetic Technician/Assistant | <input type="radio"/> Dietician |
| <input type="radio"/> Environmental Services | <input type="radio"/> Health Manager |
| <input type="radio"/> Licensed Practical Nurse | <input type="radio"/> Massage Therapist |
| <input type="radio"/> Nursing Aide/Orderly | <input type="radio"/> Occupational Therapist |
| <input type="radio"/> Paramedic | <input type="radio"/> Pharmacist |
| <input type="radio"/> Physician | <input type="radio"/> Physiotherapist |
| <input type="radio"/> Porter | <input type="radio"/> Psychologist |
| <input type="radio"/> Recreation Therapist | <input type="radio"/> Rehabilitation Assistants (OT/PT) |
| <input type="radio"/> Respiratory Therapist | <input type="radio"/> RN - Clinical Nurse Specialist |
| <input type="radio"/> RN - Nurse Manager | <input type="radio"/> RN - Nurse Practitioner |
| <input type="radio"/> RN - Staff Nurse | <input type="radio"/> Social Worker |
| <input type="radio"/> Speech Language Pathologist | <input type="radio"/> Ward Clerk |
| <input type="radio"/> Other (please specify) _____ | |

How long have you worked...?

- in your current organizational setting: - in your unit:

- | | |
|--|--|
| <input type="radio"/> Less than 6 months | <input type="radio"/> Less than 6 months |
| <input type="radio"/> 6 months - 1 year | <input type="radio"/> 6 months - 1 year |
| <input type="radio"/> 2-5 years | <input type="radio"/> 2-5 years |
| <input type="radio"/> 6-10 years | <input type="radio"/> 6-10 years |
| <input type="radio"/> 11-15 years | <input type="radio"/> 11-15 years |
| <input type="radio"/> 16-20 years | <input type="radio"/> 16-20 years |
| <input type="radio"/> 21-30 years | <input type="radio"/> 21-30 years |
| <input type="radio"/> Over 30 years | <input type="radio"/> Over 30 years |

What shifts do you usually work?

- Day Afternoon Night

How many hours do you work...? (not including overtime hours)

- in a normal work week: - in the past week:

How many overtime hours did you work in your last week?

In the past month, on how many occasions have you missed work due to illness or disability?

| | |
|--|--|
| | |
|--|--|

Personal Profile

You can request a personal profile of your survey responses by providing your email address. Only you will know your individual responses. You will obtain personal information about your responses, how they compare to people in general, and customized advice on improving your own worklife.

Do you wish to receive a personal profile?

- Yes No

Email Address for personal profile: _____

Interview

As part of the project, we will be conducting 20 in-depth interviews regarding civility in the workplace.

Would you be willing to participate in an interview?

- Yes Name: _____
 No

Best way to contact for interview:

Email: _____

Phone: _____

Final Report

Would you like a copy of the final report when it is released at the end of the project?

- Yes No

Turn the page when you are ready to begin the survey.

Section I: Organizational Environment

Self-Evaluation

Please indicate the extent to which you agree with the following statements:

| | Strongly Disagree | Disagree | Hard to Decide | Agree | Strongly Agree |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Workload (3 items) | | | | | |
| I work intensely for prolonged periods of time. | <input type="radio"/> |
| I have so much work to do on the job that it takes me away from my personal interests. | <input type="radio"/> |
| I leave my work behind when I go home at the end of the workday. | <input type="radio"/> |
| Job Control (5 items) | | | | | |
| I have control over how I do my work. | <input type="radio"/> |
| I can influence management to obtain the equipment and space I need for my work. | <input type="radio"/> |
| I have professional autonomy/independence in my work. | <input type="radio"/> |
| I have influence in the decisions affecting my work. | <input type="radio"/> |
| I have input into policies and procedures in my work unit. | <input type="radio"/> |
| I receive recognition from others for my work. | <input type="radio"/> |
| My work is appreciated. | <input type="radio"/> |
| My efforts usually go unnoticed. | <input type="radio"/> |
| I am a member of a supportive network of colleagues. | <input type="radio"/> |
| My colleagues cooperate with one another. | <input type="radio"/> |
| I don't feel close to my colleagues. | <input type="radio"/> |
| Resources are allocated fairly here. | <input type="radio"/> |
| Opportunities are decided solely on merit. | <input type="radio"/> |
| There are effective appeal procedures available when I question the fairness of a decision. | <input type="radio"/> |
| My values and the organization's values are alike. | <input type="radio"/> |
| The organization's goals influence my day to day work activities. | <input type="radio"/> |
| My personal career goals are consistent with the opportunities in the organization. | <input type="radio"/> |
| I plan on leaving my job within the next year. | <input type="radio"/> |

