Toxic Work Environments

by

Ashley McCulloch

A thesis submitted to the Faculty of Graduate and Postdoctoral Affairs
in partial fulfillment of the requirements for the degree of

Doctor of Philosophy

in

Psychology

Carleton University
Ottawa, Ontario

© 2016
Ashley McCulloch

Abstract

The notion of a toxic work environment was explored as a systemic organizational issue. Structural equation modeling of survey data from 501 participants revealed that workers' toxicity appraisals were associated with a variety of sources of workplace toxicity, including leaders, coworkers, and aspects of one's job and organization. Qualitative analyses of participants' open-ended comments depicted a range from very nontoxic work environments, wherein there was respect, constructive communication between management and employees, and issues were dealt with quickly, to very toxic work environments, wherein there was abuse, difficult conditions of work, and issues were left to fester. Although management-related sources of toxicity most strongly predicted toxicity appraisals, management's lack of involvement of workers in matters that affect them had a stronger influence on toxicity appraisals than did abusive supervision. The findings highlight the importance of taking a broad view of the workplace toxicity phenomenon, and suggest a need to shift the leadership focus in toxicity research from that of a 'toxic leader' to leadership that enables toxicity. To remedy a toxic work environment, interventions could involve changes to the ways in which management designs and monitors conditions of work, as well as how they react to workers' distress. Ultimately, given the complex dynamics involved, it is more effective to prevent workplace toxicity than to remediate it; recent trends in the promotion of workplace psychological health and safety provide direction for such prevention.

Table of Contents

Introduction.....	8
Workplace Toxicity	10
Toxic Effects.....	12
Sources of Workplace Toxicity	15
Leaders.....	15
Colleagues and Customers.....	18
Work Processes.....	19
Organizational Culture.....	20
Culture supporting destructive behaviour.....	21
Culture inhibiting remedial behaviour.....	23
Summary.....	25
Toward a Comprehensive Framework for Workplace Toxicity	25
Pilot Study: A Preliminary Investigation.....	26
Method.....	28
Participants.....	28
Procedure	29
Measures	30
Results.....	34
Preliminary Analyses.....	34
Missing data.....	34
Outliers.....	34
Assumption testing	34
Control variables.....	35
Descriptives.....	38
Model Testing.....	42
Measurement model.....	43
Path model	46
Pilot Study Discussion.....	54
Moving Forward	56
Sampling	56
Measurement.....	57
Conceptual framework.....	59
Main Study: A Psychological Climate Approach.....	60
Method.....	64
Participants.....	64
Procedure	67
Measures	68
Results.....	81
Preliminary Analyses.....	81
Missing data.....	81
Outliers.....	82
Assumption testing	82
Control variables.....	83
Descriptives.....	84

Model Testing	88
Measurement model	90
Path model	92
Participants' Comments on Toxic Work Environments	96
Understanding of the term 'toxic work environment'	98
Perspectives on toxic work environment	99
Themes	100
Comments organized by toxicity level	106
Comments organized by theme	118
Integration and discussion of themes	124
Discussion	128
Conclusion	152
References	153
Appendices	166

List of Tables

Table 1. Demographic Information for Pilot Study Participants	29
Table 2. Descriptive Statistics for Pilot Study	40
Table 3. Parameter Estimates from Confirmatory Factor Analysis	45
Table 4. Parameter Estimates for the Pilot Study Model	49
Table 5. Demographic Information for Main Study Participants	64
Table 6. Work-Related Demographic Information for Main Study Participants	66
Table 7. Toxicity Scale Items with Corresponding Item-Total Correlations	75
Table 8. Inter-Item Correlation Matrix for Toxicity Scale	76
Table 9. Exploratory Factor Analysis Pattern Matrix for Toxicity Scale	76
Table 10. Correlations and Descriptive Statistics for Main Study Variables	86
Table 11. Associations Between Variables and Demographic Information	87
Table 12. Confirmatory Factor Analysis Loadings for the Measurement Model	91
Table 13. Inter-Factor Correlations for the Measurement Model	92
Table 14. Parameter Estimates for the Path Model	94
Table 15. Respondents' Comments on Toxic Work Environments, Organized by Toxicity Level and Theme	102

List of Figures

Figure 1. Frequencies for toxicity appraisals	41
Figure 2. Frequencies for bullying.....	41
Figure 3. Frequencies for sources of bullying	42
Figure 4. Hypothesized model for pilot study	43
Figure 5. Path model with standardized parameter estimates.....	48
Figure 6. Interactive effect of tolerance for harmful behaviour in the workplace and quality of leadership on toxicity appraisals	52
Figure 7. Interactive effect of tolerance for harmful behaviour in the workplace and role clarity on toxicity appraisals	53
Figure 8. Mean ratings for climate variables, organized by toxicity level	85
Figure 9. Hypothesized model for the main study	89
Figure 10. Path model with standardized parameter estimates.....	93

List of Appendices

Appendix A. Items for Pilot Study	166
Appendix B. Correlations Between Predictor Variables in Pilot Study Path Model.....	169
Appendix C. Categories of Climate Related Variables	170
Appendix D. Items for Main Study.....	173
Appendix E. Original and Revised Toxicity Appraisal Items for Main Study.....	179
Appendix F. Frequencies for Toxicity Appraisal Items.....	180
Appendix G. Collinearity Diagnostics for Main Study Variables	181
Appendix H. Squared Multiple Correlations for Main Study Measurement Model.....	183
Appendix I. Correlations Between Predictor Variables in the Main Study Path Model	184
Appendix J. Path Model with Standardized Parameter Estimates for the Prediction of “I experience a toxic work environment.”	185

Toxic Work Environments

It is not uncommon to hear the expression that a work environment is toxic. Most people have an intuitive sense of what this means; namely, that the workplace is in some way harmful to workers' well-being – often their psychological and emotional health. Despite widespread use of the term, there is not much research in organizational psychology that explores the notion of a toxic work environment. Most workplace toxicity researchers have discussed toxic leaders and their effects on workers (e.g., Goldman, 2006; Pelletier, 2010; Reed, 2004; Reed & Olsen, 2010; Steele, 2011); fewer, however, have viewed the phenomenon more broadly and considered contributors beyond leaders, such as coworker interactions (Chamberlain & Hodson, 2010; Frost, 2003), work-related processes (Frost, 2003, Maitlis & Ozcelik, 2004), and organizational culture (e.g., Flynn, 1999; Hartel, 2008; McClure, 1996; Shain, 2009; Walton, 2008).

Seeking to gain a better understanding of the phenomenon from this broader perspective, the current research explores the notion of a toxic work environment as a systemic issue, where 'system' means "a group of related parts that move or work together" (System, 2016). As such, this research considers multiple, potentially interactive, aspects of the work environment, as opposed to focusing exclusively on one particular function or person. Although characteristics of the work environment are the main focus of this research, this is not meant to suggest that intra-individual differences do not have a role in the experience of a toxic work environment. The aim here, however, is to investigate how different characteristics of the work environment relate to workers' sense that their environment is toxic.

The word toxic refers to “containing or being poisonous material especially when capable of causing death or serious debilitation” and also means “extremely harsh, malicious, or harmful” (Toxic, 2016). In this research, the toxic substances of interest are social and organizational in nature, rather than chemical, and will be referred to as toxins and stressors throughout this document; the general term ‘workplace toxicity’ is also used throughout to refer to toxicity from any source, as researchers have focused on several (e.g., toxic leaders, toxic decision processes). There is very little research on ‘toxic work environments’ specifically, and as yet no agreed-upon or explicit definition of the term in organizational psychology. That being said, Walton (2008) defined a toxic organization “as one within which behaviours which poison, are disruptive, destructive, exploitive, dysfunctional and abusive are pervasive and tolerated” (p. 9). Further, Shain (2009) defined a poisoned work environment as:

“... one in which there is a (usually) persistent and repetitious pattern of abuse, harassment or discrimination over time that is ignored, allowed to exist and/or supported by the employer and no adequate steps are taken to correct the situation” (p. 45).

Consistent with these definitions, workplace toxicity researchers have noted that the mere presence of stressors (e.g., high workload, destructive behaviour) in the work environment does not necessarily imply toxicity (e.g., Padilla, Hogan, & Kaiser, 2007; Reed, 2004). Indeed, a number of researchers (e.g., Frost, 2003; Frost & Robinson, 1999; Lawrence, 2008; Maitlis & Ozcelik, 2004), as well as the definitions above, point to the importance of the persistence and dosage of stressors, as well as organizational members’ responses to them. This is consistent with some of the fundamental tenets of toxicology; namely, that toxic effects are dose dependant and as such virtually any substance could

be toxic at some dose (Hodgson, 2004), and that toxicity is not a property of a substance, but rather describes the harmful outcome of a specific substance-host interaction (Mückter, 2003).

Considering these points, one might say a toxic work environment, from a systemic perspective, is one that operates in a way that permits workplace stressors to reach a critical dose and hence have detrimental effects on workers' well-being. A toxic work environment can be differentiated from related constructs such as bullying and abusive supervision in that these stressors might be present in a toxic work environment, but it is also possible that they are not; a toxic work environment refers to a more general, harmful dynamic in the work environment and is about the persistence of stressors rather than the specific stressors themselves. The issue of dose suggests that stressors in a toxic work environment are either extreme or, if not, have persisted for so long that their impact is amplified. Although it does not appear that harm must be widespread for an environment to be considered toxic, as a reflection of a broader workplace dynamic it is easy to imagine that a toxic work environment could have far reaching effects.

The aim of the current research was to advance the study of toxic work environments from a systemic perspective by investigating how various potentially interactive characteristics of the work environment are associated with this phenomenon. The ultimate goal of the research is to inform the development of a framework to assist in interventions to address a toxic work environment.

Workplace Toxicity

Workplace toxicity has been examined from a number of perspectives, but there is currently no unified view of the phenomenon. Researchers have identified people and

processes in the workplace as toxic, such as toxic leaders (Padilla et al., 2007; Pelletier, 2010) and toxic decision making (Maitlis & Ozcelik, 2004); some have classified workers' own reactions as toxic, as in the case of toxic emotions (Frost, 2003) and emotion-induced toxicity (Lawrence, 2008), and others have referred to the work environment as toxic, noting the presence of conditions such as interpersonal conflict (Chamberlain & Hodson, 2010). Together, the research suggests workplace toxicity is defined by a perpetual experience of negative emotion on the part of workers in response to conflictual and/or repressive interpersonal, job-related, and/or organizational conditions. However, notwithstanding the myriad of factors potentially involved in workplace toxicity, researchers have tended to focus exclusively on one or a few at a time. Those who have discussed the interaction of multiple factors have centered fairly strongly on toxic leaders and have suggested how characteristics of workers and/or the work environment support their existence (e.g., McClure, 1996; Padilla et al., 2007). Overall, the various perspectives on workplace toxicity do not appear mutually exclusive; rather, they seem to represent different lenses from which the phenomenon has been viewed.

Despite researchers coming at the issue of workplace toxicity from different perspectives, there is some agreement with regard to symptoms and sources of workplace toxicity, as well as some consistency in suggestions of how it develops. At this relatively early stage of workplace toxicity research, however, approaches have been mainly descriptive and so empirical evidence is limited. Researchers have provided a sense of what workplace toxicity looks like and how it works, but further research is required to

better understand this phenomenon, and ultimately a comprehensive theoretical framework is needed.

Toxic Effects

By definition, to be toxic is to be harmful; thus, an important aspect of workplace toxicity is the harm suffered by members of the organization, and by the organization itself. At the individual-level, symptoms have been identified as psychological, emotional, behavioural, attitudinal, cognitive, and physiological. Over time, organizations whose members suffer from toxicity are also said to exhibit symptoms, such as reduced functioning and increased financial costs (e.g., Goldman, 2006; Steele, 2011). Ultimately, it appears workplace toxicity could have numerous and far-reaching effects, underscoring the importance of addressing this phenomenon, both for individuals' well-being and the potential negative sequelae on an even larger scale.

Regarding the individual-level, it has been reported that workers affected by workplace toxicity experience forms of psychological distress such as depression (Flynn, 1999; Kimura, 2003; Reed, 2004), anxiety (Appelbaum & Roy-Girard, 2007; Dyck & Roithmayr, 2001; Gallos, 2008; Goldman, 2006; Maitlis & Ozcelik, 2004), and burnout (Frost & Robinson, 1999; Lawrence, 2008). Emotionally, they can experience negative mood (Appelbaum & Roy-Girard, 2007; Dyck & Roithmayr, 2001; Goldman, 2006; Maitlis & Ozcelik, 2004), fear, embarrassment (Maitlis & Ozcelik, 2004), or anger (Appelbaum & Roy-Girard, 2007; Dyck & Roithmayr, 2001; Flynn, 1999; Goldman, 2006; Kimura, 2003; Maitlis & Ozcelik, 2004). They could also suffer decreased self-esteem (Goldman, 2006; Pelletier, 2010), self-efficacy (Pelletier, 2010), and motivation

(Chamberlain, 2010; Pelletier, 2010). Essentially, these workers can suffer impairments that affect their desire and capacity to work.

Behavioural symptoms of workplace toxicity include reduced interaction (Brown, 2004; Chamberlain & Hodson, 2010; Dyck & Roithmayr, 2001; Goldman, 2006; Steele, 2011), cooperation (Dyck & Roithmayr, 2001), and job effectiveness (Flynn, 1999; Ghosh, Jacobs, & Reio, 2011; Kimura, 2003; Pelletier, 2010; Steele, 2011), as workers withdraw their effort and attention from work. Increased interpersonal hostility has also been reported (Appelbaum & Roy-Girard, 2007; Chamberlain & Hodson, 2010; Dyck & Roithmayr, 2001; Steele, 2011; Stein, 2007), along with increased complaints (Goldman, 2008; Kulik, Cregan, Metz, & Brown, 2009; Reed & Olsen, 2010) and accidents (Brown, 2004). Attitudinally, workers suffering from toxicity can exhibit decreased job satisfaction (Ghosh et al., 2011; Goldman, 2006; Lawrence, 2008; Pelletier, 2010; Steele, 2011) and commitment to the organization (Ghosh et al., 2011; Goldman, 2006; Pelletier, 2010; Steele, 2011), as well as greater intention to leave the organization (Goldman, 2006; Lawrence, 2008; Pelletier, 2010).

Cognitive symptoms of workplace toxicity include impaired judgment (Appelbaum & Roy-Girard, 2007; Chamberlain & Hodson, 2010; Dyck & Roithmayr, 2001; Gallos, 2008), inability to concentrate, and memory loss (Appelbaum & Roy-Girard, 2007; Dyck & Roithmayr, 2001). Workers can also experience a heightened awareness of their environment (Dyck & Roithmayr, 2001; Yeo & Carter, 2008), and it has been suggested that such hypervigilance to threat further increases anxiety (Taghavi, Neshat-Doost, Moradi, Yule, & Dalgleish, 1999). Workers who suffer from toxicity can also exhibit poor physical health (Brown, 2004; Ghosh et al., 2011; Lawrence, 2008); in

particular, they may suffer muscle tension (Dyck & Roithmayr, 2001; Yeo & Carter, 2008), aches and pains (e.g., Gallos, 2008; Frost & Robinson, 1999), ulcers, heart attacks, or nausea (Frost & Robinson, 1999).

Given workplace toxicity appears to affect the way individuals feel, think, and behave, it is not surprising that it can ultimately have organization-level effects.

Workplace toxicity can result in high absenteeism (Appelbaum & Roy-Girard, 2007; Chamberlain & Hodson, 2010; Dyck & Roithmayr, 2001; Goldman, 2006; Flynn, 1999; Kimura, 2003), turnover (Appelbaum & Roy-Girard, 2007; Brown, 2004; Chamberlain & Hodson, 2010; Steele, 2011; Ghosh et al., 2011; Goldman, 2006; Flynn, 1999; Kimura, 2003), and overall productivity losses (Appelbaum & Roy-Girard, 2007; Brown, 2004; Dyck & Roithmayr, 2001; Goldman, 2006; Ghosh et al., 2011). It can also lead to increases in legal claims (Brown, 2004; Ghosh et al., 2011; Kulik et al., 2009), as well as higher benefits expenses for short- and long-term disability, and use of employee assistance programs and drug plans (e.g., Appelbaum & Roy-Girard, 2007; Brown, 2004; Dyck & Roithmayr, 2001).

In sum, there is a substantial list of symptoms that have been claimed to be a result of workplace toxicity. However, in most research ascribing symptoms to toxicity, researchers did not ask participants whether *they* perceived their situation to be toxic. Instead, to ascertain the symptoms of workplace toxicity, most have extrapolated from related literature on workplace conditions that harm worker well-being and organizational functioning (e.g., Appelbaum & Roy-Girard, 2007; Ghosh et al., 2011), or have drawn on their observations from their own workplace or consulting endeavors (e.g., Gallos, 2008; Goldman, 2006, 2008). Even those researchers that examined symptoms of toxicity

empirically (e.g., Chamberlain & Hodson, 2010; Maitlis & Ozcelik, 2004; Steele, 2011) deemed independently that certain situations or behaviours were toxic and measured the extent to which exposed workers experienced various symptoms. This situation highlights an important methodological gap whereby symptoms of toxicity have not yet been empirically linked to workers' own perceptions of toxicity. Thus, the current research measures workers' own appraisals of toxicity and assesses the relation between those appraisals and individual-level symptoms.

Sources of Workplace Toxicity

Researchers have described workplace toxicity as stemming from interpersonal exchanges amongst organizational members, as well as from the formal and informal ways in which responsibilities and the work environment are organized (e.g., Chamberlain & Hodson, 2010; Frost, 2003; Frost & Robinson, 1999; Maitlis & Ozcelik, 2004; McClure, 1996). In their explorations of toxicity, many researchers have highlighted contributing factors (e.g., leaders) in isolation, though there is enough discussion of dynamics involving multiple factors (e.g., leaders and culture) to suggest that this more encompassing view merits attention. Indeed, it would seem only natural for a variety of factors to interact in a workplace system. This section covers leaders, colleagues and customers, work processes, and organizational culture as sources of workplace toxicity.

Leaders. The most commonly researched source of workplace toxicity is leadership that entails a subset of destructive or dysfunctional leader behaviours and characteristics. Toxic leaders have been described as self-interested, controlling, malevolent individuals who abuse their power, role, and followers (e.g., Appelbaum &

Roy-Girard, 2007; Frost & Robinson, 1999; Gallos, 2008; Goldman, 2008; McClure, 1996; Pelletier, 2010; Reed, 2004; Steele, 2011; Walton, 2007). Some researchers have proposed typologies for leadership toxicity (e.g., Lubit, 2004; McClure, 1996; Pelletier, 2010); however, it has also been argued that because toxic leaders each have their own personality, perceptions, and attitudes, the generalizations inherent in typologies cannot be made about their behaviour (Appelbaum & Roy-Girard, 2007). Nevertheless, some research has revealed general agreement as to the types of behaviours and characteristics that constitute toxic leadership (e.g., Pelletier, 2010).

Toxic leaders are said to approach their leadership role in a shortsighted (Appelbaum & Roy-Girard, 2007; Kimura, 2003; Steele, 2011) and unethical manner (Frost & Robinson, 1999), deceiving others (Lubit, 2004; Pelletier, 2010; Walton, 2007) and manipulating rules (Pelletier, 2010). They reportedly avoid making decisions until crises arise and also change direction suddenly without a clear rationale (Bacal, 2000). From a worker's perspective, toxic leaders may seem unpredictable (Appelbaum & Roy-Girard, 2007; Bacal, 2000; Kimura, 2003) or inconsistent in terms of what they say and do (Bacal, 2000; McClure, 1996). This type of leadership could be confusing and frustrating for workers, thus creating uncomfortable conditions of work.

Toxic leaders reportedly harm workers more directly by exploiting them (Lubit, 2004; Walton, 2007) and showing little appreciation for their ideas (Kimura, 2003; Pelletier, 2010). They are said to micromanage workers (Lubit, 2004) and to hoard information (Steele, 2011). Further, toxic leaders purportedly take credit for their department's successes (Kimura, 2003) and blame others for shortcomings (Kimura,

2003; Pelletier, 2010). In these ways, toxic leaders appear to use workers to their own advantage, as opposed to benefitting the organization or the workers themselves.

When challenged, toxic leaders are said to react poorly (Bacal, 2000) and to stifle dissent (Pelletier, 2010). They are purportedly vindictive (Frost & Robinson, 1999) and aggressive (Flynn, 1999; Kimura, 2003; Pelletier, 2010; Steele, 2011), and act out in anger rather than discussing problems (Lubit, 2004; McClure, 1996). To get their way, these leaders reportedly use harsh influence tactics (Pelletier, 2010) and intimidation (Lubit, 2004; Steele, 2011). They also employ social exclusion and attack workers' self-esteem (Pelletier, 2010). Toxic leaders thus appear to abuse workers while advancing their own agenda and make it difficult for workers to remedy or leave the situation.

Toxic leaders reportedly marginalize (Pelletier, 2010) and disrespect workers (Appelbaum & Roy-Girard, 2007; Kimura, 2003; Reed, 2004). They are said to demonstrate a lack of concern for workers' well-being (Appelbaum & Roy-Girard, 2007; Reed, 2004). They also reportedly avoid workers (Steele, 2011), particularly when situations are emotionally charged, such as when there is conflict or when discipline is required (Bacal, 2000). Further, these leaders purportedly take no responsibility for their behaviour (McClure, 1996) and blame workers for their own problems (Steele, 2011). Toxic leaders thus disregard workers and seemingly distance themselves from their concerns.

Taken together, there is a dominant focus on leaders in workplace toxicity research, which is not surprising given that leaders are perceived as closely linked to the power structures that create and solve problems (Gallos, 2008). The research on toxic leadership appears to fit with Shain's (2009) definition of poisoned work environment in

that it reflects non-constructive leader responses to workers' concerns and the propensity for harmful conditions to go unresolved under their direction; in addition, the leader themselves could be the source of abusive conduct, harassment, or discrimination noted in Shain's (2009) definition. Leaders represent only one aspect of the workplace system, however, and though they can be immensely impactful, they do not operate in isolation and hence should not be considered the exclusive source of toxicity. Indeed, researchers have identified sources of toxicity not solely attributable to leaders, showing there is more to the phenomenon.

Colleagues and customers. Research on interpersonal sources of toxicity other than leadership is relatively scarce, however some researchers have described how behaviour by other organizational members might relate to toxicity. In particular, interpersonal conflict with customers (Chamberlain & Hodson, 2010; Stein, 2007) and colleagues (Frost, 2003) has been identified as potentially toxic to workers. Indeed, regardless of the source of the interpersonal conflict, the experience can invoke negative reactions in workers, such as distress and dejection (Stein, 2007), and it seems to be on this basis that it is considered a source of toxicity.

The term "toxic continuum" has been used to capture a broad range of workplace behaviours that characterize toxicity, from incivility to physical acts of violence (Ghosh et al., 2011). Incivility is defined as a form of deviant behaviour that is low in intensity, has ambiguous intent to harm, and violates workplace norms of mutual respect (Andersson & Pearson, 1999); for the toxic continuum, Ghosh and colleagues (2011) described uncivil acts such as neglecting to say please and thank you, sending "snippy" emails, and giving the silent treatment. Behaviours such as gossiping and spreading

rumours with malicious overtones have also been described as toxic (Brown, 2004), as have more intrusive behaviours like intimidation, threats, and bullying (e.g., Brown, 2004; Frost, 2003; Ghosh et al., 2011). Direct acts of physical violence are most severe on the toxic continuum and include assault and homicide (Ghosh et al., 2011). In sum, interpersonal sources of toxicity can be not only leaders, but also anyone with whom one interacts at work from colleagues to clients who engage in acts ranging from mildly uncivil to overtly aggressive.

Work processes. Some researchers have suggested that toxic reactions can result not only from interpersonal relations, but also from the ways in which work is organized (e.g., Chamberlain & Hodson, 2010; Frost, 2003; Frost & Robinson, 1999; Maitlis & Ozcelik, 2004). The structure of work processes, or even a lack thereof, can be toxic to workers in that it can represent a systemic source of distress (Frost & Robinson, 1999). For example, ineffective or stressful production processes, such as when activities are scheduled in an incoherent manner, or when systems of control are excessively rigid or coercive, reportedly constitute toxic conditions (Chamberlain & Hodson, 2010). Further, inadequate supervision (Chamberlain & Hodson, 2010), unreasonable performance targets (Frost & Robinson, 1999), and added workload (Frost, 2003) and have been identified as toxins, as have the intrusion of work into one's personal life (Frost, 2003; Webber, 1998), unrelenting internal competition (Frost & Robinson, 1999), and a lack of resources (Reed, 2004).

Some have looked at toxic work processes more closely and have associated them with emotional reactions in workers. Toxic decision processes, for example, are said to produce widespread negative emotion in organizations (Maitlis & Ozcelik, 2004). A

toxic decision process reportedly consists of an initial avoidance on the part of decision makers, an associated buildup of negative emotion in workers, and an eventual decision leading to a release of emotion by workers that is met with a lack of sensitivity on the part of decision makers (Maitlis & Ozcelik, 2004). Organizational justice violations are also considered toxic because perceptions of unfair treatment, whether procedural, distributional, or interactional, reportedly generate negative emotional reactions in workers (Lawrence, 2008). Thus, organizational practices may be toxic to workers by representing noxious working conditions they are obligated to endure.

Organizational culture. The sources of toxicity described thus far have been relatively focused and basically akin to discrete workplace stressors. Toxicity, however, is said to describe a substance host-interaction (Mückter, 2003); thus, the dynamics of the work environment (i.e., the way things are done in the organization) merit attention. It has been suggested that toxicity results from cumulative effects of toxic behaviour in the workplace (Reed, 2004) and that its severity depends on the number, frequency, and intensity of those behaviours (Appelbaum & Roy-Girard, 2007; Flynn, 1999). Others have suggested that toxicity occurs when issues are chronic (Frost & Robinson, 1999) or extend over space and time, become mutually reinforcing, and create a pervasive feeling of contamination among workers (Stein, 2007). It has also been suggested that toxicity develops based on the interplay between an issue (or stressor) and organizational members' actions and emotions in response to it (e.g., Frost, 2003; Maitlis & Ozcelik, 2004). Indeed, Wilson (2014) noted that toxic leadership, for instance, would be a problem in any organization that lacked mechanisms to control it. As a dynamic force

that shapes workplace behaviour, organizational culture may play an important role in the development of workplace toxicity by influencing the perpetuation of stressors.

Organizational culture captures organizational members' ingrained ways of interacting with their work and with each other, and is defined as:

“a pattern of shared basic assumptions that was learned by a group as it solved its problems of external adaptation and internal integration, that has worked well enough to be considered valid and, therefore, to be taught to new members as the correct way to perceive, think, and feel in relation to those problems” (Schein, 2004, p.17).

Organizational culture is continuously enacted and created through organizational members' interpersonal interactions and serves to guide and constrain their behaviour (Schein, 2004). It has been suggested that organizational culture may affect behaviour in ways that enable the development of toxicity (e.g., Appelbaum & Roy-Girard, 2007; Frost & Robinson, 1999; McClure, 1996; Nursing Standard, 2011; Shain, 2009), namely by supporting destructive behaviours and inhibiting remedial ones, though this has not yet been demonstrated empirically.

Culture supporting destructive behaviour. McClure (1996) suggested that the main reason toxic leadership exists is because the behaviour is tolerated, knowingly or not, by the culture of the organization. For example, a 'macho culture' which emphasizes 'taking it like a man' and not discussing problems, may enable toxic leaders who act out in anger (McClure, 1996) because the leader's behaviour may not be questioned and indeed may in some ways be expected. Along these lines, Padilla and colleagues (2007) proposed the toxic triangle whereby destructive leaders are said to bring about damage not only because of their own personal characteristics, but also because of supportive followers who do not stop them and environments that enable them, again suggesting that

a certain tolerance for a leader's destructive behaviour, and hence its perpetuation, makes the situation toxic.

Flynn (1999) noted that the more an organization's culture enables the toxic behaviour of its leaders, the more toxic the organization. Indeed, researchers have suggested it is characteristic of toxic leaders to fail to recognize workers' concerns and acknowledge their distress (Goldman, 2008; Pelletier, 2010; Reed & Olsen, 2010; Steele, 2011); Goldman (2008) suggested that this amounts to collusion in the development of toxicity. Even when leaders are aware of workers' concerns, Goldman (2008) suggested they might mismanage the situation. For example, they may ignore it or fail to examine the origins of the toxins (e.g., Goldman, 2008; Maitlis & Ozcelik, 2004), they could take a firm stand and rationalize the situation, or attempt to suppress the negative emotion expressed by workers (Maitlis & Ozcelik, 2004). Regardless of whether the leader's response is due to a lack of awareness, concern, or skill, organizational cultures that permit such responses - for example, where there is limited-to-no management oversight or training to ensure more constructive responses - may promote toxicity by enabling the continued presence of workplace stressors, as they have not been successfully addressed, or addressed at all.

Researchers have also suggested that a culture that enables toxic behaviour in leaders could shape workers' behaviour in a similar way by influencing the type and severity of behaviour that is accepted in the workplace (Appelbaum & Roy-Girard, 2007). Indeed, of all organizational members, leaders can have the strongest influence on culture. The destructive behaviours they exhibit reportedly cause a 'ripple effect' and influence workers far beyond the initial point of impact (Lubit, 2004) by creating a

culture in which others are persuaded to act in a similarly toxic way (Appelbaum & Roy-Girard, 2007). In this way, organizational culture may contribute to toxicity by facilitating the pervasiveness of destructive behaviour in the workplace.

Culture inhibiting remedial behaviour. Organizational culture may also contribute to workplace toxicity by inhibiting behaviour that would help to remedy the situation. Some have noted that leaders' behaviour is influenced by externally driven circumstances, such as instability, perceived threat (Padilla et al., 2007; Steele, 2011; Walton, 2007), and financial crises (Flynn, 1999; Kimura, 2003; Walton, 2007) and that, particularly in the case of financial crises (Kimura, 2003; Reed, 2004; Yeo & Carter, 2008), a narrow focus on short-term profits may encourage leaders to focus on performance targets, possibly at the expense of workers' well-being. These leaders may lack incentives or motivation to deal with workers' concerns, or the workers' concerns (e.g., excessive workload) might even be the result of the leader's intense focus on performance. Thus, in cultures heavily influenced by external adaptation, performance expectations for leaders might constrain their efforts and/or capacity to address workers' distress; hence, stressors would likely persist.

Workplace toxicity researchers have also touched on the concept of affective culture, which influences how workers experience, express, and regulate their emotions at work (Alvesson, 2002; Hartel, 2008). Gallos (2008) noted that acculturation could promote potentially unnatural affective responses, coping strategies, and communication patterns, and as such workers could be socialized to accept and/or perpetuate the experience of toxins. Examples include choosing to follow threatening direction because of a 'don't question, just do as I tell you' culture (Yeo & Carter, 2008), and not

discussing interpersonal issues face-to-face because of a culture that avoids conflict (Goldman, 2008) – in either case, the stressor affecting the worker would persist. Indeed, Reed and Olsen (2010) suggested that toxins persist in organizations because people tolerate them, protect them, and change to accommodate them.

