INCIVILITY AND RECOVERY:

RELATIONSHIPS AT THE DAY, THE PERSON, AND THE TEAM LEVEL

A Thesis Presented in Partial Fulfilment of

the Requirements for the Degree of Doctor of Psychology (Organisational)

BY

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August, 2014

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ABSTRACT

This thesis explores the relationships between workplace incivility and recovery at the day-, person- and team-level. It was suggested that recovery could represent an underlying mechanism through which incivility affects individuals in the longer term, and that both contextual factors and team-level recovery experience norms might affect this relationship.

The results of this thesis supported these assertions, with both variables related at a number of different levels. The first and second studies examined relationships at the day-level, demonstrating that when an individual experiences workplace incivility their after-work recovery process is negatively impacted, with the effects lasting into the next-day. The second study demonstrated that the likelihood of experiencing such uncivil behaviours changes with the day of the week, becoming less likely as an employee moves from Monday to Friday. The final study explored the person- and team-level of analysis, demonstrating that those who experienced more co-worker incivility were less likely, while those who experienced more supervisor incivility were more likely, to engage in after-work relaxation experiences. In contrast, neither form of incivility significantly affected psychological detachment experiences at the between-person level, indicating the relationships between incivility and recovery experiences differ significantly with the level of measurement. At the team-level, psychological detachment operated as a group-norm, with those that worked in a team with a positive psychological detachment norm (i.e. that encouraged psychological detachment) more likely to engage in both relaxation and psychological detachment experiences. Variables that may moderate these relationships were also tested. Strengths and limitations of this thesis are presented, together with implications for practice and future research.

CANDIDATE STATEMENT

This thesis contains material that has been submitted for publication, as follows:

Paper 1 (in Chapter 2), titled "Here today but not gone tomorrow: Incivility affects after-work and next-day recovery", is in press in the Journal of Occupational Health Psychology. I am the first author and my Principal Supervisor, Barbara Griffin, is the second author of this paper. My contribution to the research and paper was: Concept = 60%; Data collection = 100%; Data analysis = 100%; Writing = 75%; Total = 85%.

Paper 2 (in Chapter 3), titled "Thank goodness it's Friday: Weekly pattern of workplace incivility" is under review with the journal of Anxiety, Stress & Coping. I am the first author and my Principal Supervisor, Barbara Griffin, is the second author of this paper. My contribution to the research and paper was: Concept = 60%; Data collection = 100%; Data analysis = 100%; Writing = 80%; Total = 85%.

Paper 3 (in Chapter 4), titled "Group recovery experience norms: A new construct and its cross-level effect on team member recovery experiences", is under review with the European Journal of Work and Organizational Psychology. I am the first author and my Principal Supervisor, Barbara Griffin, is the second author of this paper. My contribution to the research and paper was: Concept = 50%; Data collection = 100%; Data analysis = 100%; Writing = 80%; Total = 80%.

Except where indicated by specific reference, the work submitted is the result of my own investigation and the views expressed are my own. No portion of the work presented has been submitted in substance for any other degree or award at this or any other university or institution. Macquarie University Human Research Ethics Committee approval was obtained for this research and all survey data was collected in line with this approval (Reference: 5201300138).

Signed: Date: 14/08/2014

PUBLICATIONS ARISING FROM THIS THESIS

Nicholson, T.S., & Griffin, B. (2014). Here today but not gone tomorrow: Incivility affects after-work and next-day recovery, *Journal of Occupational Health Psychology*. Doi: 10.1037/a0038376.

Nicholson, T.S., & Griffin, B. (in press). Thank goodness it's Friday: Weekly pattern of workplace incivility, *Anxiety, Stress & Coping.*

Nicholson, T.S., & Griffin, B. (in press). Group recovery experience norms: A new construct and its cross-level effect on team member recovery experiences, *European Journal of Work and Organizational Psychology.*

Nicholson, T.S., & Griffin, B. (2014, May). Daily rudeness at work: Incivility affects after-work recovery. Paper presented at the 29th Annual Conference for Society for Industrial and Organizational Psychology, Hawaii.

ACKNOWLEDGEMENTS

This work would not have been possible without the support and guidance of many people. It is impossible to sufficiently thank my principal supervisor, Dr Barbara Griffin. I am blessed to have had the opportunity to work with such a fantastic researcher, teacher, mentor and person. At times I saw her more than my own family, and without her advice, support and guidance this thesis would not be what it is today. I am a better researcher, professional and person because of her and I sincerely hope that we have the opportunity to work together again in the future. Thank you!

Thank you to Dr Ben Searle, my associate supervisor, for taking the time to review my work and the constructive feedback he provided. I am also grateful to Yihao Liu for sharing his knowledge on analysis within the Mplus program, I would likely still be analysing data if it weren't for his advice.

This project would not have been possible without the many research participants who completed the diary studies. I am extremely appreciative of the organisation that supported this research, and of the individuals for taking the time to complete the daily surveys.

I will be forever grateful to my family, who have encouraged me every step of the way from enrolment to completion. I would not be where I am today without their emotional support, love and guidance. Special thanks go to mum for proofreading countless essays over the last 9 years and inspiring me to become a psychologist, to dad for his sense of humour, and to my brother James for keeping me company during countless weekends of study.

Last, but not least, thank you to my incredible partner Oscar, whose daily support has gotten me through many difficult moments. He not only moved from the other side of the world so I could complete my studies, but also provided an endless stream of support, laughter and care. I can't wait to enjoy our lives together now that thesis is finished!

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CHAPTER 1: INTRODUCTION

Workplace incivility is not only commonplace in many organisations (Andersson & Pearson, 1999; Pearson, Andersson, & Porath, 2000), but it also appears to be on the rise (Johnson & Indvik, 2001; Pearson et al., 2000). This is of concern to both organisations and employees, given both its work-related outcomes, such as lower job satisfaction and higher turnover intentions (Cortina, Magley, Williams, & Langhout, 2001; Johnson & Indvik, 2001; Pearson & Porath, 2005), and broader health outcomes such as higher stress and poorer psychological well-being (e.g., Cortina et al., 2001). While the links between incivility and longer-term outcomes are reasonably well established, there is a need to understand the mechanisms linking these uncivil experiences to their ill-effects. This thesis proposes that recovery might be an explanatory process explaining *how* relatively mild rudeness and disrespect can have such negative longer-term consequences. It explores the broad relationships between these two constructs at the day-, person- and team-levels.

This introductory chapter presents a brief literature review, followed by an overview of the remaining thesis chapters. This chapter is not intended to be an exhaustive review of the literature as much of the relevant literature is covered in Chapters 2 to 4.

Workplace incivility

Incivility, a form of low intensity interpersonal mistreatment characterised by the ambiguous motivation of the perpetrator, is one of the most commonly cited forms of impersonal mistreatment in the workplace (Andersson & Pearson, 1999; Pearson et al., 2000). Often experienced as interruption, demeaning language or condescending tone (Andersson & Pearson, 1999; Cortina & Magley, 2009; Milam, Spitzmueller, & Penney, 2009; Pearson et al., 2000), the relatively mild nature of the act, combined with no clear intention to harm the target, means perpetrators may not even recognise their behaviour as mistreatment (Pearson, Andersson, & Porath, 2005). While the ambiguous intent distinguishes incivility from more serious forms of interpersonal mistreatment such as bullying, harrassment, violence and

agression, incivility has the potential to spiral into increasingly serious interpersonal mistreatment (Andersson & Pearson, 1999; Pearson et al., 2000).

While uncivil behaviours are mild, their effects are not. Instead, they have significant consequences for individuals and organisations alike. Those who experience incivility report higher levels of stress (Beattie & Griffin, 2014), higher levels of psychological distress (Cortina et al., 2001) and poorer physical health (Lim, Cortina, & Magley, 2008). This extends to the organisation, with employees who experience incivility displaying increased turnover (Johnson, & Indvik, 2001), and reduced job satisfaction (Cortina et al., 2001; Pearson, & Porath, 2005) and organisational commitment (Cortina et al., 2001). Indeed, incivility is estimated to cost organisations $14,000 per employee per year (Pearson & Porath, 2009).

Uncivil behaviours appear to be widespread due to their relatively mild nature. Reported incidence in the literature is generally high, and this is consistent across a number of different work environments including 70% of court employees (Cortina et al., 2001), 75% of university students (Caza & Cortina, 2007) and 90% of nurses (Smith, Andrusyszyn, & Laschinger, 2010). Pearson, Andersson and Porath (2000) suggest that the increasingly fragmented and complex nature of working relationships, combined with increasing job demands, are leading to an increase in these behaviours. While there is no longitudinal evidence to support this (possibly due to the relative newness of the incivility construct), the high incidence and serious outcomes alone warrant the need for further understanding of this area.

When individuals are the target of uncivil behaviours, research suggests that their emotional and cognitive resources are drained (Laschinger, Leiter, Day, & Gilin, 2009). Incivility can therefore be characterised as a work demand within the Effort-Recovery model, suggesting that such uncivil experiences further drain resources and/or inhibit the recovery process (Bakker, Demerouti, Oerlemans, & Sonnentag, 2013). Given workplace experiences

impact recovery, which in turn leads to numerous longer-term effects such as burnout, recovery might then represent the mechanism through which incivility impacts individuals in the longer term. Thus, the primary aim of this thesis was to explore the relationships between these two constructs at multiple levels of analysis using multilevel techniques. Further literature outlining the relationships between these two constructs can be found in Chapter 3.

Additionally, there is scant research examining within-person differences in incivility. Multi-level investigation enables a richer understanding of concepts such as incivility, allowing the exploration of how processes at different levels affect individual and team behaviour (Bliese & Jex, 2002). Incivility literature has traditionally focused on between-person effects, meaning our understanding of day- and group-level incidence, antecedents and impacts is limited. In particular, very little research has considered daily variations in incivility. Only one study thus far has considered within-person fluctuations of experienced incivility (Beattie & Griffin, 2013). Results suggested that incivility has negative effects on both stress and engagement at the within-person level. In other words, individuals were more stressed and less engaged on days when they experienced incivility than on days when their workplace interactions were all civil. While Beattie and Griffin's study has established that within-person differences in incivility affect individual daily outcomes, the effects on recovery have not yet been assessed. By examining day-level fluctuations in incivility, this thesis allows linkages to be drawn between incivility and the growing number of diary studies exploring recovery. It also permits the exploration of contextual factors such as day of the week.

The recovery construct

While at work, individuals utilise effort in order to complete the tasks and activities expected of them, leading to a depletion of their resources (Hockey, 1996; Zijlstra, 1996). Recovery refers to the process of replacing these resources expended throughout the day (Sonnentag, 2003a). Recovery typically occurs in the evenings once an employee has finished

work (Sonnentag, Binnewies, & Mojza, 2010), but can also occur during work breaks, weekends and vacations (Fritz & Sonnentag, 2005; Trougakos, Beal, Green, & Weiss, 2008; Westman & Eden, 1997).

Theoretical models

A number of complementary theoretical approaches describe the recovery process. The two most commonly cited theories are the Effort-Recovery Model (Meijman & Mulder, 1998) and Conservation of Resources Theory (Hobfoll, 1989).

The Effort-Recovery Model (ERM) assumes that people have a fixed amount of personal resources to invest at work in order to meet work demands, and that non-work hours provide the opportunity to rebuild their resources, prevent further loss of resources and/or gain additional resources (Meijman & Mulder, 1998). Resource replenishment is said to occur when there is an absence of work-related demands (Meijman & Mulder, 1998). According to the ERM, it is not work itself that requires effort investment (Sonnentag, Niessen, & Neff, 2011). Instead, work demands or stressors (e.g. time pressure or work overload) require effort investment, resulting in acute load reactions such as accelerated heart rate and fatigue (Meijman & Mulder, 1998). It is through recovery that these stress-related load reactions return to pre-stressor levels, allowing an employee to start the next workday replenished (Meijman & Mulder, 1998). However, when individuals do not recover during after-work hours the stress-related load reactions are prolonged, leading to accumulative strain reactions such as exhaustion, loss of function, impairment and burnout (Meijman, 1991).

Similar to the ERM, Hobfoll's (1989) Conservation of Resources (COR) theory proposes that job demands during work either threaten or utilize available resources, leading to stress. According to COR theory, individuals strive to increase and protect their resources, with affect and energy being particularly important resources in the recovery process (Hobfoll, 1989). These resources must be replenished in order to restore wellbeing and stress to normal levels (Hobfoll, 1989). While the ERM posits that individuals need relief from

demands in order to recover, COR theory suggests that individuals can replenish their resources by either temporarily reducing the stressors, or investing additional resources (Sonnentag et al., 2011). Resources can be therefore replenished by either reducing the demands, such as by taking a break, or by investing additional resources, such as by learning a language.

Although a number of theoretical models are relevant to the recovery process, this thesis adopts the Effort-Recovery model as a theoretical basis for its hypotheses. This is largely due to the ERM's focus on recovery through reduced demands being more relevant to the study context. Specifically, the long working hours in the legal industry generally mean employees have limited after-work time, as a consequence they are less likely to engage in mastery experiences that require investment of additional resources (as suggested in the COR).

The recovery process

Recovery can be thought of as having three distinct phases: need for recovery, resource generation and replenishment. When an individual has depleted or threatened resources they experience a *need for recovery*, which is commonly experienced as the desire to withdraw from activities requiring resource investment, such as further work (Sonnentag & Zijlstra, 2006). Antecedents of increased need for recovery include both work and non-work factors. Examples of the workplace factors predicting need for recovery include low job control (De Raeve, Vasse, Jansen, van den Brandt, & Kant, 2007; Sonnentag & Zijlstra, 2006), engaging in work-related activities at home (Sonnentag & Zijlstra, 2006) and high job demands such as time pressure, overtime and situational constraints (De Raeve et al., 2007; Jansen, Kant, & Brandt, 2002; Sonnentag & Zijlstra, 2006). In the non-work sphere, Fritz et al., (2010) demonstrated a relationship between non-work hassles and fatigue (which was operationalized as a need for recovery proxy).

In order to move from the state of *need for recovery* to a state of replenished resources, individuals must engage in experiences that facilitate recovery, commonly referred to as *recovery experiences* (Sonnentag & Fritz, 2007). In their seminal paper, Sonnentag and Fritz (2007) proposed four primary recovery experiences that facilitate the regeneration of resources: psychological detachment, relaxation, mastery and control. Importantly, recovery experiences refer to an individual's subjective experience of recovery, meaning it is not the activity they engage in, but how it is perceived that matters (Sonnentag & Fritz, 2007). That is, recovery is facilitated when an individual mentally removes himself or herself from work (i.e. psychological detachment), engages in activities that promote a state of low-activation (i.e. relaxation), is able to control which leisure activities they pursue (control), and/or learns something new or is challenged in non-work related activities such as by learning a new language (mastery). This thesis focuses on the former two (psychological detachment and relaxation), as they represent the two core dimensions of recovery within the ERM. Specifically, recovery within the ERM is said to occur when individuals stop utilising work-related resources (i.e. psychologically detach from work) and replenish used resources (i.e. relax) (Meijman & Mulder, 1998). Further discussion of these recovery experiences can be found in all three papers submitted from this research (i.e., Chapters 2, 3 and 4 of the thesis).

The end goal of the recovery process is *replenishment* of resources, so that recovery levels are restored. This state of replenishment is associated with numerous positive outcomes at both the within- and between-person level. At the within-person level, on days when they are more recovered, individuals are more engaged at work (Sonnentag, Mojza, Demerouti, & Bakker, 2012; Sonnentag, 2003) and proactive (Sonnentag, 2003), exhibit higher task performance, organizational citizenship behaviour and initiative (Binnewies, Sonnentag, & Mojza, 2009a), and have increased positive affect that day (Sonnentag & Bayer, 2005) and the next (Binnewies, Sonnentag, & Mojza, 2008; Sonnentag & Niessen, 2008). At the between-person level, those with higher recovery have higher work engagement (Siltaloppi,

Kinnunen, & Feldt, 2009), task performance (Binnewies, Sonnentag, & Mojza, 2009b) life satisfaction (Fritz, Yankelevich, Zarubin, & Barger, 2010; Moreno-Jiménez et al., 2009) and positive affect (Fritz, Sonnentag, et al., 2010).

This thesis explores all three aspects of recovery, including need for recovery (operationalized as situational wellbeing), recovery experiences (psychological detachment and relaxation), and replenishment (next morning recovery levels).

Recovery and incivility

As mentioned, a number of work factors have been identified as antecedents and outcomes to poor recovery, however the relationships between incivility and recovery have not yet been explored. I suggest that incivility and recovery will be related at a number of levels, with recovery providing a possible mechanism through which incivility affects individuals in the longer term. Indeed, Sluiter et al (1999) suggests that recovery might be an intermediary factor in the relation between job stressors and mental health.

A few recent studies have explored related concepts at the between-person level. For example, Demsky, Ellis, and Fritz (2014) recently demonstrated that those who experience aggression at work have reduced psychological detachment. Two studies have also explored recovery as an intermediary factor, with detachment found to moderate the effect of negative work events on wellbeing (Sonnentag, Unger, & Nägel, 2013), and need for recovery and worry found to mediate the relationship between workplace bullying and sleep quality (Rodríguez-muñoz, Notelaers, & Moreno-jiménez, 2011).

There are a number of reasons why this thesis extends research beyond the above findings. Firstly, incivility is conceptually different from other more serious forms of interpersonal mistreatment. Incivility sits within the domain of antisocial behaviour, overlapping to some extent with aggression and deviant behaviour (Andersson & Pearson, 1999). However it is distinguished from these more serious behaviours due to the mildness of the acts and the ambiguous motivation of the perpetrator (Andersson & Pearson, 1999). These

two factors make it much more common than other workplace deviance, experienced by up to 90% of staff in some industries (e.g., Smith et al., 2010). I suggest that anything affecting such a high number of employees warrants further exploration as a unique construct.

Additionally, Andersson and Pearson (1999) posit that incivility can spiral into more serious forms of misconduct (including bullying and aggression), so could be viewed as a precursor to more serious behaviours. A better understanding of incivility might therefore provide useful information on preventing these mild behaviours from spiralling into more serious mistreatment. Indeed in a study of sexual harassment and incivility, Lim and Cortina (2005) found that almost all those who had experienced harassment had also experienced workplace incivility. Finally, as the above studies were all at the between-person level, they could not determine if similar processes occur at the within-person or group-level. By exploring relationships at multiple levels of analysis, this thesis aims to provide researchers and practitioners with a more complete understanding of these constructs.

Recovery at the group level

Group-level analysis allows better understanding of organisational factors affecting individuals, and might therefore allow for more practical interventions targeted at the organisation level (Bliese & Jex, 2002). However, little attention has been given to recovery at the group-level, with research focusing on the between- and within-person levels. Group constructs such as norms impact individual behaviours by setting standards for acceptable and unacceptable behaviour. For example, group-level factors such as organisational justice climate impact both team-level and individual-level outcomes (Mossholder, Bennett, & Martin, 1998; Whitman, Caleo, Carpenter, Bernerth, & Horner, 2012).

The kinds of recovery experiences considered ‘normal’ might differ from team to team, and understanding such group effects could provide further insights into promoting individual recovery behaviours. Thus this thesis examined whether workplace teams develop norms for recovery, and how such norms influence individual recovery experiences. Further

discussion of the literature surrounding group norms can be found in the final paper (Chapter 4).

Research Approach and Analysis

As mentioned, existing theory and research on workplace incivility has largely focused on the between-person level of analysis. Recently, a few studies have considered the within-person differences in incivility, suggesting that uncivil interactions can elicit immediate negative outcomes such as anger and withheld helping behaviour (Beattie & Griffin, 2014; Lee & Brotheridge, 2006; Porath & Erez, 2007). However, the short-term effects beyond the workday have only been investigated by Ferguson (2012), who demonstrated that co-worker incivility impacts the target's non-work domain, impacting both their at-home relationships and the wellbeing of their partners. Additionally, little research has explored recovery at the group-level, meaning we do not yet have a strong understanding of how these factors operate at the group level.

It has been suggested that individual-level models are "too simplistic to accurately model complex phenomena such as those studied in organizational behaviour" (Bliese & Jex, 2002, p. 265). For example, while between-person differences provide crucial information regarding how individual differences affect incivility and other important work experiences, they do not, for example, provide any information on why an individual's behaviour fluctuates from day to day. In order to better understand the impacts of incivility and recovery we must therefore understand both between-person, and within-person and group level factors.

To address these gaps in the literature, a diary study with daily data collection was used to collect data at the day, person and between levels. An initial questionnaire measured person- and team-level variables, while twice-daily surveys measured day-level variables. Following Sonnentag's (2003) approach, participants provided information twice daily over

five consecutive work days. This allows the consideration of how factors affect not only the present day's recovery, but also the subsequent day's recovery.

Diary studies have a number of advantages over cross-sectional research. First, diaries capture individuals' short-term appraisals of, and responses to situations at work and home, allowing researchers to capture experiences closer to real time, thus reducing problems associated with memory deficits or retrospective responses (Bolger, Davis, & Rafaeli, 2003). Second, by measuring constructs in a shorter time frame researchers are able to assess immediate vs. accumulative effects.

However, diary studies are not without disadvantages. Of practical concern is the fact that participants must commit to a number of surveys, which places substantial demands on their time and recall ability. As a result, the drop-out rate is generally quite high (approximately 20%) (Ohly, Sonnentag, Niessen, & Zapf, 2010). This burden on participants also makes it difficult to recruit a large sample, which generally leads to smaller sample sizes (Ohly et al., 2010).