Self-Evaluation, continued:

Please indicate the extent to which you agree with the following statements:

| | Strongly Disagree | Disagree | Hard to Decide | Agree | Strongly Agree |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| I have been actively looking for other jobs. | <input type="radio"/> |
| I want to remain in my job. | <input type="radio"/> |
| I do not feel like a part of the family at my organization. | <input type="radio"/> |
| This organization has a great deal of personal meaning for me. | <input type="radio"/> |
| Overall, I receive the respect I deserve in this organization. | <input type="radio"/> |
| I receive the respect I deserve from my superiors. | <input type="radio"/> |
| I receive the respect I deserve from my colleagues. | <input type="radio"/> |

From my point of view, my immediate supervisor:

Please indicate the extent to which you agree with the following statements:

| | Strongly Disagree | Disagree | Hard to Decide | Agree | Strongly Agree |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Delegates appropriate authority to employees. | <input type="radio"/> |
| Encourages innovative/creative thinking about improving quality. | <input type="radio"/> |
| Consults widely with people working in the unit. | <input type="radio"/> |

Relationships with Others

Please indicate the extent to which you agree with the following statements describing

| | Strongly Disagree | Disagree | Hard to Decide | Agree | Strongly Agree |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| your approach to work: | | | | | |
| I help others who have heavy workloads. | <input type="radio"/> |
| I am always ready to lend a helping hand to those around me. | <input type="radio"/> |
| I help others who have been absent. | <input type="radio"/> |
| I willingly help others who have work-related problems. | <input type="radio"/> |

Relationships with Others, continued

| Please indicate the extent to which you agree with the following statements describing | Strongly Disagree | Disagree | Hard to Decide | Agree | Strongly Agree |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| your approach to work: | | | | | |
| I help orient new people even though it is not required. | <input type="radio"/> |
| I am one of the most conscientious employees. | <input type="radio"/> |
| I believe in giving an honest day's work for an honest day's pay. | <input type="radio"/> |
| My attendance at work is above the norm. | <input type="radio"/> |
| I do not take extra breaks. | <input type="radio"/> |
| I follow organization rules and regulations even when no one is watching. | <input type="radio"/> |
| I am the classic "squeaky wheel" that always needs greasing. | <input type="radio"/> |
| I consume a lot of time complaining about trivial matters. | <input type="radio"/> |
| I tend to make "mountains out of molehills". | <input type="radio"/> |
| I always focus on what's wrong, rather than the positive side. | <input type="radio"/> |
| I always find fault with what the organization is doing. | <input type="radio"/> |
| I try to avoid creating problems for co-workers. | <input type="radio"/> |
| I consider the impact of my actions on co-workers. | <input type="radio"/> |
| I do not abuse the rights of others. | <input type="radio"/> |
| I take steps to try to prevent problems with other employees. | <input type="radio"/> |
| I am mindful of how my behaviour affects other people's jobs. | <input type="radio"/> |
| I keep abreast of changes in the organization. | <input type="radio"/> |
| I attend meetings that are not mandatory, but are considered important. | <input type="radio"/> |
| I attend functions that are not required, but help the organization image. | <input type="radio"/> |
| I read and keep up with organization announcements, memos, and so on. | <input type="radio"/> |

How much of each kind of opportunity do you have in your

present job?

| | None | Some | A Lot | |
|---|-----------------------|-----------------------|-----------------------|-----------------------|
| Please indicate the extent to which the following opportunities exist in your work place: | | | | |
| Challenging work. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| The chance to gain new skills and knowledge on the job. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Tasks that use all of your own skills and knowledge. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

How much access to information do you have in your present job?

| | None | Some | A Lot | |
|---|-----------------------|-----------------------|-----------------------|-----------------------|
| Please indicate the availability of the following information in your work place: | | | | |
| The current state of the hospital. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| The values of top management. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| The goals of top management. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

How much access to support do you have in your present job?

| | None | Some | A Lot | |
|--|-----------------------|-----------------------|-----------------------|-----------------------|
| Please indicate the availability of each type of support in your work place: | | | | |
| Specific information about things you do well. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Specific comments about things you could improve. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Helpful hints or problem solving advice. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

How much access to resources do you have in your present job?

| | None | Some | A Lot | |
|---|-----------------------|-----------------------|-----------------------|-----------------------|
| Please indicate the availability of the following resources in your work place: | | | | |
| Time available to do necessary paperwork. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Time available to accomplish job requirements. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Acquiring temporary help when needed. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

The following statements express opinions that people might hold about the *confidence* and *trust* that can be placed in one's coworkers and management.