Lawrence (2008) similarly suggested that when exposed to stressors, it is the workers who react with negative emotions, and subsequently cope by suppressing the expression of those emotions, who suffer from toxicity. Indeed, while emotional expression is actively inhibited during emotional suppression (Gross & Levenson, 1993, 1997), the individual continues to feel the emotion (Stein, 2007). Therefore, by dictating which emotions are appropriate to express and which should be contained (Lewis, 2000), organizational culture may contribute to toxicity by constraining affected individuals from seeking and achieving relief from their negative experiences at work.

Organizational culture, in sum, may provide the conditions for leaders and other organizational members to behave in ways that support the development of toxicity. In particular, culture may promote destructive behaviour (e.g., Appelbaum & Roy-Girard, 2007; Flynn, 1999; McClure, 1996; Padilla et al., 2007), as well as stifle constructive communication and action regarding stressors and their effects (e.g., Gallos, 2008; Goldman, 2008; Reed & Olsen, 2010; Yeo & Carter, 2008), allowing them to exist, persist, and possibly escalate (e.g., Ghosh et al., 2011; Goldman, 2008; Maitlis & Ozcelik, 2004). Ultimately, whether stressors are encouraged, accepted, protected, or ignored, the situation could be equally harmful because it is the perpetuation of stressors, and hence the unrelenting threat to workers' well-being, that appears to be at the root of workplace toxicity. Given that organizational culture could potentially influence the

perpetuation of stressors in several ways, it should be considered in assessments of workplace toxicity.

Summary. Overall, the research suggests that various characteristics of an organizational system can contribute to the development of toxicity. These characteristics extend beyond leaders to include other organizational members, work processes, and organizational culture. Indeed, it appears that workplace toxicity may be more about the dynamics of a work environment than discrete workplace hazards. That is, for someone to claim their workplace is toxic would be more than indicating their workload was too high, or that their boss was mean; it would be indicating there were issues with workload or supervision - and there was insufficient (if any) intervention to address the situation, so the stressor(s) persisted to the point of harm. Thus, unless an approach to workplace toxicity accounts for a wide range of potentially interrelated contributors – such as organizational members from multiple levels, various work processes, and the culture of the organization - any associated interventions may be too isolated to be successful long-term.

Toward a Comprehensive Framework for Workplace Toxicity

The multifaceted view of workplace toxicity gleaned from the literature suggests that the phenomenon might be best captured from a broad perspective that accommodates the various workplace conditions that are potentially involved. There are also several research gaps that merit attention. First, research is needed wherein workers themselves are asked whether they are experiencing toxicity. Second, empirical evidence is needed connecting workers' toxicity appraisals and workers' well-being. Third, an exploration of toxicity with leaders as one piece in a larger context (i.e., among other potential

sources of toxicity) is needed to help ascertain whether the strong focus on leaders in the toxicity literature is warranted. Fourth, empirical research that considers the influence of organizational culture in workplace toxicity is needed. The current research aims to address the aforementioned gaps while framing the issue of workplace toxicity from a systemic perspective – that is, one that acknowledges various potential aspects of a larger workplace dynamic.

The current research explores toxicity from this broader perspective by investigating associations between workers' toxicity appraisals and various potential sources of toxicity suggested in the literature. As a first step, a pilot study was conducted by piggybacking on a workplace stress assessment that was already underway, which allowed for an exploration of relations between several workplace stressors, workers' appraisals of toxicity, and their self-reported ill-being. The results of the pilot then informed the conceptual model to be tested in the main study, which explored these relations in greater depth and expanded on the measures; particularly that of toxicity. The ultimate goal, toward which this research represents an early step, is the development of a comprehensive framework for workplace toxicity that could be used to inform interventions.

Pilot Study: A Preliminary Investigation

The main objective of the pilot study was to do a preliminary examination of the relations between workers' perceptions of workplace stressors, toxicity, and their own ill-being, with consideration of organizational culture. The study was conducted by adding items to an existing survey of workplace stressors for a group of unionized employees in the field of social work. The employees' union had requested that an outside

organization carry out a workplace assessment in response to complaints from a number of employees regarding stress and, in some cases, a toxic work environment. Although the organization's survey effort had already been through its own pilot phase, there was an opportunity to add the items for the current study just prior to the survey's full launch.

The survey included measures of workplace stressors and aspects of workers' ill-being; thus, for the current study, the variables that matched sources and symptoms of workplace toxicity suggested in the literature were selected from the available measures. From the stressors, leadership quality, bullying, work tempo, and role clarity were selected, and from the symptoms, stress, burnout, cognitive stress, and somatic stress were selected. For the pilot study, I also wanted to capture workers' appraisals of toxicity and a sense of their organization's culture; thus, in collaboration with the project leader for the survey effort, two items were developed and added to the survey. For the toxicity appraisal, given the sensitivity around a union or other outside body asking an organization's employees if they feel their work environment is toxic, the item was framed as an assessment of workplace psychological health and safety climate, using a rating scale from 'safe and supportive' to 'toxic.' The culture item, which was intended to get at the extent to which the organizational culture supports behaviour that could be toxic, was similarly focused on psychological health and safety, asking whether the workplace culture was tolerant of behaviour that was harmful to workers' mental health.

The key research questions explored in the pilot study were:

- 1 - Do various sources of workplace toxicity (i.e., workplace stressors and tolerance for harmful behaviour) relate to workers' appraisals of toxicity?

2 - Do workers' appraisals of toxicity relate to their self-reported ill-being? How does this relation compare to the relations between sources of toxicity and self-reported ill-being?

3 - Do workers' assessments of the extent to which their workplace's culture tolerates harmful behaviour influence the relations between workplace stressors and appraisals of toxicity?

Method

Participants

The pilot study used data drawn from a larger survey project conducted by a not-for-profit organization that provides occupational health information and services (e.g., research, outreach, diagnostic) to a wide range of clients, including workers, unions, employers, health professionals, students, and the public. The specific survey project from which the data for the current study were drawn was to assist a union to identify workplace stressors experienced by their members, as unions represent employees' interests in dealings with management. The union's membership is composed of direct employees of the provincial government and employees from the broader public service in several sectors. For the current study, survey data were from employees of a social service agency for children.

Survey participants were 1,200 full-time employees from 11 agency offices across Ontario¹. The majority (88.4%) of participants were female and over 60% of the sample was between the ages of 30 and 49, with approximately two thirds of those participants being in their 30s. Most participants (79.4%) were social workers (e.g., child, youth, and family social workers), several (11.4%) were administrative assistants, and others (6.2%)

¹ An additional 26 people responded to the survey but did not fit the criteria of 'employee' and instead were 'management,' 'manager,' 'supervisor,' or 'consultant', so these cases were deleted. The sample was hence reduced from 1,226 cases to 1,200 cases.

were from a variety of occupations (e.g., recruiter, maintenance worker, psychologist).

See Table 1 for a breakdown of demographic information.

Table 1

Demographic Information for Pilot Study Participants

		Frequency	%
Gender	Female	1061	88.4%
	Male	117	9.8%
	Transgendered	2	0.2%
	Not specified	20	1.7%
Age	Under 20 years old	0	0%
	20-29 years old	190	15.8%
	30-39 years old	432	36%
	40-49 years old	330	27.5%
	50-59 years old	204	17%
	60 or more years old	29	2.4%
	Not specified	15	1.3%
Job	Social Worker	953	79.4%
	Administrative Assistant	137	11.4%
	Other	74	6.2%
	Not specified	36	3%

Note. n = 1,200.

Procedure

Permission to use the workplace stressor survey data for the current study was received from both the union and the organization running the survey. To recruit participants, union representatives contacted local union executives from child social service agencies across Ontario and requested that for each agency workplace they select a coordinator to champion the survey project and be a contact for the union representative. Each coordinator sought endorsement for the project from bargaining unit leaders within their workplace. Bargaining units are groups of unionized employees with a community of interest; bargaining unit leaders are elected from within the group to act

as a liaison with union staff and executives for their workplace. Coordinators emailed members of participating bargaining units, informing them that the purpose of the survey was to identify workplace stressors that were affecting them in order to develop and present a plan to their employer to address the top three issues. Members were told there was no requirement that they be suffering from workplace stress to complete the survey.

A link to the online survey, administered using SurveyMonkey, was included in the email and interested members could complete the survey at a time and location of their choosing. At the outset of the survey, participants were informed that all reports and publications derived from the survey responses would be presented such that the identity of any individual respondent was not revealed and was kept confidential. Participants were also informed that their participation implied they consent to the use of their anonymous survey responses in academic research and publications. The coordinators informed the union representative of how many survey links they sent out and reminded members about the survey two, four, and six weeks after the initial invitation to participate. Once data collection was complete, in June 2013, union representatives provided participants' data in anonymous form to the project leader for the survey effort, who then provided it to me. Of a possible 2,056 responses, the 1,200 member responses represented a response rate of 58%.

Measures

Participants completed the measures for the current study as part of a larger survey that consisted of 94 items in total and took approximately 15 minutes to complete. The survey was constructed using published scales from the second version of the Copenhagen Psychosocial Questionnaire (COPSOQ II, 2007 edition) (Pejtersen,

Kristensen, Borg, & Bjorner, 2010), as well as two items developed for the current study to address specific areas of interest. Participants filled out all of the measures themselves, so the ratings represent their perceptions. A complete list of the subset of survey items used for the current study, along with their rating scales, is presented in Appendix A. Scales were constructed by computing a mean score across scale items. The measures are described below with published internal consistencies in parentheses, where available; internal consistencies from the current study are included in italics.

Toxicity appraisal. Participants' appraisals of their work environment were assessed to capture their own perception of whether their environment was toxic, as opposed to having someone else deem the work environment toxic for them. Toxicity appraisals were assessed using a single item developed for the current study. Participants rated the item "how would you rate the psychological health and safety climate in your workplace?" using a 7-point Likert scale from 1 (healthy/supportive) to 7 (toxic); thus, higher scores indicated less favourable (i.e., more toxic) appraisals. Due to sensitivities around directly asking workers to indicate whether they perceived their work environment as toxic, the toxicity appraisal was included as an end point on a rating scale.

Tolerance for harmful behaviour. Participants' perceptions that their workplace culture tolerates harmful behaviour were assessed to capture ideas from the literature regarding the involvement of organizational culture in workplace toxicity; namely, that toxicity exists because it is permitted by the culture (e.g., McClure, 1996). Tolerance for harmful behaviour was assessed using a single item developed for the current study. Participants rated the item "to what extent would you agree that the culture

of this organization does not tolerate behaviour that harms the mental health of those who work here?” on a 5-point Likert scale from 1 (strongly agree) to 5 (strongly disagree); thus, higher scores indicated greater tolerance for harmful behaviour in the organization. Based on consultation with the organizations running the survey, the tolerance item was negatively worded because there were concerns regarding management’s willingness to allow the question if it asked about tolerance of harmful behaviour.

Workplace stressors. Four workplace stressor variables: quality of leadership, bullying, work tempo, and role clarity were assessed as representations of sources of toxicity noted in the literature; namely the sources of leader, colleagues and customers, and work processes. All four scales were COPSOQ II (Pejtersen et al., 2010) short-form scales, consisting of 2 items each. Published reliability information is not available for the short-form COPSOQ II scales (National Research Centre for the Working Environment, 2009); thus, the reliability estimates presented in parentheses were calculated using the data from the present study.

For quality of leadership ($\alpha = .86$), participants rated 2 items including “to what extent would you say your immediate superior gives high priority to job satisfaction?” using a 5-point Likert scale from 1 (a very small extent) to 5 (a large extent) (Pejtersen et al., 2010); thus, higher scores indicated higher quality of leadership. For bullying, participants rated how frequently, if at all, during the last 12 months they had been exposed to bullying, using a scale from 1 (no) to 5 (yes, daily) (Pejtersen et al., 2010); thus, higher scores indicated greater frequency of bullying. Participants also indicated the source(s) of the bullying from the following options: colleagues, manager/superior, subordinates, and clients/customers/patients. For work tempo ($\alpha = .85$), participants

rated 2 items including “do you work at a high pace throughout the day?” using a 5-point Likert scale from 1 (never/hardly ever) to 5 (always) (Pejtersen et al., 2010); thus, higher scores indicated higher work tempo. For role clarity ($\alpha = .80$), participants rated 2 items including “does your work have clear objectives?” using a 5-point Likert scale from 1 (a very small extent) to 5 (a very large extent) (Pejtersen et al., 2010); thus, higher scores indicated greater role clarity.

Ill-being. Four aspects of workers’ ill-being: stress, burnout, cognitive stress, and somatic stress were assessed as representations of symptoms of toxicity described in the literature; namely, psychological, cognitive, and physical symptoms. All four scales were from the COPSOQ II (Pejtersen et al., 2010) and consisted of 4 items each. Published reliability estimates, as well as those computed for the current study, are in parentheses.

For all four of the ill-being scales, participants rated how often over the last four weeks they had experienced specific symptoms using a 5-point Likert scale from 1 (not at all) to 5 (all the time) (Pejtersen et al., 2010). Symptoms were assessed with items such as the following: for stress ($\alpha = .81$; $\alpha = .87$), “how often have you had problems relaxing?;” for burnout ($\alpha = .83$; $\alpha = .91$), “how often have you felt worn out?;” for cognitive stress ($\alpha = .83$; $\alpha = .87$), “how often have you had problems concentrating?;” and for somatic stress ($\alpha = .68$; $\alpha = .70$), “how often have you had a stomach ache?” (Pejtersen et al., 2010). For all four scales, higher scores indicated greater frequency of symptoms.

Demographics. Demographic information was collected regarding participants’ gender, age, and job title.

Results

Preliminary Analyses

Missing data. Of the 1,200 cases in the dataset, 281 (23.4%) had missing data. Every item had some missing data, and overall, 12.5% of values were missing. Little's MCAR test was non-significant: $\chi^2 = 844.62$, $df = 1015$, $p = 1.00$, suggesting the data were missing completely at random (i.e., there was no pattern to the missing data); therefore, all 1,200 cases were retained. For the preliminary analyses, listwise and pairwise deletion were employed for missing data, and in the main analysis, structural equation modeling (SEM), maximum likelihood estimation was used to deal with the missing data.

Outliers. In the dataset of 1,200 cases, 45 univariate outliers were found across 42 cases by consulting boxplots and histograms and by creating z-scores and deeming an outlier any case with an absolute value greater than 3.29. The affected variables were bullying, work tempo, role clarity, somatic stress, and gender. In addition, 9 cases with multivariate outliers were found by calculating Mahalanobis distance and deeming a multivariate outlier any case with a Mahalanobis distance at $p < .001$. Outliers can be problematic for analyses (Tabachnick & Fidell, 2013); for SEM in particular, they can impact model fit (Malone & Lubansky, 2012). For the present research, analyses were run with and without outliers and overall model fit did not differ; furthermore, there were no data entry errors and it was concluded that the scores were genuine, so outliers were retained.

Assumption testing. Assumptions pertaining to general linear models were checked prior to analyses. Using histograms, QQ plots, skewness, and kurtosis statistics,

non-normality was detected for the bullying, gender, and age variables. The bullying variable showed improved normality after inverse transformation; however, linearity and homoscedasticity were negatively affected, hence the original bullying variable was retained for analyses. Bivariate scatterplots revealed no substantial issues with linearity or homoscedasticity. Collinearity diagnostics revealed no issues of excessively high multicollinearity. More specifically, all variance inflation ratios were below 5 and although one condition index was above 30, no dimension had more than 1 variable with a variance proportion greater than .50 (Tabachnick & Fidell, 2013). Overall, the assumptions were met.

Control variables. Demographic variables (i.e., gender, age, and job type) were assessed using independent t-tests and one-way ANOVAs to determine whether there was a need to control for their effects on outcomes in the subsequent structural equation modeling. The gender variable included 2 groups (female and male), age included 5 groups (20-29 years, 30-39 years, 40-49 years, 50-59 years, and 60 or more years), and job included 3 groups (social worker, administrative assistant, and other). The outcomes assessed were toxicity appraisals and the scales representing ill-being (i.e., stress, burnout, cognitive stress, and somatic stress). For the most part, the assumptions for t-tests and ANOVAs were met; where the assumption of homogeneity of variance was not met, this was noted along with the remedial steps taken. Missing data were handled by excluding cases on an analysis-by-analysis basis.

Age. A one-way ANOVA revealed the need to control for a significant, albeit small (Kirk, 1996), effect of age on toxicity appraisals, $F(4, 1087) = 3.07, p < .05, \omega^2 = .01$. A Gabriel's post hoc test showed that respondents aged 20 to 29 years ($M = 3.81$,

$SD = 1.77$) had significantly lower (i.e., healthier) ratings compared to respondents aged 30 to 39 years ($M = 4.32$, $SD = 1.76$) and respondents aged 40 to 49 years ($M = 4.33$, $SD = 1.83$) at $p < .05$, with a small effect size of $d = .29$ for each. Cohen (1988) defined effect sizes of $d = .2$ as small, $d = .5$ as medium, and $d = .8$ and above as large.

ANOVAs also revealed that age had a significant, though small, effect on stress, *Welch's F* (4, 167.26) = 9.04, $p < .001$, $\omega^2 = .02$; burnout, *Welch's F* (4, 162.55) = 4.17, $p < .01$, $\omega^2 = .01$; and somatic stress, *Welch's F* (4, 165.42) = 4.21, $p < .01$, $\omega^2 = .01$, though not on cognitive stress. Welch's *F* statistics were used because Levene's test for equality of variances showed the homogeneity of variance assumption was violated in all three cases (stress, $p = .018$; burnout, $p = .034$; and somatic stress, $p = .004$).

A Games-Howell post hoc test revealed that for stress, respondents aged 20 to 29 years ($M = 3.16$, $SD = .88$), 30 to 39 years ($M = 3.25$, $SD = .75$), and 40-49 years ($M = 3.04$, $SD = .80$) had significantly higher ratings compared to respondents aged 60 or more years ($M = 2.68$, $SD = .58$) at $p < .05$, with effect sizes of $d = .64$, $d = .85$, and $d = .52$, respectively. Respondents 30 to 39 years also reported significantly higher stress than respondents aged 40 to 49 years and 50-59 years ($M = 2.96$, $SD = .77$) at $p < .05$, with effect sizes of $d = .27$ and $d = .38$, respectively.

The Games-Howell post hoc test also showed that respondents aged 30 to 39 years ($M = 3.43$, $SD = .75$) reported significantly higher burnout than respondents aged 40 to 49 years ($M = 3.23$, $SD = .86$) at $p < .05$, $d = .25$. Finally, for somatic stress, the post-hoc revealed that respondents aged 30 to 39 years ($M = 2.47$, $SD = .72$) had significantly higher ratings than respondents aged 50 to 59 years ($M = 2.27$, $SD = .74$) and 60 or more years ($M = 2.05$, $SD = .62$) at $p < .05$, with effect sizes of $d = .27$ and $d =$

.63, respectively. Based on the results of the ANOVAs, age was included in the model to account for its effects on toxicity appraisals, stress, burnout, and somatic stress.

Job type. A one-way ANOVA revealed the need to control for a significant, though small, effect of job type on toxicity appraisals, $F(2, 1071) = 5.25, p < .01, \omega^2 = .01$. A Gabriel's post hoc test revealed that social workers ($M = 4.31, SD = 1.78$) had significantly higher toxicity appraisals compared to 'other' workers ($M = 3.66, SD = 1.91$) at $p < .05, d = .35$.

ANOVAs also revealed that job type had a significant, but small, effect on stress, $Welch's F(2, 118.19) = 19.58, p < .001, \omega^2 = .04$; burnout, $Welch's F(2, 118.20) = 20.73, p < .001, \omega^2 = .05$; cognitive stress, $F(2, 1007) = 8.26, p < .001, \omega^2 = .01$; and somatic stress, $Welch's F(2, 124.16) = 6.89, p < .01, \omega^2 = .01$. Given that Levene's test for equality of variances showed the homogeneity of variance assumption was violated for stress ($p = .025$), burnout ($p = .042$), and somatic stress ($p = .042$), Welch's F statistics were used in those cases.

A Games-Howell post hoc test revealed that for stress, social workers ($M = 3.19, SD = .76$) had significantly higher ratings compared to administrative assistants ($M = 2.69, SD = .90$) and 'other' workers ($M = 2.84, SD = .85$) at $p < .05$, with effect sizes of $d = .60$ and $d = .43$, respectively. For burnout, the Games-Howell post hoc test similarly showed that social workers ($M = 3.39, SD = .78$) had significantly higher ratings compared to administrative assistants ($M = 2.86, SD = .92$) and 'other' workers ($M = 3.04, SD = .87$) at $p < .05$, with effect sizes of $d = .62$ and $d = .42$, respectively.

For cognitive stress, the post hoc test again showed social workers ($M = 2.58, SD = .79$) had significantly higher ratings compared to administrative assistants ($M = 2.31,$

$SD = .83$) and ‘other’ workers ($M = 2.31$, $SD = .82$) at $p < .05$, with effect sizes of $d = .33$ and $d = .34$, respectively. Finally, for somatic stress, the post-hoc revealed that social workers ($M = 2.42$, $SD = .76$) had significantly higher ratings than ‘other’ workers ($M = 2.14$, $SD = .65$) at $p < .05$, $d = .40$. Based on the results of the ANOVAs, job type was included in the model to account for its effects on all outcomes (i.e., toxicity appraisals, stress, burnout, cognitive stress, and somatic stress). T-tests showed no significant differences between females and males in their mean responses to the outcome variables; thus, gender was not included in the model.

Descriptives. Correlations, means, standard deviations, minimum and maximum ratings, and internal consistencies for each measured variable are presented in Table 2. Mean ratings were just slightly above the midpoint for a number of scales. The results suggest that, on average, respondents perceived the psychological health and safety climate in their workplace as fairly neutral on a scale from healthy and supportive to toxic. The frequencies of each rating (see Figure 1), however, suggest that not many respondents chose the neutral rating; instead, approximately 37% rated their climate on the positive end, and 46% on the negative end (9% of respondents did not specify a rating). Overall, respondents rated their workplace cultures as neutral with respect to tolerating harm to workers’ mental. In terms of workplace stressors, leadership quality had an overall moderate rating, and the mean for bullying was well below the midpoint for the scale, indicating an overall low incidence of bullying (15% of respondents did not specify a rating) (see Figure 2). In the follow up question about sources of bullying, of which respondents could indicate more than one, about half of respondents reported colleagues and superiors as a source, and almost as many reported clients as a source (see

Figure 3). The mean for work tempo was the highest, and the mean for role clarity was also reasonably high, suggesting participants worked at a fairly fast pace and largely knew what they had to do. With respect to symptoms, stress and burnout levels were moderate overall; the means for cognitive and somatic stress were somewhat below the midpoint, suggesting relatively low experience of these symptoms in the overall sample.

Table 2

Descriptive Statistics for Pilot Study

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Toxicity	-												
2. Tolerance	.67*	-											
3. Leadership	-.43*	-.38*	(.86)										
4. Bullying	.40*	.36*	-.34*	-									
5. Work tempo	.34*	.24*	-.16*	.19*	(.85)								
6. Role clarity	-.38*	-.34*	.42*	-.20*	-.08	(.80)							
7. Stress	.47*	.35*	-.25*	.30*	.43*	-.27*	(.87)						
8. Burnout	.45*	.35*	-.24*	.25*	.42*	-.24*	.82*	(.91)					
9. Cognitive	.38*	.31*	-.20*	.25*	.24*	-.29*	.73*	.64*	(.87)				
10. Somatic	.39*	.30*	-.22*	.29*	.31*	-.24*	.69*	.62*	.62*	(.70)			
11. Gender	.04	-.02	-.02	.03	-.06	-.07	-.01	.00	.02	-.05	-		
12. Age	.06	.06	-.06	.05	-.05	.03	-.14*	-.09	-.02	-.08	.07	-	
13. Job	-.09	-.10	-.02	-.03	-.20*	-.01	-.21*	-.22*	-.13*	-.11	-.02	.22*	-
mean	4.24	3.14	3.24	1.65	4.13	3.72	3.11	3.31	2.53	2.38	-	-	-
s.d.	1.80	1.13	1.07	.96	.71	.77	.80	.81	.80	.77	-	-	-
min-max	1-7	1-5	1-5	1-5	1-5	1-5	1-5	1-5	1-5	1-5	0-1	2-6	0-1
n	1097	1093	1036	1023	1058	1037	1032	1032	1030	1031	1178	1185	1164

Note. * $p < .0006$ (Bonferroni-adjusted significance level, .05/78 comparisons), two-tailed, pairwise deletion. Cronbach's alphas on the diagonal. 'Tolerance' = tolerance for harmful behaviour, 'Leadership' = quality of leadership, 'Cognitive' = cognitive stress, 'Somatic' = somatic stress. Gender coded 0 = female, 1 = male; job coded 0 = social worker, 1 = administrative assistant and 'other.'

Figure 1. Frequencies for toxicity appraisals.

Figure 2. Frequencies for bullying.

Figure 3. Frequencies for sources of bullying. The percentage reflects those who reported being bullied ($n = 441$) who reported that particular source of bullying. Respondents could report more than one source of bullying.

Model Testing

Structural equation modeling (SEM) was used to test the associations between workplace stressors, tolerance for harmful behaviour, toxicity appraisals, and workers' ill-being. The hypothesized model, in Figure 4, had 1 latent endogenous variable with four indicators, 1 measured endogenous predictor variable, and 11 measured exogenous predictor variables. The measured variables consisted of scores for single-item measures as well as mean scores for scales, which were created by calculating the average rating across all available scale items. In addition, 4 of the measured variables were interaction terms. Single-item measures were used for toxicity appraisals, tolerance for harmful behaviour, bullying, age, and job type, whereas mean scores were used for the 2-item workplace stressor scales (i.e., quality of leadership, work tempo, and role clarity). These

mean scores were used to minimize the number of parameters to be estimated in the model. Mean scores were also used to represent each of the 4-item ill-being scales (i.e., stress, burnout, cognitive stress, somatic stress) so that each scale could act as an indicator for the latent outcome variable of worker ill-being.

Figure 4. Hypothesized model for pilot study.

Measurement model. A confirmatory factor analysis (CFA) was conducted in AMOS v.24 to assess the 4 ill-being scales (i.e., stress, burnout, cognitive stress, and somatic stress) as indicators for the latent variable of ill-being. To set the scale for the

latent factor, the factor loading for the stress indicator was fixed to 1 (McDonald & Ho, 2002). In total, there were 14 distinct sample moments and 12 parameters to be estimated; thus, the model was over-identified with 2 degrees of freedom. The dataset of 1,200 cases was used; there were 919 cases with complete data.

The chi-square test of global model fit was significant, $\chi^2(2, N = 1200) = 23.48$ ($2, p = .000$), meaning the data were significantly different from the model, indicating poor fit. Given rejection of the null hypothesis for an over-identified model tends to occur with a large sample size (Bentler and Bonnet, 1980), the relative chi-square (χ^2/df) was calculated (Hooper, Coughlan, & Mullen, 2008). The value was 11.74, still suggesting poor fit, as values from 2.0 to 5.0 have been suggested as indicative of reasonable fit (Bollen, 1989; Tabachnick & Fidell, 2013; Wheaton, Muthén, Alwin, & Summers, 1977).

The Bentler comparative fit index (CFI; Bentler, 1990), which measures the relative improvement of model fit as compared to a baseline model (i.e., the null model), and for which a value of 1.00 indicates best fit, had a value of .99 for the current model, indicating acceptable fit (Hu & Bentler, 1999). The parsimony-adjusted comparative fit index (PCFI) is an adjustment to the CFI that penalizes less parsimonious models, adjusting for degrees of freedom (Mulaik et al., 1989). There is no agreed-upon threshold for the PCFI (Hooper, Coughlan, & Mullen, 2008); however, values range from 0 to 1, with values close to 1 indicating good fit. The value for the current model was .20, suggesting poor fit.

The Steiger-Lind root mean square error of approximation (RMSEA; Steiger, 1990), which measures error of approximation of fit, and for which a value of zero

indicates best fit, had a value of .095 [90% CI, .06 to .13] for the current model.

Although a value less than .05 has been said to indicate close approximate fit (Browne & Cudeck, 1993), and cutoffs of .06 (Hu & Bentler, 1999) and .07 (Steiger, 2007) have been suggested as upper limits, it was previously held that values in the range of .08 to .10 indicated mediocre fit (Kenny, 2015; MacCallum, Browne, & Sugawara, 1996).

Further, when a model has low degrees of freedom, RMSEA can be artificially high (Kenny, Kaniskan, & McCoach, 2015); the current model has only 2 degree of freedom. PCLOSE, which tests the null hypothesis that RMSEA equals .05 (i.e., that the model is close-fitting), had a value of .012, indicating the model was not a close fit. Parameter estimates from the CFA are presented in Table 3.

Table 3

Parameter Estimates from Confirmatory Factor Analysis

Regression weights	Standardized Estimate	Unstandardized Estimate	Standard Error	Critical Ratio	<i>p</i>
Stress	.95	1.00 ^a			
Burnout	.86	.92	.02	40.25	< .001
Cognitive stress	.77	.82	.03	32.96	< .001
Somatic stress	.74	.74	.02	30.30	< .001

Note. ^a Fixed parameter to set the scale of the latent variable.

Somatic stress showed the lowest loading for the latent ill-being factor, though the cognitive stress loading was not much higher, and neither loading was very low. The squared multiple correlations were as follows: stress, $R^2 = .91$; burnout, $R^2 = .73$; cognitive stress, $R^2 = .60$; somatic stress, $R^2 = .54$. Thus, the ideal noted by Kline (2011), whereby the CFA model explains over 50% of the variance of each indicator, was met. Given the lowest loading was .74, retaining all 4 indicators seemed reasonable,

particularly because the purpose of the current research was not to create or model a specific measure of ill-being, but rather to capture some aspects of it as an outcome.

Path model. The hypothesized model (previously shown in Figure 4) examined several potential sources of workplace toxicity (i.e., workplace stressors and tolerance for harmful behaviour) and their interactions as direct predictors of toxicity appraisals and then examined toxicity appraisals as a direct predictor of ill-being. Sources of workplace toxicity were also assessed as direct predictors of ill-being, and toxicity appraisal as an intervening variable between sources of toxicity and ill-being. Age and job type were included in the model to account for their effects on toxicity appraisals and ill-being. In addition, the path model included correlations between sources of toxicity and the interaction terms (all of which were exogenous predictor variables), but in the interest of clarity, the non-directed arcs used to represent those relations were not included in depictions of the model (see Appendix B for correlations). In testing the model, there were 152 distinct sample moments and 91 parameters to be estimated; thus, the model was over-identified with 61 degrees of freedom.