Following the advice of Bliese and Jex (2002), each study within this thesis included two levels of measurement; Chapters 2 and 3 include day- and person-level variables, and Chapter 4 includes person- and team-level variables. All analyses were conducted in MPlus version 7 (Muthen & Muthen, 2013). Multilevel modelling techniques were used to test the hypotheses in Chapter 2, with day-level measures nested within persons. Longitudinal Growth Modelling (LGM) was used in Chapter 3 to study the change process of incivility (Gross, Meier, & Semmer, 2013). LGMs provide a powerful analytical tool for studying intra-individual change, yet "are rarely applied to diary data"(Gross et al., 2013, p. 3). By utilising LGM, I was able to maximise the diary data and determine whether repeated measures of incivility were related to time (day of the week). More information regarding LGM can be found in Chapter 3. For Chapter 4, multilevel modelling was used to test the hypothesised cross-level relationships, with person-level measures nested within teams.

Structure of the thesis

This is a thesis by publication, consisting of three papers which are all either in press or under review with international journals in the field of organisational psychology. These papers are presented in full as Chapters 2 through 4.

This thesis was developed from the idea that recovery might provide the mechanism through which incivility affects longer-term outcomes. Since the design of this project and testing of hypotheses, Sonnentag and Fritz (2014) have published an overarching framework of the recovery process. As illustrated in Figure 5.1, they propose an extended stressor-detachment model, whereby job stressors predict poor psychological detachment, which predicts strain and impaired wellbeing (Sonnentag & Fritz, 2014). While not testing the model in its entirety, each chapter of this thesis explores one of the pathways outlined in Sonnentag and Fritz's (2014) model.

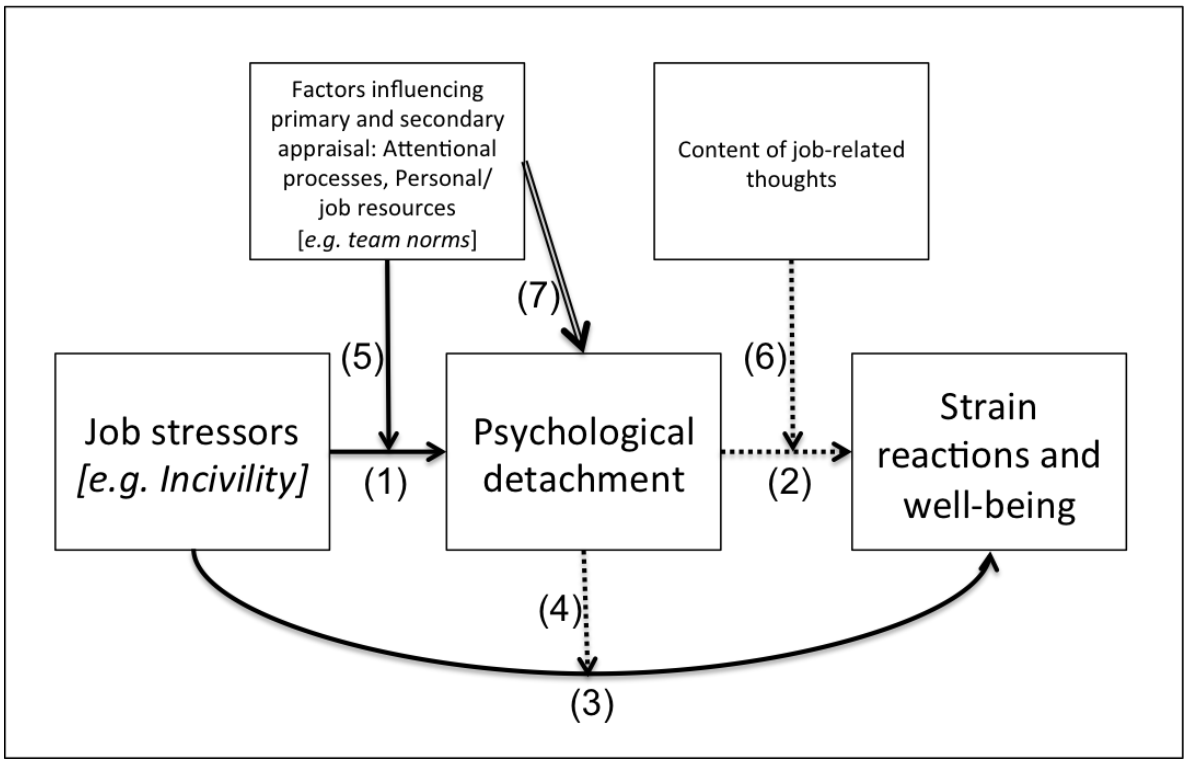

Figure 1.1: Extended stressor-detachment model, with solid lines representing pathways relevant to this thesis, and double lines representing pathways added to the original model. Adapted from "Recovery from job stress: The stressor-detachment model as an integrative framework", by S. Sonnentag and C. Fritz, 2014, *Journal of Organizational Behavior.*

Chapter 2 presents a diary study focused on examining the relationships between incivility and recovery at the day-level. This study contributes to the literature by linking the incivility literature with the growing number of diary studies exploring daily recovery (e.g., Sonnentag, 2001). Utilising the Effort-Recovery Model (Meijman & Mulder, 1998), it is suggested that incivility might inhibit an individual's ability to recover from work by reducing their after-work detachment and relaxation experiences. Results demonstrate that incivility negatively impacts after-work situational wellbeing and psychological detachment, but not relaxation. Incivility further affects recovery by reducing recovery levels the following morning. Findings support the proposal that recovery is one mechanism through which incivility, a relatively minor interpersonal interaction, has such negative long-term effects.

Chapter 3 shifts the focus from daily relationships to weekly patterns in experienced incivility. This study takes a theory-driven approach, utilising the mood and recovery literature to explain why experienced incivility might follow a consistent weekly rhythm. A key aim of the study reported in this chapter is to address a gap in the extant literature by examining the impact of contextual factors such as time on workplace incivility, and the interrelationships of any such changes with recovery and mood. To the best of my knowledge, this paper is the first to show that employees experience interpersonal mistreatment from others at work in a linear trajectory, commencing with high levels on Mondays and finishing with low levels on Fridays. However, the weekly pattern was not linked to recovery or mood weekly patterns of change.

Chapter 4 answers calls to extend the analysis of recovery to the group-level by proposing the existence of recovery experience norms at the team level. The primary aim of this chapter was to understand whether psychological detachment and relaxation develop as team norms, and how such norms impact individual recovery experiences above and beyond

individual state-like factors such as incivility, and trait-like factors such as workaholism. As in the first paper, individual recovery was the dependent variable although in this case investigated at the between-person level of analysis not the within-person level. This study reports the evidence for team-level recovery experiences, and showed how team-level psychological detachment had a direct, cross-level effect on individual recovery.

Following these papers, Chapter 5 presents a general discussion integrating the key findings of the empirical studies, discussing the strengths and limitations of the analysis, and provides recommendations for future research and practice[1]. In particular, I describe how the results from this stream of research supports a newly proposed model of the recovery process (Sonnentag & Fritz, 2014) that was published subsequent to this research design, data collection and analysis.

Participants

The participants for this research were from the legal industry. The overall sample consisted of two sub samples. The first was recruited from a single, large law firm and the second were legal professionals from a range of other firms recruited using a snowball technique. The overall sample (n = 175) was used for the first two studies while the third study only included those from the single organisation as they were members of identifiable teams in the organisation (needed for the team-level analysis of recovery "norms").

The legal context

Understanding the multilevel effects of recovery and incivility could be particularly important in this context due to the high levels of psychological distress in the legal industry (Bergin & Jimmieson, 2014; Kelk, Luscombe, Medlow, & Hickie, 2009). The poor wellbeing of those in the legal industry has been well documented, with lawyers being 3.6 times more likely to suffer depression than the average worker (Eaton, Anthony, Mandel, & Garrison, 1990).

[1] References for this introductory chapter and the final conclusion are presented after Chapter 5.

Evidence (albeit not within the academic literature) suggests that the rate of interpersonal mistreatment within the legal industry is high. Recent media reports have cited bullying as a key problem within the legal industry that necessitates immediate attention (Alexander, 2013a, 2013b). It has been suggested that the high rate of interpersonal mistreatment can be attributed to the adversarial nature of the legal system, which appears to be flowing over from the courtroom into the workplace (Alexander, 2013a).

Those in the legal industry might also have poor recovery, as employees are expected to dedicate large amounts of both on-job and off-job time to their work (Seron & Ferris, 1995; Wallace, 1997, 1999). Anecdotal evidence indicates that those in the legal industry are generally expected to work long hours with high demands, with recovery experiences such as psychological detachment and relaxation often not encouraged. Indeed, Bergin and Jimmieson (2014) recently reported that 75% of legal staff felt their work disrupted their personal life, and that they were unable to balance their work and personal responsibilities. Understanding the link between incivility and recovery in the legal industry therefore has practical as well as theoretical implications.

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CHAPTER 2

Here today but not gone tomorrow: Incivility affects after-work and next-day recovery

Journal of Occupational Health Psychology, in press.

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Abstract

This study examined the relation between daily incivility and afterwork recovery, hypothesizing that workplace incivility would have a negative effect on situational wellbeing, afterwork recovery experiences (psychological detachment and relaxation) and next-morning recovery level. Daily surveys were completed on 5 consecutive workdays by 175 employees in the legal industry. Multilevel analyses controlling for the daily number of hours worked showed that day-level incivility was negatively related to afterwork situational wellbeing and psychological detachment, but not to relaxation. Incivility experienced on 1 day also predicted recovery level the following morning. Results emphasize the ongoing impact of rudeness and disrespect in the workplace on employee wellbeing and offer an explanation for the long-term negative outcomes of what is typically thought of as a less severe workplace stressor.

Keywords: Incivility, Recovery from job stress, Relaxation, Psychological detachment, Situational wellbeing

Experiences at work do not dissipate when we exit the workplace at the end of the day. There is increasing evidence that an individual's ability to recover, defined as the process of replenishing resources expended throughout the day (Sonnentag, 2003), can be reduced by at-work experiences. In other words, negative experiences continue their effect once the individual returns home, resulting in decreased well-being, sleep quality and recovery (Rau, 2006; Sonnentag & Bayer, 2005; Sonnentag & Zijlstra, 2006).

Workplace incivility, or interpersonal mistreatment of a low-intensity (Pearson, Andersson, & Porath, 2005), is a commonly experienced problem in today's workplace (Griffin, Bell, & Marusarz, 2007), but scant attention has been paid to its short term effects. The longer-term outcomes of incivility such as lowered job satisfaction and turnover intentions are reasonably well established (Cortina, Magley, Williams, & Langhout, 2001; Johnson & Indvik, 2001; Pearson & Porath, 2005) as are its effects on broader health factors such as stress and psychological well-being (e.g., Cortina et al., 2001). Nevertheless, *how* the daily experience of incivility translates into these ill-effects is not well understood. In other words, the question remains as to what mechanisms or underlying processes allow a relatively minor interpersonal interaction to have such negative long-term damage on an individual?

In this diary study, we examine the effect of daily incivility on after-work recovery, hypothesizing that incivility may inhibit an individual's ability to recover from work by reducing their detachment and relaxation experiences. We choose these two recovery experiences because they prototypically represent the core dimensions of recovery with the Effort-Recovery Model: prevention of further resource loss (psychological detachment) and replenishment of resources (relaxation) (Meijman & Mulder, 1998). This proposed relationship between incivility and recovery is examined within the legal profession where recovery could be particularly important because, compared with other fields, those in the legal profession are expected to engage with their work in a way that requires large time commitments (Seron & Ferris, 1995; Wallace, 1997, 1999). More importantly, recent media

reports (Alexander, 2013a, 2013b) indicate that the rate of interpersonal mistreatment within the legal industry is so high that it necessitates immediate attention. Understanding the link between incivility and recovery therefore has practical as well as theoretical implications.

By examining day-level fluctuations in incivility, this study contributes by linking the incivility literature (traditionally focused on between-person differences) with the growing number of diary studies exploring daily recovery (e.g., Sonnentag, 2001). Discovering a mechanism through which incivility acts to deplete a target's job attitudes and psychological wellbeing will provide insight to improving long-term outcomes. Demsky, Ellis and Fritz (2014) recently showed that experiencing aggression at work reduced detachment from work, but their study was at the between-person level so could not determine if processes occur at the within-person level. If the effects of incivility spill over into non-work time, efforts need to focus on preventing and managing the immediate impact of incivility.

The current study also investigates the differential effects from sources of incivility *within* the workplace, which are particularly important because they are within the organisation's remit; and unlike customer incivility (e.g., Volmer et al., 2012) can therefore be managed by organisations.

The recovery concept

While at work, individuals expend effort in order to complete their required tasks and activities, leading to a depletion of their resources (Hockey, 1996; Zijlstra, 1996). Recovery refers to the after-work process of replacing these depleted resources (Sonnentag, 2003), commonly explained using the Effort-Recovery model (Meijman & Mulder, 1998). Central to this theory is the assumption that personal resources used to complete work and cope with job demands are limited, and that outside-work hours provide the opportunity to rebuild resources, prevent further loss and/or gain additional resources (Meijman & Mulder, 1998). Lack of recovery prolongs stress-related load reactions so that the next working day is

commenced in an impaired rather than replenished condition (Binnewies, Sonnentag, & Mojza, 2009b).

When resources are depleted or threatened individuals pass through three distinct phases of recovery. They will first experience a *need for recovery* , characterised by a temporary reluctance to continue with present demands, or accept new demands (Sonnentag & Zijlstra, 2006). Ideally, this need to 'recharge' encourages the second phase of engaging in activities that facilitate regeneration of resources, referred to as *recovery experiences*, that allow one to stop utilising work-related resources, for example by relaxing or detaching from work. This leads to the final phase of the recovery process, which is the experience of restored recovery levels that signals *replenishment*.

Need for recovery. After-work situational wellbeing is considered to be an indicator that the recovery process has commenced (Sonnentag, 2001), with low situational wellbeing indicating a high need for recovery (Sonnentag & Zijlstra, 2006). Different to general wellbeing (a relatively stable, global trait (Diener, Suh, Lucas, & Smith, 1999)), situational wellbeing is one's affective state at a specific point in time (Sonnentag, 2001). Diary studies support the concept of a changing state-like wellbeing construct by showing significant within-person variance associated with differing levels of both at-work and after-work activities (Sonnentag, 2001).

Recovery experiences. Referring to an individual's subjective state rather than specific activities (Sonnentag & Fritz, 2007), recovery experience is not the activity per se, but how it is perceived. While four recovery experiences (psychological detachment, relaxation, mastery and control) have been identified (Sonnentag & Fritz, 2007), we focus on those representing the two core dimensions within the ERM (psychological detachment and relaxation). Psychological detachment is the mechanism by which one stops using work-related resources by mentally and emotionally removing oneself from work or job related things (Sonnentag & Bayer, 2005). It appears to be the most effective recovery experience

(Binnewies, Sonnentag, & Mojza, 2008; Siltaloppi, Kinnunen, & Feldt, 2009; Sonnentag & Bayer, 2005; Sonnentag, Kuttler, & Fritz, 2010) Sonnentag, Unger and Nagel (2013) showed that it also moderates the relationship between negative events at work and later wellbeing. However, that study was at the between-person level so potentially different processes were operating.

While psychological detachment stops the use of work-related resources, relaxation provides the opportunity to replenish resources (Meijman & Mulder, 1998). The experience of relaxation produces a state of low activation allowing an individual to return to pre stressor levels of recovery (Sonnentag & Fritz, 2007). Although non-demanding activities (e.g. meditation, yoga, going for a walk) are often associated with the experience of relaxation, the subjective nature of recovery experiences means that relaxation will likely be evoked by different activities for different people.

Work experiences inhibiting recovery

As mentioned, there is growing evidence to suggest that negative experiences that occur at work, such as high job demands (Rau, 2006; Sonnentag & Bayer, 2005) and situational constraints (Sonnentag & Zijlstra, 2006), can continue their effect beyond the workplace by inhibiting the recovery process after work and even into the next morning (Bakker et al., 2013). For example, time pressure predicted situational wellbeing both after-work and before-bed (Sonnentag, 2001) and high job demands experienced by health professionals led to increased need for recovery (Sonnentang & Zijlstra, 2006).

Incivility. Workplace incivility evokes immediate responses such as reciprocal rudeness, self-doubt, passive coping, lowered helping behaviour and negative emotion (Beattie & Griffin, 2014; Lee & Brotheridge, 2006; Porath & Erez, 2007). We suggest that such incivility will also continue to influence an employee after work by inhibiting the recovery process. As an interpersonal work demand (Beattie & Griffin, 2014), it is likely to negatively affect the after-work emotional state of targets, reduce the likelihood they will

engage in both psychological detachment and relaxation experiences, and consequently inhibit next morning recovery. It may therefore play a dual role in inhibiting recovery, leaving affected individuals more likely to experience repeated levels of diminished resources.

Incivility is distinguished from more serious forms of interpersonal mistreatment by the low intensity or relatively mild nature of the acts, and the ambiguous motivation of the perpetrator (Pearson et al., 2005). Common forms of incivility at work include interruption, rude comments, condescending tone or thoughtless acts (Andersson & Pearson, 1999; Cortina & Magley, 2009; Milam, Spitzmueller, & Penney, 2009). Studies from across the globe (e.g. Cortina et al., 2001; Griffin et al., 2007; Pearson, Andersson, & Porath, 2000) report such acts are experienced by well over two thirds of employees. Despite its apparently less severe nature, incivility has significant work-related consequences for targets including increased turnover (Johnson, & Indvik, 2001), and reduced productivity, engagement, job satisfaction and organisational commitment (Cortina et al., 2001; Griffin et al., 2007; Pearson & Porath, 2005; Strasser, Hutton, & Gates, 2008). Broader impacts include higher levels of psychological distress (Cortina et al., 2001), lower self-rated health (Pearson, & Porath, 2005), retaliation, anger and withheld helping behaviour (Beattie & Griffin, 2014; Lee & Brotheridge, 2006; Porath & Erez, 2007). However, its short-term effect beyond the workday has not been investigated other than by Ferguson (2012), who showed that the stress caused by co-worker incivility spilt over into the targets' non-work domain, negatively influencing their at-home relationships and even the wellbeing of their partners.

Uncivil behaviours drain emotional and cognitive resources (Laschinger, Leiter, Day, & Gilin, 2009). According to the ERM, incivility would therefore lead to stress-related acute load reactions (Meijman & Mulder, 1998) thereby affecting after-work situational well-being (Sonnentag, 2001). This is consistent with Hobfall's (1989) conservation of resources (COR) theory, which states that stress occurs when resources are threatened or lost or there is no return on resource investment. By reducing or threatening resources, negative work

experiences such as incivility negatively affect the individual's emotional state by increasing stress and exhaustion that continues after leaving the workplace (Sonnentag, 2001).

Hypothesis 1: Incivility experienced at work will have a negative effect on daily after work situational well-being.

Workplace incivility: Inhibits recovery experiences

Being physically away from work may not be sufficient for recovery - it appears that a person needs to also psychologically detach from work to recover. When individuals fail to detach they remain cognitively aroused (Cropley, Dijk, & Stanley, 2006), and therefore continue to use or deplete their resources. Those who experience incivility at work tend to ruminate on the experience (Pearson et al., 2000), likely interfering with recovery (McCullough, Orsulak, Brandon, & Akers, 2007) by prolonging or reactivating stress-related load reactions (Brosschot, Pieper, & Thayer, 2005). In other words, even though exposure to the demand (incivility) has actually ended, individuals will continue to operate as if they are experiencing it thereby inhibiting the likelihood of engaging in recovery experiences, as they are unable to stop utilising work related resources (i.e. don't psychologically detach) and are unable to replenish used resources (i.e. don't engage in relaxation). We propose that a high level of incivility will therefore impair after-work psychological detachment.

Poor psychological detachment has been related to exhaustion, physical complaints and low efficacy (Taris, Geurts, Schaufeli, Blonk, & Lagerveld, 2008), while good detachment predicts positive mood at bedtime after stressful work days (Sonnentag & Bayer, 2005), improved wellbeing (Sonnentag & Fritz, 2007), and higher life satisfaction (Moreno-Jiménez et al., 2009).

Work experiences, including workload and job involvement reduce psychological detachment during after-work hours (Sonnentag & Bayer, 2005; Sonnentag & Kruel, 2006). Of relevance, a recent dairy study (Volmer et al., 2012) showed that social conflict with

customers at work was negatively related to psychological detachment from work, suggesting that workplace incivility is likely to impair after-work psychological detachment.

Hypothesis 2: Psychological detachment will be lower on days when participants experience incivility at work.

As already mentioned, the ERM suggests that, in addition to psychological detachment, experiences that allow the individual to relax after experiencing work-related demands promote recovery (Meijman & Mulder, 1998). Empirical findings indicate that relaxation has a positive impact, for example, increased positive affect and decreased negative affect (Fritz, Sonnentag, Spector, & McInroe, 2010), reduced need for recovery (Sonnetag & Fritz, 2007), and increased actual recovery levels (Garrick, Winwood, & Bakker, 2008). They have also been related to a number of recovery proxies, predicting morning serenity (Sonnentag, Binnewies, & Mojza, 2008) and wellbeing (Sonnentag & Fritz, 2007).

