UNIVERSITY OF SOUTHERN QUEENSLAND

RELATIONSHIPS AMONG THREE ASPECTS OF HARMFUL BEHAVIOURS, ORGANISATIONAL HEALTH, AND EMPLOYEE WELLBEING

This thesis is submitted by
Kathryn Noon BSc (Hons)

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Statement of Originality

I affirm that the report contains no material offered for the award of any other degree or diploma, or material previously published, except where due reference is made in the text.

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Kathryn L. Noon Date

ENDORSEMENT

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Prof. M. Anthony Machin (Supervisor) Date

_____ _____

Emeritus Prof. Gerard J. Fogarty (Supervisor) Date

Abstract

The study of harmful behaviours in the workplace which incur substantial costs for organisations and for employees is a salient topic of research. The current study investigated the relationships among frequency, source, and response severity aspects of harmful behaviours in the workplace and relevant organisational and individual factors. Online and paper versions of a self-report inventory, Better Workplaces, were completed by 5889 employees of a large, Queensland health organisation, in 2008. The sample comprised 4,575 females (77.69%) and 1,257 (21.34%) male employees who ranged in ages from under 21 years to over 60 years with a majority of 31.5% aged between 41 to 50 years. An adapted Job Demands-Resources (Bakker & Demerouti, 2007) model of job stress and the Triadic Reciprocal Determinism Model of Workplace Aggression were used to conceptualise the relationship between harmful behaviours and scale measures and the perceptual processes involved in an escalating spiral of harmful behaviours. Preliminary analysis confirmed the structure of the questionnaire by a Principal Component Analysis which revealed 16 principal components that defined the scale measures. The main analyses involving multiple regression utilised Generalized Linear Models because multivariate assumptions of linearity and homogeneity of variance were violated. The main findings included a prevalence rate of 26.83% of harmful behaviours and significant differences (p = .05) between harmful behaviour exposed and non-exposed groups on reliable scale measures. Each of the three aspects of harmful behaviours were important risk factors for organisational and individual measures. Higher frequencies, patient's visitors or relatives sources, and behaviours that elicit fears for safety were the most detrimental to measures. Interactions revealed the different characteristics of the relationships between and among measures and aspects of harmful behaviours. The findings had implications for the development of and commitment to organisational policy and procedures and supervisor training.

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I dedicate this work to my late mother, Chris, who never believed in psychology, but she always believed in me. I miss her greatly. Finally, I would like to thank my family, particularly, my husband who would like me to earn some money. They relieved me of many domestic chores and attempted to keep the chaos to a minimum. I will always appreciate the nerdy words of internet wisdom espoused by my youngest daughter for my benefit, “There are two types of people in this world. Those who can extrapolate from missing data.”

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Chapter 1 - Introduction

Brodie Panlock, a young woman of 19 years, stood atop of a multi-story car park and jumped to her death in September 2006 (Associated Press, 2010). This act was Ms Panlock's solution to end brutal and persistent workplace bullying that she had experienced over 15 months working as a waitress at a Hawthorn café (Wilkinson, 2011). Ms Panlock's manager and three co-workers were charged under the Occupational Health and Safety Act (2004) and plead guilty to the charges of workplace offences that each carried a maximum penalty of $30,000 (*Prosecution Result Summaries,* 2010) and were fined a total of $337,000 (Wilkinson, 2011). The seriousness and viciousness of workplace harassment of Ms Panlock's case was the impetus to introduce the Crimes Amendment (Bullying) Bill 2011, colloquially known as Brodie's Law, which extended the definition of stalking under the Crimes Act and carried up to a 10-year term of imprisonment (O'Conner, 2011; Viellaris, 2011). The extended stalking definition incorporated cyber bullying, that is, using social networking sites or email to harass (Wilkinson, 2011).