The chi-square test of global model fit was significant, χ^2 (61, $N = 1200$) = 274.54, $p = .000$; however, $\chi^2/df = 4.50$, which is within range for acceptable fit (Wheaton et al., 1977). The CFI value was .96, meeting the threshold for acceptable model fit of .90 or greater (Hu & Bentler, 1999). The PCFI value, which penalizes for model complexity (Mulaik et al., 1989), was .43 in a possible range from 0 to 1, which does not appear to suggest good fit. The RMSEA estimate was .05 [90% CI, .048 to .061], which met the threshold for acceptable model fit of .06 (Hu & Bentler, 1999) and the PCLOSE value was .147, suggesting the model was close-fitting (Kenny, 2015).

Overall, the fit statistics for the path model indicated acceptable global model fit. The model is depicted in Figure 5 with standardized parameter estimates. Additional information regarding parameter estimates is provided in Table 4. Just over half (55%) of the variance in toxicity appraisals was accounted for by the sources of toxicity (i.e., workplace stressors and tolerance for harmful behaviour), their interactive effects, age, and job. Almost 40% of the variance in self-reported ill-being was accounted for by toxicity appraisals, sources of toxicity, age, and job.

Figure 5. Path model with standardized parameter estimates. * $p < .05$. *** $p < .001$. The age and job type control variables are not included in the model; parameter estimates for these variables can be found in Table 4.

Table 4

Parameter Estimates for the Pilot Study Model

Model Parameters	Standardized Estimate	Unstandardized Estimate	Standard Error	Critical Ratio	<i>p</i>
Effects on toxicity appraisals					
Tolerance for harm	.48	.76	.04	19.83	< .001
Leadership quality	-.13	-.22	.04	-5.20	< .001
Bullying	.15	.28	.05	5.72	< .001
Work tempo	.17	.43	.05	7.82	< .001
Role clarity	-.14	-.34	.06	-5.76	< .001
Age	.04	.06	.04	1.73	.085
Job	-.01	-.06	.10	-.66	.509
Leadership quality x Tolerance for harm	.06	.08	.04	2.07	.038
Bullying x Tolerance for harm	-.03	-.04	.04	-1.05	.294
Work tempo x Tolerance for harm	-.01	-.03	.05	-.53	.595
Role clarity x Tolerance for harm	.05	.10	.05	2.14	.033
Effects on ill-being					
Toxicity appraisals	.28	.12	.02	7.39	< .001
Tolerance for harm	.04	.03	.02	1.16	.245
Leadership quality	.00	.00	.02	-.13	.895
Bullying	.11	.09	.02	3.93	< .001
Work tempo	.29	.31	.03	10.43	< .001
Role clarity	-.13	-.12	.03	-4.22	< .001
Age	-.11	-.08	.02	-4.29	< .001
Job type	-.11	-.21	.05	-4.15	< .001

Note. Job type coded 0 = social worker and 1 = administrative assistant and 'other.'

Direct effects. The first research question was whether potential sources of toxicity (i.e., workplace stressors and tolerance for harmful behaviour in the workplace) were associated with workers' toxicity appraisals, which were captured using respondents' ratings of the psychological health and safety climate of their workplace on a scale from healthy/supportive to toxic. Indeed, toxicity appraisals, controlling for age and job type, were significantly predicted by all five sources of toxicity in the model. The strongest predictor of toxicity appraisals was respondents' perceptions that their workplace's culture tolerated behaviour that harmed the mental health of workers. Toxicity appraisals were predicted with similar magnitude by the four workplace stressors – that is, lower quality of leadership, higher incidence of bullying, higher work tempo, and lower role clarity had similar effects on toxicity appraisals.

The second research question was whether there was a direct relation between workers' toxicity appraisals and self-reported ill-being, and how this relation compared to the relations between sources of toxicity (i.e., workplace stressors and tolerance for harmful behaviour) and ill-being. In this study, ill-being was composed of stress, burnout, cognitive stress, and somatic stress. Results indicated that higher self-reports of ill-being, controlling for age and job type, were significantly predicted by higher toxicity appraisals. With regard to sources of workplace toxicity, higher self-reported ill-being was significantly predicted by higher work tempo and, to a somewhat lesser extent, by higher incidence of bullying and lower role clarity. Neither tolerance for harmful behaviour nor quality of leadership had a significant direct effect on self-reported ill-being.

Indirect effects. Workers' toxicity appraisals were tested as an intervening variable between sources of toxicity (i.e., workplace stressors and tolerance for harmful behaviour) and self-reported ill-being. These indirect effects were calculated in AMOS and were assessed for significance using the Sobel test (Preacher & Leonardelli, 2016), as the missing data in the current study meant significance could not be determined in AMOS. All five sources of toxicity showed significant indirect effects on ill-being through toxicity appraisals. Specifically, higher tolerance for harmful behaviour predicted higher toxicity appraisals, which predicted higher reports of ill-being (standardized indirect effect = .13, $p < .001$). The same was true for lower quality of leadership (standardized indirect effect = -.04, $p < .001$), higher incidence of bullying (standardized indirect effect = .04, $p < .001$), higher work tempo (standardized indirect effect = .05, $p < .001$), and lower role clarity (standardized indirect effect = -.04, $p < .001$).

Interactive effects. The third research question was whether perceptions of the workplace culture as tolerant of harmful behaviour influenced the relations between workplace stressors and toxicity appraisals. To test this, a total of four interaction terms, created by multiplying the mean-centred scores for the tolerance for harm item by the mean-centred scores for each of the workplace stressor scales, were included in the model (Figure 4). The interactive effect of quality of leadership and tolerance for harmful behaviour on toxicity appraisals was significant, as was the interactive effect of role clarity and tolerance for harmful behaviour on toxicity appraisals (Table 4). As evidenced in Figure 6, whether tolerance for harmful behaviour was low, moderate, or high, lower quality of leadership predicted higher toxicity appraisals; however, where

there was high tolerance for harmful behaviour, toxicity appraisals were fairly high regardless of quality of leadership – that is, even where quality of leadership was highly rated, appraisals were on the toxic side of the healthy/supportive to toxic spectrum. Role clarity showed a similar pattern (see Figure 7).

Figure 6. Interactive effect of tolerance for harmful behaviour in the workplace and quality of leadership on toxicity appraisals. The figure shows the relation between quality of leadership and toxicity appraisal at low, moderate, and high tolerance for harmful behaviour.

Figure 7. Interactive effect of tolerance for harmful behaviour in the workplace and role clarity on toxicity appraisals. The figure shows the relation between role clarity and toxicity appraisal at low, moderate, and high tolerance for harmful behaviour.

Pilot Study Discussion

The purpose of the pilot study was to examine the relations between potential sources of toxicity, toxicity appraisals, and self-reported ill-being as evidenced from reports of 1,200 employees from a social service agency for children. Overall, all of the sources of toxicity (i.e., workplace stressors and tolerance for harmful behaviour) significantly predicted toxicity appraisals, assessed by asking participants to rate the psychological health and safety climate of their workplace on a scale from healthy/supportive to toxic. The finding that tolerance in the workplace for behaviour that harmed workers' mental health was the strongest predictor of toxicity seemed somewhat intuitive. Indeed, this item and the toxicity appraisal item both had a psychological health focus, and one would assume that if harm to mental health were tolerated, psychological health and safety climate perceptions would be affected. Nevertheless, the strong association between the two variables appears to support the notion that toxicity is associated with a tolerance in the work environment for the persistence of issues and their effects.

Toxicity appraisals significantly predicted ill-being, as did some of the sources of toxicity (i.e., bullying, work tempo, and role clarity) – this seemed appropriate, as one can imagine that to be bullied, consistently required to work at a fast pace, or unclear about one's responsibilities would be stressful in and of themselves. Tolerance for harmful behaviour in the workplace and quality of leadership, however, did not have direct effects on ill-being. It appears these variables might instead only influence whether workers feel their environment is healthy versus toxic; as such, their effects on ill-being take place through the environment they support or create. As noted, however,

tolerance for harmful behaviour in the workplace had a stronger effect on toxicity appraisals than did quality of leadership.

In fact, tolerance for harmful behaviour showed significant interactive effects with quality of leadership and role clarity on toxicity appraisals. Quality of leadership in this study captured the extent to which the respondent's immediate supervisor gave high priority to job satisfaction and was good at work planning, and role clarity captured the extent to which the respondent had clear objectives and expectations at work. At low levels of tolerance for harmful behaviour in the workplace, low quality of leadership was associated with high toxicity appraisals and high quality of leadership was associated with low toxicity appraisals; similarly, low role clarity was associated with high toxicity appraisals and high role clarity was associated with low toxicity appraisals. However, at high levels of tolerance for harmful behaviour, even if quality of leadership or role clarity was high, ratings of the psychological health and safety climate tended to be on the toxic end of the spectrum. That is, even if workers had a clear role or an immediate supervisor who was organized and cared about their job satisfaction, if harmful behaviour was tolerated in their workplace, their toxicity appraisals were likely to be higher.

The results suggest that leadership quality and toxicity appraisals are related, as are role clarity and toxicity appraisals, but that these relations are less pronounced when there is a high tolerance for harmful behaviour in the workplace - in which case the tendency is for toxicity appraisals to be fairly high regardless of leadership quality and role clarity. Although again, the link between tolerance for harmful behaviour and toxicity appraisals could be largely due to the similar content of the items, it might also indicate that when it comes to toxicity appraisals, tolerance for harm to workers may

simply be more critical to the feeling that one's environment is safe versus toxic than these other aspects of work. This finding appears consistent with the notion that it is not the stressors per se that make a situation toxic, but that nothing is being done about them.

Taken together, the pilot study suggested that tolerance for harm in the workplace may be integral to workers' appraisals of that environment as toxic. Thus, the goal for the next study was to capture the concept of workplace toxicity more broadly, inclusive of tolerance, and to explore how various characteristics of the work environment relate to those toxicity appraisals. Essentially, if participants experience workplace toxicity as it is broadly described in the literature, it would be helpful to know which aspects of their work environment drive that experience. This could help to get at which aspects of the system might need to be reformed in order to address workers' experience of toxicity. Based on the pilot study, improvements were made to sampling, measurement, and conceptual clarity for the main study in order to better capture the constructs of interest and ultimately increase confidence in the results and their generalizability.

Moving forward

Sampling. Practically speaking, it is challenging to find a sample with which to study toxic work environments. The pilot was conducted with an organizational sample and while it was an appropriate sample given that some of the members had been complaining of stress and a toxic work environment, and hence had experience with the topic in question, the experience of participants was limited to the social work context. Thus, it is questionable as to whether the results would generalize to other industries and occupations. For the main study, a broader sample, not confined to a single organization, was sought so that participants would be from a variety of different industries and

occupations, and would presumably have exposure to different stressors and contexts, thus contributing to the generalizability of results.

Measurement. Given the pilot study was conducted by piggy-backing on a pre-existing survey, only two items could be added to address the questions of interest and the directness with which the questions could be asked was limited. These additional items (i.e., for toxicity appraisal and culture) were single-item measures, which provided a global sense of the concepts, but missed any nuance. Furthermore, for the toxicity appraisal, an item directly asking participants to indicate whether they felt their work environment was ‘toxic’ was not permitted because the union had concerns about management’s reaction to such a question. Instead, the item asked participants to rate the psychological health and safety climate of their workplace, with toxic being a response option. This was not a very clear way to get at perceptions of workplace toxicity. For the main study, by recruiting participants as individuals, as opposed to from one specific organization, there was freedom to include any (reasonable) number of questions and to frame questions about toxicity in a straightforward manner, as participants’ management were not involved. This helped to better capture the concepts of interest.

For toxicity appraisals in particular, the measure was improved by including numerous items written based on the descriptions of workplace toxicity from the literature, as well as the findings from this pilot study, which seemed to suggest that tolerance plays a vital role in toxicity. As a broad measure of the phenomenon, the focus was on toxicity rather than on specific toxins. That is, the items were worded such that specific stressors or perpetrators were not asked about, and instead respondents were simply asked about issues that negatively affected them (e.g., “Workplace issues that

negatively affect me are mishandled at my place of work.”). Leaving the issue undefined is consistent with the notion that any substance could be toxic at some dose.

In addition, the behaviour of management was not central to the measure so as not to assign sole capacity to leaders to permit toxicity. Despite the potentially formidable impact leaders can have on the work environment, the literature suggests that organizational members from all levels enact the culture, and hence anyone could potentially behave in ways that support toxicity. As such, when it comes to workplace toxicity, the behaviour of interest should not be restricted to leaders; however, especially given their power in organizations, their influence on workplace toxicity should not be ignored either. Thus, in attempting to capture toxicity as a broad concept, the involvement of various organizational members was covered by the items.

Also in keeping with having a general measure of toxicity, the notion of tolerance was expanded beyond harm to workers’ mental health (which was its scope for the pilot study) to include tolerance for any issue that might negatively affect workers. Tolerance of workplace issues was asked about directly, and the items covered different forms of tolerance (e.g., issues being ignored, coworkers being reluctant to get involved in issues). Several questions about whether respondents’ issues persisted were also included (e.g., whether the issues happened repeatedly, were continually present, or were experienced at a high dose), as well as a question about whether they perceived their workplace as harmful to their well-being – based on the literature, both persistence and harm to well-being seemed important to an assessment of workplace toxicity.

Beyond improving the measure of workplace toxicity, additional measures were included in the main study to further explore sources of toxicity and individual-level

symptoms. In particular, the number of sources of toxicity was increased and they were better delineated as characteristics of specific aspects of the work environment (e.g., leadership, one's workgroup). This way, it would be possible to get a better sense of whether certain types of sources predict toxicity differently (e.g., whether leadership shows the strongest effect). The number of outcomes was increased as well. Whereas the pilot study only covered stress symptoms (i.e., stress, burnout, cognitive stress, somatic stress), the main study included attitudinal, behavioural, and psychological outcome measures. Indeed, the workplace toxicity literature notes various sources and symptoms of toxicity, and only a small selection was covered in the pilot study.

Conceptual Framework. Given the systemic focus of this research, the influence of organizational culture was of interest in the pilot study. This concept was not adequately captured however, as it was measured with a single survey item asking participants about the extent to which their workplace culture tolerated behaviour that harmed the mental health of workers. In addition, given its focus on mental health, the culture item was quite similar to the toxicity item, which asked participants to rate the psychological health and safety climate of their workplace. This similarity limited conceptual clarity in the pilot study, particularly because organizational culture and climate are often confused.

Organizational culture refers to a group's learned assumptions regarding how to think, feel, and behave in the workplace. As such, culture represents an evolved context, which is a somewhat vague construct, difficult to measure with survey research (Schein, 1990). For this reason, measures of climate are typically used to understand workers' perceptions of organizational culture (Schein, 1990). Climate refers to perceptions of the

work environment and reflects the thoughts and feelings of organizational members (Denison, 1996; Hall, Dollard, & Coward, 2010; James et al., 2008; Schein, 2004). In other words, whereas culture refers to the way things are done in the organization, climate refers to day-to-day perceptions, or experience, of the way things are done in the organization. For the main study, given the interest in the work environment but the limitation of it being impractical to assess organizational culture for a broad sample of workers, *climate* was assessed; this informed the conceptual framework for the study.

Main Study: A Psychological Climate Approach

The purpose of the research was to explore the notion of a toxic work environment as a systemic phenomenon. The objective of the main study was to examine how various aspects of the work environment related to workers' toxicity appraisals. In order to examine these relations using survey data from workers, a psychological climate approach was adopted. Psychological climate refers to individuals' perceptions and interpretations of their work environment (Brown & Leigh, 1996; James et al., 2008; James & James, 1989; Parker et al., 2003). It is believed that individuals' perceptions have an important influence on their actions, as well as on organizational level outcomes; for this reason, psychological climate surveys are a widely accepted tool for organizational interventions (Parker et al., 2003). With the ultimate goal of informing interventions for toxic work environments, and the systemic focus of the current research, a psychological climate approach should be especially helpful in capturing how workers' perceptions of their work environment relate to their sense that the work environment is toxic.

The concept of psychological climate is closely related to, but different from, organizational climate. Whereas psychological climate refers to the psychological meaning of the work environment for the individual, organizational climate refers to shared psychological meanings (James et al., 2008; Schneider, Ehrhart, & Macey, 2013). Both psychological and organizational climate are measured at the individual level; however, to estimate organizational climate, the psychological climate ratings for a given group are aggregated and the result is taken as indicative of a group or collective climate (James et al., 2008). A lack of agreement in climate perceptions suggests there is no organizational climate. For the current research, the sole interest was in psychological climate; however, assessments of organizational climate would seem a useful avenue during interventions to determine the extent to which perceptions of the work environment may be consistent among members of a group.

There are two predominant perspectives on the conceptualization and measurement of psychological climate, one focused on facet-specific climates, and another focused on general psychological climate. The facet-specific perspective suggests that individuals construct their beliefs about the work environment based primarily on their interactions with the organizational context and others in the workplace - as such, these perceptions are mainly descriptive (Burke, Borucki, & Kaufman, 2002). From this perspective, researchers tend to measure “climates for something” (e.g., safety climate, diversity climate, bullying climate) by selecting a focus and measuring individuals’ perceptions of the work environment (e.g., routines, policies) as they relate to that focus (Burke et al., 2002). This particular perspective on psychological climate seemed too specific for the current research, as workplace toxicity is not yet well-defined

and empirical evidence in this area is lacking; indeed, the goal of the main study is to explore empirically how different aspects of the work environment relate to workers' toxicity appraisals.

For the current research, the general psychological climate perspective was adopted. This view suggests that psychological climate perceptions are valuations, which are judgments influenced by individuals' values and emotions (James & James, 1989). From this perspective, it is suggested that work environment perceptions can be explained by a single, higher order factor, termed general psychological climate (PCg), which reflects the degree to which the individual perceives their environment as beneficial or harmful to their well-being (James & James, 1989). It has been posited further that a limited number of dimensions can be used to capture individuals' perceptions of the work environment (James & James, 1989; Jones & James, 1979). For the current study, Jones and James' (1979) framework for climate related variables (Appendix C) was employed; this framework uses situational characteristics as referents for the dimensions of climate (Parker et al., 2003).

Jones and James' (1979) framework allows for a simultaneous assessment of workers' perceptions of various aspects of their work environment, including their job, coworkers, leader, and organizational features. The notion that these perceptions are related to workers' sense of well-being is particularly fitting for the study of toxic work environments, considering that to be toxic is to be harmful to one's well-being. In general, the current study aims to address the question of how work environment perceptions are associated with workers' toxicity appraisals, and whether those appraisals can be linked with individual level outcomes consisting of work-related attitudes,

behaviour at work, and psychological well-being. The key research questions explored in the main study were:

- 1 - Do aspects of psychological climate relate to toxicity appraisals?
- 2 - Does any one of the psychological climate *dimensions* (i.e., job and role characteristics, characteristics of leadership, workgroup characteristics, subsystem and organizational characteristics) relate more strongly to toxicity appraisals than the others?
- 3 - Do toxicity appraisals relate to individual-level outcomes?

Method

Participants

Survey participants were 502 English-speaking individuals from the United States (91%) and Canada (9%). There were more female (68%) participants than male (31%), the mean age was 41 years ($SD = 11.9$ years), and most (80%) were Caucasian. Over half (55%) of participants had at least some university education. See Table 5 for a further breakdown of this demographic information.

Table 5

Demographic Information for Main Study Participants

		Freq.	%
Gender	Female	340	67.7%
	Male	154	30.7%
	Transgendered	1	0.2%
	Not specified	7	1.4%
Age	19-29 years old	84	16.7%
	30-39 years old	164	32.7%
	40-49 years old	121	24.1%
	50-59 years old	91	18.1%
	60-74 years old	41	8.2%
	Not specified	1	0.2%
Ethnicity	Caucasian	401	79.9%
	African American	36	7.2%
	Hispanic	30	6.0%
	Asian	24	4.8%
	Middle Eastern	1	0.2%
	Other	5	1.0%
	Not specified	5	1.0%
Education	High school or below	82	16.3%
	Trade or apprenticeship	28	5.6%
	Certificate or diploma	89	17.7%
	Bachelor degree or some university	216	43.0%
	Advanced degree beyond a bachelor degree	63	12.5%
	Other	22	4.4%
	Not specified	2	0.4%

Note. n = 502.

All participants reported being employed full-time. Most (88%) reported working 36 or more hours per week; however, some (12%) reported working between 25 to 35 hours per week, which is not quite full time, but nonetheless constitutes significant weekly exposure to a work environment². T-tests revealed no significant differences in mean scores on any variable between those who worked 36 or more hours and those who worked 25 to 36 hours per week. Respondents were excluded from participating in the study if they were not employed full-time (e.g., unemployed, employed on a part-time or contract basis) because it was assumed they might have a significantly lower level of exposure to a work environment, or have more than one work environment as a result of working multiple jobs, potentially affecting the way they respond to items. Respondents were also excluded if they were self-employed, as it was assumed they might not have a conventional workplace to refer to when answering the survey questions; furthermore, they might not be able to respond to questions about leaders and supervisors, as they likely would not have any. Finally, respondents who worked alone were excluded because it was assumed they might not have the same level of exposure to the interpersonal aspects of climate; moreover, they might not be able to respond to questions about their workgroup, if they truly worked in solitude.

Participants worked across more than 30 industries and were from a wide variety of occupations; for example, academic librarian, machinist, chief financial officer, editor, legal secretary, police officer, and waitress. On average, participants had been with their current organization for 8 years ($SD = 7$ years), and in their current job for seven years ($SD = 5$ years). Participants mainly reported working in organizations with over 200

² An additional 8 people responded to the survey but 7 reported working fewer than 24 hours per week and one did not specify their work hours. These 8 cases were not included in analyses, as the criterion of a full-time schedule was not met. The sample was hence reduced from 510 to 502 cases.

employees and most reported immediate workgroups of between 2 and 10 people. Many participants (41%) supervised others in their jobs; just over half (58%) of participants did not. See Table 6 for a further breakdown of this work-related demographic information.

Table 6

Work-Related Demographic Information for Main Study Participants

		Freq.	%
Work hours	36 or more hours per week	443	88.2%
	25 to 35 hours per week	59	11.8%
Years in org	Less than 1 year	44	8.8%
	1-5 years	202	40.2%
	6-10 years	116	23.1%
	11-15 years	60	12.0%
	16-20 years	35	7.0%
	21-25 years	20	4.0%
	26-30 years	10	2.0%
	More than 30 years	11	2.2%
	Not specified	4	0.8%
Years in job	Less than 1 year	47	9.4%
	1-5 years	220	43.8%
	6-10 years	110	21.9%
	11-15 years	61	12.2%
	16-20 years	25	5.0%
	More than 20 years	35	7.0%
	Not specified	4	0.8%
Org size	Fewer than 20 people	65	12.9%
	20 to 99 people	88	17.5%
	100 to 199 people	66	13.1%
	200 to 999 people	101	20.1%
	1,000 to 10,000 people	105	20.9%
	More than 10,000 people	76	15.1%
	Not specified	1	0.2%
Workgroup size	2-5 people	100	19.9%
	6-10 people	127	25.3%
	11-15 people	74	14.7%
	16-20 people	52	10.4%
	21-25 people	25	5.0%
	26-30 people	27	5.4%
	More than 30 people	94	18.7%
	Not specified	3	0.6%
Supervises others	Yes	208	41.4%
	No	293	58.4%
	Not specified	1	0.2%

Note. n = 502.

Procedure

Qualtrics data sourcing service was used to administer the survey; hence all interactions with participants were through Qualtrics, including recruiting, providing access to the survey link, and distributing compensation. Qualtrics recruited the sample of respondents through its partnerships with over 20 online research panel providers around the world. The panels include hundreds of profiling attributes, providing detailed information on every potential respondent. For the current survey, potential respondents were randomly selected where they were highly likely to qualify based on inclusion and exclusion criteria. Potential respondents were then invited via email, written and sent by Qualtrics, to participate in the survey. The email informed potential participants that the 20-minute survey was for research purposes only, and what type of compensation was available; to avoid self-selection bias, the email did not include specific details about the contents of the survey or its title.

Those interested in completing the survey followed a link to a consent form on the Qualtrics website, which provided details of the study. Potential respondents consented to participate in the study by clicking the “save and continue” button at the bottom of the page; those who did not consent to participate clicked the “quit survey” button and were immediately directed to a debriefing form. Those who consented to participate moved on to the next page of the online survey to begin answering questions.

Participants were asked 147 questions about their work environment (including leadership, their workgroup, their job and role, and the organization) and themselves (including their well-being, behaviours, and attitudes). An attention check item was included half-way through the survey to assess whether participants were paying

attention to what they were reading; the item read: “To show that you have been paying attention please select Disagree.” If a participant failed the attention check, their data were not used. The survey took on average 18.5 minutes to complete and participants were able to skip any questions and withdraw from the survey at any point by clicking through the survey pages and selecting the “quit” button at the end of the survey. Participants were not be able to withdraw their responses if they selected the “submit” button at the end of the survey, as their responses were anonymous.

Once participants either quit or submitted the survey, they were directed to a debriefing form and were also asked to download a PDF version of the debriefing form so they could access it at a later time should they have questions or concerns. All survey responses were stored and encrypted by Qualtrics without any links to information that identified respondents; therefore, all survey responses were anonymous.

Participants received compensation valued between \$0.87 and \$1.12; the specific type of compensation varied and was determined by how the respondent opted to receive payment and by the sample source Qualtrics used to recruit that participants. The types of compensation included cash, airline miles, gift cards, redeemable points, sweepstakes entrance, and vouchers.

Measures

The survey was constructed using a variety of published scales as well as some questions written for the current study. A list of all items and their rating scales is provided in Appendix D. In the survey, rating scales were one of two types (i.e., strongly disagree-strongly agree or never-very often); some ratings scales were changed from the original to achieve this consistency. Some wording changes were also made to items for

consistency in the survey; these changes are noted in the descriptions of the scales to which they apply. Each scale was constructed by computing a mean score across the scale items. The scales are described below with their published internal consistencies in parentheses; the internal consistencies in italics are from the current study. The scales used as predictors in the model are organized based on the Jones and James (1979) climate dimension they are intended to represent (i.e., job and role, leadership, workgroup, and subgroup and organizational characteristics).

Job and role characteristics. Role clarity and pressure to produce were assessed as representations of role ambiguity and job pressure from Jones and James' (1979) list of job and role characteristics (Appendix C) because the scales reflected content similar to these constructs. *Role clarity* was measured using Langford's (2009) 3-item scale ($\alpha = .77$, $\alpha = .72$), which reflected the extent to which one understands one's role requirements, how one's job contributes to the organization's success, and how well one is performing one's duties. Participants rated items such as "I understand how my job contributes to the overall success of this organization" using a 5-point Likert scale from 1 (strongly disagree) to 5 (strongly agree); thus, higher scores indicated greater role clarity.

Pressure to produce was measured using Patterson et al.'s (2005) 5-item scale ($\alpha = .79$, $\alpha = .79$), which reflected the extent to which one faces pressure to meet targets. Participants rated items such as "Management require me to work extremely hard" using a 5-point Likert scale from 1 (strongly disagree) to 5 (strongly agree); thus, higher scores indicated greater pressure to produce. The wording of the items was modified for the current study by changing the referent from people in general to the respondent. For

example, “People are expected to do too much in a day” was changed to “I am expected to do too much in a day.”

Characteristics of leadership. Supervisory support and abusive supervision were assessed as representations of support and interaction facilitation from Jones and James’ (1979) list of characteristics of leadership (Appendix C) because the scales reflected content similar to these constructs. *Supervisory support* was measured using Patterson et al.’s (2005) 5-item scale ($\alpha = .88$, $\alpha = .93$), which reflected the extent to which one experiences support and understanding from one’s supervisor. Participants rated items such as “My supervisor can be relied upon to give good guidance to people” using a 5-point Likert scale from 1 (strongly disagree) to 5 (strongly agree); thus, higher scores indicated greater supervisory support. The wording of the items was modified for the current study by changing the referent for supervisors from general to the respondent’s specific supervisor. For example, “Supervisors show that they have confidence in those they manage” was changed to “My supervisor shows that he/she has confidence in those he/she manages.”

Abusive supervision was measured using 5 items (Mitchell & Ambrose, 2007) from Tepper’s (2000) 15-item abusive supervision scale ($\alpha = .89$), which reflected the extent to which one’s supervisor engages in active forms of abuse toward staff, such as ridiculing them. The 5-item measure ($\alpha = .94$) was chosen because it reflected active interpersonal abuse by a supervisor, which was of particular interest in the current study; the other items reflected passive acts of abuse, such as not giving employees credit for work requiring a lot of effort (Mitchell & Ambrose, 2007). Participants rated items such as “My supervisor makes negative comments about staff to others” using a 5-point Likert

scale from 1 (strongly disagree) to 5 (strongly agree); thus, higher scores indicated greater abusive supervision. The items were originally worded with the stem “My boss,” followed by phrases such as “ridicules me;” however, for the current study, the wording was modified by removing the stem and adding “My supervisor” to the beginning of each phrase in order to make each item stand alone as a sentence. In addition, the referent for the items was changed from the respondent to staff in general to be consistent with the supervisory support scale and to reflect the abusiveness of the supervisor, even if the respondent had not experienced it him/herself; for example, “Ridicules me” was changed to “My supervisor ridicules staff.”

Workgroup characteristics. Civility and talent were assessed as representations of workgroup friendliness and warmth, and, to some degree, reputation for effectiveness and esprit de corps from Jones and James’ (1979) list of workgroup characteristics (Appendix C) because the scales reflected content similar to these constructs. *Civility* was measured using Walsh and colleagues’ (2012) 4-item Civility Norms Questionnaire – Brief (CNQ-B) scale ($\alpha = .81$, $\alpha = .84$), which reflected the extent to which one perceives one’s workgroup norms as supportive of respectful treatment among coworkers. Participants rated items such as “Rude behaviour is not accepted by my coworkers” using a 5-point Likert scale from 1 (strongly disagree) to 5 (strongly agree); thus, higher scores indicated greater civility. The wording of the items was modified for the current study by changing “your” to “my,” and by selecting the term workgroup from the options of unit or workgroup. For example, “Angry outbursts are not tolerated by anyone in your unit/workgroup” was changed to “Angry outbursts are not tolerated by anyone in my workgroup.”

Talent was measured using Langford's (2009) 3-item scale ($\alpha = .87$, $\alpha = .88$), which reflected the extent to which one has confidence in one's coworkers' abilities and sees them as productive and efficient (Langford, 2009). Although the talent scale items did not map on exactly to Jones and James' (1979) reputation for effectiveness and esprit de corps constructs, given there was no comparison of one's workgroup to other groups and the notion of pride in one's group was not directly assessed, it nonetheless captured the idea of workgroup effectiveness and confidence in one's coworkers. Participants rated items such as "My co-workers are productive in their jobs" using a 5-point Likert scale from 1 (strongly disagree) to 5 (strongly agree); thus, higher scores indicated greater talent.