Research from industrial medicine provides further understanding as to why incivility is likely to affect relaxation. The feeling of relaxation is dependent on the heart's electrical activity. Specifically, parasympathetic activation of the automatic nervous system allows for relaxation and regeneration, while sympathetic activation promotes a 'fight or flight' response (Cannon, 1914). Exposure to stressors at work, including difficult professional relationships, has been found to reduce parasympathetic activity (Clays et al., 2011). Further, Rau (2006) showed the cardiovascular effects of high strain work continue into non-work time. Following an experience of workplace incivility it is likely that parasympathetic activity will be reduced, making it difficult for the employee to relax.

Hypothesis 3: After work relaxation will be lower on days when participants experience incivility at work.

Workplace incivility: inhibits next day recovery

We also propose that the negative effects of incivility will continue into the next day, reducing next-morning recovery level. As explained above, on days when individuals

experience workplace incivility they will be unlikely to engage in recovery experiences that evening because they continue to utilise work related resources (i.e. don't psychologically detach) and are unable to replenish used resources (i.e. don't engage in relaxation). According to the ERM, this state of affairs causes ongoing stress-related load reactions, resulting in reduced next-day recovery.

Research indicates that the subjective experience of feeling recovered predicts work engagement, emotional exhaustion, performance and psychosomatic complaints (Binnewies et al., 2008; Binnewies, Sonnentag, & Mojza, 2009a; Binnewies et al., 2010; Sluiter, Van der Beek, & Frings-Dresen, 1999; Sonnentag, Mojza, Demerouti, & Bakker, 2012). At the day-level, Sonnentag's (2003) demonstrated that employees who are well recovered in the morning show higher levels of engagement and proactive behaviour during the workday. By impacting next day recovery, incivility may therefore have effects into the subsequent working day and beyond.

Hypothesis 4: Morning recovery will be lower when participants experience incivility at work on the previous day.

Method

Procedure

An initial general survey collected between-person measures and twice daily surveys for one week collected within-person measures. Participants completed the general survey on Monday morning, before commencing the diary surveys on Monday afternoon. A "morning" survey was completed prior to commencing work (morning recovery level and retrospective situational wellbeing and recovery experiences) and an "afternoon" survey at the end of the working day (incivility and hours worked). All surveys were completed online in order to monitor the time of completion. As recommended for this methodology (Ohly, Sonnentag, Niessen, & Zapf, 2010), participants were sent a reminder text message or email at each time point.

Sample

Participants were employees from the legal industry in Australia, recruited from a private law firm and via social media. In response to the advertised link to the study, 235 people registered to participate, of whom 180 completed the instruments (77%). Five participants were removed from the sample due to significant missing data. From the final 175 participants, a total of 1495 surveys were completed: 174 general surveys, 666 morning surveys and 655 after-work surveys. Participants included both legal staff, for example solicitors (63%), and non-legal staff, for example legal secretaries and financial officers (37%). Their mean age was 31 years (SD=9.3) and 64.4% were females. Just over half (53%) were single, 42% were married or de-facto, 4% were separated/divorced and 1% widowed. Most (95%) worked in private law firms.

Measures

In line with previous research (e.g., Volmer et al., 2012), daily survey items were rephrased to refer to day level experiences. Unless otherwise mentioned, all scales were measured on a 5-point scale ranging from "strongly disagree" to "strongly agree".

Day-level Incivility. After completing work for the day, participants reported their experienced incivility from both supervisors and coworkers using the seven-item workplace incivility scale (Cortina et al., 2001) with the stem adjusted to refer to day-level experiences of incivility: "Today, how often were you in a situation where any of your coworkers or superiors….". Items (e.g., "Put you down or were condescending to you?") were answered on a 5-point scale ranging from "none of the time" to "all of the time". Cronbach's alpha was .79 for the co-worker scale and .88 for the supervisor scale. Both incivility variables were non-normal, being positively skewed due to the large number of zero responses (77%) so were recoded into a single dichotomous variable as recommended by Streiner (2002), representing whether the respondent experienced incivility or not.

Day-level Recovery experiences. Participants completed two sub-scales of the

Recovery Experience Questionnaire (Sonnentag et al., 2008) each morning. The stem of the scale was adjusted to read "Yesterday afternoon/evening….". The four-item psychological detachment sub-scale (e.g., "I forgot about work") had a Cronbach's alpha of .85. "I kicked back and relaxed" was excluded from the relaxation scale to reduce survey length and because it is not a common Australian expression. Cronbach's alpha was .92.

Day-level situational wellbeing. Situational wellbeing was measured using Sonnentag's (2001) three item measure for wellbeing. A sample item is "I felt tense when coming home from work". Cronbach's alpha was .77.

Morning recovery level. Sonnentag and Kruel's (2006) 4-item measure of recovery assessed morning recovery level. Items included "This morning, I feel mentally recovered" and had a Cronbach's alpha of .92.

Control variables. Job demands significantly impact recovery experiences (Rau, 2006; Sonnentag & Bayer, 2005) therefore the number of hours spent at work was recorded each afternoon as a proxy of job demands as in previous research (e.g. Kinnunen & Feldt, 2011; Smith, Andrusyszyn, & Laschinger, 2010).

Results

Multilevel modelling techniques using the MPlus program (Muthen & Muthen, 2013) were used to test the specific hypotheses. Day-level measures were centered relative to each individual's mean scores to remove between-subject variances. This allowed the Level 1 regressions to represent only within-person effects without confounding between-subjects effects (Bryk & Raudenbush, 1992) and cross-level moderation estimates to reflect the true impact of between-subject differences on the within-subject relationships.

Table 1 shows means, standard deviations and intercorrelations among the study variables. Over half (55%) of participants experienced some form of incivility over the working week, ranging from 6% to 36% per day.

Table 2 presents multilevel modelling parameter estimates for within-subject main effects of incivility in predicting situational wellbeing, recovery experiences and next-day recovery. All analyses controlled for hours worked.

The mean value of the random slope for the relationship between incivility and situational wellbeing was significant, providing support for Hypothesis 1. Participants' wellbeing was reduced by a factor of 1.27 ($e^{0.24}$=1.27), or approximately 27%, on days when they experienced incivility. Hypothesis 2 was also supported in that the mean value of the random slope for the relationship between incivility and psychological detachment was significant, indicating that on days when individuals experienced workplace incivility their psychological detachment after work was reduced by 21% ($e^{0.21}$=1.21). In contrast, there was no significant relationship between incivility and relaxation, thus Hypothesis 3 was not supported. Hypothesis 4 was supported as the random slope for the relationship between incivility and next-morning recovery was significant (Table 2), indicating that daily workplace incivility negatively impacted next-day recovery. Specifically, when a participant experienced incivility their next-day recovery was reduced by 16% ($e^{0.15}$=1.16).

A Post Hoc analysis of the interaction between relaxation and incivility on next-day recovery was non-significant, indicating that incivility did not impact the effectiveness of relaxation experiences on next-day recovery.

Discussion

The results of this study demonstrate that incivility plays a part in the daily recovery process and therefore may explain why, over longer periods of time, incivility results in such negative outcomes for individual targets. On days when participants experienced incivility they had lower situational wellbeing, lower detachment, and they felt less recovered the next morning.

The Effort-Recovery Model (Meijman & Mulder, 1998) would suggest that the effect on situational wellbeing implies incivility drains daily resources. Meier, Gross, Spector and

Semmer (2013) showed that emotional tension between colleagues was related to momentary negative affect after the incident and our result extends this to show that the immediate negative impact results in drained emotional resources at the end of the working day.

Other studies (e.g., Sonnentag & Binnewies, 2013; Sonnentag et al., 2013) have found that detachment reduces the effect of negative workplace events while the findings of this current study indicates that such events actually have a direct effect in preventing detachment. It is interesting that workplace incivility reduced psychological detachment, but did not appear to impact the ability to replenish used resources by way of relaxation. This indicates that whilst targets may ruminate on that day's uncivil work experience, it might not prevent them engaging in relaxing activities. Nonetheless, it did appear that incivility reduced the effectiveness of relaxation as a recovery experience, as targets continued to ruminate about the interpersonal conflict. Querstret and Cropley (2012) showed that rumination about work events had a particularly negative relationship with work-related fatigue and sleep quality, and although a between-person study, it illustrates the problems associated with not cognitively detaching. Indeed, Demsky, Fritz, and Hammer (2012) recently demonstrated that after experiencing high levels of interpersonal conflict at work those who engaged in high levels of relaxation experiences remained as exhausted as those who did not engage in relaxation. Incivility may therefore affect the psychological side of recovery but not the physically-oriented recovery experiences. We wondered if the reduced next-day recovery suggested that relaxation efforts might not have been successful for those who experienced incivility, however a post hoc analysis was non-significant.

As noted earlier, we studied detachment and relaxation but not mastery and control, because the former are most relevant to the ERM model and due to limitations regarding survey length. However, mastery experiences such as learning a new language or hobby may also be negatively impacted by workplace incivility. Unlike relaxation, such experiences require the investment of additional resources, which our results suggest are depleted

following workplace incivility. If mastery experiences are reduced by workplace incivility this might also make individuals more vulnerable the following day, with Fritz et al., (2010) suggesting that mastery experiences build additional internal resources such as self-assurance, allowing individuals to be less affected by work-related issues.

Our findings, focusing on within-person fluctuations of wellbeing and recovery as a result of incivility, offer an explanation for the findings from research conducted at the between-person level - the identified long-term negative effects (Cortina et al., 2001; Johnson & Indvik, 2001) may be due to interference in the recovery process, where incivility plays a dual role by both depleting resources and inhibiting recovery experiences. We showed that incivility can have a significant effect on the non-work sphere, with these relatively mild experiences even impacting individuals through into the next day.

Implications for research and practice

Theoretically, the current results showing that within-person fluctuations in wellbeing are linked to daily uncivil experiences support the ERM and suggest that the long-term negative consequences of incivility may be due to the accumulative effects of poor ongoing recovery. Poor recovery from work during after-work hours is associated with psychosomatic and cardiovascular problems, depression and emotional exhaustion (e.g., de Bloom et al., 2010; Eden, 2001). It also means that the worker must start the next working day in an impaired condition, and will need to invest compensatory effort in order to perform at work (Binnewies, Sonnentag & Mojza, 2009). This can become a vicious cycle, whereby repeatedly investing extra resources in order to perform at the same level, leads to accumulated fatigue and insufficient resources (Sluiter et al., 1999).

Although incivility did not affect engagement in relaxation experiences, by reducing the likelihood that an individual will psychologically detach from work, incivility is negatively impacting what has been identified as the most effective recovery experience (Siltaloppi et al., 2009; Sonnentag & Fritz, 2007).

Given over-half of the participants experienced incivility over a working week, there are significant practical implications of the findings. Psychological detachment has important relationships with next day engagement, performance and life satisfaction (Moreno-Jiménez et al., 2009; Siltaloppi et al., 2009; Taris et al., 2008) and may explain why those in the legal profession experience high burnout, psychological distress, and are 3.6 times more likely to suffer depression than the average employed person (Eaton, Anthony, Mandel, & Garrison, 1990; Kelk, Luscombe, Medlow, & Hickie, 2009; Tsai, Huang, & Chan, 2009).

The current findings stress the need for organisations and managers to act on rather than ignore incivility within the workplace. It is of importance that the negative outcomes highlighted here were specific to colleague incivility (supervisor and co-worker), who are within the remit of organisations. Unlike external sources of incivility, such as that from a client or customer, organisations have some power to prevent and manage this behaviour. Unfortunately, empirical evidence on how organisations can reduce incivility is lacking, although a few recent studies (Leiter, Laschinger, Day, & Oore, 2011; Osatuke et al., 2009) suggest that team level interventions might be effective. Ensuring employees feel supported by their colleagues and managers may also reduce the effects of incivility (Quine, 1999).

Nonetheless, our results indicate that programs targeted at reducing rumination may assist employees to detach following incivility. Mindfulness training for example can reduce repetitive thought processes such as rumination and worry (Chiesa & Serretti, 2009; Raza, 2012), so might assist targets of incivility. Individuals may also be able to counteract the negative effects on their after-work recovery by actively engaging in activities that have been shown to promote recovery, such as physical exercise (Bakker, Demerouti, Oerlemans, & Sonnentag, 2013; Sonnentag & Natter, 2004; Sonnentag & Zijlstra, 2006), or by participating in a recovery training program (Hahn, Binnewies, Sonnentag, & Mojza, 2011).

Potential limitations and directions for future research

This study has some potential limitations that may provide direction for future research. Our measures were all self-reported, raising concerns about the common-method variance (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). However, the use of person-centred scores will have eliminated the possible influence of response tendencies.

Situational wellbeing at the end of the workday was measured retrospectively the following morning. Participants may therefore have reported their wellbeing with their current affective state in mind. While this is a limitation, it may also indicate that the effects of incivility on situational wellbeing extend beyond after-work, and into the following morning.

Another limitation of this study involves the type of questions used to measure relaxation experience that may have produced the null effect. Items such as "I took time to do relaxing things" are likely to reflect activities more than the actual experience of feeling relaxed. Future research should examine the effects of workplace incivility on relaxation using a scale directed at the feeling rather than the activity.

With all participants from within the legal industry, the generalizability of the findings may be limited. Nonetheless, sampling employees with differing roles across several organisations may have counteracted this to some extent.

We focused on the relation between incivility and recovery experiences on the same day. Future research could examine whether the effects of incivility flow into the next working day. For example, incivility may impact the engagement or productivity of an individual during subsequent working days.

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Table 2.1
Means, Standard Deviations and Intercorrelations Among Variables

Variables	M	Within-subjects SD	Between-subjects SD	1	2	3	4	5
1. Incivility	0.32	0.46	0.35					
2. Psych detachment	3.27	0.85	0.71	-0.20**				
3. Relaxation	3.67	0.84	0.64	-0.01	0.67**			
4. Situational wellbeing	3.47	0.75	0.54	-0.29**	0.51**	0.50**		
5. Recovery	3.16	0.89	0.66	-0.23**	0.44**	0.46**	0.54**	
6. Hours worked	8.99	1.81	1.50	0.08	-0.42**	-0.35**	-0.23**	-0.33**

Note. Correlations represent between-subject correlations (N=177). To calculate the between subject correlations, within-subject variables (e.g., incivility) were averaged across days. Incivility was coded (0 = *none*, 1 = *some*).
** $p < .01$.

Table 2.2
Within-Subject Main-Effect Models

	Situational wellbeing			Psychological detachment			Relaxation			Recovery		
Variable	Est.	*SE*	*95% CI*	Est.	*SE*	*95% CI*	Est.	*SE*	*95% CI*	Est.	*SE*	*95% CI*
Random intercept (β_0)												
M (γ_{00})	3.56**	0.04	[3.48, 3.64]	3.34**	0.06	[3.22, 3.46]	3.65**	0.06	[3.54, 3.76]	3.19**	0.05	[3.09, 3.30]
Variance (τ_0)	0.12**	0.03	[0.06, 0.18]	0.39**	0.05	[0.24, 0.49]	0.30**	0.05	[0.19, 0.40]	0.30**	0.05	[0.20, 0.39]
Random Slope for IN (β_1)												
M (γ_{10})	-0.24**	0.08	[-0.38, -0.09]	-0.21**	0.07	[-0.36, -0.07]	0.04	0.07	[-0.09, 0.17]	-0.15*	0.07	[-0.29, -0.01]
Variance (τ_1)	0.16**	0.06	[0.04, 0.28]	0.05	0.08	[-0.12, 0.21]	0.01	0.08	[-0.15, 0.17]	0.03	0.09	[-0.14, 0.20]
Fixed slope for hours (β_2)	-0.06	0.03	[-0.12, 0.00]	-0.05	0.03	[-0.11, 0.02]	-0.09*	0.04	[-0.16, -0.02]	-0.07	0.04	[-0.15, 0.01]

Note. N = 636.**p<.01. IN = Incivility; Hours = Hours worked.

CHAPTER 3

Thank goodness it's Friday: Weekly pattern of workplace incivility

Anxiety, Stress & Coping, in press.

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Abstract

This study extends incivility theory and research by applying logistic growth modelling to diary study data to understand day-to-day changes in incivility. Previous research has shown day-level differences in uncivil behaviour, however it is unknown if incivility follows a consistent weekly change pattern. The authors took a theory-driven approach, reviewing both mood and recovery theory that support a decrease in incivility over the working week. Daily surveys were completed on five consecutive workdays by 171 employees in the legal industry. Latent growth curve analyses showed that regardless of job demands or gender, incivility follows a weekly rhythm, with the likelihood of experiencing incivility decreasing from Monday to Friday in a relatively linear fashion. This weekly rhythm was not explained by mood or recovery. Results emphasise the impact of contextual factors such as time on workplace incivility and the need to consider weekly rhythms of other behaviours in organisational psychology. The findings are likely to be relevant to studies of other forms of interpersonal mistreatment, such as social undermining and inter-personal conflict.

Keywords: Workplace incivility, Latent growth modelling, Weekly rhythm, Recovery, Mood

There is increasing evidence that much like our work and social lives, our mood varies in a weekly time cycle. In other words, not only do we feel differently on a Monday than we do on a Thursday or Friday (Devereux, Rydstedt, & Cropley, 2011; Larsen & Kasimatis, 1990; Noble, 1996; Reis, Sheldon, Gable, Roscoe, & Ryan, 2000), but these fluctuations follow a consistent rhythm (e.g. Kim, Lee, & Ahn, 2010; Larsen & Kasimatis, 1990). It seems probable that this weekly rhythm will be reflected in our behaviours and experiences at work, yet scant attention has been paid to this form of time-structured change in the field of organizational psychology (Gross et al., 2013). Many workplace events (e.g. absenteeism and overtime) fluctuate on a daily basis (N. Nicholson, Jackson, & Howes, 1978; Van Hooff, Geurts, Kompier, & Taris, 2006), but it is not clear if there are patterns to this fluctuation linked to the progression of the working week that might be linked to the observed weekly mood and emotion cycle. The current study focuses on the experience of incivility at work, using diary study data to investigate whether this significant workplace event is randomly experienced or follows a consistent weekly trajectory.

The diary study has become a popular methodology for examining within-person fluctuations in behaviour, attitudes and emotions at work. Results from two such recent studies (Beattie & Griffin, 2014; T. Nicholson & Griffin, 2014) demonstrate that whether or not a person experiences incivility at work changes from day to day and that daily fluctuations in well-being, recovery and stress are linked to daily experiences of workplace incivility. Discovering a weekly rhythm in incivility experiences could provide insight into the contextual factors that increase the likelihood of experiencing incivility and offer information to develop more targeted interventions. There would also be important methodological implications of a weekly rhythm, as failing to control any day of the week effects may add error variance to measures of incivility, and related variables (Reis et al., 2000).

Workplace incivility

Workplace incivility, or low-intensity interpersonal mistreatment (Pearson et al., 2005) such as rude comments, condescending tone or thoughtless acts, is a pervasive issue in the modern workplace. Studies from across the globe (e.g. Cortina et al., 2001; Griffin et al., 2007; Pearson et al., 2000; Pearson & Porath, 2005) report that this type of behaviour is experienced by well over two thirds of employees, with one-fifth reporting weekly incivility. Recent diary research indicates that the actual number of uncivil reactions might be even higher when incivility experiences are captured closer to real time, with more than 50% of employees experiencing some form of daily incivility over a four-day period (T. Nicholson & Griffin, 2014).

Conceptually, the low intensity and ambiguous motivation of the perpetrator distinguishes these relatively mild behaviours from other more serious forms of interpersonal mistreatment (Pearson et al., 2005). Nevertheless, incivility is associated with negative consequences for targets including decreased retention, productivity, engagement, job satisfaction, organisational commitment and lower-self rated health (Cortina et al., 2001; Griffin et al., 2007; Johnson & Indvik, 2001; Pearson & Porath, 2005; Strasser et al., 2008). As mentioned above, recent evidence illustrates how the experience of incivility also has within-person effects, whereby on days when people are treated in an uncivil manner they react with stress, reduced situational well-being, low psychological detachment, retaliation, anger, and fewer helping behaviours (Beattie & Griffin, 2014; Lee & Brotheridge, 2006; T. Nicholson & Griffin, 2014; Porath & Erez, 2007). The negative effects continue into the next day, reducing next-morning recovery level (T. Nicholson & Griffin, 2014).

Weekly rhythm

Over the course of a regular working week the expressions ‘Monday blues’, ‘Wednesday hump day’ and ‘thank goodness it’s Friday’ are common. These day-of-the week stereotypes reflect the importance of the seven-day weekly cycle, or circaseptum rhythm, in our lives (Areni, 2008; Larsen & Kasimatis, 1990). This is somewhat unusual, as unlike daily

and seasonal cycles, weekly variations are purely social in their origin, stemming largely from a desire to regulate work and rest (Areni, 2008). The seven-day week acts as a temporal map, allowing us to have structure, order and routine in our lives (Larsen & Kasimatis, 1990). This is most clearly reflected in our work and leisure activities, with the seven-day week typically divided into five days of work, and two days of leisure.