Ms Panlock's story epitomised the potential of harmful workplace behaviours to cause serious psychological and or physical harm to a worker. Until recently, only physical violence in the workplace was actionable if it met the criteria under the Criminal Code. On the heels of Victoria's introduction of Brodie's Law, the Queensland Industrial Relations Minister convened a workplace bullying reference group to review the adequacy of Queensland's current workplace legislation (O'Conner, 2011). This was followed by a national inquiry of workplace bullying that contributed to the efforts of States and Territories to harmonise workplace health and safety regulations through a nationally consistent Code of Practice: Managing the Risk of Workplace Bullying, drafted by Safe Work Australia (House of Representatives Standing Committee on Education and Employment, 2012). Therefore, harmful behaviours in the workplace is an important area for research. The current study

endeavours to better understand the impact of three aspects of harmful behaviour in the workplace.

1.1. Setting the Scene

The study of harmful behaviours in the workplace has a relatively short, three-decade history beginning in earnest in the 1980s and has become a particularly important topic of research over the last decade. The report of the current project comprises five chapters beginning with this introductory chapter that establishes the scope and context within which workplace harmful behaviours were investigated and will include the proposed theoretical models of the mechanisms underlying the relationships among aspects of harmful behaviours and organisational and individual variables. The second chapter will describe the methodological approach used to the statistical analyses that were performed on archival data. The third chapter will examine the structure and reliability of the measure used to collect data and will be followed by descriptive statistics of the sample and descriptive statistics relating to experiences of harmful behaviours. The fourth chapter will present the explorative analyses performed that were related to the main topic of interest. The final chapter will discuss the findings and the associated implications, suggestions for future research, and the limitations of the study.

A description of the relationships and context within which harmful behaviours occur will be presented first in the introductory chapter to establish the perspective and scope of the discussion of harmful behaviours. Relevant literature will be reviewed in relation to the discussion topics that follow. The reported prevalence of workplace harmful behaviours and the financial costs of harmful behaviours to Australian organisations will then be offered in support of the salience of this area of study. The purpose and aims of this study will then be presented. Australian legislation relating to workplace behaviour will then be described. Next, a discussion of issues relating to agreed-upon definitions and terminology will lead to a

broad definition of harmful behaviours that is appropriate to the scope of this study. Harmful behaviours measurement methods will be described next. Theoretical perspectives of behaviour and a conceptual model of the associations between harmful behaviours, individual aspects and organisational aspects will be developed and presented. The role of psychological factors associated with harmful behaviour experience will be introduced prior to a summary of the research questions and the hypotheses that were addressed in this study.

1.1.1. Perpetrator-Recipient Dyad.

The terms *perceived perpetrator* (or simply *perpetrator*) and *recipient* are used in prose to identify the dyad in which harmful behaviours occur. Common terminologies within literature, such as, bully or actor and victim or target may more strongly imply an underlying intent to harm. The perpetrator of workplace harassment may be an employer, a worker, a co-worker, group of co-workers, client or customer, or a member of the public (The State of Queensland Department of Justice and Attorney-General, 2011). The perpetrator-recipient dyad is understood to represent a particular relationship within the workplace, whether that is organisation-worker, worker-worker, or client-worker.

1.1.2. Context of Harmful Behaviours.

Harmful behaviours in the workplace do not occur in isolation as characteristics of discrete relationships within an organisation. Hodson, Roscigno, and Lopez (2006) attributed the occurrence of workplace bullying to two dimensions, relational powerlessness and *organizational coherence*. The latter represented the intensity of organisational chaos created by mismanagement and poor leadership, which effects employee confidence in aspects such as job security and trust. Hodson et al. described three principles by which the organisational context may be better understood. Transparency, accountability, and capacity principles relate to the visibility of workplace bullying, the nature of the consequences for bullying behaviours, and the ability of the organisation's rules and rewards to control and motivate

employees (Hodson et al., 2006). Under high levels of transparency and low levels of accountability and capacity, the occurrence of harmful behaviours can suffuse organisational culture through non-reporting for fear of retribution (Speedy, 2006) or by an acceptance of the behaviours that in turn fosters an escalation of the phenomena (Barker, Sheehan, & Ramsay, 2008).