Subsystem and organizational characteristics. Voice and involvement were assessed as representations of openness of expression, organizational communication – down, and, to some extent, awareness of employee's needs from Jones and James' (1979) list of subsystem and organizational characteristics (Appendix C) because the scales reflected content similar to these constructs. *Voice* was measured using Van Dyne and LePine's (1998) 6-item scale ($\alpha = .88$, $\alpha = .92$), which reflected the extent to which those in one's workgroup feel free to engage in and share their thoughts on matters relevant to the group. Participants rated items such as "In my workplace, people feel free to develop and make recommendations concerning issues that affect the workgroup" using a 5-point Likert scale from 1 (strongly disagree) to 5 (strongly agree); thus, higher scores indicated greater voice. The wording of the items was modified for the current study by adding the words "In my workplace" to the beginning of each statement. In addition, the referent was fixed to "people feel free to" rather than the items stating "This particular

coworker....” and providing separate response options for ‘self’, ‘peer’, and ‘supervisor.’ For example, “This particular co-worker speaks up in this group with ideas for new projects or changes in procedures” was changed to “In my workplace, people feel free to speak up in the group with ideas for new projects or changes in procedures.”

Involvement was measured using Patterson et al.’s (2005) 6-item scale ($\alpha = .87$, $\alpha = .88$), which reflected the extent to which there is communication and involvement of employees in matters that affect them. Participants rated items such as “Information is widely shared” and “people don’t have any say in decisions which affect their work” using a 5-point Likert scale from 1 (strongly disagree) to 5 (strongly agree); thus, higher scores indicated greater involvement.

Toxicity. Toxicity appraisals were assessed as the main outcome of interest. There is currently no published scale to measure employee perceptions of workplace toxicity or toxic work environment; therefore, items were developed for the current study based on descriptions of workplace toxicity found in the literature, as well as consultation with subject matter experts in the field of Organizational Psychology. Ten toxicity items were written and shared with the experts; based on their feedback, the items were modified for clarity, brevity, consistency, and to capture a broader range of the phenomenon (see Appendix E for the original and revised version). In total, 2 of the original items were deleted, 8 were modified, and 6 new items were added. The item review process was then repeated with a smaller subset of the subject matter experts until agreement was reached.

The revised set of 14 toxicity items reflected the extent to which the respondent experiences workplace issues that negatively affect him/her, reactions to such issues by

others in the workplace, the status of the respondent's well-being in the work environment, and his/her perception that the work environment is "toxic." Participants rated items using a 5-point Likert scale from 1 (strongly disagree) to 5 (strongly agree); thus, higher scores indicated stronger perceptions of toxicity. Frequencies for the toxicity items are presented in Appendix F.

In the survey, the toxicity scale was followed by an open-ended question: "Please use the space provided below to briefly explain what makes you think your work environment is, or is not, toxic." A 150 word maximum was suggested for responses, and a 1,000 character limit was applied to the text box in which participants typed their responses.

The 14 toxicity items ($\alpha = .94$) are presented with their item-total correlations in Table 7 to show how each item was related to the scale as a whole, followed by the inter-item correlation matrix in Table 8 to show how all of the items were related to each other. Items 4, 8, and 13 had the lowest correlations with the scale and the other items. To assess the dimensionality of the 14-item toxicity scale, a principal components analysis with direct oblimin rotation was conducted, with extraction based on Eigenvalues greater than 1. The pattern matrix in Table 9 shows a two-component structure, with items 4, 8, and 13 loading onto the second component whereas the other items had extremely low loadings on the second component. Items 4, 8, and 13 were removed, resulting in an 11-item toxicity scale. Principal components analysis and Cronbach's alpha were re-run and yielded a single component and $\alpha = .96$.

Table 7

Toxicity Scale Items with Corresponding Item-Total Correlations

Item	Corrected item-total correlation
1 In my workplace, issues that that negatively affect me are ignored.	.81
2 Workplace issues that negatively affect me are mishandled at my place of work.	.82
3 In my workplace, I feel discouraged from raising issues that negatively affect me.	.79
4 In my workplace, issues that negatively affect me are adequately resolved.	.49
5 In my workplace, issues that negatively affect me happen repeatedly.	.86
6 In my workplace, the way people respond to issues leads to more problems.	.77
7 My work environment is harmful to my well-being.	.76
8 In my workplace, health, safety, and well-being are valued.	.53
9 In my workplace, issues that negatively affect me are continually present.	.83
10 I experience a high dose of workplace issues that negatively affect me.	.84
11 In my workplace, there is a tolerance for issues that negatively affect me – as though it’s “just the way things are.”	.83
12 My coworkers are reluctant to get involved in workplace issues that negatively affect me.	.74
13 My employer is aware of workplace issues that negatively affect me.	.22
14 I experience a toxic work environment.	.76

Note. n = 502. Items in bold were retained for the final 11-item scale.

Table 8

Inter-Item Correlation Matrix for Toxicity Scale

Item	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1														
2	.81*													
3	.74*	.74*												
4	.45*	.47*	.42*											
5	.73*	.75*	.71*	.45*										
6	.65*	.71*	.67*	.41*	.70*									
7	.65*	.64*	.62*	.36*	.67*	.60*								
8	.46*	.43*	.47*	.46*	.46*	.42*	.51*							
9	.68*	.70*	.66*	.44*	.79*	.69*	.67*	.42*						
10	.68*	.67*	.69*	.43*	.81*	.65*	.71*	.45*	.78*					
11	.69*	.68*	.68*	.47*	.75*	.67*	.62*	.46*	.74*	.73*				
12	.63*	.64*	.63*	.33*	.66*	.64*	.60*	.35*	.65*	.66*	.70*			
13	.20*	.18*	.15	-.09	.28*	.17*	.18*	.02	.26*	.23*	.26*	.23*		
14	.61*	.63*	.61*	.37*	.67*	.61*	.71*	.48*	.67*	.71*	.63*	.57*	.23*	
mean	2.55	2.52	2.52	2.74	2.49	2.70	2.17	2.13	2.52	2.33	2.71	2.61	3.22	2.06
s.d.	1.14	1.11	1.19	1.07	1.13	1.14	1.14	1.03	1.14	1.14	1.28	1.12	1.12	1.17
min-max	1-5	1-5	1-5	1-5	1-5	1-5	1-5	1-5	1-5	1-5	1-5	1-5	1-5	1-5
n	502	502	502	502	502	502	502	502	502	502	502	502	502	502

Note. * $p < .0005$ (Bonferroni-adjusted significance level, .05/91 comparisons), two-tailed.

Table 9

Exploratory Factor Analysis Pattern Matrix for Toxicity Scale

Item	Component	
	1	2
1	.85	-.03
2	.85	-.04
3	.83	-.06
4	.50	-.56
5	.90	.08
6	.81	-.01
7	.81	.00
8	.55	-.42
9	.87	.08
10	.88	.05
11	.86	.05
12	.80	.14
13	.33	.81
14	.80	.04

Note. n = 502.

Outcomes. Affective, behavioural, and psychological outcomes were included in the model, and they were each assessed with 2 or 3 scales. The affective outcomes variable was composed of organizational commitment, job satisfaction, and intention to stay scales. The behavioural outcomes variable was composed of work withdrawal and work neglect scales. Finally, the psychological outcomes variable was composed of perceived stress, anxiety and depression, and exhaustion scales.

Affective outcomes. Organizational commitment, job satisfaction, and intention to stay were assessed as affective outcomes. *Organizational commitment* was measured using Langford's (2009) 4-item scale ($\alpha = .88$, $\alpha = .92$), which reflected the extent to which one possesses loyalty, pride, emotional attachment, and willingness to put forth effort for the organization. Participants rated items such as "I feel a sense of loyalty and commitment to this organization" using a 5-point Likert scale from 1 (strongly disagree) to 5 (strongly agree); thus, higher scores indicated greater organizational commitment.

Job satisfaction was measured using Langford's (2009) 3-item scale ($\alpha = .86$, $\alpha = .84$), which reflected the extent to which one is overall satisfied with one's job, likes the work one does, and feels a sense of personal accomplishment from it. Participants rated items such as "My work gives me a feeling of personal accomplishment" using a 5-point Likert scale from 1 (strongly disagree) to 5 (strongly agree); thus, higher scores indicated greater job satisfaction.

Intention to stay was measured using Langford's (2009) 3-item scale ($\alpha = .89$, $\alpha = .93$), which reflected the extent to which one could see oneself working for the organization at various points in time in the future. Participants rated items such as "I would like to still be working in this organization in 5 years time" using a 5-point Likert

scale from 1 (strongly disagree) to 5 (strongly agree); thus, higher scores indicated greater intention to stay.

Behavioural outcomes. Neglect and work withdrawal were assessed as behavioural outcomes. *Neglect* was measured using Withey and Cooper's (1989) 3-item scale ($\alpha = .55$, $\alpha = .81$), which reflected the extent to which one engages in avoidance and distancing from work. Participants indicated how frequently, within the last month, they had done such things as "Coming in late to avoid dealing with problems" using a 5-point Likert scale from 1 (never) to 5 (very often); thus, higher scores indicated greater neglect. To help avoid recall bias, all survey items referring to frequency had timeframes limited to the last month.

Work withdrawal was measured using Kammeyer-Mueller and Wanberg's (2003) 4-item scale ($\alpha = .76$, $\alpha = .81$), which reflected the extent to which one psychologically disengages from work through separation and decreased effort. Participants indicated how frequently, within the last month, they had done such things as "Allowing others to do my work for me" using a 5-point Likert scale from 1 (never) to 5 (very often); thus, higher scores indicated greater work withdrawal. The wording of one item was modified for the current study by changing referents from "your" and "you" to "my" and "me;" that is, "Allowing others to do your work for you" was changed to "Allowing others to do my work for me."

Psychological outcomes. Perceived stress, anxiety and depression, and exhaustion were assessed as psychological outcomes. *Perceived stress* was measured using the 10-item version ($\alpha = .85$) of Cohen, Kamarck, and Mermelstein's (1983) 14-item scale. In a review of the psychometric properties of the perceived stress scale, Lee

(2012) reported internal consistencies for the 10-item scale ranging from .74 to .91. The scale reflected the extent to which one finds their life to be uncontrollable, unpredictable, and overloading. Participants indicated how frequently, within the last month, they had experienced such things as “I have felt that I was unable to control the important things in my life” using a 5-point Likert scale from 1 (never) to 5 (very often); thus, higher scores indicated greater perceived stress. The wording of the items was modified for the current study by changing the introductory words for each item from “In the last month, how often have you” to “I have” and using a frequency rating scale, asking the respondent to indicate the frequency at which they had engaged in or experienced each item in the last month. This changed the items from questions to statements. In addition, the referent was changed from “your” and “you” to “my” and “I.” For example, “In the last month, how often have you felt that you were on top of things?” was changed to “I have felt that I was on top of things.”

Anxiety and depression were measured using Kroenke et al. 's (2009) 4-item Patient Health Questionnaire for Depression and Anxiety (PHQ-4) scale ($\alpha = .85$, $\alpha = .87$), which reflected the extent to which one experiences symptoms that constitute core screening criteria for anxiety and depression. Participants indicated how frequently, within the last month, they had experienced such things as “I have not been able to stop or control worrying” using a 5-point Likert scale from 1 (never) to 5 (very often); thus, higher scores indicated greater anxiety and depression. The introductory wording preceding the items, as well as the wording of the items themselves, was modified for consistency in the survey, making the timeframe the last month and making the items read as statements about oneself. For example, “Over the *last 2 weeks*, how often have

you been bothered by the following problems?” with item “Feeling nervous, anxious, or on edge” was changed to “Please indicate the frequency at which you have experienced the following in the last month” with item “I have felt nervous, anxious, or on edge.”

Exhaustion was measured using Demerouti, Mostert, and Bakker’s (2010) 8-item scale ($\alpha = .78$, $\alpha = .81$) for which exhaustion is defined as a consequence of intensive affective, cognitive, and physical strain from prolonged exposure to job demands.

Participants indicated how frequently, within the last month, they had experienced such things as “After my work, I feel worn out and weary” using a 5-point Likert scale from 1 (never) to 5 (very often); thus, higher scores indicated greater exhaustion. Given the rating scale referred to frequency, and there were already references to frequency (i.e., ‘often’ and ‘usually’) in the original items, those original items were modified by removing the references to frequency. For example, “When I work, I usually feel energized” was changed to “When I work, I feel energized.”

Negative affectivity. A measure of negative affectivity was included in the survey to be used as a control variable because it has been shown to influence the magnitude of the relations between self-reported stressors and strains and has been dubbed a methodological nuisance (Burke, Brief, & George, 1993). *Strain-free negative affectivity* was measured using 12 items ($\alpha = .88$), from Fortunato and Goldblatt’s (2002) 20-item scale, for which they tested the internal consistency using two samples and found alphas of .86 and .88. The scale reflects one’s “negative emotional reactivity to transient situational events” (p. 46); the strain-free aspect means the measure does not assess general psychological or physiological distress, which are said to contaminate measures of negative affectivity (Fortunato & Goldblatt, 2002).

The 12 strain-free negative affectivity items were selected from the 20-item measure in order to shorten the scale and reduce potential overlap in items. Participants rated items such as “I tend to become very distressed when I have too much work to do” using a 5-point Likert scale from 1 (strongly disagree) to 5 (strongly agree); thus, higher scores indicated greater strain-free negative affectivity. The wording of a few items was modified for the current study; one modification was changing the word “think” to “worry” in the item “Whenever I encounter a difficult problem, I usually think about it a lot”, and the others involved selecting the terms “work” and “boss” rather than “school” and “teacher” where the item offered a choice, such as in the item “I tend to become really aggravated when things don’t go right at work (or school).”

Demographics. Demographic information was collected regarding participants’ age, gender, ethnicity, current country of residence, education level, employment status, work hours, job title, tenure in current position, tenure in organization, whether they supervise others, organization and immediate workgroup sizes, and industry.

Results

Preliminary Analyses

Missing data. Of the 502 cases in the dataset, 28 (6%) had missing data; 17 of the 112 items (15%) had some missing data, and overall, 0.1% of values were missing. One case was removed from the dataset for excessive (over 50%) missing data, resulting in a sample size of 501.

Of the remaining 501 cases, 7 had missing data on 1 to 3 items of a scale. These 7 cases were handled by allowing mean scores for scales to be computed as few as two items making up the scale, resulting in no missing data at the scale level. Of the

remaining 20 cases with missing data, 17 were missing data on one demographic item and 3 were missing data on two demographic items. For preliminary analyses, listwise and pairwise deletions were employed for missing data. The main analysis was structural equation modeling (SEM), using in SPSS Amos v.24. Given the low amount of missing data and the fact that Amos does not produce certain statistics when data are missing, only complete cases were used for the SEM.

Outliers. In the dataset of 501 cases, 43 univariate outliers were found across 30 cases by consulting boxplots and histograms, and by creating z-scores and deeming an outlier any case with an absolute value greater than 3.29. The affected variables were role clarity, civility, talent, job satisfaction, neglect, and work withdrawal. In addition, 13 cases of multivariate outliers were found by calculating Mahalanobis distance and deeming a multivariate outlier any case with a Mahalanobis distance at $p < .001$. Given there were no data entry errors and it was determined that the scores were genuine, outliers were retained.

Assumption testing. Assumptions of general linear modeling were checked prior to analyses. Slight non-normality was detected for the role clarity, talent, and job satisfaction scales; however, there was no improvement with transformation and hence the scales were left untransformed. More substantial non-normality was found for the neglect and work withdrawal scales, which improved following log transformation; however, analyses were run with and without the transformed variables and because there was no significant change in the results, the original variables were retained. No substantial issues were found with linearity or homoscedasticity. Multicollinearity was detected between the civility and talent variables (Appendix G), just meeting the criteria

set forth by Belsely et al. (1980, as cited in Tabachnick & Fidell, 2013, p.91); however, given the only goal of the analysis was prediction, it was ignored (Tabachnick & Fidell, 2013).

Control variables. Demographic variables were assessed using independent t-tests and one-way ANOVAs to determine whether there was a need to control for their effects on outcomes. The demographics assessed were country, gender, age, ethnicity, education, work hours, years in one's organization, years in one's job, size of one's organization, size of one's workgroup, and supervisory status. The outcomes assessed were workers' ratings of toxicity and self-reported symptoms (i.e., affective, behavioural, and psychological). Missing data were handled by excluding cases on an analysis-by-analysis basis.

Gender. T-tests revealed the need to control for significant, though small, effects of gender on all three psychological symptoms (i.e., perceived stress, anxiety and depression, and exhaustion). A Bonferroni-adjusted significance level of $p < .006$ was used, as gender was tested for 9 outcomes in total ($p = .05/9$ comparisons). For perceived stress [$t(491) = 2.87, p < .006, r = .13$], women ($M = 2.57, SE = .04$) reported higher levels of stress on average than men ($M = 2.40, SE = .05$). There was a significant effect of gender on anxiety and depression as well [$t(491) = 4.18, p < .006, r = .18$], with women ($M = 2.55, SE = .05$) reporting higher levels on average than men ($M = 2.19, SE = .07$). There was also a significant effect of gender on exhaustion [$t(491) = 2.90, p < .006, r = .13$], with women ($M = 2.64, SE = .04$) reporting higher levels on average than men ($M = 2.46, SE = .05$).

Supervisory status. T-tests revealed the need to control for significant effects of supervisory status on two affective symptoms (organizational commitment and job satisfaction) and one psychological symptom (exhaustion), using a Bonferroni-adjusted significance level of $p < .006$. Specifically, for organizational commitment [$t(498) = 3.46, p < .006, r = .15$], those who supervised ($M = 3.96, SE = .07$) reported higher commitment on average than those who did not supervise ($M = 3.64, SE = .06$). Similarly, for job satisfaction [$t(498) = 3.63, p < .006, r = .16$], those who supervised ($M = 4.15, SE = .05$) reported higher satisfaction on average than those who did not supervise ($M = 3.87, SE = .05$). Finally, for exhaustion [$t(498) = -2.92, p < .006, r = .13$], those who supervised ($M = 2.48, SE = .05$) reported lower exhaustion on average than those who did not supervise ($M = 2.66, SE = .04$).

Descriptives. Correlations, means, standard deviations, ranges, and internal consistencies for each variable are presented in Table 10. Mean ratings were above the midpoint for most scales, with the mean for role clarity being the highest, and means for talent, civility, and job satisfaction also quite high. These results suggest that, on average, respondents in this sample had quite positive perceptions of their job and immediate workgroup. The mean ratings for abusive supervision, toxicity, neglect, work withdrawal, anxiety, and depression fell below the midpoint, and the means for perceived stress and exhaustion were only slightly above the midpoint. Thus, on average, the experience of negative working conditions and negative outcomes was fairly low in this sample. Given the current study's focus on toxicity, the mean ratings for each of the climate variables are organized by toxicity level in Figure 8, showing clear differences in

climate ratings by level. Associations between study variables and demographics are presented in Table 11.

Figure 8. Mean ratings for climate variables, organized by toxicity level.

Table 10

Correlations and Descriptive Statistics for Main Study Variables

	1. Role Clarity	2. Pressure to Produce	3. Supervisor Support	4. Abusive Supervision	5. Civility	6. Talent	7. Voice	8. Involvement	9. Toxicity	10. Org. Commitment	11. Job Satisfaction	12. Intention to Stay	13. Neglect	14. Work Withdrawal	15. Perceived Stress	16. Anxiety & Depression	17. Exhaustion	18. Negative Affectivity
1.	(.72)																	
2.	-.09	(.79)																
3.	.28*	-.31*	(.93)															
4.	-.15	.31*	-.64*	(.94)														
5.	.36*	-.24*	.59*	-.44*	(.84)													
6.	.35*	-.17*	.51*	-.35*	.72*	(.88)												
7.	.35*	-.30*	.68*	-.47*	.66*	.63*	(.92)											
8.	.30*	-.34*	.68*	-.58*	.58*	.51*	.74*	(.88)										
9.	-.26*	.37*	-.65*	.68*	-.59*	-.51*	-.65*	-.78*	(.96)									
10.	.37*	-.23*	.63*	-.41*	.54*	.51*	.70*	.66*	-.59*	(.92)								
11.	.42*	-.23*	.57*	-.38*	.52*	.52*	.64*	.60*	-.58*	.83*	(.84)							
12.	.30*	-.25*	.58*	-.40*	.50*	.46*	.65*	.64*	-.59*	.85*	.80*	(.93)						
13.	-.14	.11	-.11	.35*	-.16	-.15	-.10	-.24*	.38*	-.15	-.22*	-.15	(.81)					
14.	-.11	.06	-.04	.31*	-.12	-.10	-.04	-.18*	.33*	-.11	-.16	-.08	.87*	(.81)				
15.	-.20*	.20*	-.28*	.31*	-.26*	-.28*	-.29*	-.40*	.47*	-.24*	-.25*	-.24*	.33*	.31*	(.85)			
16.	-.13	.20*	-.22*	.31*	-.17*	-.23*	-.21*	-.33*	.44*	-.18*	-.21*	-.19*	.32*	.33*	.83*	(.87)		
17.	-.26*	.30*	-.38*	.34*	-.35*	-.39*	-.42*	-.49*	.53*	-.41*	-.45*	-.40*	.29*	.24*	.77*	.69*	(.81)	
18.	-.15	.18*	-.23*	.35*	-.25*	-.22*	-.24*	-.39*	.46*	-.20*	-.21*	-.19*	.33*	.33*	.63*	.60*	.56*	(.88)
mean	4.33	3.14	3.79	1.96	3.86	3.94	3.65	3.12	2.47	3.78	3.98	3.73	1.40	1.38	2.52	2.44	2.58	2.89
s.d.	.59	.87	.93	1.05	.81	.80	.83	.93	.97	1.01	.86	1.12	.66	.60	.65	.91	.67	.73
min-max	1-5	1-5	1-5	1-5	1-5	1-5	1-5	1-5	1-5	1-5	1-5	1-5	1-4.67	1-4.5	1-4.5	1-5	1-4.75	1-5

Note. n = 501. * $p < .0003$ (Bonferroni-adjusted significance level, .05/153 comparisons), two-tailed, Cronbach's alphas on the diagonal.

Table 11

Associations Between Variables and Demographic Information

	<i>n</i>	Role Clarity	Pressure to Produce	Supervisor Support	Abusive Supervision	Civility	Talent	Voice	Involvement	Toxicity	Org. Commitment	Job Satisfaction	Intention to Stay	Neglect	Work Withdrawal	Perceived Stress	Anxiety & Depression	Exhaustion	Negative Affectivity
Country	501	.08	-.08	.05	-.01	-.04	.01	.00	.02	.04	.07	.01	.06	-.05	-.04	-.03	-.06	-.04	-.04
Gender	493	.02	.02	.01	.04	-.02	.01	.03	.01	-.04	-.04	-.02	.01	.11	.09	-.13	-.19*	-.13	-.07
Age	500	.01	.00	-.06	-.07	.04	.04	-.07	-.03	-.02	-.01	.03	-.03	-.22*	-.20*	-.19*	-.20*	-.16	-.27*
Ethnicity	501	-.01	.07	.08	-.03	.05	.05	.07	.02	-.02	.01	.02	-.01	.08	.08	.01	-.02	.04	.06
Education	499	-.06	-.04	.05	-.08	.06	.06	.04	.06	-.08	.04	.03	.00	-.01	.02	-.04	-.06	-.07	.01
Work hours	501	-.06	.07	.02	-.04	-.04	-.04	-.01	.02	-.05	.01	-.02	.01	-.11	-.09	-.05	-.04	-.01	-.09
Org years	497	.02	.06	-.05	-.01	-.01	.01	-.01	-.03	.01	.07	.03	.09	-.02	-.01	-.16*	-.13	-.15	-.14
Job years	497	.07	.07	-.05	.01	.00	.00	-.03	-.03	.03	.08	.06	.08	-.04	-.06	-.10	-.12	-.07	-.13
Org size	500	-.07	.14	.01	-.09	.01	.01	.02	-.06	.03	-.08	-.05	-.02	.00	.01	-.04	-.05	-.01	-.07
Group size	498	.05	.05	.08	-.05	.10	.10	.12	.08	-.03	.11	.12	.14	.06	.05	-.03	-.05	-.03	-.05
Supervise	500	-.14	-.14	-.09	.00	-.15	-.13	-.21*	-.16*	.06	-.15	-.16	-.11	-.06	-.07	.10	.06	.13	.08

Note. * $p < .0003$ (Bonferroni-adjusted significance level, .05/198 comparisons), two-tailed, pairwise deletion. Country coded 0 = Canada, 1 = United States; gender coded 0 = female, 1 = male; supervise (i.e., supervisory status) coded 0 = supervisor, 1 = not a supervisor.

Model testing

Structural equation modeling (SEM) was used to test the associations between various aspects of psychological climate, toxicity appraisals, and individual-level outcomes. The hypothesized model, in Figure 9, was recursive and had 3 latent endogenous variables, 1 latent endogenous predictor variable, and 11 measured exogenous predictor variables. The measured predictor variables were single-item responses for gender and supervisory status, and mean scores for each of the 9 scales (i.e., the 8 aspects of psychological climate, and negative affectivity). The mean scores were used to reduce the number of parameters to be estimated in the model; they were calculated using all available items for the scale. Mean scores were also used for the scales underlying the 3 latent variables representing affective, behavioural, and psychological outcomes. Toxicity appraisals were represented as a latent variable, with the 11 scale items as indicators; a mean score was not used here because the items underlying this scale were of interest.

Figure 9. Hypothesized model for the main study.

Measurement model. Fit was assessed for the four latent factors (i.e., affective symptoms, behavioural symptoms, psychological symptoms, and toxicity) and their underlying indicators. To set the scales for the latent factors, the factor loading for the first indicator of each was fixed to 1 (McDonald & Ho, 2002). Cases with missing data on any item in the model were deleted; therefore, the sample size was 492. In total, there were 190 distinct sample moments and 44 parameters to be estimated; thus the model was over-identified with 146 degrees of freedom.

The chi-square test of global model fit was significant, χ^2 (146, $N = 492$) = 556.69, $p = .000$, suggesting poor fit; however, the χ^2/df was 3.81, indicating reasonable fit (Bollen, 1989; Tabachnick & Fidell, 2013; Wheaton et al., 1977). The CFI value was .95, which met the threshold for acceptable model fit of .90 or greater (Hu & Bentler, 1999) and the PCFI value was .81, also indicating acceptable fit. The RMSEA estimate was .076, and the PLCLOSE value was .000. Although values of greater than .07 (Steiger, 2007) have recently been considered indicative of poor fit, it was previously held that values from .05 to .08 indicated reasonable error of approximation (Browne & Cudeck, 1993). Taken together, model fit was marginally acceptable. The loadings of the indicators on their respective latent factors are presented in Table 12 and all exceeded .75; inter-factor correlations are in Table 13. Squared multiple correlations (Appendix H) showed that over 50% of the variance for each indicator was accounted for by its latent factor (Kline, 2011).

Table 12

Confirmatory Factor Analysis Loadings for the Measurement Model

Regression weights	Standardized Estimate	Unstandardized Estimate	Standard Error	Critical Ratio	<i>p</i>
Toxicity					
Item 1	.83	1.00 ^a			
Item 2	.86	1.01	.04	24.15	< .001
Item 3	.81	1.02	.05	21.95	< .001
Item 5	.88	1.06	.04	25.16	< .001
Item 6	.80	.96	.05	21.49	< .001
Item 7	.77	.93	.05	20.36	< .001
Item 9	.86	1.04	.04	24.05	< .001
Item 10	.86	1.04	.04	24.16	< .001
Item 11	.85	1.16	.05	23.62	< .001
Item 12	.76	.91	.05	20.06	< .001
Item 14	.77	.95	.05	20.12	< .001
Affective outcomes					
Organizational commitment	.93	1.00 ^a			
Job satisfaction	.88	.81	.03	31.13	< .001
Intention to stay	.90	1.07	.03	32.84	< .001
Behavioural outcomes					
Neglect	.98	1.00 ^a			
Withdrawal	.88	.82	.05	15.52	< .001
Psychological outcomes					
Perceived stress	.95	1.00 ^a			
Anxiety & depression	.87	1.28	.05	28.37	< .001
Exhaustion	.82	.89	.04	25.23	< .001

Note. n = 492. ^a Fixed parameter to set the scale of the latent variable.

Table 13

Inter-Factor Correlations for the Measurement Model

Inter-factor correlations	Toxicity	Affective outcomes	Behavioural outcomes	Psychological outcomes
Toxicity	-			
Affective outcomes	-.67	-		
Behavioural outcomes	.37	-.21	-	
Psychological outcomes	.53	-.32	.36	-

Note. n = 492.

Path model. The model (Figure 10) assessed various aspects of psychological climate, covering four dimensions (i.e., job and role characteristics, characteristics of leadership, workgroup characteristics, and subgroup and organizational characteristics), as direct predictors of toxicity appraisals, and then assessed toxicity appraisals as direct predictors of affective outcomes (i.e., organizational commitment, job satisfaction, and intention to stay), behavioural outcomes (i.e., neglect and work withdrawal), and psychological outcomes (i.e., perceived stress, anxiety and depression, and exhaustion). Gender, supervisory status, and negative affectivity were included in the model as control variables; however, gender and supervisory status are not depicted in Figure 10 in the interest of clarity. The path model also had correlations between the 8 psychological climate variables and negative affectivity, but for clarity, these were also not depicted in Figure 10 (see Appendix I for correlations). In total, there were 465 distinct sample moments and 106 parameters to be estimated in the model; thus the model was over-identified with 359 degrees of freedom. Overall, fit was acceptable, though it was not a close-fitting model, $\chi^2(359, N = 492) = 1163.81, p = .000$; χ^2/df was 3.24; CFI = .93; PCFI = .77; RMSEA = .07, PLCLOSE = .000. Standardized parameter estimates shown in Figure 10; additional information regarding estimates is presented in Table 14.

Figure 10. Path model with standardized parameter estimates. * $p < .05$. ** $p < .01$. *** $p < .001$. The gender and supervisory status control variables are not included in the model; parameter estimates for these variables can be found in Table 14.

Table 14

Parameter Estimates for the Path Model

Model Parameters	Standardized Estimate	Unstandardized Estimate	Standard Error	Critical Ratio	<i>p</i>
Effects on toxicity appraisals					
Role clarity	.00	.01	.04	.15	.880
Pressure to produce	.07	.08	.03	2.71	.007
Supervisor support	-.05	-.05	.04	-1.25	.212
Abusive supervision	.25	.22	.03	7.25	< .001
Civility	-.09	-.11	.04	-2.42	.016
Talent	-.06	-.07	.04	-1.53	.126
Voice	-.09	-.10	.05	-2.15	.031
Involvement	-.40	-.41	.04	-9.52	< .001
Negative affectivity	.14	.18	.04	5.11	< .001
Effects on affective symptoms					
Toxicity	-.74	-.73	.05	-15.56	< .001
Negative affectivity	.11	.14	.05	2.78	.005
Effects on behavioural symptoms					
Toxicity	.28	.18	.03	5.58	< .001
Negative affectivity	.18	.16	.04	3.83	< .001
Effects on psychological symptoms					
Toxicity	.28	.18	.03	7.08	< .001
Negative affectivity	.55	.46	.03	14.06	< .001
Effects of control variables					
Supervisory status → Organizational commitment	-.07	-.14	.05	-2.88	.004
Supervisory status → Job satisfaction	-.08	-.13	.05	-2.90	.004
Supervisory status → Exhaustion	.05	.07	.04	1.73	.084
Gender → Stress	-.08	-.12	.05	-2.51	.012
Gender → Anxiety & depression	-.15	-.28	.07	-4.15	< .001
Gender → Exhaustion	-.09	-.12	.05	-2.34	.019

Note: n = 492. Gender coded 0 = female, 1 = male; supervisory status coded 0 = supervisor, 1 = not a supervisor.