Just as many of our activities follow a seven-day cycle, there is increasing evidence that our moods and health outcomes vary in a weekly pattern. Zerubavel (1985) suggested that Mondays are the lowest point in the week as they represent the transition from the pleasurable world of rest and relaxation to the demanding world of work, while Fridays are positive as they herald the start of the weekend. Indeed, there is evidence to suggest that Mondays are associated with a peak in negative events, including lower financial returns (Pettengill, 1993) and higher employee absence, fatigue, overtime, sleep complaints, depression, suicide, stroke and myocardial infection (Jessen, Steffensen, & Jensen, 1998; Kelly-Hayes et al., 1995; Larsen & Kasimatis, 1990; N. Nicholson et al., 1978; Rook & Zijlstra, 2006; Van Hooff et al., 2006; Willich et al., 1994). In contrast, Fridays are associated with lower fatigue and depression (Larsen & Kasimatis, 1990; Rook & Zijlstra, 2006).

Despite the importance of the seven-day cycle in our lives, and the increased focus on diary studies, little attention has been paid to weekly rhythms. Gross (2013) stresses the need to shift our focus from daily variations in behaviours and emotions, to rhythms, by considering the influence that inter-individual differences (such as time) have on these intra-individual processes. Latent growth models (LGMs) allow this, by assessing whether a set of repeated measures follow a change pattern related to time, and establishing the form, rate and between-person variation in this change (Gross et al., 2013). Some areas of research, such as mood, have begun to embrace this form of analysis in order to identify weekly change patterns (e.g. Larsen & Kasimatis, 1990).

This study extends current knowledge on the experience of incivility by examining whether these negative events follow a weekly change pattern, and if so, what this change might look like. We take a theory-driven approach, reviewing theories from both the recovery and mood literature that would support a decrease in incivility over the working week.

Recovery

The recovery concept emphasizes the importance of resources for coping with demands at work and therefore is likely to have relevance for both targets and perpetrators of incivility. A brief review of the literature below indicates that recovery follows a weekly pattern and we suggest that incivility will be linked to this.

After a day at work people generally feel a need to 'recharge' the batteries, or recuperate from the effort that has been expended while at work (Hockey, 1996). Recovery, as commonly explained by the Effort-Recovery model (ERM), refers to this process of replenishing depleted resources (Meijman & Mulder, 1998; Sonnentag, 2003). The assumption that people have a fixed amount of personal resources to use each day at work is central to this theory, which asserts that outside-work hours provide a break from these work demands, allowing individuals to recoup resources, prevent further loss and/or gain additional resources (Meijman & Mulder, 1998). When an individual fails to recover a vicious spiral can ensue, whereby extra effort is needed on each subsequent working day to maintain the same level of performance (Sluiter, Frings-Dresen, van der Beek, & Meijman, 2001; Sluiter et al., 1999).

According to the ERM, the longer the employee is without job demands, the greater the opportunity to replenish resources (Meijman & Mulder, 1998). However, this does not necessarily imply that after-work recovery is less effective than weekend recovery. While a number of studies have shown the effectiveness of the weekend as a recovery opportunity (e.g.,Fritz, Sonnentag, et al., 2010; Marzuq & Drach-Zahavy, 2012) one only needs to recoup enough resources to return to pre-work levels. Indeed, a recent diary study tracking 117

employees over a working week demonstrated the effectiveness of after-work recovery, with the average employee reporting low-moderate recovery levels at the end of the workday, and high-moderate levels of morning recovery (Sonnentag et al., 2012). Furthermore, an early fade-out effect of weekend recovery has been identified, potentially due to one's anticipation of work on a Monday acting as a stressor (Brosschot et al., 2005). Indeed, the finding that workers have elevated cortisol levels on Monday mornings (when compared to Sunday) has been taken to demonstrate the negative effect that anticipating an impending workday has on stress (Devereux et al., 2011). Additionally, it appears that after-work recovery may become more effective as the week progresses. For example, employees in Rook and Zijlstra's (2006) study reported more fatigue and less quality sleep at the start of the week, with both improving towards the weekend.

If resources and/or recovery efficiency increase over the working week the experience of incivility is likely to be affected in two ways. First, employees may become less likely to *instigate* incivility as the week progresses. According to Baumeister's (1998) self-regulation theory, depleted resources impair self-regulation, leading to increased impulsiveness and emotional behaviours (Baumeister, Bratslavsky, Muraven, & Tice, 1998; Meijman & Mulder, 1998; Schmeichel & Baumeister, 2004; Thau & Mitchell, 2010; Vohs et al., 2008). When considered together with the above, this suggests instigated incivility will decrease as the week proceeds, as increasing resources improve an individual's ability to regulate their behaviours and emotions. Indeed, a recent dairy-study (Wheeler, Halbesleben, & Whitman, 2013) demonstrated that depleted resources, operationalised as emotional exhaustion, predicted higher levels of enacted co-worker abuse..

Second, when people have higher levels of recovery they are likely to be less sensitive to threat and thus less likely to interpret and report ambiguous actions directed at them as uncivil behaviour. According to Hobfoll's Conservation of Resources Model (1989), when faced with depleted resources (i.e. inadequate recovery) the prospect of losing further

resources becomes even more threatening, limiting one's ability to cope with further demands and increasing sensitivity to stressful events, such as incivility (Demerouti, Bakker, & Bulters, 2004; Freedy & Hobfoll, 1994; Hobfoll, Johnson, Ennis, & Jackson, 2003; Hobfoll, 2002; Hornung, Weigl, Glaser, & Angerer, 2013). For example, Hornung et al., (2013) demonstrated that emotionally exhausted physicians were more likely than others to perceive work demands as stressful. Therefore, if Monday resource levels are reduced due to 'back to work' stress and Friday resources are high in anticipation of the weekend, employees will be more likely to perceive an ambiguous behaviour as uncivil at the beginning of the week and less likely to do so at the end of the week.

Mood

Each new working day is associated not only with changing recovery levels, but also changing mood although the two are linked with recovery thought to be crucial to a person's mood, or affective state, predicting increased positive affect and decreased negative affect (Fritz, Sonnentag, et al., 2010; Sonnentag, Binnewies, et al., 2008). The working week has a strong impact on daily mood, with the seven-day rhythm accounting for 40% of its variance (Larsen & Kasimatis, 1990). The existence of a weekly mood cycle is relatively well established (e.g. Larsen & Kasimatis, 1990; Reis et al., 2000; Rossi & Rossi, 1977), with individuals generally in a 'good mood' on the weekend, and a poorer mood on work days (Egloff, Tausch, Kohlmann, & Krohne, 1995; Kennedy-Moore, Greenberg, Newman, & Stone, 1992; McFarlane, Martin, & Williams, 1988; Stone, Hedges, Neale, & Satin, 1985; Stone, Schneider, & Harter, 2012).

There are also differences within the working week, with positive mood increasing, and negative mood decreasing, as the week proceeds (Larsen & Kasimatis, 1990; Reis et al., 2000; Rossi & Rossi, 1977). For example, a two-week diary study of university students (Reis et al., 2000) demonstrated a consistent pattern of mood variation over the week, where positive mood states were highest on Fridays, and lowest on Mondays. This Friday

improvement is consistent with Bryant's (1989) concept of savouring, whereby people are able to feel pleasure in the present by anticipating future positive outcomes such as an upcoming weekend. Indeed, weekend anticipation predicted positive mood in Sonnentag, Mojza, Binnewies, and Scholl's (2008) study of German employees. Conversely, lower mood would be expected on Monday as employees anticipate a full working week ahead.

In the same way recovery could affect both targets and instigators of incivility, mood might also have a dual effect. In terms of its potential to influence the actions of instigators, negative mood likely increases incivility due to its tendency to increase anger and aggression (Berkowitz, 1990) and impulsive behaviours (Tice, Bratslavsky, & Baumeister, 2001). Targets in a negative mood are also more likely to interpret behaviours as uncivil. As noted in a number of theories including Affective Events Theory (Weiss & Cropanzano, 1996) and Lazarus and Folkman's (1984) cognitive appraisal model, an event can be interpreted differently depending on the individual's mood or affective state. For example, Rothbard and Wilk (2011) recently showed that sales people in a positive mood were more likely to rate customers as calm, cheerful or friendly, while those in a negative mood were more likely to rate them as upset, rude, insulting or frustrated. Moreover, according to the Affect Infusion Model (AIM; Forgas, 1995) mood has its strongest effect on cognitive appraisal in situations where a high level of substantive processing is required, as is the case with rudeness (Forgas, 1998b; Weiss & Cropanzano, 1996). Forgas, (1998a) demonstrated that mood had greater effect on responses to impolite compared to polite requests, and in the same way it is therefore possible that mood will have an amplified effect on the perceptions of uncivil behaviour.

The objective of the present study is to evaluate the extent to which a weekly rhythm can account for variance in day-to-day fluctuations in incivility, and to examine the form, rate inter-personal variation and interrelationships of such a change.

Method

Procedure

We used an online diary design, utilising an initial general survey to collect between-person measures and daily surveys to collect within-person measures. Participants completed the general survey on Monday morning (measuring demographic variables), before commencing the diary surveys on Monday afternoon. Participants completed a "morning" survey at the start of each workday (recovery level) and an "afternoon" survey at the end of each working day (incivility, vigor and hours worked) over a five-day working week. Data were collected over a 3-month period ensuring that any identified patterns could be generalised beyond a specific week. As we were studying a work-related variable, measurements were not collected on the weekend. As recommended for this methodology (Ohly, Sonnentag, Niessen, & Zapf, 2010), participants were sent a text message or email at each time point reminding them to complete their surveys.

Sample

Participants were 171 employees from the legal industry in Australia, recruited from a private law firm and via social media. It is noted that although there is overlap in the participants for this paper and chapter 1, the samples are not the same. In response to the advertised link to the study, 235 people registered to participate, of whom 180 completed the instruments (77%). Nine participants had significant missing data so they were removed from the sample. From the final 171 participants, a total of 1630 surveys were completed: 171 general surveys, 652 morning surveys and 807 after-work surveys. The sample included both legal staff, for example solicitors (63%), and non-legal staff, for example legal secretaries and financial officers (37%). Their mean age was 31 years (SD=9.4), 65% were females and 14% were in a management position. Approximately half (53%) of the participants were single, 42% were married or de-facto, 4% were separated/divorced and 1% widowed. Most (95%) worked in private law firms that employed more than one thousand staff within Australia

(78%). Only those employed full time (five days a week) with standard working hours were included in the study.

Measures

Unless otherwise mentioned, all variables were measured on a 5-point likert scale (1 = *strongly disagree*, 5 = *strongly agree*).

Day-level Incivility. Given the problems of social desirability in assessments of incivility (Griffin, 2010), we measured it from the target perspective rather than that of the instigator, noting that target reports will capture higher levels of both instigated/actual incivility and perceptions of incivility. Participants reported their experienced incivility using the seven-item workplace incivility scale (Cortina et al., 2001). As in previous research (e.g., Volmer et al., 2012) the stem of the scale was adjusted to refer to day-level experiences of incivility: "Today, how often were you in a situation where any of your coworkers or superiors….". An example item is "made demeaning or derogatory remarks about you?" Respondents provided separate ratings for supervisors and coworkers on a 5-point scale ranging from "none of the time" to "all of the time". Cronbach's alpha varied over the 5 days between 0.70 and 0.81 (*M=0.78*) for the co-worker scale and between 0.82 and 0.95 (*M=0.89*) for the supervisor scale. Both incivility variables were non-normal, being positively skewed due to the large number of zero responses (77%). Due to the non-linear spread and low endorsement rate, all incivility variables were therefore recoded into a single dichotomous variable as recommended by Streiner (2002), representing whether the respondent experienced incivility or not from coworkers or from supervisors.

Daily Mood. Given incivility occurs during work hours, it is the employee's affective state while at work that is most relevant to its prevalence and interpretation. The present research therefore utilised vigor, an affective state associated with feelings of strength, emotional energy and cognitive arousal (Cranford et al., 2006; Shirom, 2011) to measure mood. Vigor is a form of positive affect, differentiated from happiness by high levels of

activation (Sonnentag & Niessen, 2008). Vigor was selected over other measures of mood as it has been suggested that the associated positive and energised state is extremely beneficial for everyday life, enabling an individual to approach tasks with more energy (Sonnentag & Niessen, 2008). As a central facet of work engagement (Bakker, Schaufeli, Leiter, & Taris, 2008), vigor is also particularly relevant in light of research suggesting the positive affect scale of a measure previously used to demonstrate daily changes in mood might in fact measure engagement (Egloff et al., 1995; Kennedy-Moore et al., 1992).

The three item vigor subscale of Breevaart et al.'s (2012) measure of state work engagement was used to measure at-work affect. The stem of the scale was adjusted slightly to refer to at work affect: "Today at work..". A sample item is "Today at work I felt strong and vigorous". Cronbach's alpha over the week ranged from to 0.71 to 0.82 (*M=0.77).*

Daily Recovery. Morning recovery level was measured using four items from Sonnentag and Kruel's (2006) measure of recovery. Items such as "This morning, I feel mentally recovered" measure the person's momentary recovery state, with Cronbach's alpha ranging from 0.91 to 0.93 over the week (*M*=0.92).

Control variables. Gender has been shown to significantly impact weekly mood rhythms (Rossi & Rossi, 1977) and was therefore included in the analysis. Additionally, job demands have been shown to significantly impact recovery (Rau, 2006; Sonnentag & Bayer, 2005). The number of hours spent at work was therefore recorded each afternoon as a proxy of job demands, as has been done in previous research (e.g. Kinnunen & Feldt, 2011; Smith et al., 2010).

Data analysis

Latent Growth Curve (LGC) analysis using the MPlus program (Muthen & Muthen, 2013) was used to identify a weekly pattern to experienced incivility (and of mood and recovery). LGC utilises structural equation modelling and hierarchical linear modelling to allow for both latent variables and random coefficients across individual development

trajectories. The Aikake information criterion (AIC), Bayesian Information Criterion (BIC) and Sample-size adjusted Bayesian Information Criterion (SSABIC) were used to compare model fit, with lower values indicating better fit (Vasantha & Venkatesan, 2014).

A series of models were estimated as follows. First, unconditional latent growth models were fit to each study variable to determine growth trajectories, including (a) intercept only, (b) intercept and linear slope, and (c) intercept, linear and quadratic slope. The model that best fit the data according to the above fit indices was selected. A parallel process model was then used for incivility and each of the comparison variables in order to evaluate the correlations among growth parameters.

Results

Descriptive Analysis

Table 3.1 shows means, standard deviations and intercorrelations among the study variables. As shown in Table 3.2, the number of participants experiencing incivility decreased throughout the study, peaking on Monday, when 43% of the participants reported some form of incivility, down to Friday, when 19% of participants experienced incivility. Morning recovery was highest at the start of the week, while vigor was highest at the end of the week.

Latent Growth Curve Analysis

To determine the shape of the weekly trajectory of each variable, unconditional LGC models (without covariates) were first fit to the data. Significant variance in the intercept term would indicate substantial differentiation in baseline levels of the variable, while significant variance in latent growth factors such as the slope would indicate individual differences in the progression of the variable over the week. Fit indices for the each model are presented in Table 3.3.

In estimating the trajectory of incivility over five repeated daily measures, the linear model provided the best fit to the data (AIC = 778.78, BIC = 794.49, SSABIC = 778.66), and was therefore used in all subsequent analysis due to the fit indices, near linear trajectory (as

shown in Figure 3.1), and the ease of interpreting the growth factor in a linear model. Figure 3.1 presents a line graph showing the probability of experiencing incivility from Monday to Friday. It can be seen that average incivility decreased over time in a nearly linear fashion. On average, the likelihood of experiencing incivility declined by 0.78 each day, this decrease was significant ($p<0.00$). The variance of the intercept factor in the linear LGC model was 4.24 (SE=1.96; $p<0.05$), indicating significant individual differences in incivility at the beginning of the week. The variance of the slope factor was 0.34 (SE=0.23; $p>0.05$), indicating that individuals do not differ significantly in their changes over the working week.

Analysis of the four repeated daily measures of recovery found that the intercept only model provided the best fit for data (AIC = 1610.53, BIC = 1629.38, SSABIC = 1610.38), indicating that recovery trajectory remained flat across time. It was therefore excluded from any further analysis.

The quadratic model provided the best fit for vigor (AIC = 1559.39, BIC = 1603.37, SSABIC = 1559.04. As can be seen in Figure 3.2, vigor increased over time with an accelerated increase from Monday to Tuesday.

For hours worked, a quadratic model provided the best fit to the data (AIC = 2774.49, BIC = 2818.47, SSABIC = 2774.14). Figure 3.3 presents a line graph of hours worked over the working week, with hours decreasing over the week and an accelerated decline from Thursday to Friday.

To examine the effects of daily hours worked and vigor on incivility, each variable was analysed with incivility in a parallel process linear growth model as suggested by Muthen & Muthen (2010, p. 119) including intercepts and slopes for incivility and the chosen variable. For the parallel process model of vigor and incivility, initial level of vigor was associated with initial incivility (-0.55, $p<0.01$), indicating higher vigor on Monday was associated with lower incivility on Monday. The covariance between the incivility intercept and slope was not significant (0.17, $p=0.35$), indicating that initial incivility didn't affect its

rate in change over the working week. The covariance between vigor intercept and slope was also not significant (0.01, p=0.90). Initial level of vigor did not predict growth in incivility from Monday to Friday (0.26, p=0.50), and incivility intercept did not predict growth in vigor (0.03, p=0.13). The path coefficient between the slopes of both variables was also not significant (-0.04, p=0.07), indicating the rate of change in incivility was not associated with the rate of change of vigor. The fit indices for the parallel process model indicated a poorer fit than the unconditional models (AIC = 2337.88, BIC = 2397.57, SSABIC = 2337.41), and thus vigor was excluded from subsequent analysis.

For hours worked, the path coefficients between the intercepts and slopes of both variables were not significant, indicating levels of incivility were not linked to hours worked. The covariance between the hours worked intercept and slope was significant (-0.14, p<0.01), suggesting that higher initial hours worked was associated with a slower reduction in hours worked over the week. Fit indices also demonstrated a poorer fit than the two unconditional models (AIC = 3581.46, BIC = 3641.15, SSABIC = 3580.99). Hours worked was therefore excluded from subsequent analyses.

The conditional LGC model is presented in Figure 3.4 Gender was included in the conditional model as the variation in incivility at the start of the week indicated a possible influence of interpersonal differences. The fit indices of the conditional LGC model were improved (AIC = 771.46, BIC = 793.41, SSABIC = 771.25). The path loadings from the latent intercept to each of the outcome measures were fixed at 1, and the fixed loadings from the latent slope to each of the five outcome measures were 0, 1, 2, 3, 4, reflecting the time interval between each measurement (1 day). The path coefficients leading from gender to the intercept and slope were -0.89 (SE = 0.53; p>0.05) and -0.04 (SE = 0.24; p>0.05) respectively, indicating males and females do not differ in either their levels of incivility at the start of the working week, or the rate of decrease as the week proceeds.

Even when gender was included, the residual variances were still significant for the intercept factor (SE=1.99; $p<0.05$), indicating significant additional individual variance in incivility at the start of the week that accounted for by some other non-measured variable.

Discussion

The purpose of this study was to evaluate the extent to which a weekly rhythm can account for variance in day-to-day fluctuations in incivility, and to examine the form, rate and inter-personal variation of such a change. Results from the current study provide evidence that incivility follows a weekly rhythm. Specifically, latent growth curve analyses suggested that regardless of job demands, recovery, vigor or gender, the likelihood of experiencing incivility decreases from Monday to Friday in a relatively linear fashion. The likelihood of experiencing incivility on Friday was less than half that on Monday.

The pattern identified is consistent with research on mood, which shows that mood follows a weekly cycle, with positive mood increasing (and negative mood decreasing) as the week proceeds (Larsen & Kasimatis, 1990; Reis et al., 2000; Rossi & Rossi, 1977). Our research suggests that like other measures of mood, vigor displays a weekly change pattern, increasing from Monday to Friday. Theories such as Affective Events Theory (Weiss & Cropanzano, 1996) and Lazarus and Folkman's (1984) cognitive appraisal model would suggest that one explanation for the negative slope of reported incivility would be that improving mood over a week is likely to reduce one's interpretation of an event as being uncivil. However, our results suggest that while those who were more vigorous experienced less incivility at the start of the week, neither vigor at the start of the week nor the changing slope of vigor throughout the week predicted changing levels of incivility over the working week.

Similarly, the weekly pattern of incivility was not explained by recovery, as morning recovery did not follow a consistent change pattern. Indeed, contrary to expectations, those in our study reported slightly higher recovery at the start of the week (Tuesday). In contrast,

Rook and Zijlstra (2006) have previously demonstrated that fatigue is at its highest, and sleep quality at its lowest, at the start of the week. These differences might show the difficulties in using other measures as proxies for recovery, as previous research has demonstrated that sleep quality and fatigue are generally only moderately correlated with evening and morning recovery respectively (e.g., Brosschot et al., 2005; Sonnentag & Zijlstra, 2006). It is also possible that recovery trends are different within the legal industry, due to the high demands of staff during both on and off-job time (Seron & Ferris, 1995; Wallace, 1997, 1999). It is important to note however, that the first recovery measure was on Tuesday – Monday morning recovery was not assessed and may have been lower than Tuesday.