Please indicate the extent to which you agree

with the following statements:

| | Strongly Disagree | Disagree | Hard to Decide | Agree | Strongly Agree |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Management at my organization is sincere in its attempts to meet the workers' point of view. | <input type="radio"/> |
| Our organization has a poor future unless it can attract better managers. | <input type="radio"/> |
| If I got into difficulties at work I know my workmates would try and help me out. | <input type="radio"/> |
| Management can be trusted to make sensible decisions for the organization's future. | <input type="radio"/> |
| I can trust the people I work with to lend me a hand if I needed it. | <input type="radio"/> |
| Management at work seems to do an efficient job. | <input type="radio"/> |
| I feel quite confident that the organization will always try to treat me fairly. | <input type="radio"/> |
| Most of my workmates can be relied upon to do as they say they will do. | <input type="radio"/> |
| I have full confidence in the skills of my workmates. | <input type="radio"/> |
| Most of my fellow workers would get on with their work even if supervisors were not around. | <input type="radio"/> |
| I can rely on other workers not to make my job more difficult by careless work. | <input type="radio"/> |
| Our management would be quite prepared to gain advantage by deceiving the workers. | <input type="radio"/> |

You have now completed 50% of the survey.

Relationships with Work, cont'd

*Please indicate how frequently you experience the following events involving **Patients**.*

| | Never | Sporadically: A few times a year or less | Now and Then: Once a month or less | Regularly: A few times a month | Often: Once a week | Very Often: A few times a week | Daily |
|---------------------------|-----------------------|--|------------------------------------|--------------------------------|-----------------------|--------------------------------|-----------------------|
| Rude or Uncivil Behavior. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Verbal Abuse. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Physical Assault. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Sexual Harassment. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Section III: Social Environment

*Please indicate how much of the time during the **past four weeks**:*

| | None of the time | A Little of the time | Some of the time | Most of the time | All of the time |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| I have been a very nervous person. | <input type="radio"/> |
| I have felt so down in the dumps that nothing could cheer me up. | <input type="radio"/> |
| I have felt calm and peaceful. | <input type="radio"/> |
| I have felt downhearted and blue. | <input type="radio"/> |
| I have been a happy person. | <input type="radio"/> |

Social Environment, cont'd

Consider your own behavior towards other people **at work** over the same period.

Please indicate how frequently you have:

| | Never | Sporadically: A few times a year or less | Now and Then: Once a month or less | Regularly: A few times a month | Often: Once a week | Very Often: A few times a week | Daily |
|---|-----------------------|--|---------------------------------------|-----------------------------------|-----------------------|-----------------------------------|-----------------------|
| Paid little attention to another person's statement or showed little interest in their opinion. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Addressed another person in unprofessional terms, either publicly or privately. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Ignored or excluded another person from professional camaraderie. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Doubted another person's judgment on a matter over which the other person has responsibility. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Made unwanted attempts to draw another person into a discussion of personal matters. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Please answer all of the following questions thinking about your experiences over the past six months.

If you are uncertain, your work group is indicated inside the front cover of the survey booklet.

Please indicate the extent to which you agree

with the following statements:

| Never | Sporadically | Now and Then | Regularly | Often | Very Often | Daily |
|-------|--------------|--------------|-----------|-------|------------|-------|
|-------|--------------|--------------|-----------|-------|------------|-------|

| | | | | | | | |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| People treat each other with respect in my work group. | <input type="radio"/> |
| A spirit of cooperation and teamwork exists in my work group. | <input type="radio"/> |
| Disputes or conflicts are resolved fairly in my work group. | <input type="radio"/> |
| The people I work with take a personal interest in me. | <input type="radio"/> |
| The people I work with can be relied on when I need help. | <input type="radio"/> |

Social Environment

Please indicate the extent to which you agree with the following statements:

| | Strongly Disagree | Disagree | Neither Agree nor Disagree | Agree | Strongly Agree |
|---|-----------------------|-----------------------|----------------------------|-----------------------|-----------------------|
| This organization does not tolerate discrimination. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Differences among individuals are respected and valued in my work group. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Managers/supervisors/team leaders work well with employees of different backgrounds in my work group. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Section IV: Comments

| | | | | | | | | | |
|--|--|--|--|--|--|--|--|--|--|
| | | | | | | | | | |
|--|--|--|--|--|--|--|--|--|--|

Thank you very much for your participation.



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