The first research question was whether aspects of psychological climate were associated with toxicity appraisals. Higher toxicity appraisals, controlling for negative affectivity, were significantly predicted by higher pressure to produce, more abusive supervision, lower civility, less voice, and less involvement. Involvement and, to a somewhat lesser extent, abusive supervision were the strongest predictors of toxicity appraisals. Role clarity, supervisor support, and talent did not show significant effects on toxicity appraisals. The predictor variables explained a substantial proportion of variance in toxicity scores, $R^2 = .76$.

The second research question was whether any one of the psychological climate dimensions (i.e., job and role characteristics, characteristics of leadership, workgroup characteristics, or subgroup and organizational characteristics) was more strongly predictive of toxicity appraisals than the others. Variables from all four dimensions of climate significantly predicted toxicity appraisals, meaning toxicity was not solely influenced by one dimension of the work environment. Furthermore, although the strongest predictor of toxicity appraisals was involvement (from the subsystem and organizational dimension of climate) and this dimension was the only one to have both variables (i.e., involvement and voice) significantly predict toxicity appraisals, it may not be entirely accurate to conclude this dimension most strongly predicted toxicity, as the effect of abusive supervision (from the leadership dimension) had a stronger effect on toxicity appraisals than did voice. Thus, the strongest predictors of toxicity appraisals were not exclusively covered by one of Jones and James' (1979) dimensions of climate; that being said, they both had to do with management.

The third research question was whether toxicity appraisals were associated with individual-level outcomes. Toxicity appraisals significantly predicted all three outcomes after controlling for negative affectivity, though higher toxicity appraisals most strongly predicted lower affective symptoms, which comprised organizational commitment and job satisfaction, controlled for supervisory status, and intention to stay. Higher toxicity appraisals predicted higher behavioural symptoms (i.e., neglect and work withdrawal) and higher psychological symptoms (i.e., perceived stress, anxiety and depression, and exhaustion controlled for gender) with similar magnitude. The predictor variables (i.e., toxicity and negative affectivity) explained about half of the variance in affective symptoms, $R^2 = .48$, and psychological symptoms, $R^2 = .52$, and somewhat less in behavioural symptoms, $R^2 = .16$.

As an additional analysis, the climate variables were assessed as predictors of the single item “I experience a toxic work environment” as opposed to the full 11-item toxicity scale. Higher scores on the toxicity item, controlling for negative affectivity, were significantly predicted by higher pressure to produce, more abusive supervision, lower civility, less voice, and less involvement, with abusive supervision being the strongest predictor (see Appendix J). Thus, when predicting the term itself, rather than the larger toxicity phenomenon, abusive supervision and involvement flipped for first and second strongest predictors.

Participants’ Comments on Toxic Work Environments

In the survey, there was an open-ended question immediately following the toxicity scale in which participants were asked to respond to the item “Please use the space provided below to briefly explain what makes you think your work environment is,

or is not, toxic.” The purpose of the question was to find out whether respondents understood the term ‘toxic work environment’ and to explore their perspectives on the experience of a toxic work environment, or lack thereof. Due to a technical glitch during survey administration, the first 50 of the 510 participants were unable to provide a response to this question. Of the 501 cases that were retained for analysis, 451 were able to provide a response and 414 (92%) did. The length of the comments ranged from 1 to 155 words.

The comments were examined using thematic analysis, which is a qualitative technique whereby one searches across the dataset for repeated patterns of meaning (i.e., themes) (Aronson, 1994; Braun & Clarke, 2006). Given the research question was fundamentally about how respondents viewed the notion of ‘toxic work environment,’ as an initial approach to the analysis, comments were grouped based on the participant’s response to the just-prior quantitative item, “I experience a toxic work environment,” for which the distribution was: 41% strongly disagreed (i.e., very nontoxic work environment), 31% disagreed (i.e., nontoxic work environment), 13% neither agreed nor disagreed (i.e., neutral work environment), 11% agreed (i.e., toxic work environment), and 4% strongly agreed (i.e., very toxic work environment); the terms presented in parentheses are used for ease of reading and should not be taken as technically accurate.

From this perspective, the comments were analyzed according to the steps recommended by Braun and Clarke (2006). First, all of the comments were read multiple times, starting with those from respondents who indicated a very nontoxic work environment, all the way to those from respondents who indicated a very toxic work environment. This reading was done to gain familiarity with the data, as well as to note

preliminary ideas regarding its content. Second, the content of the comments was coded to identify elements that were of interest with regard to the phenomenon of a toxic work environment; this helped to begin organizing the data in a meaningful way. Third, the coded data were grouped together to reflect themes (including sub-themes). Fourth, the comments were re-read to ensure the themes adequately captured the data and to add to the themes any data or codes that were previously missed. Fifth, the themes were further refined and named by considering how each fit the overall story of how respondents experienced a toxic work environment, as well as whether each was distinct enough from the others. Sixth, the story of the data was put together to depict workers' perspectives on toxic work environments, both across and within themes. The results of the analysis are presented below and start with addressing the question of whether respondents appeared to understand the term 'toxic work environment', followed by descriptions of their perspectives on the phenomenon.

Understanding of the term 'toxic work environment'

Of the 414 comments provided, most (77.5%) showed that the respondent clearly understood the item "I experience a toxic work environment" as it was intended in this study – that is, they recognized a 'toxic work environment' as one that presents threats to workers' well-being, and mainly their psychological and emotional health. However, it was evident in a small proportion of comments (7.5%) that the respondent did not understand the item as intended, and instead interpreted it as asking about whether they were exposed to chemical or other ecological toxins at work; for example, stating, "we have nothing toxic. It is not a chemical company" (*participant #296*). In several comments (15%), it was unclear how well the respondent understood the item because

their response was not detailed enough to decipher their understanding with certainty, for example, stating “my workplace is not toxic..it is safe” (*participant #105*); some of these respondents might simply have been resistant to open-ended questions, and thus did not take the item seriously, for example, stating “This is weird” (*participant #154*). For the 37 respondents (8%) who did not respond at all, out of the 451 who could, it is unknown whether they misunderstood the question or simply chose not to respond.

These findings demonstrate that the use of the term “toxic work environment” as intended in this study is not ubiquitous, but it was understood well enough to suggest it is common. The comments from the 31 respondents (7.5%) who clearly misunderstood the meaning of ‘toxic work environment’ were not included in the results³; as such, the findings from the remaining 383 comments are discussed.

Perspectives on toxic work environment

Participants were asked to explain why they thought their work environment was, or was not, toxic. The idea was to have participants describe their own working conditions in order to get a sense of what leads to an appraisal of a toxic work environment on the part of workers. There were a few respondents, however, who provided more general statements about their perspective on toxic work environments, akin to a definition. These statements are presented below, followed, in parentheses, by the respondent’s rating of whether they experienced a toxic work environment.

“A toxic work environment is one that causes a lot of stress. I feel that it would stem from ideologies amongst coworkers that are very different from each other. Issues with politics or just anger

³ To verify whether participants’ understanding of the term ‘toxic work environment’ affected quantitative results, ANOVAs were run comparing results of those who understood, those who did not, and those for which understanding was unclear. No significant differences were found.

management issues can lead to a toxic environment where people can't do their work effectively as a result.” (*participant #164*, strongly disagree; thus, nontoxic environment)

“I think of toxic as poisonous in the extreme and having an overarching negative effect which leeches out and permeates my daily life. My work environment [sic] while it can be stressful at times is generally harmonious and supportive. Most people work well together and are excellent sounding boards for ideas and issues, making themselves available [sic] to provide assistance [sic] when needed.” (*participant #191*, strongly disagree; thus, nontoxic environment)

“In every work environment there are people who will be negative no matter what. Overall my work environment is not toxic but recently as new changes have been made people have been more negative.” (*participant #329*, neither agree nor disagree; thus, neutral environment)

These general statements, or ‘definitions,’ provided insight into what these particular respondents felt was toxic, and what they felt was not. It was noticeable, however, that there were no general statements about toxic work environment from those who reported experiencing a toxic work environment (i.e., had ratings of agree or strongly agree). This could simply be because they had a toxic work environment to talk about, whereas those who claimed to not have a toxic work environment would have to speak more conceptually, and hence generally, when referring to a toxic work environment. Indeed, as will be seen, respondents who reported *not* having a toxic work environment also commented about feelings they did *not* experience, suggesting they recognized what a toxic work environment felt like, even if they were not experiencing one. In the following section, more detailed results of the thematic analysis are discussed.

Themes. Across the comments, there were three main themes: interpersonal relations, work-related behaviour and processes, and issue management; each of these

themes had at least two sub-themes. The interpersonal relations sub-themes were workplace harmony, communication, valuing employees and their well-being, and emotional reactions; the work-related behaviour and processes sub-themes were work-related behaviour and the organization of work; finally, the issue management sub-themes were the presence of, and response to, issues, and well as personal coping. The themes and sub-themes resulted from groupings of coded data that reflected similar statements or sentiments about one's work environment. As such, not every respondent made statements underlying each theme or sub-theme; either several respondents made the same statement, or a single respondent made a statement that was in some way similar to others' statements.

The data were examined from two perspectives. The first perspective was based on toxicity level, as determined by responses to the item "I experience a toxic work environment," and the second perspective was based on the themes presented above. Table 15 summarizes respondents' comments, organized according to both perspectives; this table is for reference purposes only, as the same information is discussed in more detail in the subsequent sections. The benefit of Table 15 is to be able to see both perspectives in one place. The reader can read the contents from top to bottom, or left to right, to get a slightly different picture of toxic work environment; the first being what each level of toxicity looks like, across themes, and the second being what every theme looks like, across levels of toxicity. The purpose of describing the same comments from these two different, but complementary, perspectives was to highlight not only what it looks like for a work environment to be more versus less toxic, but also the nuances of how each aspect (i.e., theme) looks different as one moves through the levels of toxicity.

Table 15

Respondents' Comments on Toxic Work Environments, Organized by Toxicity Level and Theme

Toxicity Level				
'Very nontoxic'	'Nontoxic'	'Neutral'	'Toxic'	'Very toxic'
Interpersonal Relations				
Workplace harmony				
-management, supervisors, and coworkers got along -interactions were friendly, respectful, and positive -drama and negativity were absent -coworkers were referred to as family -the workplace was called "nurturing"	-people got along -interactions were kind, respectful, and positive -coworkers were referred to as friends	-people got along -coworkers were described as good -mention of people grouping up on others -there were tensions with management -the work environment was neither positive nor negative -the workgroup was positive, whereas management or the organization as a whole was negative -management was dictatorial; disrespectful	-people had bad attitudes that spread -people were mean spirited, negative, and brought others down -a supervisor belittled workers in the open, which bred negativity -there was little positivity -there was a lack of respect and accountability -there was dishonesty, lying, spying, sabotage -there was a general distrust and lack of trust from employer -dealing with senior management was particularly negative -management was disruptive -management had no fear of consequence	-there were cliques -there was favouritism in general, and with rules and discipline -there were numerous accounts of abuse, including: being degraded, belittled, yelled at – sometimes in the presence of others; being threatened physically and with job loss; being excessively restricted, monitored, and punished; being harassed, some sexually harassed; women being disrespected; individual sensitivities being disrespected -some experienced several forms of abuse, some noted it happened regularly
Communication				
-discussions were open and regular -people across levels of	-communication between staff and management was good	-communication was described as "decent", but also as non-existent	-workers did not receive straight answers from management	-the only conversations were to complain about others or the workplace

the organization were included		-management did not want to listen to workers at times -workers were threatened with job loss if they spoke up about anything affecting them or their job	-workers' opinions were not valued, were dismissed – management did what it wanted -workers lacked encouragement and appreciation -management was quick to criticize	itself -coworkers spread gossip and made untrue, negative statements about people to management
Valuing employees and their well-being				
-management and supervisors were supportive -employers cared about workers, valued their well-being -there were benefits, bonuses, and opportunities for development -there was work life balance	-management was supportive -workers' well being was considered -everyone cared about what happened to each other	-management did not value workers or show appreciation -work life balance sometimes suffered for business needs	-the organization existed to maximize profits -management did not value workers, did not care about their well being or that of their families -there was mediocre pay and a lack of rewards -coworkers were decent but higher management and the company had no compassion -the company wanted to do the right thing, but the department was lost	-management only cared about itself and the bottom line, not about employee welfare -people were made to work despite physical limitations or being booked off for vacation
Emotional reactions				
-people felt safe, happy, appreciative, fortunate -not angry, upset, worried, or dreading going to work	-people experienced enjoyment -not “insane by the end of the day” -low morale, resentment -feeling discouraged was also noted	-sadness due to not feeling part of a team was mentioned -low morale	-people felt highly stressed, on edge, anxious, depressed -low morale -high blood pressure was noted	-employees unhappy and angry all the time -people hurt all the time -turnover intentions within a week on the job; the workplace was called “pathetic”
Work-Related Behaviour and Processes				
Work-related behaviour -people were helpful,	-people were helpful,	-management lacked	-there was	-management made

<p>worked together toward a common goal</p> <ul style="list-style-type: none"> -people understood their responsibilities, were professional, competent 	<p>encouraging, and worked together toward a common goal</p> <ul style="list-style-type: none"> -people understood their responsibilities -people were trusted to do their work and make decisions -in general, people were professional, competent, followed through, and took pride in their work -doing additional work to make up for work not completed by coworkers was an issue 	<p>knowledge of the work, rarely consulted workers, and largely ignored their opinions</p> <ul style="list-style-type: none"> -there was adherence to rules, but also unfairness and favouritism -doing additional work to make up for work not completed by coworkers was an issue 	<p>micromanagement</p> <ul style="list-style-type: none"> -departments enforced rules differently -there was unfairness in general and with work distribution; favouritism -doing additional work to make up for work not completed by coworkers was an issue -coworkers had no motivation to be productive 	<p>changes suddenly, without consulting those who did the work</p> <ul style="list-style-type: none"> -workers were not all held to the same standards, particularly with regard to workload and productivity -workers were asked daily to lie and cheat customers
<p>Organization of work</p> <ul style="list-style-type: none"> -workload was reasonable -the atmosphere was relaxed -people worked with few coworkers or mostly alone 	<ul style="list-style-type: none"> -workload was not considered detrimental to health -people worked with few coworkers or mostly alone -people had control over their work -“red tape” was an issue 	<ul style="list-style-type: none"> -people were overworked -work was stressful, which “could be toxic or not” -working with few coworkers was noted both as a positive and a negative -bureaucracy was an issue 	<ul style="list-style-type: none"> -changes made by management did not fit the work -work was difficult and expectations were high -there was understaffing and overworking -needed supplies were ignored -management was unable to properly plan and carry out company goals 	<ul style="list-style-type: none"> -there was excessive workload and unreasonable deadlines
<p>Issue Management</p> <p>Presence of, and response to, issues</p> <ul style="list-style-type: none"> -there were few issues -issues were resolved before they escalated -management received regular updates from workers, recognized 	<ul style="list-style-type: none"> -issues were non-existent, sporadic, or resolved immediately -the workplace was not seen as “toxic” despite a few issues being present 	<ul style="list-style-type: none"> -some issues were addressed, some were not -it was noted that issues were perpetual -management was aware of issues but did nothing 	<ul style="list-style-type: none"> -management spoke out about issues, but allowed them to persist due to inaction -management was aware of an abusive supervisor, 	<ul style="list-style-type: none"> -filing a complaint meant getting fired -management did not check into complaints -management expected workers to “just deal

<p>problems, and talked over concerns</p> <p>-workers raised issues and management discussed resolutions with them</p> <p>-issues were handled professionally, quickly, quietly, respectfully</p> <p>-the workplace was not seen as toxic despite issues mishandled or unaddressed by management</p>	<p>-issues were “swept under the rug;” “hidden, but we all know it happens and the boss just sugar coats the issue, so the problem never goes away and in some cases has gotten worse”</p>	<p>but did nothing because the supervisor was productive and hard to replace</p> <p>-workers were told issues they raised were not their responsibility to worry about</p> <p>-health problems were perceived as a nuisance to higher ups</p>	<p>with” issues</p> <p>-management allowed/did not handle negative coworker behaviour, including violent conduct</p> <p>-higher levels of management did not address issues with lower levels of management, despite awareness of the issues</p>
<p>Personal coping</p> <p>-workers ignored negativity, ‘rolled with the punches’</p>	<p>-workers noted they “take the good with the bad;” “don’t bring my work home with me”</p> <p>-workers noted having support from several sources; adopting an “us versus them” mentality with respect to management</p>	<p>-workers noted having to “just deal with issues that arise mostly on your own. You either learn to adapt, or quit;” “try to stay positive”</p> <p>-one respondent noted they knew what to expect going in to the job, so they did not let the workplace get to them</p> <p>-it was noted the workplace was “not toxic to everyone”</p>	<p>[no comments fit this sub-theme]</p> <p>[no comments fit this sub-theme]</p>

Comments organized by toxicity level. In this section, respondents' comments are described by toxicity level, providing a sense of what work environments look like at each level, based on the themes (i.e., interpersonal relations, work-related behaviour and processes, and issue management).

Very nontoxic. Of the 207 respondents who reported a very nontoxic work environment (i.e., strongly disagreed that they had a toxic work environment), 180 (87%) provided comments; of these comments, 147 (82%) clearly demonstrated that the respondent understood the term 'toxic work environment' as it was intended in this study.

In the comments, it was frequently stated that management, supervisors, and coworkers got along. Respondents commonly noted there was friendliness, respect for one another, positivity, and an absence of drama and negativity in interactions; some said their coworkers were like family. There was a common theme of open and regular communication across all levels of the organization and the workplace was described as nurturing. There was repeated reference to having management and supervisor support, as well as employers caring about workers and valuing their well-being. There was also regular mention of receiving benefits, bonuses, and opportunities for development, and of having work-life balance. A number of respondents noted feeling safe, happy, appreciative, and fortunate; some even described an absence of negative feelings - for example, not feeling angry, upset, worried, or dreading going to work.

It was commonly stated that coworkers helped each other and worked together toward the same goal; respondents used expressions such as being "on the same page" (*participants #43, #221*) and "pulling in the same direction" (*participant #244*). There was frequent mention that people understood their job responsibilities and were

professional and competent, and that workload was reasonable and the atmosphere relaxed. Several respondents spoke of either working with few coworkers or performing most of their tasks alone.

Respondents commonly stated there were few issues in their workplace, and that when issues were present they were resolved before they escalated. It was noted that management received regular updates from staff, recognized problems, and talked over concerns. Another common theme was that staff raised issues to be resolved and worked with superiors on resolutions. Issues were often described as being handled professionally, quickly, quietly, and respectfully. Further, several respondents stated they did not consider their workplace to be toxic despite issues mishandled or unaddressed by management, and some mentioned dealing with issues themselves; for example, by ignoring negativity such as gossip, and by learning to “roll with the punches” (*participants #223, 315*).

Nontoxic. Of the 154 respondents who reported a nontoxic work environment (i.e., disagreed that they had a toxic work environment), 118 (77%) provided comments; of these comments, 92 (78%) clearly demonstrated that the respondent understood the term ‘toxic work environment’ as it was intended in this study.

Similar to the previous category, in the comments of those who reported a nontoxic work environment, it was commonly noted that people got along and that there was kindness, respect, and positivity in interactions. Coworkers were often referred to as friends; there was only one reference to coworkers as family, which was a term used more frequently in the previous category. There was repeated mention of good communication between staff and management. A number of respondents noted that

management was supportive; for example, one said senior members of the organization advocated for junior members. There was also regular reference to there being consideration for workers' well-being; it was also commonly stated that employers, management, supervisors, and coworkers cared about what happened to each other. Respondents mainly reported positive feelings regarding their workplace, such as enjoyment, and similar to the previous category, one respondent reported an absence of negative feelings, noting, "I am not insane by the end of the day" (*participant #142*). New to this category were reports of the presence of negative feelings, such as low morale and resentment – for example, one respondent stated, "I think there are some folks that are here that hate their job and hate the responsibility that they have been given, so they do the minimal effort, making [sic] it [sic] more difficult to do your own job and making you resentful" (*participant #77*).

Respondents frequently stated that people were helpful, encouraging, and worked together toward a common goal; it was also noted that coworkers had similar work ethic and drive. A common theme was that people understood their job responsibilities and were trusted to do their work and make decisions. A number of respondents remarked that others in the work environment were professional, competent, followed through on their responsibilities, and took pride in their work. In addition to the workload issue noted in the previous paragraph, whereby coworkers not doing their own work increased others' workload, there were a few references to high workload; however, there were also references to workload not being excessive. Also like the previous category, some respondents noted working with few coworkers or mostly alone; indeed, having control

over one's work environment was raised as a positive, whereas "red tape" (*participant #145*) was noted as problematic.

Issues were regularly described as non-existent, sporadic, or resolved head on and immediately. Some said despite a few issues, they did not consider the workplace to be "toxic." Indeed, one respondent noted the workplace was busy, but that people got along, and another said their work environment was fairly pleasant but that sometimes management did not follow through, stating "I know that management cares about the issues that are brought up to them, but I do not feel that the follow through is always there and that can be very discouraging" (*participant #417*). Several respondents described coping strategies, such as "u [sic] have to take the good with the bad" (*participant #309*) and "I feel the pressure of meeting required goals but I don't bring my work home with me and it's not anything I stress over" (*participant #448*). Respondents also noted having support from several sources, and one respondent said their work team had adopted an "us versus them" (*participant #280*) mentality with regard to management, which they noted helped to keep the atmosphere light and fun. As in the previous category, there was not a complete absence of issues in nontoxic work environments, but they seemed to be resolved quickly, of low dose, or outweighed by other, more positive, conditions, including the individual's own coping.

Neutral. Of the 64 respondents who reported a neutral work environment (i.e., neither agreed nor disagreed that they had a toxic work environment), 51 (80%) provided comments; of these comments, 33 (65%) clearly demonstrated that the respondent understood the term 'toxic work environment' as it was intended in this study.

In the comments of those who reported a neutral work environment, there was regular mention of people getting along and of having good coworkers; however, one respondent stated that people in their work environment “like to group up” (*participant #412*), which was taken to mean “gang up,” defined as exerting group pressure against someone (Gang up, 2016). In addition, a number of respondents noted tensions with management. The work environment was described as neither positive nor negative, and some noted a kind of dichotomy, for example, one respondent said their department was positive, supportive, and understanding, but that the organization as a whole was negative, and another noted their colleagues were great but that higher management put them down. Indeed, evidence of a worker-management divide started to appear in this category.

Management was described as dictatorial rather than friendly, and a few respondents noted disrespectful behaviour from their managers, such as being talked down to or berated. Communication was described as decent, but also as non-existent, and management was at times described as not wanting to listen to employees; one respondent remarked there was always a threat of job loss if they spoke up about things that affected them or their job. A few respondents noted management did not value them or show appreciation and that their work life balance sometimes suffered for business needs. In contrast to the previous categories, mainly somber emotions were reported; for example, there was reference to not feeling part of a team, which the respondent said was “sad because we are suppose [sic] to be a school family” (*participant #50*), and another respondent noted low morale.

Respondents commonly stated that management lacked knowledge of the work that their decisions affected, that they rarely consulted workers, and that workers' opinions on changes were largely ignored. Some noted there was adherence to rules in their workplace; however, other respondents reported unfairness and favouritism, such as in hiring and the assignment of less stressful work. As in previous categories, having to complete others' work was noted as an issue; there was also mention that people were overworked. One respondent remarked that their work was stressful, which they said could be toxic or not. As in previous categories, having few coworkers was noted as a positive, suggesting this helped to keep from experiencing toxicity; however, it was also noted in a negative context, wherein the few other workers were favoured and got away with "pushing off work onto" the respondent (*participant #271*). Several respondents stated bureaucracy was an issue – something that was also raised in comments from the nontoxic category.

Respondents frequently commented that some workplace issues were addressed whereas others were not. One respondent remarked that the issues in their workplace were sustained, and another said "There are people that cause issues for everyone else. Management knows it but does little to nothing to change this" (*participant #60*). Indeed, issues were described as "swept under the rug" (*participant #78*), as well as "hidden, but we all know it happens and the boss just sugar coats the issue, so the problem never goes away and in some cases has gotten worse" (*participant #366*). One respondent noted, "you have to just deal with issues that arise mostly on your own. You either learn to adapt, or quit. You have to weigh the pros and cons when it comes to the job" (*participant #33*); another said, "I try to stay positive, but with the lack of consistency

and always "cutting" benefits while requiring more can make it hard" (*participant #387*). Overall, the neutral category, wherein respondents neither agreed nor disagreed that they experienced a toxic work environment, seemed to reflect two main positions: one was that the environment was not entirely bad, or 'toxic', though there were issues, and the other was that the environment was not toxic for the respondent, but that it was for some.

Toxic. Of the 55 respondents who reported a toxic work environment (i.e., agreed that they had a toxic work environment), 45 (82%) provided comments; of these comments, 32 (71%) clearly demonstrated that the respondent understood the term 'toxic work environment' as it was intended in this study.

A frequent theme in the comments of those who reported a toxic work environment was bad attitudes, which one respondent said, "spread like wildfire" (*participant #167*). Indeed, respondents noted the presence of mean spirited, negative people that brought others down. One respondent described that although they got along with their supervisor, the supervisor belittled others in the open and this bred negativity. There was repeated reference to there being little positivity; a lack of respect in the workplace, such as calling one another names; and a lack of accountability, including not apologizing after having done something wrong. In addition, several respondents mentioned such things as dishonesty, lying, spying, and sabotage in the workplace, as well as distrust in general, and a lack of trust from the employer. Senior management was often described as particularly negative. For example, one respondent explained that their senior vice president was disruptive and divisive and pitted departments against each other, and another stated, "upper management has no fear of losing their jobs so

they feel they can get away with anything, regardless of how it impacts those down the chain” (*participant #36*).

In the comments, workplace communication seemed strained, particularly between management and employees. A number of respondents noted not receiving straight answers and that management did not value workers’ opinions; for example, it was stated that management dismissed their advice, or did not take it in the first place, and instead did what they wanted. Respondents also noted a lack of encouragement, as well as management being quick to criticize workers but slow to appreciate a job well done - if they showed appreciation at all. Indeed, several respondents expressed the feeling that their organization existed to maximize profits for shareholders, and that employees were not valued or seen as important, with some noting that management did not care about their well being or that of their families. There were references to mediocre pay and lack of rewards; for example, one respondent mentioned not having received a pay raise in over 7 years, and another said staff never received raises whereas the company owners were always on vacation.

Similar to the previous category, there was some evidence of dichotomy. For example, one respondent said their coworkers were decent but that higher management and the company had no compassion; another stated that their company seemed to want to do the right thing, but their department was lost. In terms of emotions, one respondent stated they did not have “the happiest work environment” (*participant #462*), and others reported having high stress, anxiety, depression, feeling on edge, and experiencing low morale. High blood pressure was also mentioned; this was the first category in which respondents noted any physical health conditions.

With regard to work-related behaviour and processes, micromanagement was noted as an issue. A number of respondents described an imbalance of sorts; for example, they spoke of departments enforcing rules differently, as well as unfairness in general, and specifically with respect to workload – as was raised in previous categories, several respondents stated that when others did not complete their work, they (the respondent) had to make up for it. One respondent explained that their coworkers had no motivation to be productive, so the distribution of work was uneven and therefore unfair, and that this reduced employee morale. It was also noted by a respondent that their manager rationalized tasking them with a majority of the work compared to others by saying the respondent was a “go getter” and enjoyed “doing all the work” (*participant #161*). Respondents mentioned that the changes management made did not fit the work, that the work was difficult, expectations were high, there was understaffing, and people were overworked. One respondent noted “overall people feel on edge due to the inability for management to properly plan and carry out goals for the company” (*participant #167*).

In the comments of those who reported a toxic work environment, the issues described were commonly unresolved. For example, one respondent recounted that their employer spoke out against issues but still allowed them to persist due to inaction, and another respondent said management was aware of a supervisor that was belittling people but did nothing because the supervisor was productive and would be difficult to replace (*participant #462*). It was also as though concerns were not taken seriously, as one respondent described that they had gone to management about issues and been told that it was not their responsibility to worry about them, and another noted that the health

problems that some employees had were perceived as a nuisance to higher ups. Overall, it seemed that compared to other categories, this category showed evidence of more destructive relations, less input from employees, less regard for their well-being, and less concern regarding the impacts of decisions on the workforce.

Very toxic. Of the 21 respondents who reported a very toxic work environment (i.e., strongly agreed that they had a toxic work environment), 20 (95%) provided comments; of these comments, 18 (90%) clearly demonstrated that the respondent understood the term ‘toxic work environment’ as it was intended in this study.

In the comments, respondents noted cliques, as well as favouritism, both in general and with respect to enforcing rules and discipline. For example, one respondent said there were employees who were consistently allowed to break the rules without consequence; another noted their manager flirted her way out of trouble and they (the respondent) would get blamed for whatever had happened. There were also numerous accounts of abuse (e.g., verbal abuse, physical threats), with a few respondents experiencing multiple forms, and some saying it happened regularly. For example, several respondents stated they were yelled at, sometimes in the presence of others, as well as threatened physically with objects being thrown, with job loss, and with consequence to one’s family. One respondent reported, among other things, being belittled, put down, embarrassed, having activities restricted, and being excessively monitored and punished by management. There was frequent mention of being degraded by supervisors and called names; one respondent said of management, “they treat us like crap and I suspect pit us against each other for fun” (*participant #431*).

It was also stated that there was manipulation through fear and intimidation, and the word harassment was used in general, and with reference to a manager who consistently invaded people's space, was obnoxious, and engaged in sexual harassment. Some of the mistreatment was subtler, with one respondent noting a lack of respect regarding their perfume allergy, such that coworkers continued to wear scents despite having been asked not to. One respondent noted that the only conversations being had were to complain about others or the workplace itself. There was also mention of coworkers spreading gossip, as well as making untrue, negative statements about people to management.

Management was often described as only caring about itself, its needs, and the bottom line, and not about employees and their welfare; indeed, one respondent stated, "this is a job (sic) will only give you a paycheck (when that's on time) and nothing else" (*participant #26*). A few respondents described a lack of consideration, with one noting that management did not care about a back problem they reported and still made them do heavy, laborious work; another said their manager had customers call them on their personal phone when they were on vacation, making them work from home. As though they were accepting their situation, one respondent explained, "I have a coveted 'full time' position & that means the company owns me and can do whatever they want to me" (*participant #41*). It was noted, "employees are unhappy and angry all the time" (*participant #272*) and that "people hurt all the time" (*participant #10*). One respondent expressed they had started looking for another job within a week of starting and called their work environment "pathetic" (*participant #431*).