Implications for research and practice

As one of the first to investigate time-structured change in interpersonal mistreatment within organisations, our finding that incivility varies in a weekly rhythm has considerable implications for research and practice. Consistent with Gross (2013), the results suggest there is value in shifting the focus from daily variations to rhythms, as it provides greater understanding of the influence that contextual factors such as time have on intra-individual processes. Although we measured experiences of incivility, the results imply decreasing levels of perpetrated incivility, although this is an area for further investigation. Griffin (2010) demonstrated the existence of an environment for incivility whereby the amount of incivility experienced by an individual employee in an organisation was statistically similar to the amount experienced by colleagues in the same organisation, but different from employees of other organisations. The results from the current study provide further evidence that there are contextual factors driving the amount incivility that occurs in a workplace, which may, if addressed, reduce overall incivility. Given there was more than a 50% drop in experienced incivility from Monday to Friday, further research is essential to discover what is driving this change in order to develop more targeted and effective interventions.

Although we have yet to fully understand these contextual drivers, there are important practical implications of the current research for organisations. By choosing to only investigate incivility from sources within the workplace (supervisor and co-worker), our findings relate to behaviour that comes within the organisation's realm of control. Clearly, negative behaviour that is as widespread as the results suggest, should be a focus for attention by organisational authorities. Although there is limited empirical evidence, studies by Leiter, Laschinger, Day and Oore, (2011) and Osatuke et al. (2009) indicate that team-level incivility interventions can reduce incivility as can efforts to ensure employees feel supported by their colleagues and managers (Quine, 1999). Our findings suggest that employee experiences of incivility are linked to the day of the week. Being aware of this influence may allow managers to more effectively manage incivility, for example by adjusting the support they give employees with the day of the week.

There are also important methodological implications of a weekly incivility rhythm, as failing to control for day of the week effects may add error variance to measures of incivility, and related variables (Reis et al., 2000).

Potential limitations and directions for future research

Having established in the current study that incivility follows a weekly rhythm, future research should seek to identify the contextual differences that underlie this rhythm. For example, there is some evidence suggesting high job demands, when combined with high anticipation of work, can lead to higher stress levels on Monday morning (Devereux et al., 2011). Additionally, the amount of social contact with colleagues and supervisors might differ with the day of the week. As mentioned above, further understanding of these contextual factors would lead to more targeted interventions.

Recovery was only measured from Tuesday to Friday, as daily measures commenced on Monday afternoon (given the general survey was sent on Monday morning). Future

research could explore whether there are any significant changes to recovery on Monday, and into the weekend.

The present study found significant individual variance in incivility at the start of the working week that wasn't explained by gender. Future research should seek to identify what factors lead to these between-person differences in intercepts, which in light of the invariant slope, is likely to include stable factors related to the person or their environment.

Diary studies may be susceptible to several effects, such as reactance, habituation and gradual entrainment. Reactance refers to the tendency for participants to change their behaviour, thoughts or feelings as a result of participation in a study (Bolger et al., 2003). While there is little evidence to suggest reactance poses a threat to the validity of diary studies (Rook & Zijlstra, 2006), the repetitive nature of diaries may make them more susceptible to habituation. Bolger, Davis and Rafaeli, (2003) suggest this may be problematic, as participants who develop a habitual response style may skim sections of a diary questionnaire that seldom applies to their experience. It is possible then that decreasing levels of incivility were due to a habituation effect, whereby respondents did not take time to adequately answer the incivility items, leading to reducing levels of that variable (Ohly et al., 2010). However, if the results were due to a response style, it is equally likely that respondents would exhibit a gradual entrainment, whereby they become more sensitive to rudeness once they are primed by the initial questionnaire and report increasing levels as the study progresses. Little is known about the effect of response styles on diary study validity (Bolger et al., 2003). By transforming the incivility variables from a five-point scale to a yes/no variable we may have reduced the likelihood of such effects.

Generalizability of our findings may be limited given that only employees from the legal industry were included, even though participants had a number of different roles across a number of organisations. Nonetheless, this study is the first that we know of to illustrate

how negative interpersonal events at work follow a distinct pattern across time that is consistent across participants and workplaces.

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Table 3.1
Means, Standard Deviations and Intercorrelations Among Variables

Variables	M	Within-subjects SD	Between-subjects SD	1	2	3	4
1. Gender	0.35	-	0.48	-			
2. Hours worked	8.88	1.73	1.36	0.15*	-		
3. Incivility	0.30	0.46	0.34	-0.13	0.11	-	
4. Recovery	3.16	0.89	0.67	0.09	-0.37**	-0.23**	-
5. Vigor	2.97	0.77	0.60	-0.01	-0.20**	-0.22**	0.67**

Note. Correlations represent between-subject correlations (N=171). To calculate the between subject correlations, within-subject variables (e.g., incivility) were averaged across days. Gender was coded (0 = *women*, 1 = *men*). Incivility was coded (0 = *none*, 1 = *some*).
* $p < 0.05$. ** $p < 0.01$.

Table 3.2
Incivility, hours worked, recovery and vigor by day of the week

	Monday	Tuesday	Wednesday	Thursday	Friday
Prevalence of Incivility (%)	42.77%	33.33%	28.74%	20.65%	19.31%
Morning recovery	-	3.23	3.11	3.15	3.16
Vigor	2.77	2.99	3.01	3.04	3.07
Hours worked (average)	9.09	9.13	8.99	8.87	8.25

Note. N = 171. Morning recovery and vigor were measured on a 5 point scale (1-5).

Table 3.3
Model fit indices of unconditional latent growth models

	Incivility			Recovery			Vigor			Hours worked		
	AIC	BIC	SSABIC	AIC	BIC	SSABIC	AIC	BIC	SSABIC	AIC	BIC	SSABIC
1. I	823.37	829.65	823.32	1610.53	1629.38	1610.38	1580.81	1602.80	1580.63	2856.33	2878.32	2856.16
2. I + L	778.78	794.49	778.66	1611.65	1639.93	1611.43	1567.32	1598.74	1567.07	2798.64	2830.06	2798.40
3. I + L + Q	785.83	814.11	785.61	1611.00	1651.84	1610.68	1559.39	1603.37	1559.04	2774.49	2818.47	2774.14

Note. N = 171. AIC = Akaike information criterion; BIC = Bayesian information criterion; SSABIC = sample-size-adjusted Bayesian information criterion; I = Intercept; L = Linear; Q = Quadratic.

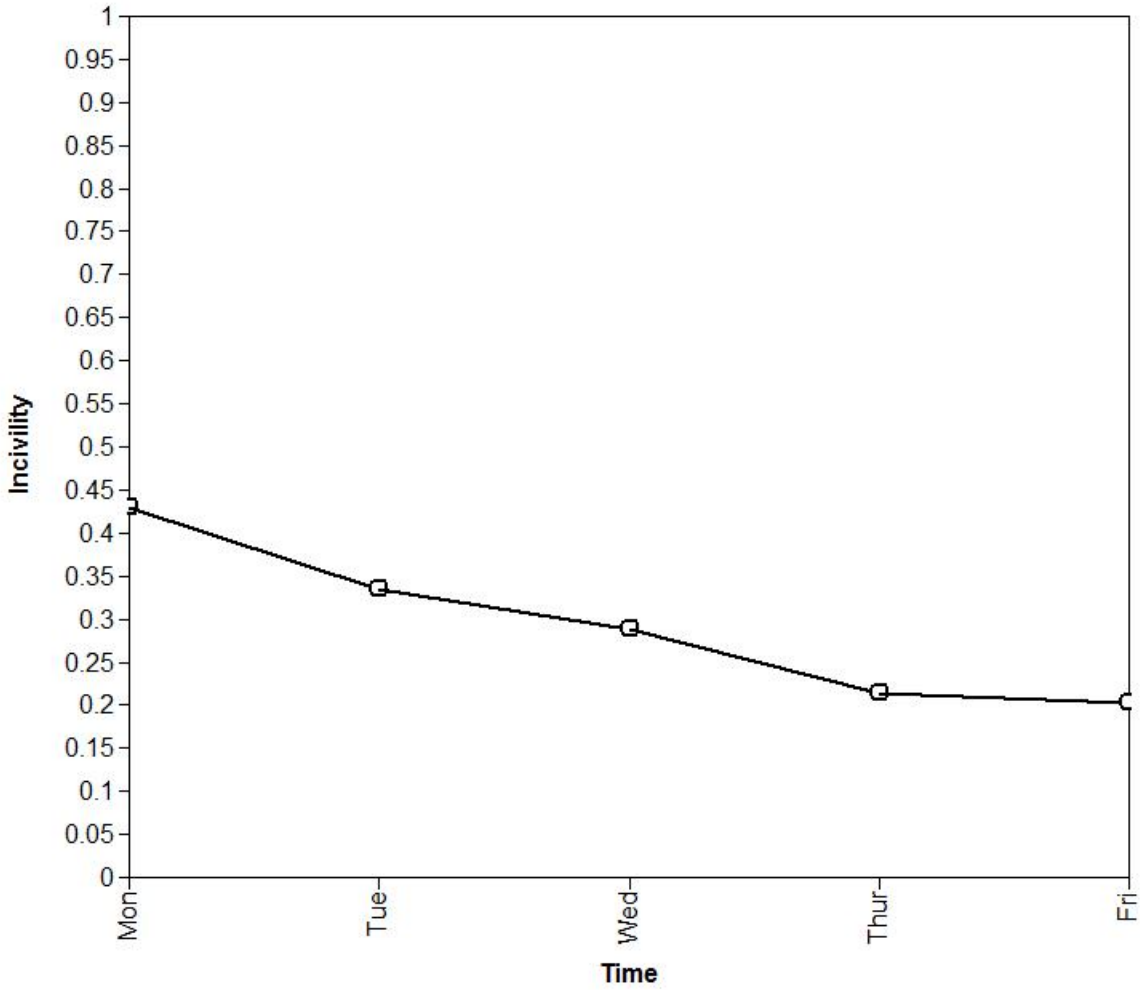

Figure 3.1: Sample proportions of experiencing incivility across the working week (N=171). The scale range was 0-1 (0 = no incivility, 1 = some incivility). Mon = Monday; Tue = Tuesday; Wed = Wednesday; Thu = Thursday; Fri = Friday.

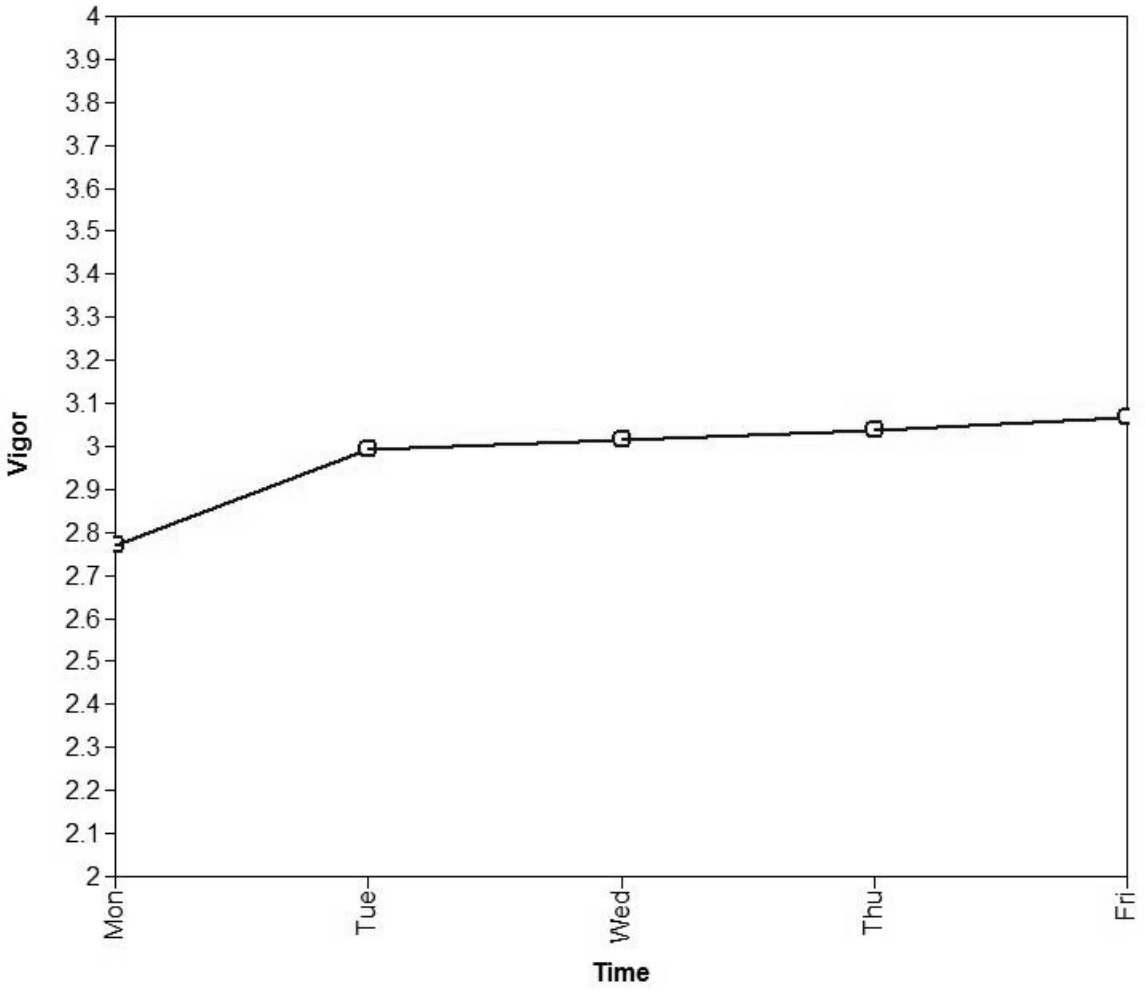

Figure 3.2: Sample means of vigor across the working week (N=171). The scale range was 1-5 (0 = low vigor, 5 = high vigor). Mon = Monday; Tue = Tuesday; Wed = Wednesday; Thu = Thursday; Fri = Friday.

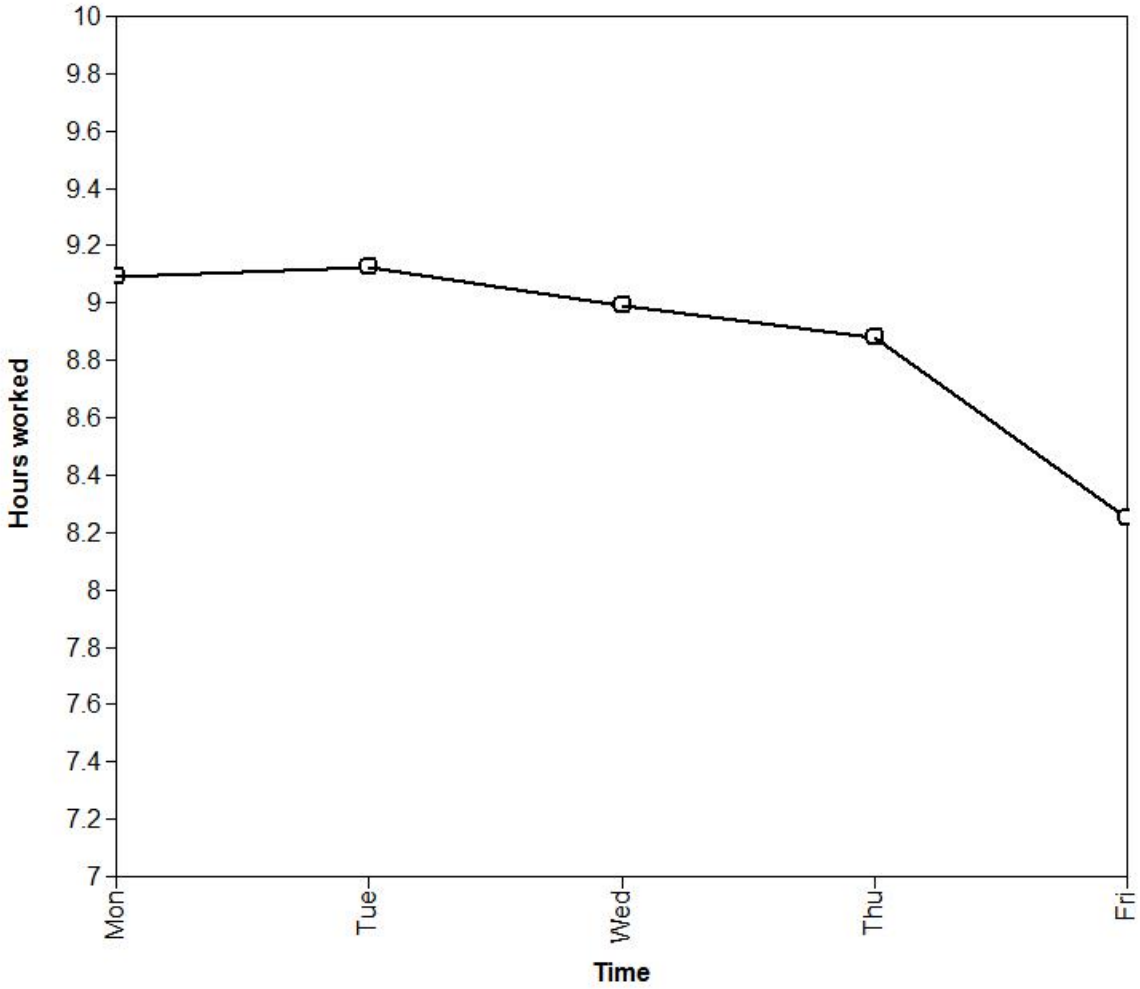

Figure 3.3: Sample means of hours worked across the working week (N=171). The scale range was 1-5 (0 = low vigor, 5 = high vigor). Mon = Monday; Tue = Tuesday; Wed = Wednesday; Thu = Thursday; Fri = Friday.

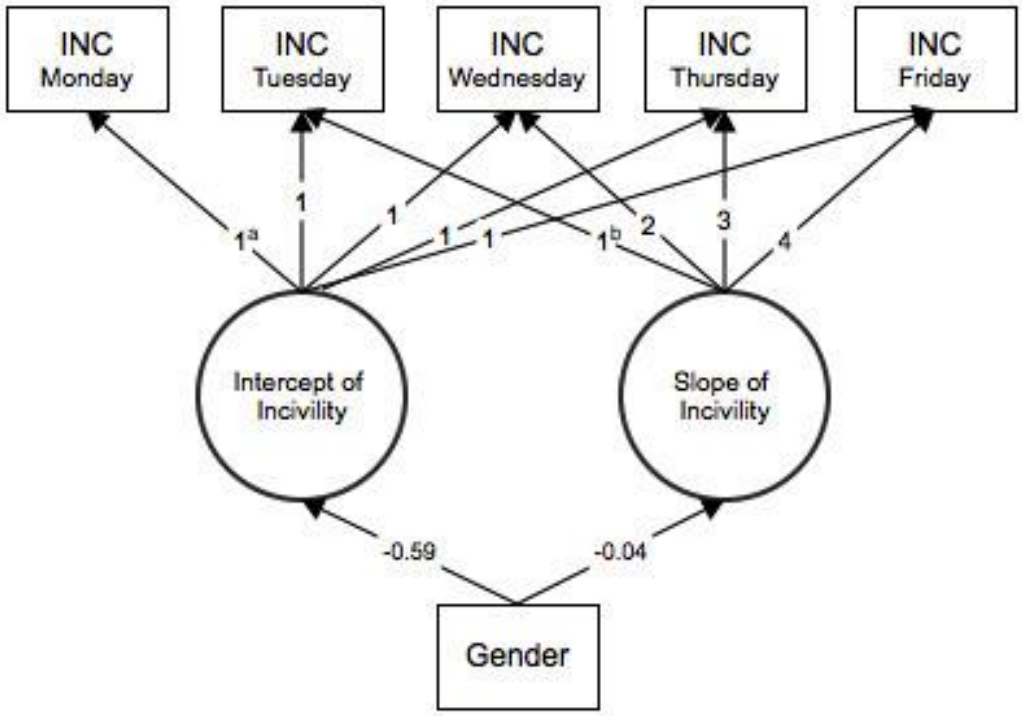

Figure 3.4: Conditional latent growth curve model showing unstandardised path coefficients leading from covariates to the intercept of incivility on Monday, and the slope of incivility from Monday to Friday. INC = incivility. Aikake information criterion = 771.46; Bayesian Information Criterion = 793.41; Sample-size adjusted Bayesian Information Criterion = 771.25. [a]Fixed loading. [b]Time interval from initial assessment by day. * $p < .05$. ** $p < .01$.

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CHAPTER 4

Group recovery experience norms: A new construct and its cross-level effect on team member recovery experiences

European Journal of Work and Organizational Psychology, in press.

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Abstract

This study proposed that, within a team work environment, recovery experience would emerge as a group-level construct acting as norms of behaviour that would impact individual team members' recovery experiences. Using the Effort-Recovery Model measures of psychological detachment and relaxation, norms were developed and measured in 20 teams of employees (n=100) from an organisation within the legal industry. Results of multilevel analysis indicated that a psychological detachment norm existed at the team-level, which impacted individual relaxation and detachment experiences over and above individual psychological distress, workaholism, hours worked and incivility. In contrast, the evidence for a group-level relaxation norm was less strong and a team's relaxation norm did not impact individual team member recovery experiences. As one of the first studies to demonstrate the importance of group norms on the recovery process of individual team members, it provides further insights for addressing the high levels of psychological distress in the legal industry.