Similar to the previous category, several respondents noted that management made decisions and changes suddenly, and without consulting those who did the work. It was also commonly noted that employees were not all held to the same standards with regard to work. For example, respondents described that some people were required to carry the bulk of the workload while others remained unproductive. One respondent noted they were expected to do work that should be done by management; another said they were asked to lie and cheat customers on a daily basis. There was also mention of excessive workload and unreasonable deadlines.

There was an air of hopelessness in comments relating to issue management. For example, one respondent said filing a complaint meant getting fired; another stated that no one checked into their complaints, noting their manager told them she had a lot on her plate. One respondent described experiencing daily abuse from customers, including yelling, swearing, and name-calling, and said that management expected them to “just deal with it” (*participant #41*). Similarly, some noted managers allowing, or not handling, negative coworker behaviour, such as gossip and violent conduct; one respondent stated their manager “just lets them think it’s ok for them to yell and threaten other workers because they know they will not get punished” (*participant #160*). In addition, respondents described that higher levels of management did not address issues with lower levels of management. For example, one respondent said higher management did nothing to deter the actions of a manager who harassed his employees, and another said management knowingly let their supervisor verbally abuse and physically threaten workers. Overall, in the comments of those who reported a very toxic work environment,

seriously threatening working conditions were regularly coupled with a lack of constructive response such that any reprieve seemed unlikely.

In sum, the analysis by toxicity level provided depictions of work environments from very nontoxic to very toxic; in general, these appeared to represent opposite ends of a spectrum – or of several spectra. Indeed, what appeared consistently across the comments of those reporting a toxic or very toxic work environment was an increased severity of workplace conditions when compared to nontoxic work environments. The results suggest that the linchpin of the phenomenon may be a dysfunctional social system – one that could reasonably convert any issue into something more severe by means of mishandling. The next section looks more closely at the themes (i.e., workplace conditions) and highlights the differing nature of each across toxicity levels.

Comments organized by theme. In this section, the analysis is flipped and the comments are described by theme (i.e., interpersonal relations, work-related behaviour and processes, and issue management), providing a sense of what each one looks like from very nontoxic to very toxic work environments. Though the following descriptions cannot be said to capture how a work environment spirals into toxicity, they at least provide snapshots of aspects of organizational functioning across toxicity levels – and from this, one can see progressively worse conditions described as toxicity levels rise.

Interpersonal relations. In general, interpersonal relations went from being described as inclusive and harmonious in nontoxic work environments to divisive and abusive in toxic work environments. In neutral work environments, where respondents neither agreed nor disagreed their work environment was toxic, a dichotomy or balancing of sorts could be seen in the comments whereby respondents described coworkers as

positive but management or the organization as negative. Indeed, tensions with management were increasingly noted starting in the neutral category, though some coworker issues were noted as well; in toxic and very toxic work environments, comments were predominantly focused on management. It was not that interpersonal discord was never present in very non-toxic work environments - respondents from that category described negative people as well as some isolated challenges regarding management. In toxic and very toxic work environments, however, negativity was described as spreading and breeding; fundamental respect as lacking; and people as abused both subtly (e.g., “the company owns me,” favouritism when enforcing rules) and overtly (e.g., being yelled at in the presence of others, objects being thrown).

Communication went from being characterized as open and constructive in nontoxic work environment, to closed and destructive in toxic work environments. In nontoxic environments, not only did communication take place across levels, it was for a purpose, such as resolving issues. In neutral work environments, there were indications of lines of communication closing between management and workers; workers were even discouraged from speaking up. In toxic work environments, management was described as not openly sharing information with, or accepting input from, workers and there was a lack of positive recognition and a presence of criticism. In very toxic work environments, descriptions of communication were overwhelmingly unfavourable; there were accounts of complaining and of propagation of negativity, for example through gossip and superiors berating employees.

Across the toxicity levels, management went from being described as supportive, caring, and investing in workers to distant, profit-driven, and reckless with employee

welfare. In nontoxic work environments, it was noted that people at all levels cared about each other; however, in the neutral category, management support and appreciation appeared to fall away and it was as though workers were starting to be treated as resources more so than as people. In toxic work environments this turned into something more akin to exploiting workers, placing on them unreasonable demands. In very toxic work environments, there was a clear imbalance in how management valued results versus workers, in favour of results.

The emotions reported across the toxicity levels went from positive to persistently negative. In very nontoxic work environments, reports of favourable emotions, including appreciation, along with acknowledgement of negative emotions not being experienced, suggested that workers knew how bad things could be and were identifying that this was not their situation. Emotions expressed in nontoxic work environments were similar, but there was also mention of feeling discouraged and resentful, and of low morale. In neutral work environments, reports of low morale continued and respondents also expressed not feeling part of a team, suggesting a lack of closeness between coworkers – starkly contrasting reports from very non-toxic work environments of coworkers being like family. Low morale was also seen in comments regarding toxic work environments, along with feelings of stress and depression, and in very toxic work environments, perpetual experiences of negative emotions such as anger and hurt were reported.

Work-related behaviour and processes. Work-related behaviour went from being described as cohesive and competent to disconnected and unfair. Capable workers coordinating efforts to complete a common goal characterized very nontoxic and nontoxic work environments. However, starting in neutral work environments, and

continuing increasingly into very toxic work environments, management was described as lacking knowledge of the work and not consulting with employees. There were also various issues raised regarding the implementation of work; for example, micromanagement, inconsistent enforcement of rules across departments, sudden changes, and most commonly, unfairness. There was also consistent mention across levels of toxicity, from nontoxic to very toxic work environments, of having to complete work not done by one's coworkers. However, the nature of the issue appeared slightly more severe in toxic work environments such that rather than coworkers simply not doing their share of the work, the actual distribution of work, as well as expectations placed on workers, were imbalanced. As such, in toxic and very toxic work environments, the unfairness seemed to be part of the way things were regularly done in the organization – as though it was ingrained.

The organization of work went from being described as reasonable and controllable in nontoxic work environments to excessive and misfit in toxic work environments. In nontoxic work environments, workload was not considered detrimental to health; however, in neutral environments, there was overworking, and in toxic and very toxic work environments, there was overworking with additional constraints such as high expectations, understaffing, lack of supplies, and unreasonable deadlines. Bureaucracy and “red tape” were also noted as issues in nontoxic and neutral work environments, suggesting some level of displeasure with constraints in general, or with the structure or governance of things. In toxic work environments, it was noted that management had difficulty aligning work with goals and that the changes they made did not fit, suggesting not just bureaucracy as the problem, but a breakdown in organizational

effectiveness. In a similar vein, there was a common theme in nontoxic work environments of working mostly alone and having control over one's work, suggesting that perhaps the more power one has over their own working conditions, the less likely they are to perceive their environment as toxic.

Issue management. Descriptions of issue management went from showing receptiveness and responsiveness in nontoxic work environments, to avoidance and unresponsiveness in toxic work environments. In very nontoxic and nontoxic work environments, there was neither a complete absence, nor perfect handling, of issues; they were simply responded to promptly and/or there was no particular abundance or persistence of them. In neutral environments, there was evidence of management avoiding issues, for example, by being aware of problems but unwilling to acknowledge or address them. Not surprisingly, in this category, issues were noted as perpetuating and even worsening. Similarly, in toxic work environments, management was described as being aware of issues but not addressing them because of productivity considerations, or simply due to inaction. Moreover, workers were subtly dissuaded from pursuing issues; for example, being told it was not their concern, or through a perception that their problems were inconvenient for management. In very toxic work environments, workers were essentially left to deal with issues on their own; complaints were not only ignored, but filing a complaint could result in job loss. Management did not address problematic behaviour exhibited by workers or by other members of management - all of this despite awareness of the issues and the fact that behaviour in these environments was reportedly rather egregious and destructive.

From very nontoxic to neutral work environments, there was evidence of individuals personally managing issues, but there was no such evidence in toxic work environments. In very nontoxic work environments, there were descriptions of individuals accepting and ignoring issues; that is, issues that were not otherwise addressed by management. In nontoxic environments, individuals' managing of issues was more akin to coping; for example, they acknowledged there would be issues at work, limited energy spent thinking about the workplace, and tapped in to sources of social support such as coworkers and other people in their life. In neutral work environments, the management of issues seemed to be more a matter of endurance, with respondents making statements such as "learn to adapt, or quit" (*participant #33*) and "try to stay positive" (*participant #387*) – this was perhaps because this was the category in which issues started being described as perpetual. In this category, there was also an acknowledgement of individual differences and possible resilience to toxicity, for example, with statements such as "It is not toxic to everyone" (*participant #247*) and "I knew what my job was gonna [sic] be like before I took it so I just don't let stuff get to me" (*participant #258*). In toxic and very toxic work environments, however, there were no references to coping strategies or managing workplace issues oneself – even individuals' attempts at gaining support to resolve issues seemed fruitless, given the accounts of management increasingly distancing themselves from workers' problems as toxicity levels rose.

In sum, the same three themes (i.e., interpersonal relations, work-related behaviour and processes, and issue management), and many of the same sub-themes, were present in comments from respondents reporting very nontoxic work environments,

all the way to very toxic work environments. What made the comments different across toxicity levels seemed to be the nature of behaviours and situations, which became harsher and more dysfunctional as reports of toxicity increased. In the next section, the two perspectives (i.e., toxicity level and theme) are integrated for a high-level exploration of toxic work environment, aimed at identifying possible dynamics at play.

Integration and discussion of themes. Based on the analyses by toxicity level and by theme, respondents' comments on toxic work environment suggest that overall the phenomenon represents high levels of disintegration and negativity in the workplace. Of all the topics that respondents touched on, 'people' seemed to be mentioned most frequently in response to why they felt their work environment was or was not toxic, however, issues regarding interpersonal relations were not the only ones, as work-related behaviour and processes, as well as issue management were also consistently implicated. Indeed, despite grouping respondents' comments based on these three broad themes, it seemed there might be interactions across themes and sub-themes (e.g., between communication and the organization of work) such that they could be building off each other to create toxic work environments. This suggests that the toxic work environment phenomenon might in fact be a systemic issue – which is fitting, considering workplaces are social systems.

Speaking of social systems, working mainly alone or with few coworkers was a fairly predominant theme in nontoxic work environments and suggests that the fewer people, the less social interaction, and the less likely toxicity is to develop. Having few or no coworkers could also be about having independent influence over one's working conditions. Thus, working completely alone, with full control over one's work, may not

be a situation in which toxicity would arise; however, as soon as social interaction or anyone else's influence on the work is added, there is potential for a toxic work environment. As such, a toxic work environment might be less likely with fewer people, but still possible. Potentially further evidence of others' influences as an issue for workers in the context of toxicity comes from respondents' references to bureaucracy and micromanagement in explaining why they thought their work environment was toxic.

Indeed, management was noted as increasingly difficult and abusive as toxic work environment ratings increased. At the same time, but to a lesser extent, coworker relations were described as increasingly abusive as well, and respondents' descriptions of coworkers went from "family" to "cliques", suggesting destructive social associations. As environments were rated as more toxic, the comments showed a growing divide between management and workers in particular, as evidence by deteriorating communication and a lessening of support and consideration for workers. Workers not only experienced verbal abuse, they were blocked from raising issues, and their problems went unresolved – even when management was aware of the problem. In these same environments, issues persisted, spread, and worsened; indeed, not punishing people for mistreating others was seen as giving the message that it was okay for them to do so – and so they did.

There was also a distance when it came to work planning, which manifested in changes made by management that did not fit the work - perhaps as a result of workers not being consulted. The changes were also not up for discussion, therefore allowing them to continue. Perhaps also related to the distance between management and workers, there was imbalance and unfairness in the distribution of work, which meant an

excessive, and thus potentially stressful, workload for some workers and not for others; indeed, being overworked was a common problem noted in toxic work environments. There was also mention that those who were not completing their own work were not punished or motivated to perform, and that those who did more than their share of the work were not acknowledged or rewarded.

It was as though there was a lack of concern by management regarding the process of work, which was consistent with respondents' accounts of management's profit-focus and selfish motivations in toxic work environment comments. Combined with management's lack of openness and responsiveness to employee issues, one can see how unfairness in the distribution of work could eventually become ingrained. Such unreasonable conditions could lead to tensions not only with management but between workers as well, possibly fueling the types of interpersonal issues seen in toxic work environments. Indeed, respondents noted frustration over uneven work distribution. Such issues could also help to explain the low morale reported in toxic work environments, as there appeared to be a lack of cohesion and sense of team amongst coworkers; thusly, a divide is seen between workers as well as between workers and management.

There was evidence of coping behaviour in nontoxic and neutral work environments, but not in toxic work environments. It is possible this was because workers in toxic environments did not have access to the resources that were used in neutral and nontoxic work environments, as interpersonal relations were negative and abusive in toxic environments, and workers suffered alienation from management and from one another - not to mention they might be drained from reportedly persistent

feelings of hurt and anger, and hence not have enough personal resources remaining to cope after a while. Thus, it may not be that workers who report a toxic work environment are those who cannot cope with the work environment as a matter of personal resilience, or those who will not step up to do something to help themselves. It could instead be that they are surrounded by conditions, subtle and overt, that work against them, such as resistance or refusal by management to hear issues, or unfair enforcement of rules, making problem resolution an uphill battle no matter what they do – and so problems persist. Indeed, there could be a link between the absence of support and coping in this category and the presence of anxiety and depression, which were not noted in previous categories.

Beyond seeking support, respondents in nontoxic and neutral work environments also reported accepting issues and managing them on their own; however, the issues reported in these environments were fewer and less severe than in toxic work environments, so to accept them, for example, would seem a viable option. In toxic work environments, the issues tended to be harsher, more persistent, and abundant, making it more difficult for workers to simply carry on. Furthermore, in the neutral category, it was noted that the work environment was not toxic for everyone, suggesting that an element of individual difference is involved. It could be that the individual differences are related to experience, expectation, or preparedness, as one respondent said they did not find their environment to be toxic because they knew what to expect coming in to the job. It could also be that workplace conditions differ for different workers, making the issue not only about who is being exposed, but what they are being exposed to. Indeed, in an environment where workers are treated unfairly, do those doing minimal work see

the environment as toxic the way those doing the bulk of the work do? Regardless, the comment that the work environment was not toxic for everyone highlighted not only that a toxic work environment can be detected by workers even if they are not personally harmed by it, but also that there are individual differences in the experience of the phenomenon.

Overall, the qualitative results provided insight into workers' own views on what made their work environment toxic or not; this helped not only to provide context for the quantitative results from the survey, but also to shed additional light on the concept of toxic work environment. The results were consistent with suggestions that a toxic work environment is about more than the presence of issues or stressors (e.g., Padilla et al., 2007; Reed, 2004), such as bad attitudes or excessive workload, as negative conditions are present to some extent in any workplace (e.g., Frost, 2003; Walton, 2008). Rather, the results showed a toxic work environment had to do with the functioning of the social system – in particular, that issues were present and were ultimately not being resolved, so in turn, they were more persistent and severe than in nontoxic work environments. It seems that unless one were to address this core piece of the dynamic, a system would continue to fuel the persistence of issues, hence contributing to toxicity.

Discussion

The purpose of the present research was to explore the notion of a toxic work environment as a systemic issue. The phenomenon was examined from a broad perspective to account for various potential workplace influences, including leaders, coworkers, and aspects of one's job and organization. The main questions of interest asked which aspects of the work environment contributed to toxicity appraisals, how

leadership fit in to the larger context of this phenomenon, and whether individual-level outcomes were associated with appraisals of toxicity.

Overall, most participants in the current study demonstrated a clear understanding of the term ‘toxic work environment’ as it was intended – that is, as an environment in which social and organizational ‘substances’ are harmful to workers’ well-being, mainly in a psychological and emotional sense. Although not everyone recognized the term as such, it seemed common enough because even some respondents who reported not experiencing a toxic work environment described what one looked like and how it felt. Based on participants’ survey responses and comments, toxic work environments were characterized by destructive and abusive interpersonal relations and communication, unfair and excessive working conditions, insufficient consideration for workers’ interests and well-being, avoidance or lack of response regarding workers’ concerns, and persistently negative feelings among workers, such as hurt, anger, and distress. Moreover, it appeared that the link between management and workers played a key role in the phenomenon. Participants’ comments reflected elements of toxicity from theory, such as the perpetuation of stressors; they also revealed that the specific stressors participants experienced were not always the same, meaning the toxicity phenomenon can take many shapes.

In general, the emerging picture of a toxic work environment was consistent with previous research in this field in that it appeared to reflect an environment that operates in a way that permits stressors to persist and reach a critical dose, detrimentally affecting workers. As such, the results were also in line with Walton’s (2008) definition, where he states “a toxic organisation is defined as one within which behaviours which poison, are

disruptive, destructive, exploitive, dysfunctional and abusive are pervasive and tolerated,” (p. 9) and with Shain’s (2009) definition, where he states:

“A poisoned work environment is one in which there is a (usually) persistent and repetitious pattern of abuse, harassment or discrimination over time that is ignored, allowed to exist and/or supported by the employer and no adequate steps are taken to correct the situation” (Shain, 2009, p. 45).

Three areas of findings from the current research were particularly noteworthy and will be addressed in more detail in the following sections. The first has to do with management-related aspects of climate being most pivotal with respect to workers’ toxicity appraisals; the second is about a need to shift the predominant view of a toxic leader to more fully consider less overtly abusive aspects of leadership in the context of toxicity; and the third is about the need to account for the individual’s role in the experience of a toxic work environment in order to achieve a truly comprehensive view of the phenomenon. As such, intervention may be needed from multiple angles when a work environment has reached the point of being considered toxic.

The Organizational System and Toxicity

The current research investigated sources of toxicity from across the organizational system using a psychological climate approach, which captures workers’ perceptions of their work environment (Brown & Leigh, 1996). Results showed that job and role, workgroup, leadership, and organizational characteristics, to varying degrees, influenced workers’ toxicity appraisals; in addition, many such aspects were interrelated. This was consistent with researchers’ suggestions that numerous features of the work environment are involved in toxicity (e.g., Frost, 2003; Macklem, 2005; Walton, 2008). The results showed further that toxicity appraisals were most strongly predicted by

aspects of climate relating to management, suggesting this may be a crucial target for interventions aimed at addressing toxic work environments.

Toxicity appraisals were associated with job and role characteristics, but in general, the relations were not strong. Indeed, role clarity ratings in this sample were high regardless of respondents' toxicity appraisals. More than issues of role clarity, respondents' comments about toxic work environments highlighted issues with poorly planned and ill-fitting work processes, consistent with Chamberlain and Hodson's (2010) suggestion that ineffective and stressful production processes were toxins. Respondents also noted unfair distribution of work, which was in line with other researchers noting unfairness as a source of toxicity (Frost, 2003; Lawrence, 2008).

Pressure to produce had a significant, albeit weak, effect on workers' toxicity appraisals, and, in their comments on toxic work environments, respondents similarly raised issues of excessive workload and high expectations. These results were in line with observations from several researchers who have noted workload and pressure as toxins (e.g., Frost, 2003; Macklem, 2005; Walton, 2008), as well as with Shain's (2009) contention that chronic disregard of the impacts of relentless work pressure on employees' mental health constitutes abuse. Of the four dimensions of climate (i.e., job and role, workgroup, leadership, and organizational), however, job and role characteristics showed the weakest associations with toxicity appraisals.

Workgroup characteristics were more strongly associated with toxicity appraisals than were job and role characteristics; however, they were not much stronger predictors of the phenomenon. Workgroup civility had a significant, though somewhat weak, negative effect on toxicity appraisals. This is consistent with coworker relations being

identified as a source of toxicity (e.g., Chamberlain & Hodson, 2010; Frost, 2003; Madell, 2015). Furthermore, in their comments about toxic work environments, respondents commonly highlighted interpersonal issues with coworkers, regularly noting a lack of respect as well as abusive behaviour – which contrasted starkly with the friendly, respectful, and positive relations noted in comments about nontoxic work environments. Generally speaking, the deterioration of workgroup interpersonal relations from nontoxic to toxic work environments appeared to follow the toxic continuum suggested by Ghosh et al. (2011). That is, comments about nontoxic environments referenced subtle forms of incivility, such as cattiness, drama, cliques, and coworkers speaking negatively about each other; whereas in the most toxic work environments, acts such as gossip were noted, as well as manipulation, sabotage, threats, yelling, and more aggressive behaviours, such as and throwing objects - moreover, several respondents stated nothing was done to stop the perpetrators, which was how Ghosh et al. (2011) stated incivility escalates to violence, by building over time.

Talent, which refers to coworkers' effectiveness in their jobs, was not a significant predictor of toxicity appraisals, though the two variables were significantly and fairly strongly correlated ($r = -.51$). Indeed, respondents' comments about toxic work environments included reports of coworkers being unmotivated and not doing their work; sometimes this went hand in hand with job and role issues, where respondents complained of having to complete their coworkers' tasks, thus raising their workload. Although this issue was also raised in nontoxic work environments, it was increasingly noted from neutral to toxic work environments; in toxic work environments, unfair work distribution and workers not being held to the same standards were seemingly ingrained.

This finding appeared to support the notion that toxic effects are dose dependent (Hodgson, 2004) and that they result when issues are cumulative (Reed, 2004; Too & Harvey, 2012), frequent (Appelbaum & Roy-Girard, 2007; Flynn, 1999), or chronic (Frost & Robinson, 1999).

Toxicity appraisals were fairly strongly associated with leadership characteristics. Supervisor support was not a significant predictor of workers' toxicity appraisals; however, the two variables were strongly negatively correlated ($r = -.65$). Indeed, in their comments about nontoxic work environments, respondents described open and supportive management that cared about their well-being, whereas in their comments about toxic work environments, management was described as negative, dismissive, and not caring about workers' welfare. This finding was consistent with suggestions that toxic leaders lack concern for workers' well-being (Appelbaum & Roy-Girard, 2007; Reed, 2004) and that they avoid workers in emotional or conflict-related situations (Bacal, 2000; Steele, 2011). In addition, supervisor support was fairly strongly correlated with workgroup civility ($r = .59$), which itself was significantly related to toxicity. In fact, one respondent said of their toxic work environment that by not handling abusive conduct between coworkers, their superior was letting the workers think it was acceptable because they knew they would not be punished. These results appear to reflect the notion that it is not the stressors themselves that lead to toxicity, but rather the interplay between those stressors and organizational members' responses to them; mainly, management's response (Frost, 2003, 2004; Maitlis & Ozcelik, 2004; Shain, 2009).

Abusive supervision predicted toxicity appraisals at over twice the magnitude of the next highest predictor, which was workgroup incivility. Indeed, in their comments on

toxic work environments, respondents recounted several forms of abuse from superiors, including being yelled at in the presence of others, harassed, degraded, threatened, having objects thrown, and in one case, being slapped. These results were consistent with researchers' descriptions of toxic leaders as aggressive (Flynn, 1999; Kimura, 2003; Pelletier, 2010; Steele, 2011) and disrespectful (Appelbaum & Roy-Girard, 2007; Kimura, 2003; Reed, 2004) toward workers. The results were also in line with Chu's (2014) finding that abusive supervision was associated with toxic emotions, measured as experiencing recurring negative emotion, disconnecting from others, and feeling drained. Although toxic emotions and the current study's toxicity appraisals are not the same, they provide different perspectives on essentially the same overarching phenomenon – that is, workplace toxicity.

Beyond leadership characteristics, organizational characteristics also had strong associations with workers' toxicity appraisals. Voice, which reflected the extent to which workers felt free to speak up regarding issues, was a significant, albeit weak, predictor of toxicity appraisals. The two variables were, however, strongly correlated ($r = -.65$) and their association was consistent with researchers' descriptions of communication patterns in toxic work environments; for example, where workers are expected to not question but rather do as they are told (Yeo & Carter, 2008), and where interpersonal issues are not discussed (Goldman, 2008). Voice was also strongly correlated with supervisor support ($r = .68$) and civility ($r = .66$); this was further evidenced in respondents' descriptions of nontoxic work environments wherein communication between management and workers was regular, open, and constructive, and coworkers were respectful, positive, and kind – conditions that seem favourable for voice. Conversely, in comments about toxic work

environments, management was described as only caring about themselves, and communication at all levels was selective, negative, and destructive – seemingly not conducive to voice.

Toxicity appraisals were most strongly predicted by a lack of involvement of workers by management in matters that affect them. This result appeared consistent with a group of attributes described in the toxic leader literature; namely that toxic leaders marginalize workers (Pelletier, 2010), show little appreciation for their ideas (Kimura, 2003; Pelletier, 2010), are controlling, and hoard information (Steele, 2011). Indeed, in respondents' comments about toxic work environments, lack of involvement seemed to take the form of a distance between management and workers whereby workers were not valued or considered, and their needs were ignored. Involvement was strongly correlated with supervisory support ($r = .68$) and very strongly with voice ($r = .74$). For workers to lack all three in their work environment – that is, to not be included, supported, or given a means to speak out - would understandably enable a persistence of any problems that might arise.

Management's lack of involvement and consideration of workers seemed especially pivotal in toxicity based on workers' comments, as it appeared to beget other adverse workplace conditions – although such causation could not be confirmed with the current research design. Indeed, as toxicity ratings increased, comments showed deteriorating interpersonal and job-related conditions alongside an increasing distance between management and workers. Given management's disconnect from workers to the point of avoiding or ignoring their concerns, there were seemingly no means by which

workers could get difficult conditions improved to provide them relief – thus, their problems were allowed to persist and even worsen.

The results appear consistent with Goldman's (2008) contention that by not recognizing workers' concerns and their distress, management is colluding in the development of toxicity. Indeed, respondents' comments about nontoxic environments showed these workplaces were not perfect - there were indeed issues. However, in nontoxic work environments, management was said to be open to hearing from workers as well as inclusive in problem-solving, and issues were dealt with. Presumably, if one were to address management's consideration and involvement of workers in matters that concern them, other aspects of the work environment might also be affected along with it because management would, in theory, gain a better understanding of workers' experiences, needs, and concerns - the key, then, would be to address them, constructively.

Overall, what describes something and what impels it to be are not the same things; hence what a toxic work environment *looks like* and what *contributes* to a toxic work environment are two different questions. The current study provided empirical evidence that various aspects of the work environment are associated with toxicity appraisals, but also indicated that they do not all affect toxicity appraisals in the same way. This is important for developing workplace interventions to address toxic work environments, as one must consider whether the problematic aspects of the work environment they are addressing are major drivers of the toxicity. Indeed, based on the current research, it seems a toxic work environment reflects a complex workplace

dynamic and that it would be most impactful to target organizational characteristics, and in particular, management's consideration and involvement of workers.

Leaders as Reckless *or* Negligent

The toxic leader is a popular focus in the workplace toxicity literature and they tend to be described as abusive (e.g., Flynn, 1999; Kimura, 2003; Pelletier, 2010; Steele, 2011; Wilson, 2014). The current study explored leaders' influence on workers' toxicity appraisals alongside other potential sources of toxicity to see how leaders contribute within a broader context. Indeed, the results showed the strongest predictors of toxicity appraisals were management-related, providing some support for this focus in the toxicity literature. Specifically, however, management's lack of involvement of workers in decisions that affect them had a much stronger effect on workers' toxicity appraisals than did abusive supervision, emphasizing that despite the popular figure of a malicious leader in toxicity descriptions, to be malicious is not a leader's only role in a toxic work environment, and in fact might not even be its most impactful one. Indeed, it seems a leader's most significant role in the big picture of workplace toxicity may be as seemingly benign as allowing it to happen, which is consistent with definitions of the phenomenon, which refer to tolerance for issues (Walton, 2008) and ultimately not correcting the situation (Shain, 2009). Although failure to recognize and address issues affecting workers is destructive, it is possible that in some cases this contribution may not come from a place of malice at all.

Shain, Arnold, and GermAnn (2012) described the notion of workplace mental injury as "the realization of risk to employee mental health that results from negligent, reckless, and intentional acts or omissions on the part of employers, their agents, and

other employees and frequently takes the form of debilitating anxiety, depression, and burnout” (p. 144). They also described a complementary concept, psychological safety at work, “as the result of every reasonable effort being made to protect the mental health of employees” (Shain et al., 2012, p. 144). These concepts are applicable here insofar as the results of the current research suggest that leaders contribute to toxicity largely by allowing it in the environment, and the idea of risks to workers’ mental health provides a useful way to see this potential to cause harm. Toxic work environment can be differentiated from the psychological safety and mental injury constructs in that psychological safety describes the management of hazards, which could contribute to toxicity, whereas toxic work environment refers to a situation in which those hazards are persistent and where mental injury is present. In this way, a toxic work environment refers to a dynamic that involves mental injury and is likely reflective of a psychologically unsafe workplace; however, neither mental injury nor a psychologically unsafe workplace, in and of itself, means the work environment is toxic.

Shain and colleagues (2012) described five key workplace factors which, often in combination, affect risks to mental health and hence contribute to the psychological safety of the environment; these factors are: job demands and requirements of effort, job control or influence, reward, fairness, and support. Indeed, there was evidence of all five of these factors being associated with toxicity appraisals in the current study, suggesting a lack of psychological safety in toxic work environments. This connection highlights the importance of psychosocial risk management in the context of a toxic work environment. With leaders being in a unique position to organize and design work, as well as to influence the organization’s social conditions (Bailey, Dollard, & Richards, 2015; Hall,

Dollard, & Coward, 2010; Shain, 2009; Shain et al., 2012), to be negligent would be to fail to recognize the risks inherent in the ways in which one chooses to do so (Shain et al., 2012). Along these lines, several researchers, from both workplace toxicity and psychological safety perspectives, have proposed concepts related to risk management and setting favourable conditions for the protection of workers' psychological and emotional well-being.

Psychosocial safety climate (PSC) is defined as an “upstream organizational resource influenced largely by senior management” that concerns “policies, practices, and procedures for the protection of worker psychological health and safety” (Dollard & Bakker, 2010, p. 579). PSC is conceptualized as a facet specific organizational climate with four domains: 1) senior management support and commitment for stress prevention through involvement; 2) management priority to psychological health and safety versus productivity goals; 3) organizational communication, including listening to employees; and 4) organizational participation and involvement, which entails consultation with stakeholders such as unions and health and safety committees (Hall, Dollard, & Coward, 2010). PSC has been described as a preeminent risk factor, affecting the presence of psychosocial risk factors in the environment, such as work pressure (Bailey et al., 2015; Dollard & Bakker, 2010; Hall, Dollard, & Coward, 2010); indeed, PSC has been empirically linked to lower emotional demands on workers (Dollard & Bakker, 2010) and lower harassment (Law, Dollard, Tuckey, & Dormann, 2011). The results of the current study suggest that PSC in toxic work environments is low, as evidenced by lack of management support, a focus on profits at the expense of workers' health, and a lack of communication with workers. Thus, PSC appears to represent a potentially important

influence in the context of toxicity in that it sets the conditions for workers to be considered in the design and management of work, as well as provides them with avenues to have their concerns addressed.