Keywords: Incivility, Recovery from job stress, Relaxation norm, Psychological detachment norm, Group-level norms

Adequate recovery from work, defined as the process of replenishing resources expended while at work, is crucial to effective functioning in both the work and non-work spheres of our lives (Demerouti, Bakker, Geurts, & Taris, 2009; Sonnentag, 2003). According to the Effort-Recovery Model (Meijman & Mulder, 1998) the recovery process is facilitated by recovery *experiences*, including psychological detachment (which allows one to stop utilising work related resources) and relaxation (which provides the opportunity to replenish used resources). Recovery experiences are therefore key to moving from a state of depletion to replenishment. The importance of recovery experiences at both the between- and within-person level is reasonably well established in the literature, with recovery experiences leading to a number of positive outcomes such as work engagement, mood, wellbeing and life satisfaction (Moreno-Jiménez et al., 2009; Siltaloppi et al., 2009; Sonnentag & Bayer, 2005; Sonnentag & Fritz, 2007). However, whether or not recovery experiences also function at a group level has received little attention. In other words, do groups in the workplace develop norms for recovery that influence the recovery experiences of individual group members?

The present study applies multilevel theory and analysis to firstly define and assess recovery experience (psychological detachment and relaxation) at a group (team) level, and then to investigate the cross-level effects of team-level recovery experience norms on individual-level recovery experiences, including both the direct effects and moderating effects. We focus our research on the legal industry, which has a reputation for placing high demands on staff during both on- and off-job time (Seron & Ferris, 1995; Wallace, 1997, 1999), potentially affecting the likelihood of individuals engaging in after-work experiences. Understanding the multilevel effects of recovery experiences could be particularly important in this context as it may provide further insights for addressing the high levels of psychological distress in the legal industry (Kelk et al., 2009).

Individual-level recovery and recovery experiences

The process of replenishing resources depleted at work, known as recovery, allows

individuals to refuel and prepare for the next day (Hockey, 1996; Sonnentag, 2003; Zijlstra, 1996). Commonly explained via the Effort-Recovery Model (ERM), this refuelling process ensures the availability of resources such as energy and affect that are necessary for successful next-day functioning (Meijman & Mulder, 1998). The ERM suggests that each person has a limited supply of such resources, with non-work hours providing the opportunity to rebuild resources by allowing stress-related load reactions to return to pre-stressor levels (Meijman & Mulder, 1998). Where recovery does not occur, these limited resources are not replenished, resulting in continued stress-related load reactions and next-day impairment (Binnewies, Sonnentag & Mojza, 2009).

The recovery process itself is commonly thought to involve three key phases: need for recovery, resource generation, and replenishment. *Need for recovery* signals the start of the recovery process, characterised by the need to 'recharge the batteries' and take a break in order to replenish depleted resources (Sonnentag & Zijlstra, 2006). In order to move from this initial need for recovery to the final stage of restored recovery levels (*replenishment)*, the individual must generate new resources. According to the ERM, these resources are generated when individuals engage in *recovery experiences* that allow them to stop utilising work-related resources and replenish used resources (Meijman & Mulder, 1998).

Because recovery experiences refer to a subjective state, how an activity is perceived determines its utility as a recovery experience (Sonnentag & Fritz, 2007). Two recovery experiences represent the core dimensions of the effort recovery model: prevention of further resource loss (psychological detachment) and replenishment of resources (relaxation). Considered the most effective recovery experience (Siltaloppi et al., 2009; Sonnentag & Fritz, 2007), psychological detachment stops the use of work-related resources by disconnecting the individual emotionally and mentally from work (Sonnentag & Bayer, 2005). When after-hours thoughts, feelings and activities are not associated with work or job related things, the need for recovery is reduced (Binnewies et al., 2008; Siltaloppi et al., 2009; Sonnentag &

Bayer, 2005; Sonnentag, Kuttler, et al., 2010) and work engagement, psychological wellbeing and life satisfaction are higher (Moreno-Jiménez et al., 2009; Sonnentag & Fritz, 2007).

After-work hours provide the opportunity to not only psychologically detach to prevent further resource loss, but also to replenish resources through relaxation (Meijman & Mulder, 1998). Relaxation experiences allow the individual to return to pre-stressor levels of recovery by producing a state of low activation (Sonnentag & Fritz, 2007). Non-demanding activities such as meditation, reading or being outdoors often generate the feeling of relaxation, however the subjective nature of recovery experiences means that the kinds of activities that evoke relaxation will likely be different for each person. Like psychological detachment, relaxation experiences also facilitate recovery and lead to higher psychological wellbeing (Sonnentag & Fritz, 2007).

While we focus our research on these two facets of the ERM (psychological detachment and relaxation), it is important to note that two other recovery experiences (mastery and control) have been identified (Sonnentag & Fritz, 2007). These constructs are excluded from the current study for three reasons: 1) they have weaker linkages with the ERM; 2) we believe mastery is less relevant for the working week in the legal environment. Mastery experiences, such as learning a new language, require time and effort-investment that, due to long working hours, those in the legal profession are unlikely to engage in on a typical working day; and 3) mastery and personal control, or the degree to which a person can control the activities they pursue after-work, are more individual factors that are unlikely to emerge as group level norms.

The group-level construct of ERM recovery experiences

We propose that group norms regarding relaxation and detachment experiences will emerge over time and operate much like other group norms by influencing individual behaviours (Bliese & Jex, 2002; Hackman, 1992). Anecdotal evidence in law firms suggests such norms might exist, with new staff expected to conform to team expectations regarding

working hours and extended availability, “The type of hours a young lawyer works is highly dependent on their practice group” (Lawyers Weekly, 2013). These expectations extend beyond working hours, with lawyers often required to be available “24/7” to meet the needs of partners and clients.

Group-level recovery experiences are conceptualised here as a group norm in that they are expected to impact individual behaviours through informal, rather than formal, workplace processes (Ehrhart & Naumann, 2004) - it is unlikely that organisations will attempt to regulate or reward behaviours such as recovery experiences that occur outside working hours. Group norms are implied standards for acceptable attitudes and behaviours that develop over time (Sherif, 1936), permeating the work environment in a way that influences all those present (Hackman, 1992). By operating in such a way, recovery experience norms are defined as ‘ambient stimuli’ within Hackman’s (1992) group research model. Ambient stimuli are one of two forms of group stimuli identified by Hackman (1992) as influencing member behaviour, with the alternative being discretionary stimuli which have a differential effect on each group member.

While norms can exist at the organisational level, Ehrhart and Naumann (2004) suggest norms are more likely to develop at the team-level due to the amount of time team members spend within this norm group, meaning there is more opportunity to be guided by team member cues than those of the wider organisation. As team members discuss their after-work plans with colleagues, model constant availability or send work-related emails during the evening, they are giving social cues to others regarding acceptable recovery experiences. Recovery experience norms are likely to develop as team members use these cues to guide their individual recovery behaviours. Such behaviours are likely to be more acceptable in some groups than others, however the impact of team-level recovery has yet to be explored. This is despite suggestions by leading recovery researchers that individual recovery is likely to influence team members and team climate (Sonnentag et al., 2011), and specific calls to

explore the effect of norms on psychological detachment: "Researchers may want to investigate how organizational norms and expectations about boundaries between work and nonwork life impact on employees' psychological detachment from work during nonwork time" (Sonnentag & Fritz, 2014, p. 25).

Hypothesis 1: Recovery experience norms (expressed as a norm for psychological detachment and a relaxation norm) will develop in a team.

While recovery experiences have not yet been explored at the group level some parallels can be drawn between psychological detachment norms and work-family conflict research into segmentation norms (e.g., Park, Fritz, & Jex, 2011). The extent to which a work group encourages segmentation or integration between work and home is referred to as its segmentation norm, with highly segmented work groups encouraging impermeable boundaries that prevent work from spilling over into the home domain (Park et al., 2011). Research suggests that those who perceive a high segmentation norm in their work group are more likely to detach psychologically during off work time (Park et al., 2011). They are, however, distinct constructs, as "psychological detachment is a more narrow concept that refers to not thinking about work during non-work time" (Sonnentag, Binnewies, & Mojza, 2010, p. 3).

Hypothesis 2: Recovery experience norms (psychological detachment and relaxation) and segmentation norm will be independent constructs.

Effects of group ERM recovery experience norms on individual recovery experiences

Social psychology research suggest that norms develop as team-members monitor and conform to the dominant attitudes and behaviours of the group (Thibaut & Kelley, 1959). Social learning theory (Bandura, 1977), for example, proposes that individuals observe and model the behaviours of others in their group. This is further supported by social information-processing theory (Salancik & Pfeffer, 1978), where social cues from other group members are said to guide acceptable attitudes and behaviours.

Applying the theory of group norms to recovery experiences, we would therefore expect a team's relaxation and psychological detachment norms to independently affect the individual recovery experiences of each team member (Morrison, Wheeler-Smith, & Kamdar, 2011). That is, if an individual receives social cues indicating that team members view relaxation or psychological detachment as experiences that should be and are engaged in after work, they will be more likely themselves to engage in such experiences during off-job time. Conversely, when team members provide regular input as to their constant availability for work, off duty thinking about work (e.g., sharing ideas about a work project that occurred to them the previous evening during non work time), and actually working rather than relaxing, individuals will be unlikely to see recovery experiences as normative and therefore less likely to engage in them. This is supported by numerous studies demonstrating that group-level constructs (e.g. climate or norms) influence individual behaviour beyond what is accounted for by individual perceptions (Morrison et al., 2011). Additionally, research suggests that consequences of poor recovery (burnout and engagement; e.g.,Fritz & Sonnentag, 2005; Ten Brummelhuis & Bakker, 2012) can cross over to team members (Bakker, Emmerik, & Euwema, 2006).

We further suggest that ERM recovery experience norms will affect individual recovery behaviours even when individual-level predictors of these experiences are taken into account. This is supported by Hahn et al. (2011) who suggested that group-level workplace characteristics might impact the effectiveness of recovery training on recovery experiences, with an organisation that values work-life balance possibly leading to improved training outcomes. The likelihood that a person will engage in recovery experiences is affected by both factors in the individual's work environment and their own personality (Bakker et al., 2013; Sonnentag & Fritz, 2007) and therefore both are included in this study.

Negative work-related factors are said to have a dual effect on recovery, by both further depleting resources and reducing the likelihood the individual will engage in recovery

experiences (Bakker et al., 2013). The two demands included here, both of which have been shown to reduce recovery, are long working hours (Rau & Triemer, 2004) and incivility (Nicholson & Griffin, 2014).

Obviously, the longer an individual works the less after-work time there is to recover, which acts as a stressor due to increased demands (Rau & Triemer, 2004). There is a general consensus that those in the legal industry work long hours, with lawyers typically working more than 50 hours per week (Wallace, 1997). This is problematic, as those who work longer hours not only face more demands but they experience less psychological detachment and relaxation after work (Mojza, Lorenz, Sonnentag, & Binnewies, 2010; Siltaloppi et al., 2009; Sonnentag & Bayer, 2005).

Interpersonal mistreatment has been identified as a prolific issue in the legal industry, with media reports indicating it is so high it necessitates immediate action (Alexander, 2013a, 2013b; Younger, 2014). Workplace incivility is the most commonly experienced form of interpersonal mistreatment the workplace (Griffin et al., 2007). A form of low-intensity interpersonal mistreatment, incivility is often experienced as interruption, rude comments or condescending tone (Andersson & Pearson, 1999; Cortina & Magley, 2009; Milam et al., 2009). Both co-workers and supervisors perpetrate incivility, however supervisor incivility generally has more negative effects on the individual (Laschinger et al., 2009). Daily incivility has recently been reported to decrease after-work wellbeing, psychological detachment and next-day recovery, although had no effect on after-work relaxation experiences (T. Nicholson & Griffin, 2014).

The individual characteristics included in the current study are workaholism (a trait-like characteristic) and psychological distress (state-like characteristic). Workaholism, or the compulsion to work excessively hard and allocate more time to work than is reasonably required. Workaholics are less likely to engage in recovery experiences after work (Taris,

Geurts, Schaufeli, Blonk, & Lagerveld, 2008; Taris, Schaufeli, & Verhoeven, 2005; van Wijhe, Peeters, Schaufeli, & Ouweneel, 2013).

Psychological distress has previously been associated with lower recovery experiences (Sonnentag & Fritz, 2007) and higher need for recovery (Jansen et al., 2002).While generally considered an outcome of poor recovery (e.g.,Jansen et al., 2002), Sonnentag and Fritz (2007) suggest that those with impaired wellbeing might be less likely to engage in positive recovery experiences. These variables have particular resonance in the legal industry, where rates of psychological distress are higher than the average population (Kelk et al., 2009) and workaholism often leads to greater career advancement and rewards (Daicoff, 1998). The present study will also assess the impact of demographic factors including age, gender, tenure and status.

Hypothesis 3: Psychological detachment norm and relaxation norm will be positively related to individual recovery experiences, and this relationship will be significant beyond the effects of individual predictors of recovery.

Cross-level Moderating effect of ERM recovery experience norms

As mentioned, Erhart and Naumann (2004) suggest that group norms have a stronger impact on individuals who spend more time within their norm group, as there are more opportunities to be guided by team member cues. Individuals who spend more time in the office (i.e. those who work longer hours) are therefore likely to be more impacted by group norms than those who do not. We suggest that this is likely to only be the case where negative recovery experience norms exist, as positive recovery experience norms would likely encourage individuals to spend less time in their work group in order to allow sufficient after-work recovery time. In other words, we expect that longer working hours will accentuate the effect of low recovery experience norms, further reducing individual recovery.

Hypothesis 4: Psychological detachment norm and relaxation norm will moderate the relationship between individual hours worked and individual recovery experiences, such that the relationship will be stronger within groups with positive recovery experience norms.

Method

Procedure

Data were collected using a diary design with an initial general survey and twice-daily surveys over a working week. Participants completed the general survey on Monday morning, which measured demographics, workaholism, and their perceptions of group norms. They completed an "afternoon" survey at the end of each working day measuring hours worked and incivility experienced that day, and a "morning" survey measuring retrospective recovery experiences from Tuesday morning onwards. Participants therefore completed a total of nine diary surveys over a five-day period, with text message or email reminders sent at each time point as recommended for this methodology (Ohly, Sonnentag, Niessen, & Zapf, 2010). As described below, daily measures were averaged to create individual-level (between person) measures.

Sample

Participants were 100 employees from a private law firm in Australia who registered via an online survey. In response to the advertised link to the study, 157 people registered to participate, of which 109 completed the instruments (69%). Nine participants had significant missing data so were removed from the sample. From the final 100 participants, a total of 962 surveys were completed: 100 general surveys, 386 morning surveys and 476 after-work surveys. The sample included both legal staff, for example solicitors, (51%), and non-legal staff, for example legal secretaries and financial officers, (49%). Participants were from 20 teams within the organisation, with an average of five participants per team. Mean tenure was 4.30 years (SD=3.40). Their mean age was 32.36 years (SD=10.37), 62% were females and

10% were in a management position. Just over half of the participants (53%) were single, 41% were married or de-facto, 5% were separated/divorced and 1% widowed.

Measures:

Some individual-level variables (workaholism, psychological distress, demographics) were measured in the initial survey whereas others (recovery experiences, incivility and hours worked) were measured at the day-level and aggregated to an average score across the working week. Aggregate diary data has been shown to more accurately represent true experiences than single report measures (Bolger et al., 2003; Shiffman et al., 1997). Unless otherwise mentioned, all scales were measured on a 5-point scale ranging from "strongly disagree" to "strongly agree". The group-level variables were included in the initial survey.

Outcomes: Recovery experiences. Participants completed two sub-scales of the Recovery Experience Questionnaire (Sonnentag, Binnewies, et al., 2008) each morning. The stem of the scale was adjusted to read "Yesterday afternoon/evening….". The four-item psychological detachment sub-scale had items such as "I forgot about work" with daily Cronbach's alpha ranging from of 0.83 to 0.89. In order to reduce the time required to complete the scale, participants only completed three items from the relaxation scale ("I kicked back and relaxed" was excluded, being a less common expression in Australia). Daily Cronbach's alpha ranged from 0.88 to 0.96. Daily scores for each sub-scale were averaged across the four mornings to represent the participant's average psychological detachment and relaxation experience.

Individual level predictors and control variables: Incivility. Incivility was measured by averaging day-level scores over a five-day period, to represent the average amount of incivility experienced over a working week. Participants reported their experienced co-worker and supervisory incivility at the end of each working day using the seven-item workplace incivility scale (Cortina et al., 2001). In line with previous research (e.g., Volmer et al., 2012), the stem of the scale was adjusted to refer to day-level experiences of incivility:

"Today, how often were you in a situation where any of your co-workers or superiors….". An example item is "Put you down or were condescending to you?" Respondents provided separate ratings for supervisors and co-workers on a 5-point scale ranging from "none of the time" to "all of the time". Cronbach's alpha for the daily scale ranged from 0.76-0.89 for the co-worker scale and 0.82-0.96 for the supervisor scale.

Hours worked. Hours worked were recorded at the end of each working day for five days, and averaged across the week to give average hours. Cronbach's alpha with each day treated as a different item was 0.87.

Workaholism. The compulsive tendencies subscale of the Work Addiction Risk Test was used to measure workaholism (B. E. Robinson, 1999; Taris, Schaufeli, & Verhoeven, 2005), as done in previous research (e.g., Bakker et al., 2013). In order to reduce the time taken to complete the scale, participants only completed five items from the scale. We selected items based on the factor loadings reported in Taris et al. (2005). Cronbachs alpha was 0.69.

Psychological distress: The ten-item Kessler Psychological Distress Scale (Kessler et al., 2003) was used to measure psychological distress, with scores on the ten items summed so that higher scores indicated higher distress. Cronbach's alpha for the scale was 0.90.

Demographics. Gender (0 = female, 1 = male), age, tenure, role type (one time asking whether the respondent was in a legal position: 0 = no, 1 = yes), team and seniority (one item asking whether the respondent was in a management or leadership position: 0 = no, 1 = yes) were assessed in the general survey. We created a variable measuring informal status by adding role type and seniority on advice from organisational representatives (so that 0=non-legal, 1=legal or non-legal manager and 3 = legal manager).

Group-level variables: Recovery experience norms. The recovery experience norms were operationalised as subjective rather than collective norms. While collective norms are aggregated measures of individual behaviour, subjective norms measure the individual's

perception of normative behaviours and attitudes in the group. We utilised the referent shift model (Chan, 1998) to create an adapted version of the Recovery Experience Questionnaire (Sonnentag, Binnewies, et al., 2008). In doing so the basic meaning of the constructs remained unchanged, but the referent was shifted to the team level. For example, "last night, I distanced myself from my work" was changed to "after work, people in my team think it's good to distance themselves from their work". Participants completed the four-item psychological detachment norm scale and three-item relaxation norm scale in the initial questionnaire (as with day-level recovery experiences one item was excluded from the relaxation scale).

Segmentation norm: We measured segmentation norm using Kreiner's (2006) four-item Segmentation Supplies scale to ensure there was no significant overlap between segmentation norm and psychological detachment norm. A sample item is "in my team, people can keep work matters at work". Coefficient alpha at the individual-level was 0.90.

Results

Table 4.1 shows means, standard deviations and intercorrelations among the study variables.

Construct validity of group-level recovery

In examining the construct validity of the proposed recovery experiences norms we first conducted factor analyses to investigate its factor structure and uniqueness from an existing construct (segmentation norm). We then computed r_{wg} scores to determine if individual team members' perceptions of recovery experience norms could be aggregated to the team level.

The results of a confirmatory factor analysis indicated that a three-factor model with psychological detachment norm, relaxation norm (with one item, "We are encouraged to do relaxing things" omitted from the scale) and segmentation norm (with one item, "In my team, people can mentally leave work behind when they go home" omitted from the scale) as

unique variables fit the data well (χ^2 = 24.51, *df* = 22, p = 0.28; root-mean-square error of approximation [RMSEA] = 0.04, comparative fit index [CFI] = 0.99, Tucker-Lewis index [TLI] = 0.99). This model fit the data significantly better than either the three-factor model with all items (χ^2 = 87.18, *df* = 41, p<0.05; RMSEA = 0.11, CFI = 0.93, TLI = 0.91), the two-factor model with psychological detachment and segmentation combined into one factor (χ2 = 172.25, df = 43, p<0.05; RMSEA = 0.17, CFI = 0.81, TLI = 0.75), the two-factor model with psychological detachment and relaxation combined into one factor (χ^2 = 116.43, *df* = 43, p<0.05; RMSEA = 0.13, CFI = 0.89, TLI = 0.86) or the one-factor model (χ^2 = 260.87, *df* = 44, p<0.05; RMSEA = 0.22, CFI = 0.67, TLI = 0.59). These results support Hypothesis 1 and 2, and the discriminant validity of the recovery experience norm scales, and segmentation norm was excluded from further analysis. The coefficient alpha was 0.80 for psychological detachment norm and 0.81 for the two-item revised relaxation norm.

Justification for aggregating the items to a team-level variable was examined by computing within-group interrater agreement (r_{wg}) scores. LeBretin and Senter (2007) suggest that strong within group agreement is evidenced by mean r_{wg} scores above .70. Results yielded acceptable mean values for both the relaxation norm (.78) and the psychological detachment norm (.84). A small number of teams had values lower than the 0.70 threshold, however substantively identical results in the analyses reported below were obtained when removing teams with low r_{wg} scores. All cases were therefore retained as advised by Chen, Mathieu and Bliese (2004). The intra-class correlation for psychological detachment norm (0.12) provided further evidence for aggregation, however relaxation norm was below the 0.05 threshold (0.02) suggested by Harlow (2014). Given the acceptable r_{wg} values, relaxation norm was included in further analysis. These results provided partial support for Hypothesis 1.