In a similar, but separate vein of research, Gilbert, Carr-Rufino, Ivancevich, and Konopaske (2012) contrasted toxic work environments with community-centered organizations, which they described as positive, nurturing, caring, and supportive workplaces in which harmful practices are discussed and dealt with in a healthy way. This description was consistent with features noted in respondents' comments about nontoxic work environments; indeed, several such respondents described their coworkers as 'family' and as 'friends.' With their focus on culture, Gilbert and colleagues (2012) emphasized that leaders set the emotional tone and expectations within the workplace, and significantly contribute to the structural, evaluative, and communicative aspects of organizational life. As such, encouraging a community-centered orientation, as opposed to narcissism, self-focus, and corporate isolationism (Gilbert et al., 2012), should help to avoid toxic behaviours and practices that can arise when people are focused on the protection of their own interests and advantages (Walton, 2008). Consistent with psychosocial safety climate, the authors suggested human resource policies - in this case reflecting fairness and egalitarianism - as a way to create a more supportive organizational culture (Gilbert et al., 2012).

The concepts of psychosocial safety climate and community-centered organizations are in line with Frost's (2003, 2004) work on toxic emotions and the role of toxin handlers. According to Frost (2003), emotional pain is inevitable in organizational life, and the key to emotions becoming toxic is insensitive response from others in the

organization. Frost (2003, 2004) therefore stressed the importance of toxin handlers, who identify harmful circumstances faced by workers and take constructive action to address them, essentially protecting workers and allowing them to carry on in their role. Frost (2004) noted that toxin handlers focus on individuals' emotional needs, as well as the emotional linkages in the organization. He also suggested that toxin handling is a particularly important role for leaders as it unburdens workers from having to manage toxicity alone, it places the responsibility with those who have the power to make significant changes, and, when leaders are seen to be handling toxins, it engenders a healthier work environment overall (Frost, 2004). Ultimately, psychosocial safety climate, community-centered organizations, and toxin handling all stress the need to consider how workers might be impacted by workplace conditions and to respond in a positive way - as such, they promote the involvement and consideration of workers, which were found in this study to be the strongest drivers of toxicity appraisals.

There is no doubt that reckless and intentionally malicious leadership have a place in workplace toxicity (e.g., Lubit, 2004; Pelletier, 2010; Steele, 2011; Walton, 2007). The current research even showed that when predicting only the item "I experience a toxic work environment," abusive supervision was the strongest predictor. However, the finding that a lack of involvement of workers in matters that concern them had the strongest influence on the toxicity scale suggests a need to accommodate the notion of negligence when looking at toxicity from a broad, systemic perspective. Indeed, it appears management could enable, or thwart, toxicity through the design and management of the conditions workers face; neglecting to harness this influence in a positive way could contribute to a persistence of issues, and hence toxicity. This

highlights a crucial role for leaders in controlling and responding to risks to mental health. Essentially, the idea is that management should not simply allow toxicity to happen; indeed, they should take reasonable precautions to avoid it.

These findings are important because they suggest a need to broaden the scope from the popularized notion of ‘toxic leader,’ to leadership that enables toxicity – and to take a view that a leader does not have to be malicious for workers to be harmed. Coming at the issue of toxicity from this perspective could help leaders - at various levels - to more readily identify contributions they might be making to the problem, possibly unintentionally. It could also give leaders pause to balance their priorities with keeping their workers safe, as is reflected in psychosocial safety climate (Hall, Dollard, & Coward, 2010); indeed, it is possible that psychosocial safety is something leaders might have previously been blind to, rather than opposed to. Recognizing this seemingly more subtle role of leaders in the development of a toxic work environment highlights the need for leaders to anticipate and address employee issues – as opposed to avoid, dismiss, or ignore them. Ultimately, it seems very significant to the big picture of toxic work environment that management consistently not looking out for workers may be more influential in workers’ appraisals of toxicity than the incidents of direct mistreatment they face.

The Individual and Toxicity

Given that a toxic work environment is harmful by definition, the current study explored outcomes at the individual level, including affective, behavioural, and psychological effects. Consistent with suggestions from the literature, the results showed toxicity appraisals significantly predicted affective outcomes; namely organizational

commitment, job satisfaction, and intention to stay (e.g., Frost, 2004, Ghosh et al., 2011; Goldman, 2006; Lawrence, 2008; Pelletier, 2010; Steele, 2011). In addition, in their comments about toxic work environments, respondents noted negative emotions including persistent unhappiness and anger (e.g., Appelbaum & Roy-Girard, 2007; Dyck & Roithmayr, 200; Goldman, 2006; Maitlis & Ozcelik, 2004).

Toxicity appraisals also significantly predicted psychological and behavioural outcomes, though at a much lower magnitude compared to affective outcomes. Nonetheless, consistent with researchers' suggestions, there was a significant effect of toxicity on workers' perceived stress, anxiety and depression, and exhaustion (e.g., Appelbaum & Roy-Girard, 2007; Chu, 2014; Dyck & Roithmayr, 2001; Flynn, 1999; Frost, 2003; Frost & Robinson, 1999; Gallos, 2008; Goldman, 2006; Kimura, 2003; Lawrence, 2008; Maitlis & Ozcelik, 2004; Reed, 2004); toxicity also had a significant effect on work withdrawal and neglect (e.g., Brown, 2004; Frost 2004). Furthermore, in their comments about nontoxic work environments, respondents noted helpful coworkers, whereas there was no such mention in comments about toxic work environments; this is consistent with suggestions of a lack of cooperation (Dyck & Roithmayr, 2001) and organizational citizenship behaviour (Chu, 2014) in toxic situations. Taken together, workers' appraisals of toxicity were significantly associated with a variety of individual-level outcomes related to well-being.

In the current study, some respondents commented that the work environment was not toxic to them, though it was to others, which hinted at the role of individual differences in the experience of toxicity. Although there is no doubt that intra-individual differences are involved in this experience, exploring them in depth was beyond the

scope of the current study. Nonetheless, outcomes in the current study (including toxicity appraisals) were controlled for the effect of negative affectivity, which is generally thought to negatively colour one's perceptions (Watson & Clark, 1984); significant effects were still found. Controlling for negative affectivity at least provided some evidence that the experience of workplace toxicity is about more than a negative mindset.

When looking at workplace toxicity from a systemic perspective, more important than intra-individual differences is the link between the individual's work environment and their ability to cope with it. Indeed, researchers have described that otherwise healthy and resilient people can become severely distressed and impaired by their conditions of work (Macklem, 2005; Shain et al., 2012), suggesting that more than intra-individual differences are involved. Hartel (2008) noted that organizational culture influences individual's interpretation of, and response to, affective events. In particular, according to Hartel (2008), the coping strategies that individuals employ, which can be either functional (i.e., discouraging the issue at hand) or dysfunctional (i.e., further encouraging the issue), are partially the result of available systematic support.

Hartel (2008) explained that a healthy emotional culture, which is based on foundations such as trust, justice, and positive relations between workers and management, encourages functional coping, such as establishing socio-emotional support; an unhealthy culture, by contrast, is one where toxic emotions are present. Indeed, in their comments on nontoxic work environments, respondents noted the use of social support, as well as conditions consistent with Hartel's (2008) description of a healthy emotional culture. Although there was no explicit mention of coping in

respondents' comments on toxic work environments, toxicity appraisals significantly predicted work withdrawal and neglect, which were in line with the dysfunctional coping strategies of withdrawal and absenteeism noted by Hartel (2008).

Hartel (2008) explained that due to the use of dysfunctional coping strategies in toxic emotional cultures, downward spirals could ensue whereby even more negative emotion-eliciting events take place. From this perspective, one can see how an otherwise resilient person might be harmed, facing persistently negative workplace conditions which their coping only further encourages. Overall, the current research provided evidence that toxicity affects individual-level outcomes related to well-being, and possibly one's ability to cope – though more research on this last point is required.

Limitations and Future Research

There were some limitations to the current research, which affected the generalizability of the findings but also suggested avenues for future research. The first limitation was that, given the cross-sectional design of the research, data were collected at a single point in time; hence, it is hard to say whether the work environment devolves from nontoxic to toxic as suggested by the analysis of respondents' comments, as well as whether management's disconnect from workers was central to the decline.

Respondents' comments provided a sense that the progression takes place over time as workplace issues are tolerated or ignored; however, this progression was not observed. This limitation could be addressed in future research by conducting a longitudinal study with an organization, or by having participants from a toxic work environment provide retrospective accounts of the conditions leading to the toxicity. This additional research would help to confirm management's role in the development of toxicity, as well as shed

light on issues such as the speed at which toxicity develops, whether it can be stopped or reversed, and, with enough samples, the extent to which these features are consistent across organizations.

Also related to the cross-sectional research design was the threat of common method bias. Consistent with Podsakoff, MacKenzie, Lee, and Podsakoff's (2003) recommendations to reduce the risk for common method bias, climate scale items in the main study were mixed such that none was presented on its own; as such, the toxicity scale was also not adjacent to any particular climate scale. Testing some relations preliminarily in the pilot study, as well as asking participants to provide descriptions of what they felt made their work environments toxic or not, helped to provide some confirmation of the associations seen in the quantitative results of the main study. For the pilot study in particular, common method bias seemed unlikely because significant interactions were found. Finally, participants in the pilot study and the main study were informed that their survey responses would be anonymous and confidential, which should reduce the likelihood of participants responding based on social desirability, which is also a risk factor for common method bias.

The second limitation was the sample insofar as participants were not from the same workplace; this had two downsides. The first was that respondents were not describing the same environment, so descriptions at each toxicity level were based on compilations of respondents' comments about their respective work environments. Though this provided information about various work environments, and themes were found, it is unlikely that all toxic work environments look the same, and in the case of 'very toxic' work environments, for example, where there were relatively few

respondents, the picture of toxicity that was painted is likely not all encompassing of what such an environment might entail. This could be addressed in future research by conducting more exhaustive examinations of single workplaces in order to fully explore what makes them toxic; furthermore, sampling from several distinct organizations would allow for the assessment of consistency in descriptions of toxicity across workplaces.

The second downside to participants not being from the same workplace was that it precluded any study of agreement in workers' perceptions of aspects of their work environment and whether they felt it was toxic. This kind of research could help shed light on whether there is empirical support for the notion of toxic work environment as a group-level phenomenon. Indeed, Walton's (2008) definition of a toxic organization notes mistreatment and abuse as pervasive. Future research could assess organizational climate, which is an aggregation of the psychological climate perceptions of members of the same workplace (James et al., 2008; Schneider et al., 2013); the question would be to what extent similarities in perceptions of the work environment are associated with similarities in workers' toxicity appraisals. On a related note, participants in the pilot study for the current research were from 11 workplaces of the same overarching agency. Results were similar enough across workplaces that all 11 were combined into one sample; this suggests support for the notion that workers see their environments fairly similarly within an organization.

The third limitation concerns organizational culture. Numerous researchers have noted the importance of culture in the context of workplace toxicity (e.g., Appelbaum & Roy-Girard, 2007; Flynn, 1999; Gilbert et al., 2012; Hartel, 2008; McClure, 1996; Shain, 2009; Yeo & Carter, 2008) and the results of the current study seemed to reveal

workplace dynamics related to toxicity that resembled culture, based on both climate ratings and respondents' comments. However, climate is only a proxy for organizational culture and ultimately, culture cannot be assessed with cross-sectional research. To address this limitation and assess culture more fully in the context of toxicity, future research could employ a method such as action research (Lewin, 1997), to gain a sense of the nuances of the work environment. Taken together, there are various avenues for future research on toxic work environments. It appears that a great deal of progress could be made by closely examining individual cases of toxic work environment and then comparing across samples. Such an approach would necessitate a comprehensive and widely applicable framework.

Research Implications

The current research addressed several gaps in the workplace toxicity literature. The first was that a measure was created to assess workers' own sense that their work environment is toxic - something that had not been done in previous research, where instead someone else, such as the researcher, deemed the work environment toxic. The measure covered not only the participant's response to the item "I experience a toxic work environment", but also other characteristics of the workplace toxicity phenomenon, such as whether there was a persistence of issues that negatively affected them. This measure could be used in future studies, prior to which it would be useful to conduct additional research on its reliability and validity. In particular, it would be interesting to administer the toxicity scale at a different point in the survey than the open-ended item asking participants to explain why they thought their work environment was, or was not, toxic. It is possible that by having the open-ended item immediately following the

toxicity scale in the current study, some respondents' descriptions of their toxic work environments might have been influenced by the preceding questions, leading to greater concurrence between the scale and respondents' descriptions than might naturally be the case. It is at least apparent that this was not the case for all respondents, however, because some respondents made comments that clearly indicated they did not understand the term "toxic work environment" as it was intended in this study, thinking instead of a chemically toxic environment.

The creation of the toxicity measure in this study allowed for a second gap in the literature to be addressed – that is, making an empirical connection between perceptions of a toxic work environment and individual-level well-being. Third, this research helped put into context the role of leadership in a toxic work environment, highlighting their less malicious contributions to the phenomenon. Fourth, by taking a psychological climate approach, the current research helped to address a gap in the literature regarding the need to empirically explore the contribution of culture to the workplace toxicity phenomenon.

Above all, the aim of this research was to explore the notion of a toxic work environment from a systemic perspective in order to inform future frameworks for workplace interventions. The results provided evidence of various workplace factors being involved in toxicity, suggesting support for taking a broad view of the phenomenon. To date, only a few researchers have proposed high-level frameworks to account for various influences on toxicity. Padilla and colleagues (2007) proposed the toxic triangle, whereby destructive leadership is conceptualized as a function of elements in three domains: the destructive leader themselves, susceptible followers, and conducive environments. Walton (2008) also proposed a framework for understanding toxicity

whereby three dimensions are considered: the behaviour of executives, the internal context of the organization (including its culture and climate), and organization's the external environment. Although these frameworks capture important contributors to toxicity and acknowledge their complex dynamics, they are both leader-centric in the sense that they ultimately focus on how the damaging behaviour and effects of leaders are enabled. The results of the present research suggest that a comprehensive framework for workplace toxicity should account for the elements noted by Padilla and colleagues (2007) and Walton (2008), but should do so from the perspective of trying to understand how organizational members at all levels shape, and are shaped by, the environment such that harmful conditions are created, persist, and ultimately lead to harm. Furthermore, the framework should capture individual- and organizational-level markers for well-being, including, but not limited to, psychological health, absenteeism, and productivity.

Practical Implications

The present research suggested that a toxic work environment is a systemic issue involving a dynamic interplay of workplace conditions. The implication for addressing the phenomenon in practice is that intervention may be needed at various levels of the organization to remedy functioning. Fundamentally, given that organizations are social systems, any solution to toxicity would require behaviour change among organizational members. For workers, this could involve changes to their interactions with management and coworkers, as well as modifications to their interpretation and response to workplace events. Coworkers in general are important to the development of toxicity not only because they could be the source of issues that negatively affect someone (e.g., coworker incivility, abuse), but also because they are, as a group, an integral part of making

destructive responses to issues a part of the workplace culture. Coworker actions that ignore, allow, or incite harmful workplace conditions feed into creating a culture that perpetuates issues for workers, as opposed to helping them.

For management, behavioural changes may be needed regarding their design and monitoring of working conditions, as well as their recognition of, and response to, workers' distress. Indeed, Frost (2004) described that to be a toxin handler stems from a concern for others and the ability to know when they are suffering; given this might not be natural to some managers, awareness building may be necessary. Similarly, Hartel (2008) suggested that managers should be fully supported and trained in the skills and practices required to ensure a healthy emotional culture, including performance management, and that they should in turn emphasize training in order to cultivate conditions such as positive relationships and organizational justice. Finally, higher level organizational changes, such as the implementation of human resource policies that prioritize the well-being of workers and provide avenues for the constructive management of issues, should also be included to buttress any behavioural and work-related changes (Hall, Dollard, & Coward, 2010; Hartel, 2008).

Far simpler than remediation, however, is prevention. Indeed, if a work environment were truly toxic, a new way of social life would need to be established, meaning a new organizational culture. With such entrenched and severe forms of mistreatment associated with toxicity, to turn over what was once permitted, even expected, would be a significant feat. For this reason, to avoid the development of toxicity in the first place is clearly best (Too & Harvey, 2012). Indeed, the Mental Health Commission of Canada (MHCC) recently released the National Standard of Canada for

Psychological Health and Safety in the Workplace (MHCC, 2013) and approaches are being established across the country to prevent mental injury and promote psychological health at work (Bailey et al., 2015; Shain et al., 2012). The Standard includes information regarding risk management, evaluation methods, supportive practices, and workplace safety culture (Bailey et al., 2015; MHCC, 2013). Given the Standard was developed based on the five factors highlighted by Shain and colleagues (2012) (i.e., job demands and requirements of effort, job control or influence, reward, fairness, and support), and the current study provided evidence that all five of these factors are related to toxicity, the promotion of psychological health and safety at work represents a promising avenue for the prevention of a toxic work environment.

Conclusion

Overall, the findings appeared to support the notion of a toxic work environment as a social system that operates in such a way that harms workers' well-being by allowing for a persistence of issues that negatively affect them. By taking a broad view of the phenomenon and considering the involvement of various aspects of the work environment, initial empirical evidence was acquired that suggests toxicity develops based on a complex interplay of workplace conditions. Nevertheless, management was found to have the strongest influence on workers' toxicity appraisals; hence, their oversight of the organization's social system appears to be most critical to the development, and correspondingly the abatement, of this phenomenon. That is not to say the onus to remedy toxicity lies solely with management, however, as the connection of the organization's culture to the fueling of toxicity ultimately implicates all organizational members. The workplace is, after all, a social *system*.

References

- Alvesson, M. (2002). *Understanding organizational culture*. London: Sage Publications.
- Andersson, L. M., & Pearson, C. M. (1999). Tit for tat? The spiraling effect of incivility in the workplace. *Academy of Management Review*, 24, 452-471.
- Appelbaum, S. H., & Roy-Girard, D. (2007). Toxins in the workplace: Affect on organizations and employees. *Corporate Governance*, 7, 17-28. doi: 10.1108/14720700710727087
- Aronson, J. (1994). A pragmatic view of thematic analysis. *The Qualitative Report*, 2(1). Retrieved from <http://www.nova.edu/ssss/QR/BackIssues/QR2-1/aronson.html>
- Bacal, R. (2000). Toxic organizations: Welcome to the fire of an unhealthy workplace. Retrieved from www.work911.com
- Bailey, T. S., Dollard, M. F., & Richards, P. A. M. (2015). A national standard for psychosocial safety climate (PSC): PSC 41 as the benchmark for low risk of job strain and depressive symptoms. *Journal of Occupational Health Psychology*, 20(1), 15–26. doi: 10.1037/a0038166
- Bentler, P. M. (1990). Comparative fit indexes in structural models. *Psychological Bulletin*, 107(2), 238-246. doi: 0033-2909/90
- Bentler, P. M., & Bonett, D. G. (1980). Significance tests and goodness-of-fit in the analysis of covariance structures. *Psychological Bulletin*, 88, 588-606. doi: 0033-2909/80/8803-0588\$00.75
- Bollen, K. A. (1989). *Structural equations with latent variables*. New York: Wiley.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77-101. doi: 10.1191/1478088706qp063oa

Brown, L. (2004, January). Are you a target for a toxic workplace? *TLOMA Today*.

Retrieved from

http://www.brownconsulting.ca/files/7/Are_You_A_Target_For_A_Toxic_Workplace.pdf

Brown, S. P., & Leigh, T. W. (1996). A new look at psychological climate and its relationship to job involvement, effort, and performance. *Journal of Applied Psychology, 81*(4), 358-368. doi: 0021-9010/96

Burke, M. J., Borucki, C. C., & Kaufman, J. D. (2002). Contemporary perspectives on the study of psychological climate: A commentary. *European Journal of Work and Organizational Psychology, 11*(3), 325-340. doi: 10.1080/13594320244000210

Burke, M. J., Brief, A. P., & George, J. M. (1993). The role of negative affectivity in understanding relations between self-reports of stressors and strains: A comment on the applied psychology literature. *Journal of Applied Psychology, 78*(3), 402-412. doi: 0021-9010/93

Chamberlain, L. J. & Hodson, R. (2010). Toxic work environments: What helps and what hurts. *Sociological Perspectives, 53*(4), 455-477. doi: 0.1525/sop.2010.53.4.455

Chu, L-C. (2014). Mediating toxic emotions in the workplace: The impact of abusive supervision. *Journal of Nursing Management, 22*, 953–963.

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Hillsdale, NJ: Lawrence Earlbaum Associates.

Cohen, S., Kamarck, T., & Mermelstein, R. (1983). A global measure of perceived stress. *Journal of Health and Social Behavior, 24*, 385-396.

- Demerouti, E., Mostert, K., & Bakker, A. B. (2010). Burnout and work engagement: A thorough investigation of the independency of both constructs. *Journal of Occupational Health Psychology, 15*(3), 209-222.
- Denison, D. R. (1996). What is the difference between organizational culture and organizational climate? A native's point of view on a decade of paradigm wars. *Academy of Management Review, 21*(3), 619-654.
- Dollard, M. F., & Bakker, A. B. (2010). Psychosocial safety climate as a precursor to conducive work environments, psychological health problems, and employee engagement. *Journal of Occupational and Organizational Psychology, 83*, 579-599. doi:10.1348/096317909X470690
- Dyck, D., & Roithmayr, T. (2001). The toxic workplace: Is your organization making workers sick? *Benefits Canada, 25*(3), 52-55.
- Flynn, G. (1999). Stop toxic managers before they stop you! *Workforce, 78*(8), 40-44.
- Fortunato, V. J. & Goldblatt, A. M. (2002). Construct validation of a revised strain-free negative affectivity scale. *Educational and Psychological Measurement, 62*(1), 45-63.
- Frost, P. J. (2003). *Toxic emotions at work*. Boston, MA: Harvard Business School Press.
- Frost, P. J. (2004). Handling toxic emotions: New challenges for leaders and their organization. *Organizational Dynamics, 33*(2), 111-127.
doi:10.1016/j.orgdyn.2004.01.001
- Frost, P. J., & Robinson, S. L. (1999). The toxic handler: Organizational hero - and casualty. *Harvard Business Review* (Reprint 8571).

- Gallos, J. V. (2008). Learning from the toxic trenches: The winding road to healthier organizations – and to healthy everyday leaders. *Journal of Management Inquiry*, 17, 354-367. doi: 10.1177/1056492608320580
- Gang up. (2016). In *Merriam-Webster's online dictionary*. Retrieved from <http://www.merriam-webster.com/dictionary/gang%20up>
- Ghosh, R., Jacobs, J. L., & Reio, T. G. (2011). The toxicity continuum from incivility to violence: What can HRD do? *Advances in Developing Human Resources*, 13, 3-9. doi: 10.1177/1523422311410641
- Gilbert, J. A., Carr-Ruffino, N., Ivancevich, J. M., & Konopaske, R. (2012). Toxic versus cooperative behaviors at work: The role of organizational culture and leadership in creating community-centered organizations. *International Journal of Leadership Studies*, 7(1), 29-47.
- Goldman, A. (2006). High toxicity leadership: Borderline personality disorder and the dysfunctional organization. *Journal of Managerial Psychology*, 21, 733-746. doi: 10.1108/02683940610713262
- Goldman, A. (2008). Company on the couch: Unveiling toxic behaviour in dysfunctional organizations. *Journal of Management Inquiry*, 17, 226-238. doi: 10.1177/1056492608318157
- Gross, J. J., & Levenson, R. W. (1993). Emotional suppression: Physiology, self-report, and expressive behavior. *Journal of Personality and Social Psychology*, 64, 970-986.
- Gross, J. J., & Levenson, R. W. (1997). Hiding feelings: The acute effects of inhibiting negative and positive emotion. *Journal of Abnormal Psychology*, 106, 95-103.

- Hall, G. B., Dollard, M. F., & Coward, J. (2010). Psychosocial safety climate: Development of the PSC-12. *International Journal of Stress Management*, 17(4), 353–383. doi: 10.1037/a0021320
- Hartel, C. E. J. (2008). How to build a healthy emotional culture and avoid a toxic culture. In N. M. Ashkanasy & C. L. Cooper (Eds.), *Research companion to emotion in organizations* (pp. 575-588). Cheltenham, U.K. and Northampton, Mass.: Edward Elgar.
- Hodgson, E. (2004). *A textbook of modern toxicology* (3rd ed.). Hoboken, NJ: John Wiley & Sons, Inc.
- Hooper, D., Coughlan, J., & Mullen, M. (2008). Structural equation modelling: Guidelines for determining model fit. *Electronic Journal of Business Research Methods*, 6(1), 53-60.
- Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling*, 6, 1–55.
- James, L. R., Choi, C. C., Ko, C. E., McNeil, P. K., Minton, M. K., Wright, M. A., & Kim, K. (2008). Organizational and psychological climate: A review of theory and research. *European Journal of Work and Organizational Psychology*, 17(1), 5-32.
- James, L. A., & James, L. R. (1989). Integrating work environment perceptions: Explorations into the measurement of meaning. *Journal of Applied Psychology*, 74(5), 739-751. doi: 0021-9010/89

- Jones, A. P., & James, L. R. (1979). Psychological climate: Dimensions and relationships of individual and aggregated work environment perceptions. *Organizational Behavior and Human Performance*, 23, 201-250. doi: 0030-5073/79/020201-505
- Kammeyer-Mueller, J. D., & Wanberg, C. R. (2003). Unwrapping the organizational entry process: Disentangling multiple antecedents and their pathways to adjustment. *Journal of Applied Psychology*, 88, 779– 794. doi:10.1037/0021-9010.88.5.779
- Kenny, D. A. (2015, November 24). Measuring model fit [Web log post]. Retrieved from <http://davidakenny.net/cm/fit.htm>
- Kenny, D. A., Kaniskan, B., & McCoach, D. B. (2015). The performance of RMSEA in models with small degrees of freedom. *Sociological Methods & Research*, 44, 486-507.
- Kimura, H. (2003). Overcome toxic management. *Nursing Management*, 34, 26-9.
- Kirk, R. E. (1996). Practical significance: A concept whose time has come. *Educational and Psychological Measurement*, 56(5), 746-759.
- Kline, R. B. (2011). *Principles and practice of structural equation modeling* (3rd ed.). New York, New York: Guilford Press.
- Kroenke, K., Spitzer, R. L., Williams, J. B. W., & Lowe, B. (2009). An ultra-brief screening scale for anxiety and depression: The PHQ-4. *Psychosomatics*, 50(6), 613-621.
- Kulik, C. T., Cregan, C., Metz, I., & Brown, M. (2009). HR managers as toxin handlers: The buffering effect of formalizing toxin handling responsibilities. *Human Resources Management*, 48, 695-716. doi: 10.1002/hrm.20311

- Langford, P. H. (2009). Measuring organisational climate and employee engagement: Evidence for a 7 Ps model of work practices and outcomes. *Australian Journal of Psychology*, 61(4), 185-198. doi: 10.1080/00049530802579481
- Law, R., Dollard, M. F., Tuckey, M. R., Dormann, C. (2011). Psychosocial safety climate as a lead indicator of workplace psychosocial hazards, psychological health and employee engagement. *Accident Analysis and Prevention*, 43, 1782–1793.
- Lawrence, S. A. (2008). The case for emotion-induced toxicity: Making sense of toxic emotions in the workplace. In N. M. Ashkanasy & C. L. Cooper (Eds.), *Research companion to emotion in organizations* (pp. 73-89). Cheltenham, U.K. and Northampton, Mass.: Edward Elgar.
- Lee, E-H. (2012). Review of the psychometric evidence of the perceived stress scale. *Asian Nursing Research*, 6, 121-127. doi: 10.1016/j.anr.2012.08.004
- Lewin, K. (1997). *Resolving social conflicts and field theory in social science*. Washington, DC: American Psychological Association.
- Lewis, K. M. (2000). When leaders display emotion: How followers respond to negative emotional expression of male and female leaders, *Journal of Organizational Behavior*, 21(2), 221-234.
- Lubit, R. (2004, March/April). The tyranny of toxic managers: Applying emotional intelligence to deal with difficult personalities. *Ivey Business Journal Online*, 1-7.
- Retrieved from http://www.iveybusinessjournal.com/view_article.asp?intArticle_ID 1/4 475

- Maitlis, S., & Ozcelik, H. (2004). Toxic decision processes: A study of emotion and organizational decision making. *Organization Science*, 15(4), 375-393. doi: 10.1287/orsc.1040.0070
- Malone, P. S., & Lubansky, J. B. (2012). Preparing data for structural equation modeling: Doing your homework. In R. H. Hoyle (Ed.), *Handbook of structural equation modeling* (pp. 263-276). New York: Guilford Press.
- MacCallum, R. C., Browne, M. W., & Sugawara, H. M. (1996). Power analysis and determination of sample size for covariance structure modeling. *Psychological Methods*, 1, 130-149.
- Macklem, K. (2005). The toxic workplace. *Maclean's*, 118(5), 34-45.
- Madell, R. (2015, April 20). The most toxic types of people to avoid at work. *US News & World Report*. Retrieved from <http://money.usnews.com/money/blogs/outside-voices-careers/2015/04/20/the-most-toxic-types-of-people-to-avoid-at-work>
- McClure, L. (1996). *Risky business: Managing employee violence in the workplace*. Binghamton, NY: Haworth Press.
- Mental Health Commission of Canada. (2013). *Psychological health and safety in the workplace: Prevention, promotion, and guidance to staged implementation*. Calgary, Canada: Mental Health Commission of Canada.
- Mitchell, M. S., & Ambrose, M. L. (2007). Abusive supervision and workplace deviance and the moderating effects of negative reciprocity beliefs. *Journal of Applied Psychology*, 92(4), 1159-1168. doi: 10.1037/0021-9010.92.4.1159

- Mückter, H. (2003, March). What is toxicology and how does toxicity occur? *Best Practices in Clinical Anaesthesiology*, 17(1), 5-27. Retrieved from <http://www.ncbi.nlm.nih.gov/pubmed/12751546>
- Mulaik, S. A., James, L. R., Van Alstine, J., Bennet, N., Lind, S., & Stilwell, C. D. (1989). Evaluation of goodness-of-fit indices for structural equation models. *Psychological Bulletin*, 105(3), 430-45.
- National Research Centre for the Working Environment. (2009). *Cronbach's alphas of the scales in the three COPSQ II questionnaires*. Retrieved from <http://www.arbejdsmiljoforskning.dk/en/publikationer/spoergeskemaer/psykisk-arbejdsmiljoe>
- Padilla, A., Hogan, R., & Kaiser, R. B. (2007). The toxic triangle: Destructive leaders, susceptible followers, and conducive environments. *The Leadership Quarterly*, 18, 176-194. doi: 10.1016/j.leaqua.2007.03.001
- Parker, C. P., Baltes, B. B., Young, S. A., Huff, J. W., Altmann, R. A., Lacost, H. A., & Roberts, J. E. (2003). Relationships between psychological climate perceptions and work outcomes: A meta-analytic review. *Journal of Organizational Behavior*, 24, 389 -416. doi: 10.1002/job.198
- Patterson, M. G., West, M. A., Shackleton, V. J., Dawson, J. F., Lawthom, R., Maitlis, S., Robinson, D. L., & Wallace, A. M. (2005). Validating the organizational climate measure: Links to managerial practices, productivity and innovation. *Journal of Organizational Behavior*, 26, 379-408. doi: 10.1002/job.312

- Pejtersen, J. H., Kristensen, T. S., Borg, V., & Bjorner, J. B. (2010). The second version of the Copenhagen Psychosocial Questionnaire. *Scandinavian Journal of Public Health*, 38, 8–24. doi: 10.1177/1403494809349858
- Pelletier, K. L. (2010). Leader toxicity: An empirical investigation of toxic behaviour and rhetoric. *Leadership*, 6, 272-289. doi: 10.1177/1742715010379308
- Podsakoff, P. M., MacKenzie, S. B., Lee, J-Y, & Podsakoff, N. P. (2003). Common method bias in behavioural research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, 88(5), 879-903. doi: 10.1037/0021-9010.88.5.879
- Preacher, K. J., & Leonardelli, G. J. (2016). Calculation for the Sobel test: An interactive calculation tool for mediation tests [Online calculator]. Retrieved from <http://quantpsy.org/sobel/sobel.htm>
- Reed, G. (2004, July/August). Toxic leadership. *Military Review*, 67-71.
- Reed, G. E., & Olsen, R. A. (2010, November/December). Toxic leadership: Part deux. *Military Review*, 58-64.
- Schein, E. H. (1990). Organizational culture. *American Psychologist*, 45(2), 109-119.
- Schein, E. H. (2004). *Organizational culture and leadership* (3rd ed.). San Francisco, CA: Jossey-Bass.
- Schneider, B., Ehrhart, M. G., & Macey, W. H. (2013). Organizational climate and culture. *Annual Review of Psychology*, 64, 361-388. doi: 10.1146/annurev-psych-113011-143809
- Shain, M. (2009). Psychological safety at work: Emergence of a corporate and social agenda in Canada. *International Journal of Mental Health Promotion*, 11, 42-48.

- Shain, M., Arnold, I., & GermAnn, K. (2012). The road to psychological safety: Legal, scientific, and social foundations for a national standard for psychological safety in the workplace (A working paper for the Mental Health Commission of Canada). Retrieved from http://www.mentalhealthcommission.ca/sites/default/files/Workforce_The_Road_to_Psychological_Safety_ENG_0_1.pdf
- Steiger, J. H. (1990). Structural model evaluation and modification: An interval estimation approach. *Multivariate Behavioral Research*, 25(2), 173-180.
- Steiger, J. H. (2007). Understanding the limitations of global fit assessment in structural equation modeling. *Personality and Individual Differences*, 42(5), 893-98.
- Stein, M. (2007). Toxicity and the unconscious experience of the body at the employee-customer interface. *Organization Studies*, 28, 1223-1241. doi: 10.1177/0170840607079527
- Steele, J. P. (2011). Antecedents and consequences of toxic leadership in the U.S. Army: A two-year review and recommended solutions. *Center for Army Leadership. Technical Report 2011-3*, 1-42.
- System. (2016). In *Merriam-Webster's online dictionary*. Retrieved from <http://www.merriam-webster.com/dictionary/system>
- Tabachnick, B. G., & Fidell, L. S. (2013). *Using multivariate statistics* (6th ed.). Boston, MA: Pearson.
- Taghavi, M. R., Neshat-Doost, H. T., Moradi, A. R., Yule, W., & Dalgleish, T. (1999). Biases in visual attention in children and adolescents with clinical anxiety and mixed anxiety-depression. *Journal of Abnormal Child Psychology*, 27, 215-223.

- Tepper, B. J. (2000). Consequences of abusive supervision. *Academy of Management Journal*, 43(2), 178-190.
- Too, L., & Harvey, M. (2012). "TOXIC" workplaces: The negative interface between the physical and social environments. *Journal of Corporate Real Estate*, 14(3), 171-181.
- Toxic. (2016). In *Merriam-Webster's online dictionary*. Retrieved from <http://www.merriam-webster.com/dictionary/toxic>
- Van Dyne, L., & LePine, J. A. (1998). Helping and voice extra-role behaviors: Evidence of construct and predictive validity. *Academy of Management*, 41(1), 108-119.
- Walsh, B. M., Magley, V. J., Davies-Schriels, K. A., Marmet, M. D., Reeves, D. A., & Gallus, J. A. (2012). Assessing work group norms for civility: Development of the Civility Norms Questionnaire – Brief. *Journal of Business and Psychology*, 27, 407-420.
- Walton, M. (2007). Leadership toxicity - An inevitable affliction of organizations? *Organizations and People*, 14, 19-27.
- Walton, M. (2008). In consideration of a toxic workplace: A suitable place for treatment. In A. Kinder, R. Hughes, & C. L. Cooper (Eds.), *Employee well-being support: A workplace resource* (pp. 9-24). West Sussex, England: John Wiley & Sons.
- Watson, D., & Clark, L. A. (1984). Negative affectivity: The disposition to experience negative aversive emotional states. *Psychological Bulletin*, 96, 465–490.
- Webber, A. M. (1998, November). Danger: Toxic company. *Fast Company*, 19. Retrieved from <https://www.fastcompany.com/35667/dangertoxic-company>

- Wheaton, B., Muthén, B., Alwin, D. F., & Summers, G. F. (1977). Assessing reliability and stability in panel models. In D. R. Heise (Ed.), *Sociological methodology* (pp. 84-136). San Francisco: Jossey-Bass.
- Wilson, D. S. (2014, January 10). Toxic leaders and the social environments that breed them, *Forbes*. Retrieved from <http://www.forbes.com/sites/darwinatwork/2014/01/10/toxic-leaders-and-the-social-environments-that-breed-them/#3c600b7f2dda>
- Withey, M. J., & Cooper, W. H. (1989). Predicting exit, voice, loyalty and neglect. *Administrative Science Quarterly*, 34, 521-539.
- Yeo, A. C. M., & Carter, S. (2008, June). Toxic leaders – Inevitable or avoidable? *Accountants Today*. Retrieved from <http://www.mia.org.my/at/at/200806/11.pdf>

Appendix A

Items for Pilot Study

Toxicity appraisal	
Item	How would you rate the psychological health & safety climate in your workplace?
Ratings	1 = healthy/supportive 2 = good 3 = fair 4 = neutral 5 = not so good 6 = poor 7 = toxic
Tolerance for harmful behaviour	
Item	To what extent would you agree that the culture of this organization does not tolerate behaviour that harms the mental health of those who work here?
Ratings	1 = strongly agree 2 = agree 3 = neutral 4 = disagree 5 = strongly disagree
Quality of leadership	
Items	To what extent would you say that your immediate superior gives high priority to job satisfaction? To what extent would you say that your immediate superior is good at work planning?
Ratings	1 = to a very small extent 2 = to a small extent 3 = somewhat 4 = to a large extent 5 = to a very large extent

Bullying

Items Have you been exposed to bullying at your workplace during the last 12 months?
If yes, from whom? (You may tick off more than one: colleagues, manager/superior, subordinates, clients/customers/patients)

Ratings 1 = no
2 = yes, a few times
3 = yes, monthly
4 = yes, weekly
5 = yes, daily

Work tempo

Items Do you work at a high pace throughout the day?
Is it necessary to keep working at a high pace?

Ratings 1 = never/hardly ever
2 = seldom
3 = sometimes
4 = often
5 = always

Role clarity

Items Does your work have clear objectives?
Do you know exactly what is expected of you at work?

Ratings 1 = to a very small extent
2 = to a small extent
3 = somewhat
4 = to a large extent
5 = to a very large extent

Stress

Items How often have you had problems relaxing?
How often have you been irritable?
How often have you been tense?
How often have you been stressed?

Ratings 1 = not at all
2 = a small part of the time
3 = part of the time
4 = a large part of the time
5 = all the time

Burnout	
Items	How often have you felt worn out? How often have you been physically exhausted? How often have you been emotionally exhausted? How often have you felt tired?
Ratings	1 = not at all 2 = a small part of the time 3 = part of the time 4 = a large part of the time 5 = all the time
Cognitive stress	
Items	How often have you had problems concentrating? How often have you found it difficult to think clearly? How often have you had difficulty in making decisions? How often have you had difficulty with remembering?
Ratings	1 = not at all 2 = a small part of the time 3 = part of the time 4 = a large part of the time 5 = all the time
Somatic stress	
Items	How often have you had a stomach ache? How often have you had a headache? How often have you had palpitations? How often have you had tension in various muscles?
Ratings	1 = not at all 2 = a small part of the time 3 = part of the time 4 = a large part of the time 5 = all the time

Appendix B

Correlations Between Predictor Variables in Pilot Study Path Model

Predictor variable	1	2	3	4	5	6	7	8	9
1. Tolerance for harmful behaviour	-								
2. Quality of leadership	-.38***	-							
3. Bullying	.36***	-.34***	-						
4. Work tempo	.24***	-.16***	.19***	-					
5. Role clarity	-.34***	.42***	-.20***	-.08**	-				
6. Lead x Tolerance for harm	-.02	.22***	-.16***	-.04	.06	-			
7. Bully x Tolerance for harm	.12***	-.15***	.45***	.03	-.10**	-.39***	-		
8. Work Tempo x Tolerance for harm	.04	-.04	.03	-.07*	-.06	-.18***	.20***	-	
9. Role Clarity x Tolerance for harm	-.02	.05	-.09**	-.05	.24***	.48***	-.24***	-.03	-

Note. * $p < .05$, ** $p < .01$, *** $p < .001$. 'Tolerance for harm' = tolerance for harmful behaviour in the workplace.

Appendix C

Categories of Climate Related Variables

Job and role characteristics	
Role ambiguity	The extent to which a task is unclear in demands, criteria, or relationships with other tasks.
Role conflict	The presence of pressure for conflicting or mutually exclusive behaviors.
Job autonomy	The ability of a person in a given role to determine the nature of the tasks or problems faced and to arrive at a course of action.
Job variety	The degree to which the job calls for the individual to engage in a wide range of behaviors or to use a variety of equipment.
Job importance	The extent to which the person feels his job makes a meaningful contribution and is important to the organization.
Job feedback	The extent to which an individual is aware of how well he is performing on his job.
Job challenge	The extent to which a job gives the individual a chance to use his skills and abilities.
Job pressure	The extent to which there is inadequate time, manpower, training, or resources to complete assigned tasks.
Efficiency of job design	The extent to which job behaviors and job design lead to organizationally valued goals.
Job standards	The extent to which the job demands rigid adherence to exacting standards of quality and accuracy.
Opportunities to deal with others	The extent to which the task requires or provides opportunities to interact with other persons.
Characteristics of leadership	
Support	The extent to which the supervisor is aware of and responsive to the needs of subordinates. Supervisor enhances someone else's feelings of personal worth and importance.
Goal emphasis	Supervisor stimulates personal involvement in meeting group goals. Emphasizes high standards of performance and sets an example by working hard himself.
Work facilitation	Supervisor helps achieve goal attainment through such activities as scheduling, coordinating, planning, and providing resources.
Interaction facilitation	Supervisor encourages the development of close, mutually satisfying relationships within the group.

Planning and coordination	Supervisor's ability to plan and coordinate the group's activities so that maximum performance is possible.
Upward interaction	The degree to which a supervisor is successful in interactions with higher levels of command.
Confidence and trust – UP	Group members' feelings of trust and confidence in the supervisor.
Confidence and trust – DOWN	The degree to which supervisors trust the performance and judgments of subordinates.
<hr/> Workgroup characteristics <hr/>	
Workgroup cooperation	An atmosphere in which there is cooperative effort among individuals to carry out difficult tasks.
Reputation for effectiveness	The extent to which the group is seen as able to produce work of higher quality and quantity than other groups in the organization.
Workgroup esprit de corps	The extent to which members take pride in their group.
Workgroup friendliness and warmth	The extent to which there is open communication and trust among members of a workgroup and the atmosphere is characterized by friendly relations.
<hr/> Subsystem and organizational characteristics <hr/>	
Openness of expression	The degree to which individuals feel the atmosphere is conducive to the expression of individual opinions, ideas, and suggestions.
Organizational communication - DOWN	The degree to which information is communicated to subordinates concerning impending changes in procedures, policies, and so forth.
Interdepartmental cooperation	The extent to which there are friendly, cooperative interactions between departments.
Conflict of organizational goals and objectives	The degree to which goals and policies of one subsystem are in conflict with those of other groups in the same organization.
Ambiguity of organizational structure	The extent to which organizational channels of authority are obscure or undefined.
Consistent applications of organizational policies	The degree to which organizational policies are consistently and fairly applied.
Organizational esprit de corps	The degree to which an individual believes his organization performs an important function and offers unique opportunities for growth and reward.
Professional esprit de corps	The degree to which an individual believes his profession has a good image to outsiders and provides opportunities for growth and advancement.
Planning and effectiveness	The degree to which the organization is able to plan so that workgroups have the required supplies and there is little wasted effort.
Fairness and objectivity of the	The degree to which an organization rewards individuals for performance rather than seniority or

reward process	other non-performance reasons.
Opportunities for growth and advancement	The degree to which an individual feels that the organization provides a vehicle for development and of desired personal skills, goals, and rewards.
Awareness of employees' needs and problems	The extent to which an organization attempts to assess and respond to its employees' needs and problems.

Note. Adapted from "Psychological Climate: Dimensions and Relationships of Individual and Aggregated Work Environment Perceptions" by A. P. Jones and L. R. James, 1979, *Organizational Behaviour and Human Performance*, 23, p. 212-213. Copyright 1979 by Academic Press, Inc.

Appendix D

Items for Main Study

Role Clarity	
Items	<p>I understand my goals and objectives and what is required of me in my job.</p> <p>I understand how my job contributes to the overall success of this organization.</p> <p>During my day-to-day duties I understand how well I am doing.</p>
Ratings	<p>1 = strongly disagree</p> <p>2 = disagree</p> <p>3 = neither agree nor disagree</p> <p>4 = agree</p> <p>5 = strongly agree</p>
Pressure to Produce	
Items	<p>I am expected to do too much in a day.</p> <p>In general, my workload is not particularly demanding.</p> <p>Management require me to work extremely hard.</p> <p>I am under pressure to meet targets.</p> <p>The pace of my work is pretty relaxed.</p>
Ratings	<p>1 = strongly disagree</p> <p>2 = disagree</p> <p>3 = neither agree nor disagree</p> <p>4 = agree</p> <p>5 = strongly agree</p>
Supervisor Support	
Items	<p>My supervisor is really good at understanding people's problems.</p> <p>My supervisor shows that he/she has confidence in those he/she manages.</p> <p>My supervisor is friendly and easy to approach.</p> <p>My supervisor can be relied upon to give good guidance to people.</p> <p>My supervisor shows an understanding of the people who work for him/her.</p>
Ratings	<p>1 = strongly disagree</p> <p>2 = disagree</p> <p>3 = neither agree nor disagree</p> <p>4 = agree</p> <p>5 = strongly agree</p>
Abusive Supervision	
Items	<p>My supervisor ridicules staff.</p> <p>My supervisor tells staff their thoughts or feelings are stupid.</p> <p>My supervisor puts staff down in front of others.</p> <p>My supervisor makes negative comments about staff to others.</p> <p>My supervisor tells staff they are incompetent.</p>

Ratings	1 = strongly disagree 2 = disagree 3 = neither agree nor disagree 4 = agree 5 = strongly agree
<hr/>	
Civility	
Items	Rude behaviour is not accepted by my co-workers. Angry outbursts are not tolerated by anyone in my workgroup. Respectful treatment is the norm in my workgroup. My co-workers make sure everyone in the workgroup is treated with respect.
Ratings	1 = strongly disagree 2 = disagree 3 = neither agree nor disagree 4 = agree 5 = strongly agree
<hr/>	
Talent	
Items	I have confidence in the ability of my co-workers. My co-workers are productive in their jobs. My co-workers do their jobs quickly and efficiently.
Ratings	1 = strongly disagree 2 = disagree 3 = neither agree nor disagree 4 = agree 5 = strongly agree
<hr/>	
Voice	
Items	In my workplace, people feel free to develop and make recommendations concerning issues that affect the workgroup. In my workplace, people feel free to speak up and encourage others in the group to get involved in issues that affect the group. In my workplace, people feel free to communicate their opinions about work issues to others in the group even if their opinion is different and others in the group disagree with them. In my workplace, people keep well informed about issues where their opinion might be useful to the workgroup. In my workplace, people feel free to get involved in issues that affect the quality of work life here in this group. In my workplace, people feel free to speak up in the group with ideas for new projects or changes in procedures.
Ratings	1 = strongly disagree 2 = disagree 3 = neither agree nor disagree 4 = agree

5 = strongly agree	
Involvement	
Items	<p>Management involve people when decisions are made that affect them.</p> <p>Changes are made without talking to the people involved in them.</p> <p>People don't have any say in decisions which affect their work.</p> <p>People feel decisions are frequently made over their heads.</p> <p>Information is widely shared.</p> <p>There are often breakdowns in communication here.</p>
Ratings	<p>1 = strongly disagree</p> <p>2 = disagree</p> <p>3 = neither agree nor disagree</p> <p>4 = agree</p> <p>5 = strongly agree</p>
Toxicity	
Items	<p>In my workplace, issues that negatively affect me are ignored.</p> <p>Workplace issues that negatively affect me are mishandled at my place of work.</p> <p>In my workplace, I feel discouraged from raising issues that negatively affect me.</p> <p>In my workplace, issues that negatively affect me happen repeatedly.</p> <p>In my workplace, the way people respond to issues leads to more problems.</p> <p>My work environment is harmful to my well-being.</p> <p>In my workplace, issues that negatively affect me are continually present.</p> <p>I experience a high dose of workplace issues that negatively affect me.</p> <p>In my workplace, there is a tolerance for issues that negatively affect me – as though it's "just the way things are."</p> <p>My coworkers are reluctant to get involved in workplace issues that negatively affect me.</p> <p>I experience a toxic work environment.</p>
Ratings	<p>1 = strongly disagree</p> <p>2 = disagree</p> <p>3 = neither agree nor disagree</p> <p>4 = agree</p> <p>5 = strongly agree</p>
Organizational Commitment	
Items	<p>I feel a sense of loyalty and commitment to this organization.</p> <p>I am proud to tell people that I work for this organization.</p> <p>I feel emotionally attached to this organization.</p> <p>I am willing to put in extra effort for this organization.</p>
Ratings	<p>1 = strongly disagree</p> <p>2 = disagree</p> <p>3 = neither agree nor disagree</p>

	4 = agree 5 = strongly agree
<hr/>	
Job Satisfaction	
Items	My work gives me a feeling of personal accomplishment. I like the kind of work I do. Overall, I am satisfied with my job.
Ratings	1 = strongly disagree 2 = disagree 3 = neither agree nor disagree 4 = agree 5 = strongly agree
<hr/>	
Intention to Stay	
Items	I am likely to still be working in this organization in 2 years time. I would like to still be working in this organization in 5 years time. I can see a future for me in this organization.
Ratings	1 = strongly disagree 2 = disagree 3 = neither agree nor disagree 4 = agree 5 = strongly agree
<hr/>	
Neglect	
Items	Calling in sick and not dealing with what is happening. Coming in late to avoid dealing with problems. Becoming less interested and making more errors.
Ratings	1 = strongly disagree 2 = disagree 3 = neither agree nor disagree 4 = agree 5 = strongly agree
<hr/>	
Work Withdrawal	
Items	Failing to attend scheduled meetings. Allowing others to do my work for me. Doing poor quality work. Making excuses to go somewhere to get out of work.
Ratings	1 = strongly disagree 2 = disagree 3 = neither agree nor disagree 4 = agree 5 = strongly agree

Perceived Stress	
Items	<p>I have been upset because of something that happened unexpectedly.</p> <p>I have felt that I was unable to control the important things in my life.</p> <p>I have felt nervous and stressed.</p> <p>I have felt confident about my ability to handle my personal problems.</p> <p>I have felt that things were going my way.</p> <p>I have found that I could not cope with all the things that I had to do.</p> <p>I have been able to control irritations in my life.</p> <p>I have felt that I was on top of things.</p> <p>I have been angered because of things that were outside my control.</p> <p>I have felt difficulties were piling up so high that I could not overcome them.</p>
Ratings	<p>1 = strongly disagree</p> <p>2 = disagree</p> <p>3 = neither agree nor disagree</p> <p>4 = agree</p> <p>5 = strongly agree</p>
Anxiety and Depression	
Items	<p>I have felt nervous, anxious, or on edge.</p> <p>I have not been able to stop or control worrying.</p> <p>I have felt down, depressed, or hopeless.</p> <p>I have had little interest or pleasure in doing things.</p>
Ratings	<p>1 = strongly disagree</p> <p>2 = disagree</p> <p>3 = neither agree nor disagree</p> <p>4 = agree</p> <p>5 = strongly agree</p>
Exhaustion	
Items	<p>There are days when I feel tired before I arrive at work.</p> <p>After work, I tend to need more time than in the past in order to relax and feel better.</p> <p>I can tolerate the pressure of my work very well.</p> <p>During my work, I feel emotionally drained.</p> <p>After working, I have enough energy for my leisure activities.</p> <p>After my work, I feel worn out and weary.</p> <p>I can manage the amount of my work well.</p> <p>When I work, I feel energized.</p>
Ratings	<p>1 = strongly disagree</p> <p>2 = disagree</p> <p>3 = neither agree nor disagree</p> <p>4 = agree</p> <p>5 = strongly agree</p>

Negative Affectivity	
Items	<p>Whenever I encounter a difficult problem, I usually think about it a lot.</p> <p>I tend to become really aggravated when things don't go right at work.</p> <p>I tend to become very distressed when I have too much work to do.</p> <p>I tend to get really annoyed when someone interrupts me when I am speaking.</p> <p>I tend to get very angry when someone cuts in front of me in line.</p> <p>It irritates me more than my friends when I get behind a slow driver.</p> <p>I tend to get more impatient than my friends do when I am stuck waiting in a long line.</p> <p>I get resentful when someone else gets the recognition I deserve.</p> <p>I get resentful when someone expects me to do something I really don't want to do.</p> <p>I tend to become very apprehensive when my boss calls me into his or her office.</p> <p>I tend to worry more than my friends do whenever an important deadline approaches.</p> <p>I tend to get very nervous when I'm running late for an appointment.</p>
Ratings	<p>1 = strongly disagree</p> <p>2 = disagree</p> <p>3 = neither agree nor disagree</p> <p>4 = agree</p> <p>5 = strongly agree</p>

Appendix E

Original and Revised Toxicity Appraisal Items for Main Study

Original items
<ol style="list-style-type: none"> 1. In my workplace, I experience a toxic work environment. 2. My employer ignores workplace issues that are negatively affecting workers. 3. My employer is unaware of workplace issues that are negatively affecting workers. 4. My employer mishandles workplace issues that are negatively affecting workers. 5. In my workplace, people do not speak up about issues that are negatively affecting them. 6. In my workplace, even when people speak up about issues that are negatively affecting workers, the issues do not get adequately resolved. 7. In my workplace, issues that negatively affect workers happen repeatedly over time. 8. In my workplace, the way workers respond to issues leads to more problems. 9. In my workplace, I do not address issues head-on. 10. In my workplace, the climate is supportive of psychological health and safety.
Revised items
<ol style="list-style-type: none"> 1. In my workplace, issues that negatively affect me are ignored. 2. Workplace issues that negatively affect me are mishandled at my place of work. 3. In my workplace, I feel discouraged from raising issues that negatively affect me. 4. In my workplace, issues that negatively affect me are adequately resolved. (R) 5. In my workplace, issues that negatively affect me happen repeatedly. 6. In my workplace, the way people respond to issues leads to more problems. 7. My work environment is harmful to my well-being. 8. In my workplace, health, safety, and well-being are valued. (R) 9. In my workplace, issues that negatively affect me are continually present. 10. I experience a high dose of workplace issues that negatively affect me. 11. In my workplace, there is a tolerance for issues that negatively affect me – as though it's “just the way things are.” 12. My coworkers are reluctant to get involved in workplace issues that negatively affect me. 13. My employer is aware of workplace issues that negatively affect me. (R) 14. I experience a toxic work environment.

Appendix F

Frequencies for Toxicity Appraisal Items

Item	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
1. In my workplace, issues that negatively affect me are ignored.	94	182	111	88	27
2. Workplace issues that negatively affect me are mishandled at my place of work.	95	181	118	86	22
3. In my workplace, I feel discouraged from raising issues that negatively affect me.	105	183	90	94	30
4. In my workplace, issues that negatively affect me are adequately resolved. (R)	46	197	136	89	34
5. In my workplace, issues that negatively affect me happen repeatedly.	103	176	119	80	24
6. In my workplace, the way people respond to issues leads to more problems.	76	167	121	110	28
7. My work environment is harmful to my well-being.	168	181	77	52	24
8. In my workplace, health, safety, and well-being are valued. (R)	147	215	83	40	17
9. In my workplace, issues that negatively affect me are continually present.	98	183	103	96	22
10. I experience a high dose of workplace issues that negatively affect me.	134	184	90	70	20
11. In my workplace, there is a tolerance for issues that negatively affect me – as though it's “just the way things are.”	109	135	95	121	42
12. My coworkers are reluctant to get involved in workplace issues that negatively affect me.	85	166	142	79	30
13. My employer is aware of workplace issues that negatively affect me.	49	73	149	179	52
14. I experience a toxic work environment.	207	154	64	56	21

Note. n = 502.

Appendix G

Collinearity Diagnostics for Main Study Variables

Coefficients ^a		Collinearity Statistics	
Model		Tolerance	VIF
1	Role Clarity	.834	1.199
	Pressure to Produce	.842	1.187
	Supervisor Support	.366	2.734
	Abusive Supervision	.451	2.218
	Civility	.384	2.602
	Talent	.434	2.305
	Voice	.320	3.126
	Involvement	.285	3.511
	Negative Affectivity	.757	1.321
	Toxicity	.274	3.651

Note. ^a Dependent Variable: Job Satisfaction.

Collinearity Diagnostics for Main Study Variables cont'd

		Condition Index	Variance Proportions										
Dimension	Eigenvalue		Constant	Role Clarity	Pressure	Supervisor	Abusive	Civility	Talent	Voice	Involve	Negative Affect	Toxicity
1	10.284	1.000	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
2	.458	4.741	.00	.00	.00	.00	.08	.00	.00	.00	.01	.00	.02
3	.078	11.501	.00	.00	.14	.00	.63	.00	.00	.00	.01	.05	.06
4	.056	13.532	.00	.00	.64	.01	.01	.00	.00	.00	.00	.24	.04
5	.035	17.132	.00	.02	.13	.00	.06	.01	.01	.00	.01	.58	.35
6	.028	19.087	.00	.00	.00	.04	.00	.13	.18	.00	.27	.03	.05
7	.018	24.188	.00	.11	.02	.75	.16	.00	.00	.01	.21	.04	.00
8	.016	25.662	.00	.62	.00	.06	.02	.00	.06	.08	.13	.00	.20
9	.013	28.306	.00	.05	.00	.05	.02	.24	.00	.77	.16	.00	.00
10	.011	30.695	.00	.00	.01	.04	.00	.59	.73	.14	.02	.00	.00
11	.005	47.271	.98	.20	.05	.05	.01	.02	.01	.00	.17	.04	.27

Note. 'Pressure' = pressure to produce, 'Supervisor' = supervisor support, 'Abusive' = abusive supervision, 'Involve' = involvement, 'Negative Affect' = negative affectivity, 'Toxicity' = toxicity appraisal.

Appendix H

Squared Multiple Correlations for Main Study Measurement Model

	Estimate
Toxicity item 1	.686
Toxicity item 2	.743
Toxicity item 3	.659
Toxicity item 5	.780
Toxicity item 6	.641
Toxicity item 7	.596
Toxicity item 9	.739
Toxicity item 10	.743
Toxicity item 11	.723
Toxicity item 12	.584
Toxicity item 14	.587
Organizational Commitment	.872
Job Satisfaction	.781
Intention to Stay	.817
Neglect	.951
Work Withdrawal	.774
Stress	.899
Anxiety & Depression	.755
Exhaustion	.668

Appendix I

Correlations Between Predictor Variables in the Main Study Path Model

	Role Clarity	Pressure to Produce	Supervisor Support	Abusive Supervision	Civility	Talent	Voice	Involvement	Negative Affectivity
Role Clarity	-								
Pressure to Produce	-.08	-							
Supervisor Support	.27*	-.31*	-						
Abusive Supervision	-.16*	.31*	-.66*	-					
Civility	.35*	-.23*	.58*	-.44*	-				
Talent	.34*	-.17*	.50*	-.35*	.71*	-			
Voice	.34*	-.30*	.68*	-.48*	.65*	.63*	-		
Involvement	.30*	-.34*	.69*	-.57*	.58*	.52*	.74*	-	
Negative Affectivity	-.15*	.18*	-.24*	.34*	-.25*	-.22*	-.25*	-.38*	-

Note. n = 492. * $p < .001$, two-tailed.

Appendix J

Path Model with Standardized Parameter Estimates for the Prediction of “I experience a toxic work environment.”

Figure 11. * $p < .05$. ** $p < .01$. *** $p < .001$. The gender and supervisory status control variables are not included in the model; parameter estimates for these variables can be found in Table I1.

Table I1

Parameter Estimates for the Path Model

Model Parameters	Standardized Estimate	Unstandardized Estimate	Standard Error	Critical Ratio	<i>p</i>
Effects on item: "I experience a toxic work environment"					
Role clarity	-.04	-.07	.07	-1.11	.269
Pressure to produce	.08	.11	.04	2.46	.014
Supervisor support	-.04	-.05	.06	-.78	.436
Abusive supervision	.36	.40	.05	8.44	< .001
Civility	-.11	-.15	.07	-2.16	.031
Talent	-.06	-.09	.07	-1.31	.192
Voice	-.06	-.08	.08	-1.10	.272
Involvement	-.20	-.25	.07	-3.88	< .001
Negative affectivity	.01	.02	.05	.34	.731
Effects on affective symptoms					
Toxicity item	-.60	-.49	.03	-14.98	< .001
Negative affectivity	-.05	-.06	.05	-1.19	.235
Effects on behavioural symptoms					
Toxicity item	.24	.13	.02	5.31	< .001
Negative affectivity	.23	.20	.04	5.29	< .001
Effects on psychological symptoms					
Toxicity item	.18	.09	.02	4.94	< .001
Negative affectivity	.62	.52	.03	16.70	< .001
Effects of control variables					
Supervisory status → Organizational commitment	-.07	-.14	.05	-2.97	.003
Supervisory status → Job satisfaction	-.08	-.14	.05	-2.98	.003
Supervisory status → Exhaustion	.05	.07	.04	1.76	.079
Gender → Stress	-.09	-.12	.05	-2.60	.009
Gender → Anxiety & depression	-.15	-.29	.07	-4.21	< .001
Gender → Exhaustion	-.09	-.13	.05	-2.42	.015

Note: n = 492. Gender coded 0 = female, 1 = male; supervisory status coded 0 = supervisor, 1 = not a supervisor.