Direct effect of group norm on individual level recovery

Multilevel modelling using the MPlus program (Muthen & Muthen, 2013) was used to test the hypothesized cross-level relationships. The two-level model included individuals at the first-level (N= 100 participants) and teams at the second-level (N = 20 teams). Predictor variables at the person-level (Level 1) were centred to the group mean. Step 1 in the multilevel modelling process was to examine the within and between-group variation in the individual-level outcome variables (detachment and relaxation). There was significant between-team variation for both detachment ($p=0.02$) and relaxation ($p<0.00$), with intraclass correlations of 0.09 and 0.25 respectively.

Step 2 of the analysis investigated the individual level relationships. As can be seen in Table 4.1, age, gender and tenure were not significant predictors of either relaxation or detachment, and were therefore excluded from further analyses. However, the participant's status was significantly related to both relaxation and detachment, and was therefore included as a control variable.

Table 4.2 shows multilevel modelling parameter estimates for between-subject main effects of incivility, hours worked, psychological distress and workaholism in predicting after-work psychological detachment. The mean value of the random slope for the relationship between hours worked and psychological detachment was significant. Participants who worked longer hours experienced less psychological detachment after-work. Specifically, for each additional hour a team member worked on average over the week their mean psychological detachment decreased by a factor of 1.12 ($e^{0.11}=1.12$), or approximately 12%. In contrast there were no significant relationships between incivility, psychological distress or workaholism and psychological detachment. The fixed slope for status was significant, with each unit increase in status associated with a 38% reduction in psychological detachment ($e^{0.32}=1.38$).

As reported in Table 4.2, the mean values for the random slopes between both forms of incivility and after-work relaxation were significant. Specifically, participants who

experienced co-worker incivility were less likely to experience relaxation after work, with each unit increase in average co-worker incivility resulting in a 52% reduction in relaxation ($e^{0.42}$=1.52). Interestingly, those who experienced supervisor incivility displayed the opposite effect; reporting significantly more after-work relaxation, with each unit increase in supervisor incivility associated with a 75% increase in relaxation ($e^{0.56}$=1.75). Psychological distress had a significantly effect on after-work relaxation, such that those with higher distress experienced less relaxation after-work. Specifically, for each unit increase in psychological distress (possible scores ranged from 0-100) average after-work relaxation reduced by 3% ($e^{0.03}$=1.03). There were no significant relationships between workaholism or hours worked and after-work relaxation experiences. Additionally, the fixed slope for status was non-significant.

The third step in the analysis was to examine the direct, cross-level effect of group norms on individual psychological detachment and relaxation. Table 4.3 presents parameter estimates for the cross-level models. After controlling for covariates, team psychological detachment norm was significantly related to both after-work relaxation and psychological detachment. A positive detachment norm increased both individual-level relaxation and psychological detachment; with each one-unit increase in team psychological detachment norm associated with an average increase of 52% in team member psychological detachment ($e^{0.42}$=1.52) and 77% increase in relaxation ($e^{0.57}$=1.77). In contrast, team relaxation norm was not related to either individual-level recovery experience (Table 4.3). Substantively identical results were obtained when the analysis were repeated with the original three-item relaxation norm. Hypothesis 3 was therefore supported in terms of psychological detachment norms but not in terms of relaxation norms.

Hypothesis 4 was not supported, as there was no significant variance in the random slope for the relationship between hours worked and either relaxation or psychological

detachment (Table 4.2). We therefore did not include level 2 predictors for these random slopes.

Discussion

The results of the present study extend the body of research on recovery by demonstrating that psychological detachment and relaxation experiences operate at a group level. Evidence justified the aggregation of independent reports by individual team members about the typical recovery behaviour of the team to form a team-level construct that we suggest represents recovery experience norms. These recovery experience norms were distinct from the previously examined segmentation norm (Park et al., 2011). Importantly, psychological detachment norm was associated with individual team members' recovery experiences. Regardless of hours worked, interpersonal job demands, workaholism or their individual psychological distress, those who were in teams with a high psychological detachment norm were more likely than others to engage in both relaxation and psychological detachment experiences after work.

Social psychology theories such as Social Learning Theory (Bandura, 1977) and Social Information-Processing Theory (Salancik & Pfeffer, 1978) suggest that members of a group will change their behaviour depending on the normative attitudes and behaviours of the group (Thibaut & Kelley, 1959). As the first to examine the effects of group-level recovery behaviour or "norms", our findings support this and provide evidence (including significant between-group variance in individual recovery experiences and the cross-level influence of the group variable on the individual variable) that recovery experiences are driven not just by individual factors, but also by group-level norms. This finding is consistent with previous research showing the effect of collective work group behaviour on individual behaviour, such as antisocial behaviour (S. L. Robinson & O'Leary-Kelly, 1998), organisational citizenship behaviour (Ehrhart & Naumann, 2004), incivility (Paulin & Griffin, 2014) and voice (Morrison et al., 2011).

It is interesting that although psychological detachment existed as a norm, evidence for a relaxation norm was somewhat equivocal and did not significantly affect individual recovery experiences. Either team members did not have a shared understanding of the extent to which after-work relaxation is acceptable and typical, or such a norm did not impact their own engagement in relaxation or psychological detachment experiences. Feldman (1984) suggests that group norms only develop and are enforced where such norms facilitate the group's chances of success. As with many industries, messaging in the legal industry regarding the importance of mental health for professional success tends to focus on detachment experiences such as physical exercise, rather than relaxation (e.g., De Jong, 2013; "Mental health in the law," 2012; Solomonidis & Brown, 2012). Perhaps then, a relaxation norm does not develop, or is not enforced, as there is no shared understanding that it increases the success of their team. Indeed, empirical evidence suggests that detachment is more important for work-related outcomes than relaxation (Siltaloppi et al., 2009; Sonnentag & Fritz, 2007), For example, Siltaloppi et al. (2009) demonstrated that psychological detachment, but not relaxation, predicts work engagement. The stronger effect of norms for psychological detachment could indicate that, just as psychological detachment is the most effective recovery experience at the individual-level (Siltaloppi et al., 2009; Sonnentag & Fritz, 2007), it might also be the most effective recovery experience norm.

Though the focus of our research was on the cross-level effects of relaxation and detachment norms on individual-level recovery experiences, an interesting finding at the between-person level warrants discussion. Specifically, while co-worker incivility functioned as predicted in decreasing relaxation experiences, supervisor incivility had the opposite effect in increasing relaxation experiences. Although non-significant, the relationship with psychological detachment for the two forms of incivility followed a similar trend. A possible explanation for this may be found in their differing effects on health outcomes, with co-worker incivility escalating the impact of job stressors on mental health, and supervisor

incivility escalating the same effect on physical health (Gilin Oore et al., 2010). Perhaps these physical health problems such as headaches or backaches lead those who have experienced supervisor incivility to engage in more relaxation activities, as such problems might encourage one to "do relaxing things" such as resting or watching television. An alternative explanation is that those who experience supervisor incivility may be engaging in relaxation experiences, rather than engaging in work-related activities at home, as a form of passive counterproductive workplace deviance (CWB). Indeed, social undermining by supervisors (a form of incivility), but not co-workers, has been found to predict passive CWB behaviours such as taking long breaks or lazy work habits (Duffy, Ganster, & Pagon, 2002). Future research should measure both physical health and hours spent on work-related activities after work in order to further explore these possibilities.

Practical implications

Our results demonstrating the important role that a psychological detachment norm can have in fostering positive recovery behaviours have important implications for organisations and managers who want to encourage and enable after-work recovery. The finding that group norms can facilitate individual recovery experiences even where team members are required to work long hours, experience incivility at work or are high in workaholism is particularly relevant for industries such as law, where such factors are often difficult to control.

Feldman (1984) suggests that norms are commonly set by those with power or status within the group explicitly supporting such behaviours. Therefore, in order to foster increased psychological detachment and relaxation during after-work hours, managers have a role to play in developing norms within their group that encourage team members to engage in such experiences. By role modelling and encouraging team members to switch off mentally from work when leaving the office, managers are likely to facilitate a positive psychological detachment norm within their team. For example, managers could encourage employees not

to check work-related emails, think about job-related problems, or take work home from the office (Sonnentag & Fritz, 2007). Such norms may also increase employee performance and proactive behaviours, with previous research demonstrating a link between recovery and these positive workplace behaviours (Binnewies et al., 2009a; Sonnentag, 2003; Taris et al., 2008). Establishing a norm for relaxation may not be as effective, so managers (and key team members) should focus on messages around psychological detachment.

While not unique to the legal environment, our findings are pertinent in this environment given the established link between recovery and wellbeing (e.g.,Siltaloppi et al., 2009; Sonnentag & Fritz, 2007), and the finding that staff in the legal industry are 3.6 times more likely to suffer depression than other professionals (Eaton et al., 1990; Kelk et al., 2009). Indeed, psychological distress levels in our sample were well above average, with participant rates of moderate to severe mental distress six times higher than the reported average (30% scored 25 or above, compared to 5% in the Australian population; (Andrews & Slade, 2001). In such contexts, any factor likely to increase after-work recovery has financial and mental health implications.

Limitations and future directions

Some potential limitations of this study are outlined and may provide direction for future research. While the use of aggregated data from multiple time points potentially increased measurement accuracy (Bolger et al., 2003; Shiffman et al., 1997), the cross-sectional nature of this study means that results cannot indicate causality. Longitudinal research on the effects of recovery experience norms should be conducted in the future to address this limitation. Additionally, data were collected from a relatively small number of work groups which may have impacted the power of multi-level results. There is some debate in the literature about the number of groups necessary to conduct multilevel analysis. For example, Maas and Ho (2005) demonstrated that regression coefficients and variance

components are estimated without bias even with only 5 groups, however second-level standard error estimates are biased where there are 30 groups or less.

The generalizability of our findings may be limited due to our sample being drawn entirely from the legal industry. Although somewhat counteracted by sampling employees from both non-legal and legal roles, the industry is characterised by long work hours, high distress and large workload that is not necessarily representative of the broader workforce. In particular, these qualities may more readily result in the development of recovery norms than would occur in teams of other professionals that are less stressed or who typically work fewer hours. As mentioned, Feldman (1984) argues that group norms are only enforced where such norms facilitate group success. It would therefore be valuable to investigate the effects of relaxation and detachment norms in less demanding working environments where these norms might have differential impacts on group success.

As noted earlier, we only included psychological detachment and relaxation, as they are most relevant to the ERM and we were limited in the length of our daily surveys. Future research might explore the impact of the remaining recovery experiences (mastery and control) at the group-level. In addition, research should explore how recovery experience norms develop and change. We noted that leadership behaviours and attitudes are likely to impact this process, however it would be valuable to better understand how leaders and organisations can most effectively intervene to change group norms regarding these recovery experiences.

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Table 4.1
Means, Standard Deviations and Intercorrelations Among Variables

Variables	M	SD	1	2	3	4	5	6	7	8	9	10	11	12
1. Age	32.36	10.37	-											
2. Gender	0.38	0.49	0.01	-										
3. Tenure	4.30	3.40	0.58**	0.08	-									
4. Status	0.61	0.53	0.00	0.07	-0.11	-								
5. Hours Worked	8.65	1.51	-0.24*	0.15	-0.18	0.43**	-							
6. Co-worker Incivility	0.10	0.20	-0.19	-0.03	-0.08	-0.01	0.07	-						
7. Supervisor Incivility	0.12	0.29	-0.06	-0.12	-0.10	0.09	0.25*	0.42**	-					
8. Workaholism	3.06	0.58	-0.09	-0.10	-0.02	0.26**	0.28**	-0.03	0.17	-				
9. Distress	21.26	6.50	-0.11	-0.05	-0.01	0.09	0.11	0.03	0.26**	-0.41**	-			
10. Relaxation	3.59	0.81	0.19	0.02	-0.06	-0.20*	-0.37**	-0.03	-0.14	-0.35**	-0.34**	-		
11. Detachment	3.29	0.72	0.08	-0.03	0.05	-0.35**	-0.46**	-0.02	-0.17	-0.41**	-0.35*	0.67**	-	
12. Team Relaxation	3.59	0.40	0.27**	-0.10	0.14	-0.14	-0.27**	-0.07	-0.27**	-0.18	-0.03	0.33**	0.29**	-
13. Team Detachment	3.29	0.39	0.26**	-0.11	0.14	-0.33**	-0.37**	-0.08	-0.33**	-0.28**	-0.18	0.41**	0.33**	0.64**

Note. Correlations represent between-subject correlations (N=100). Gender was coded (0 = *women*, 1 = *men*). Status was coded (*0 = non lawyer, 1= non-lawyer manager or lawyer, 2= lawyer manager).* * $p < .05$. ** $p < .01$. Distress = Psychological Distress.

Table 4.2
Between-Subject Main-Effect Models

	Psychological detachment			Relaxation		
	Est.	*SE*	*95% CI*	Est.	*SE*	*95% CI*
Random intercept (b_0)						
M (γ_{00})	3.35**	0.08	[3.19, 3.50]	3.69**	0.09	[3.51, 3.87]
Variance (τ_0)	0.06**	0.02	[0.03, 0.10]	0.11**	0.03	[0.06, 0.17]
Random Slope for WH (b_1)						
M (γ_{10})	-0.18	0.12	[-0.40, 0.05]	-0.01	0.09	[-0.19, 0.17]
Variance (τ_1)	0.05	0.08	[-0.12, 0.21]	0.01	0.07	[-0.14, 0.15]
Random Slope for CIN (b_2)						
M (γ_{20})	-0.04	0.16	[-0.35, 0.26]	-0.42*	0.19	[-0.79, -0.04]
Variance (τ_2)	0.00	0.03	[-0.05, 0.05]	0.01	0.16	[-0.30, 0.33]
Random Slope for SIN (b_3)						
M (γ_{30})	0.10	0.12	[-0.13, 0.34]	0.56**	0.17	[0.24, 0.89]
Variance (τ_3)	0.00	0.03	[-0.06, 0.06]	0.11	0.22	[-0.32, 0.53]
Random Slope for Hours (b_4)						
M (γ_{40})	-0.11*	0.05	[-0.22, -0.01]	-0.08	0.10	[-0.28, 0.11]
Variance (τ_4)	0.00	0.01	[-0.02, 0.02]	0.00	0.03	[-0.06, 0.07]
Random Slope for Distress (b_5)						
M (γ_{50})	-0.02	0.01	[-0.04, 0.00]	-0.03**	0.01	[-0.05, -0.01]
Variance (τ_5)	0.00	0.00	[0.00, 0.00]	0.00	0.02	[-0.03, 0.03]
Fixed slope for Status (b_6)	-0.32*	0.14	[-0.59, -0.05]	-0.03	0.13	[-0.29, 0.22]

Note· N = 100. *p<.05 **p<.01. WH = Workaholism; CIN = Co-worker incivility; SIN = Supervisor incivility Hours = Hours worked; Distress = Psychological Distress. Status was coded (0 = *non-legal, 1= non-legal manager or legal, 3= legal manager).*

Table 4.3
Cross-Level Models

	Psychological detachment			Relaxation		
	Est.	SE	95% CI	Est.	SE	95% CI
Random intercept (b_0)						
Intercept (γ_{00})	1.17**	0.41	[0.36, 1.97]	1.40**	0.51	[0.40, 2.41]
PD Norm (γ_{01})	0.42*	0.18	[0.07, 0.77]	0.57**	0.17	[0.24, 0.91]
RL Norm (γ_{02})	0.22	0.23	[-0.23, 0.67]	0.11	0.24	[-0.36, 0.59]
Residual Variance (σ^2_0)	0.00	0.01	[-0.02, 0.03]	0.04	0.03	[-0.02 0.11]
Random Slope for WH (b_1)						
M (γ_{10})	-0.18	0.12	[-0.41, 0.05]	-0.01	0.10	[-0.20, 0.18]
Variance (τ_1)	0.04	0.08	[-0.12, 0.21]	0.01	0.08	[-0.14, 0.16]
Random Slope for CIN (b_2)						
M (γ_{20})	-0.04	0.16	[-0.35, 0.27]	-0.41*	0.19	[-0.79, -0.03]
Variance (τ_2)	0.00	0.03	[-0.05, 0.06]	0.01	0.16	[-0.29, 0.32]
Random Slope for SIN (b_3)						
M (γ_{30})	0.10	0.12	[-0.13, 0.34]	0.56**	0.16	[0.23, 0.88]
Variance (τ_3)	0.00	0.03	[-0.06, 0.06]	0.11	0.21	[-0.31, 0.52]
Random Slope for Hours (b_4)						
M (γ_{40})	-0.11*	0.05	[-0.22, -0.01]	-0.08	0.10	[-0.27, 0.11]
Variance (τ_4)	0.00	0.01	[-0.02, 0.02]	0.00	0.05	[-0.10, 0.10]
Random Slope for Distress (b_5)						
M (γ_{50})	-0.02	0.01	[-0.04, 0.00]	-0.03**	0.01	[-0.05, -0.01]
Variance (τ_5)	0.00	0.00	[0.00, 0.00]	0.00	0.02	[-0.04, 0.04]
Fixed slope for Status (b_6)	-0.32*	0.14	[-0.59, -0.05]	-0.04	0.13	[-0.30, 0.23]

Note. N = 100. *p<.05 **p<.01. WH = Workaholism; CIN = Co-worker incivility; SIN = Supervisor incivility Hours = Hours worked; Distress = Psychological Distress. Status was coded (0 = *non-legal, 1= non-legal manager or legal, 3= legal manager).*

CHAPTER 5: GENERAL DISCUSSION

The final chapter of this thesis briefly summarises and integrates the key the findings of all three papers, along with the overall limitations of this work and future directions for research.

Summary of findings

The results of this thesis confirm that incivility is a widespread and common form of interpersonal mistreatment at work. More than half of the individuals experienced some form of incivility over a working week, with up to 43% of those in the full sample experiencing incivility on a given work day. This statistic becomes particularly salient when one considers the body of research showing the negative outcomes associated with incivility.

The current project was developed from the idea that recovery might provide the mechanism through which incivility affects longer-term outcomes. Since the design of this project and testing of hypotheses, Sonnentag and Fritz (2014) have published an overarching framework of the recovery process. As illustrated in Figure 5.1, they propose an extended stressor-detachment model, whereby job stressors predict poor psychological detachment, which predicts strain and impaired wellbeing (Sonnentag & Fritz, 2014). While not testing the model in its entirety, the results from this thesis have provided support for a number of pathways outlined in Sonnentag and Fritz's (2014) model.

Considering the proposed link between job stressors and psychological detachment (pathway 1 in Figure 5.1), I demonstrated a relationship between day-level workplace incivility and detachment (Chapter 2), but not person-level workplace incivility and detachment (Chapter 4). Specifically, at the day-level, incivility was negatively related to after-work situational wellbeing and psychological detachment, but not relaxation. At the between person-level, neither form of incivility significantly affected psychological detachment experiences. In contrast, those who experienced more co-worker incivility were less likely, while those who experienced more supervisor incivility were more likely, to

engage in after-work relaxation experiences. This indicates that the relationship between job stressors, such as incivility, and recovery experiences differs significantly with the level of measurement.

The link between job stressors and strain (pathway 3 in Figure 5.1) was supported by the findings that incivility predicted lower next-morning recovery at the day level (Chapter 2) and the person level (Chapter 3). While strain per se was not measured, morning recovery is conceptually similar to strain (Zijlstra & Cropley, 2006), and was considered as indicative of strain in the development of the adapted stressor-detachment model (Sonnentag & Fritz, 2014). Unfortunately, measuring the longer term outcomes of incivility was not possible, however the finding that the effects of job stressors on recovery spillover into the next day indicates that recovery might explain the long-term negative outcomes of this common workplace stressor.

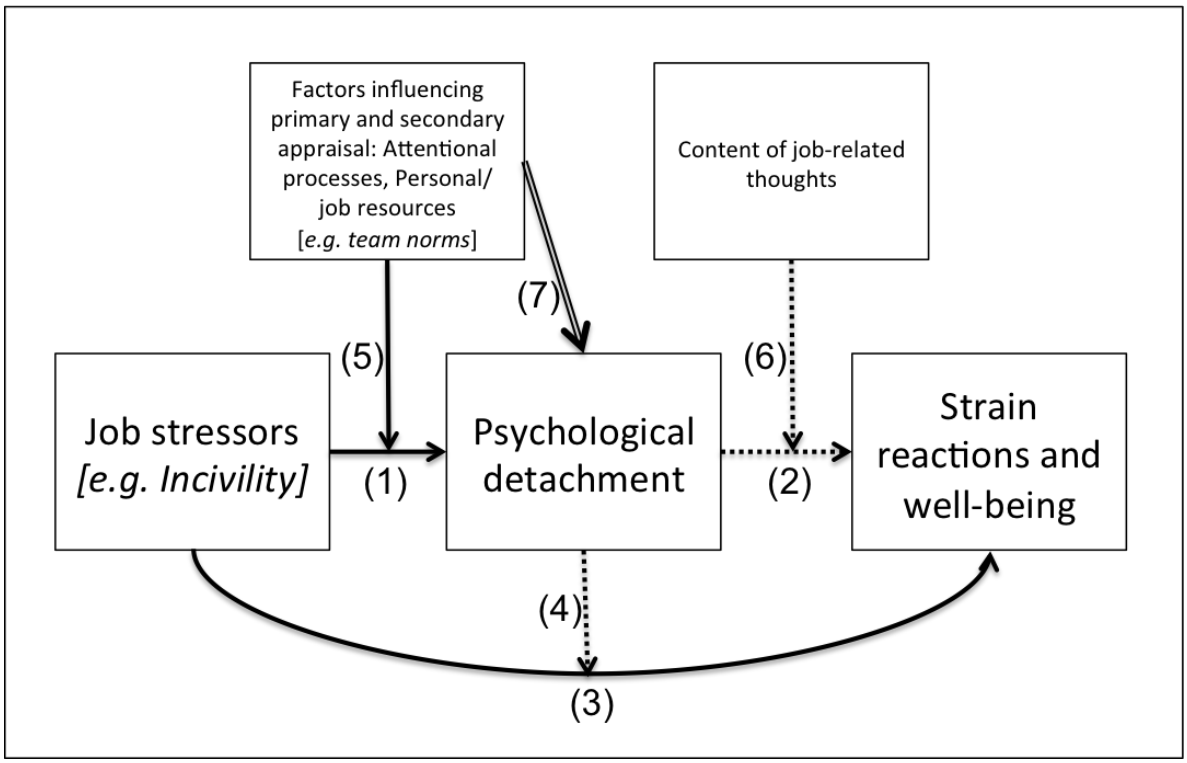

Figure 5.1: Extended stressor-detachment model, with solid lines representing pathways relevant to this thesis, and double lines representing pathways added to the original model. Adapted from "Recovery from job stress: The stressor-detachment model as an integrative framework", by S. Sonnentag and C. Fritz, 2014, *Journal of Organizational Behavior*.

In their model, Sonnentag and Fritz (2014) suggest that an individual's availability of job resources will moderate the negative impact of job stressors on detachment (pathway 5 in Figure 5.1). This study suggests that a norm of psychological detachment might represent one such job resource. This is in line with previous research where group-level norms such as climate have been considered job resources (e.g., Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2009). I established the existence of a team-level psychological detachment norm which was found to impact individual-level psychological detachment and relaxation beyond the affects of individual workaholism, psychological distress, hours worked or incivility (Chapter 4). However, such a norm did not moderate the relationship between incivility and psychological detachment (pathway 5 in Figure 5.1). As a result, the direct affect of job resources, such as team norms, on detachment was included as an additional pathway in the model (pathway 7 in Figure 5.1). Results regarding the existence of a relaxation norm were equivocal, however such a norm did not impact individual level recovery experiences. This emphasises the importance of group-level norms on individual recovery behaviours.

Although not directly related to Sonnentag and Fritz's (2014) model, on the basis of theoretical evidence suggesting incivility might follow a weekly rhythm, I also examined day-level changes in the likelihood of experiencing workplace incivility (Chapter 3). Logistic growth modelling suggested that incivility follows a weekly rhythm, decreasing in a relatively linear fashion from Monday to Friday. These changes were not explained by either recovery or vigor, indicating the importance of contextual factors such as time when considering workplace incivility. This finding extends prior research regarding the incidence of incivility beyond the person-level, and emphasises the need to study the outcomes of incivility at the within-person level.

Taken together, the results of this thesis suggest that incivility and recovery are related at a number of different measurement levels, and provides support for some of the proposed pathways in Sonnentag and Fritz's (2014) model. At the day-level, when an individual

experiences workplace incivility their after-work recovery process is negatively impacted, with the effects lasting into the next-day. At the team-level, psychological detachment operates as a group-norm, with those that work in a team with a positive psychological detachment norm (i.e. that encourages psychological detachment) more likely to engage in both relaxation and psychological detachment experiences. Further, the likelihood of experiencing such uncivil behaviours changes with the day of the week, becoming progressively less likely as an employee moves from Monday to Friday.

Overall limitations of the research and future directions

Although the relationships between incivility and recovery were explored at different levels of analysis, this research did not measure long term outcomes of these constructs and therefore cannot provide empirical evidence that recovery does indeed act as the mechanism through which incivility affects long term outcomes (as also proposed by Sonnentag and Fritz (2014). Further research should explore the longer term impacts of both constructs, and examine whether the recovery process (or detachment specifically) mediates the long term outcomes of incivility. Additionally, there was still substantial within-person variance in both variables that remained unexplained. Future research could investigate what additional variables contribute to this variance.

Diary studies require a greater time commitment from participants, making it difficult to collect large samples of data (Ohly et al., 2010). Although participant numbers were sufficient (Ohly et al., 2010), the limited sample size may have contributed to the absence of some findings, particularly at the group-level (Chapter 4). Chapter 3 outlines a number of other possible limitations associated with diary research. As noted earlier, I examined psychological detachment and relaxation due to their relevance to the sample context and limitations regarding diary survey length. Future research is warranted exploring the relationships between incivility and other recovery experiences (mastery and control).

A feature of this research is that recovery and incivility were explored in the legal industry, a working environment where both constructs have been identified as necessitating action. The findings therefore have practical relevance to this context. However, while the demands identified in the legal industry are similar to a number of other industries such as investment banking and management consulting, future research should explore if the relationships between incivility and recovery differ in job contexts with lesser or different job demands.

The high incidence of incivility found in this study, even at the daily level, indicates a need for further empirical research into interventions at the day, person and team level. Only two empirical studies thus far have demonstrated effective incivility interventions (Leiter, Laschinger, Day, & Oore, 2011; Osatuke et al., 2009). Perhaps this is because the ambiguous nature of incivility makes it difficult to educate perpetrators. The findings of this thesis might suggest alternative avenues for workplace interventions, as interventions targeted at recovery behaviours might lessen the long-term negative effects of incivility.

Conclusion

Organisations seeking to encourage respectful workplace interactions or positive recovery behaviours face significant challenges. The mild nature of workplace incivility, when combined with the ambiguous intent of the perpetrator, makes it difficult to intervene or sometimes even identify when these behaviours are occurring. And even if organisations are aware that well-recovered staff will be more engaged and perform better, many managers believe that positive recovery behaviours cannot coexist with increasing job demands and work hours (e.g., Korkki, 2012).

A key finding of this research is that recovery emerges as a group level construct, impacting individual recovery outcomes. Such norms will likely impact the effectiveness of recovery interventions, thus indicating further avenues for effective recovery interventions. Additionally, the finding that a norm for psychological detachment had a positive impact even

where employees were working long hours, experienced incivility, had poor wellbeing or were high in workaholism has practical significance for managers and organisations.

A strength of this body of work is the use of three levels of analysis to examine the relationships between recovery and incivility, which addresses the problem of single-level analysis and provides a more complete understanding of the interrelationships between the two variables. Because incivility and recovery were linked at all three levels of analysis, this research highlights the need to include more than one level when designing interventions or research related to these constructs.

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APPENDICES

Appendix 1: Registration survey

Thank you for agreeing to participate in this research.

[Organisation sample only] Your organisation is participating in research being conducted by researchers at Macquarie University investigating the role that co-worker relationships and communication have on the link between recovery and engagement at work. It is our hope that by understanding the impact that at-work relationships have on overnight recovery and engagement, we will contribute to the identification of factors that lead to wellbeing and engagement at work.

[Convenience sample only] Researchers at Macquarie University are investigating the role that co-worker relationships and communication have on the link between recovery and engagement at work. It is our hope that by understanding the impact that at-work relationships have on overnight recovery and engagement, we will contribute to the identification of factors that lead to wellbeing and engagement at work.

This research involves completing a number of short surveys over a 5-day period including:

- An initial survey that will take approximately 10 minutes to complete.
- Four morning surveys that will take approximately 2-5 minutes to complete each.
- Five evening surveys that will take approximately 2-5 minutes to complete each.

The surveys will ask you about your experience of respectful and disrespectful behaviours and characteristics about yourself and your team. To encourage completion of the surveys, there will be a chance for participants to **win one of ten x $50 vouchers** at the end of the study. Participation is voluntary and completely anonymous. Summary findings will be shared with your workplace in order to assist with continuous improvement. Completing the survey indicates your consent to participate.

Thank you for taking the time to contribute to improving the wellbeing and engagement of workers in the legal industry. To find out more information please view the full consent form here [hyperlink].

We recognise that some of these questions may make you feel that you are not anonymous. However please note that any personal details collected will be used only for survey distribution through the distribution system. Your survey responses are completely ANONYMOUS. Your answers will not be linked to your personal details and your organisation will not be able to identify any individual responses.

1. Do you currently work full time?	O Yes O No (survey ends)
2. Do you currently work in the legal industry? (Including both legal and non-legal roles) Examples include a secretary within a law firm, or a lawyer with a private organisation [Convenience sample only]	O Yes O No (survey ends)

3. What is your email address? Please provide the email that you check most often during the working week (survey links will be sent to this address).	
4. Create your Study ID. Please write the *first 3 letters of your mothers name followed by the last three numbers of your phone number. E.g. Elizabeth and 0412 345 678= ELI678*	
5. What is your mobile number? This will be used to send a reminder for the afternoon survey. If you would prefer not to receive SMS reminders then please leave blank	

Appendix 2: Information form

MACQUARIE UNIVERSITY

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Dr Barbara Griffin
Ms Tahnee Nicholson

Information Form

RECOVERY AND ENGAGEMENT AT WORK: THE IMPACT OF INTERPERSONAL COMMUNICATION

The purpose of this study is to investigate the role that co-worker relationships and communication have on the link between recovery and engagement at work. It is our hope that by understanding the impact that at-work relationships have on overnight recovery and engagement, we will contribute to the identification of factors that lead people to engagement and wellbeing at work.

You are invited to participate in this research, which involves completing a number of short surveys over a 5-day period including:

- An initial survey that will take approximately 10 – 15 minutes to complete.
- Four morning surveys that will take approximately 2-5 minutes to complete each
- Five evening surveys that will take approximately 2-5 minutes to complete each
- The surveys will ask you about your experience of respectful and disrespectful behaviours and characteristics about yourself and your team.
- To encourage completion of the surveys, there will be a chance for participants to win one of ten x $50 vouchers at the end of the study.

This research is being conducted by Tahnee Nicholson to meet the requirements of the Masters of Organisational Psychology, under the supervision of Dr Barbara Griffin of the Department of Psychology. If you have any further questions about the research, please contact Dr Griffin (02 9850 9012, barbara.griffin@mq.edu.au). Should you experience any distress from completing this research, please go to http://www.mentalhealth.asn.au/images/pdf/Illness/Workplace_Bullying.pdf. Alternatively, please contact LifeLine on 13 11 14.

Participation is voluntary and completely anonymous. Your name NEVER appears on the survey. Please note that the researchers do not have access to your name or contact details. Neither the researchers nor your organisation will know who has chosen to complete the survey. You may withdraw from the study at any time, without having to give a reason and without consequence. You may also discontinue any of the surveys at any time if you change your mind about participating. Data will be published in averages so that no individual person could possibly be identified in any report. Once the research has been completed, a summary of the results will be made available on the organisational psychology website at Macquarie University (www.psy.mq.edu.au/orgpsych@mq).

The ethical aspects of this study have been approved by the Macquarie University Human Research Ethics Committee. If you have any complaints or reservations about any ethical aspect of your participation in this research, you may contact the Committee through the Director, Research Ethics (telephone (02) 9850 7854; email ethics@mq.edu.au). Any complaint you make will be treated in confidence and investigated, and you will be informed of the outcome.

Appendix 3: Initial survey

Please note:

- This initial survey that will take approximately 10 minutes to complete.
- Following this survey you will be required to complete a 2-3 minute survey each morning and afternoon this week (last survey will be sent out Friday afternoon).

Thank you for taking the time to contribute to improving the wellbeing and engagement of workers in the legal industry.

Please be completely honest. All responses are completely anonymous and will therefore not be linked to your personal details.

1. Will you be working Monday to Friday this week? (if no, please discontinue and take this survey next week)	O Yes O No (survey ends)

2. Please answer the following questions considering your normal working day:

	Almost Never	Rarely	Sometimes	Often	Almost Always
I seem to be in a hurry and racing against the clock.	❍	❍	❍	❍	❍
I find myself doing two or three things at one time such as eating lunch and writing a memo, while talking on the phone.	❍	❍	❍	❍	❍
I overly commit myself by biting off more than I can chew.	❍	❍	❍	❍	❍
I feel guilty when I am not working on something.	❍	❍	❍	❍	❍
I put myself under pressure with self-imposed deadlines when I work	❍	❍	❍	❍	❍

3. In the last four weeks, about how often did you…

	Never	Rarely	Sometimes	Often	Very often
Feel tired out for no good reasons?	❍	❍	❍	❍	❍
Feel nervous?	❍	❍	❍	❍	❍
Feel so nervous that nothing could calm you down?	❍	❍	❍	❍	❍
Feel hopeless?	❍	❍	❍	❍	❍
Feel restless or fidgety?	❍	❍	❍	❍	❍
Feel so restless that you could not sit still?	❍	❍	❍	❍	❍
Feel depressed?	❍	❍	❍	❍	❍
Feel that everything was an effort?	❍	❍	❍	❍	❍
Feel so sad that nothing could cheer you up?	❍	❍	❍	❍	❍
Feel worthless?	❍	❍	❍	❍	❍

4. Please answer the below questions considering the TEAM you work in:

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
My team lets people forget about work when they're at home	❍	❍	❍	❍	❍
In my team, people can keep work matters at work	❍	❍	❍	❍	❍
In my team, people are able to prevent work issues from creeping into their home life	❍	❍	❍	❍	❍
In my team, people can mentally leave work behind when they go home	❍	❍	❍	❍	❍

5. In terms of AFTER WORK hours, in my team....

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
We are encouraged to forget about work	❍	❍	❍	❍	❍
It is normal not to think about work at all	❍	❍	❍	❍	❍
People think it's good to distance themselves from their work	❍	❍	❍	❍	❍
Team members are encouraged to get a break from the demands of work	❍	❍	❍	❍	❍
We are encouraged to do relaxing things	❍	❍	❍	❍	❍
Team members use the time to relax	❍	❍	❍	❍	❍
It is normal to take time for leisure	❍	❍	❍	❍	❍

6. Are you…..
- ❍ Male
- ❍ Female

7. What is your age?

8. What is your marital status?
- ❍ Single
- ❍ Married / De facto
- ❍ Separated / Divorced
- ❍ Widowed

9. How many years have you been employed at your current workplace?

10. Are you in a management / leadership position?
- ❍ Yes
- ❍ No

11. What role are you in?
- ❍ Legal
- ❍ Legal Support
- ❍ Shared Services

12. Which team are you in?
[Organisation sample only]

13. What type of organisation are you employed in? [Convenience sample only]	❍ Private law firm ❍ Federal government ❍ State or local government ❍ Legal services or legal aid ❍ Public interest organization ❍ Business/financial/industry ❍ Other (please specify)
14. Approximately how many people work in your firm/organisation within Australia? [Convenience sample only]	❍ 0 – 50 ❍ 50 – 100 ❍ 100 – 250 ❍ 250 – 500 ❍ 500 – 1000 ❍ 1000+

Appendix 4: Morning Survey

This survey must be answered in the Morning (prior to 10.30am). A reminder that all responses are completely anonymous.

Please answer the below questions considering the period between leaving work and sleeping.

1. Yesterday afternoon / evening.....

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
I felt tense when coming home from work	❍	❍	❍	❍	❍
I was in a good mood when coming home from work	❍	❍	❍	❍	❍
I was in a good mood at the end of the workday	❍	❍	❍	❍	❍
I used the time to relax	❍	❍	❍	❍	❍
I got a break from the demands of work	❍	❍	❍	❍	❍
I did relaxing things	❍	❍	❍	❍	❍
I did not think about work at all	❍	❍	❍	❍	❍
I forgot about work	❍	❍	❍	❍	❍
I took time for leisure	❍	❍	❍	❍	❍
I distanced myself from my work	❍	❍	❍	❍	❍
I kicked back and relaxed [convenience sample only]	❍	❍	❍	❍	❍

2. Your feelings this morning

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
This morning I feel mentally recovered	❍	❍	❍	❍	❍
This morning I feel physically recovered	❍	❍	❍	❍	❍
This morning I feel well-rested	❍	❍	❍	❍	❍
This morning I am full of new energy	❍	❍	❍	❍	❍

Appendix 5: Afternoon Survey

This survey must be answered AFTER completing work (in the afternoon or evening). A reminder that all responses are completely anonymous

1. Today at work..... (Day name e.g. Monday)

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
I felt bursting with energy	❍	❍	❍	❍	❍
I felt strong and vigorous at my job	❍	❍	❍	❍	❍
When I got up in the morning, I felt like going to work	❍	❍	❍	❍	❍

2. How many hours did you spend at work today (Day name e.g. Monday)?

3. Today (Day name e.g. Monday), how often were you in a situation where any of your coworkers or superiors:

	None of the time	Rarely	A few times	On quite a few occasions	All the time
	Coworkers				
Put you down or were condescending to you?	❍	❍	❍	❍	❍
Paid little attention to your statement or showed little interest in your opinion?	❍	❍	❍	❍	❍
Made demeaning or derogatory remarks about you?	❍	❍	❍	❍	❍
Addressed you in unprofessional terms, either publicly or privately?	❍	❍	❍	❍	❍
Ignored or excluded you from professional camaraderie?	❍	❍	❍	❍	❍
Doubted your judgement on a matter over which you have responsibility?	❍	❍	❍	❍	❍
Made unwanted attempts to draw you into a discussion of personal matters?	❍	❍	❍	❍	❍
	Supervisors / Managers				
Put you down or were condescending to you?	❍	❍	❍	❍	❍
Paid little attention to your statement or showed little interest in your opinion?	❍	❍	❍	❍	❍
Made demeaning or derogatory remarks about you?	❍	❍	❍	❍	❍
Addressed you in unprofessional terms, either publicly or privately?	❍	❍	❍	❍	❍
Ignored or excluded you from professional camaraderie?	❍	❍	❍	❍	❍
Doubted your judgement on a matter over which you have responsibility?	❍	❍	❍	❍	❍
Made unwanted attempts to draw you into a discussion of personal matters?	❍	❍	❍	❍	❍

Appendix 6: Ethics approval

Approved- Ethics application- Griffin (Ref No: 5201300138)

Ethics Secretariat <ethics.secretariat@mq.edu.au>
To: Associate Professor Barbara Griffin <barbara.griffin@mq.edu.au>
Cc: Ms Tahnee Nicholson <Tahnee.nicholson@students.mq.edu.au>
Dear Associate Professor Griffin

Re: "Workplace Incivility: Impacts on recovery and engagement" (Ethics Ref: 5201300138)

Thank you for your recent correspondence. Your response has addressed the issues raised by the Human Research Ethics Committee and you may now commence your research.

This research meets the requirements of the National Statement on Ethical Conduct in Human Research (2007). The National Statement is available at the following web site:

http://www.nhmrc.gov.au/_files_nhmrc/publications/attachments/e72.pdf.

The following personnel are authorised to conduct this research:

Associate Professor Barbara Griffin
Ms Tahnee Nicholson

NB. STUDENTS: IT IS YOUR RESPONSIBILITY TO KEEP A COPY OF THIS APPROVAL
EMAIL TO SUBMIT WITH YOUR THESIS.

Please note the following standard requirements of approval:

1. The approval of this project is conditional upon your continuing compliance with the National Statement on Ethical Conduct in Human Research (2007).

2. Approval will be for a period of five (5) years subject to the provision of annual reports.

Progress Report 1 Due: 09 April 2014

Progress Report 2 Due: 09 April 2015
Progress Report 3 Due: 09 April 2016
Progress Report 4 Due: 09 April 2017
Final Report Due: 09 April 2018

NB. If you complete the work earlier than you had planned you must submit a Final Report as soon as the work is completed. If the project has been discontinued or not commenced for any reason, you are also required to submit a Final Report for the project.

Progress reports and Final Reports are available at the following website:

http://www.research.mq.edu.au/for/researchers/how_to_obtain_ethics_approval/human_research_ethics/forms

3. If the project has run for more than five (5) years you cannot renew approval for the project. You will need to complete and submit a Final Report and submit a new application for the project. (The five year limit on renewal of approvals allows the Committee to fully re-review research in an environment where legislation, guidelines and requirements are continually changing, for example, new child protection and privacy laws).

4. All amendments to the project must be reviewed and approved by the Committee before implementation. Please complete and submit a Request for Amendment Form available at the following website:

http://www.research.mq.edu.au/for/researchers/how_to_obtain_ethics_approval/human_research_ethics/forms

5. Please notify the Committee immediately in the event of any adverse effects on participants or of any unforeseen events that affect the continued ethical acceptability of the project.

6. At all times you are responsible for the ethical conduct of your research in accordance with the guidelines established by the University. This information is available at the following websites:

http://www.mq.edu.au/policy/

http://www.research.mq.edu.au/for/researchers/how_to_obtain_ethics_approval/human_research_ethics/policy

If you will be applying for or have applied for internal or external funding for the above project it is your responsibility to provide the Macquarie University's Research Grants Management Assistant with a copy of this email as soon as possible. Internal and External funding agencies will not be informed that you have final approval for your project and funds will not be released until the Research Grants Management Assistant has

received a copy of this email.

Please retain a copy of this email as this is your official notification of final ethics approval.

Yours sincerely
Dr Karolyn White
Director of Research Ethics
Chair, Human Research Ethics Committee