1.2. Prevalence of Harmful Behaviours

The prevalence of harmful behaviours in the workplace was estimated at 15% of the Australian workforce in 2005 (WorkSafe Victoria, 2005). Given the rising number of WorkCover claims since harassment became a legitimate inclusion in July 2000, it appeared the rate was increasing (WorkSafe Victoria, 2005). However, a benchmarking report released in 2010 noted that the increase in claims peaked in 2003-2004 and declined through to 2007-2008 (Productivity Commission, 2010). The confusion surrounding terminology and definitions in the report made the actual prevalence of workplace bullying difficult to estimate (Jones, 2011). Estimates of the prevalence in specific industries and occupations range between a few percent to more than 50% (Hodson et al., 2006). Between 2.5 million and 5 million Australians will experience some form of workplace bullying over the course of their working lives (Australian Human Rights Commission, 2004). There may be workplace factors that contribute to the prevalence of harmful behaviours which can be targeted for intervention or remediation.

1.3. Discrepant Prevalence Rates

The lack of standardised definitions of workplace harmful behaviours contributes to the discrepancies in prevalence rates reported in literature (Nielsen, Matthiesen, & Einarsen, 2010). Workplace bullying differed in meaning across organisations, professions, populations, countries, and cultures, and differed in the applied methodologies and the measures used (Moayed, Daraiseh, Shell, & Salem, 2006; Nielsen et al., 2010).

Agervold (2009) found very low prevalence of bullying (0.4%) among 12 different departments of a local, government social security organisation's employees against a criterion of one act per week which was consistent with mobbing criteria set out by Leymann (1996). Sá and Fleming (2008) reported a rate of 13% among Portuguese nurses over a 6-month period. In contrast, an online survey conducted by University of New England in 2007, established a 90% prevalence rate of bullying by colleagues among Australian teachers in private and state schools (Know Bull (Australia), 2011). A workplace bullying prevalence rate of 25% was found in a longitudinal, cohort study conducted between 2008 and 2009 that investigated factors that impacted retention and recruitment of doctors in Australia (Askew et al., 2012).

Demir and Rodwell (2012) reported a bullying prevalence rate of 34.3% among nursing staff at a large Australian hospital in their cross-sectional study of antecedents and consequences of different forms of workplace aggression. A comprehensive definition of bullying accompanied a single item bullying measure. However, only 2.5% met the minimum criterion of at least one incident per week for a commonly used definition of bullying (See Agervold, 2007; Einarsen, 1999). Participants were asked to report their frequency of experience across four types of violence including physical assault, threat of assault, emotional abuse, and verbal sexual harassment. High frequencies of emotional abuse from internal and external sources were reported. Co-workers and supervisors were the source of internal emotional abuse for 23% and patients, clients, and their families were the source of external emotional abuse for 17.6% of participants. Low frequencies were reported for internal threat of assault (2%), external threat of assault (6.8%), internal physical assault (2%), external physical assault (2.9%), internal verbal sexual harassment (2%), and external sexual harassment (2.9%). Higher prevalence of harmful behaviours in the workplace incurs costs to both organisations and personnel.

1.4. Financial Costs of Harmful Behaviours

The estimated financial cost of workplace bullying in lost productivity and absenteeism was between $6 billion and $13 billion annually (WorkSafe Victoria, 2005). A more recent estimation of cost has not been reported (See House of Representatives Standing Committee on Education and Employment, 2012). Litigation, retention or staff turnover rates, selection and training costs, absenteeism, counselling programs, loss of productivity, and reputation represent a poor investment of economic resources for an organisation (Kieseker & Marchant, 1999). The costs of harmful workplace behaviours extend beyond a temporal effect on an organisation's economic wellbeing through loss of productivity.

Harmful behaviours in the workplace lead to financial costs and psychological costs for an individual (Kieseker & Marchant, 1999). The recipient of harmful workplace behaviours may experience pervasive psychological distress leading to impaired psychological and psychosomatic functioning with diminution of self-efficacy and self-esteem, stress, insomnia, increased depression, anxiety, and irritability, and reduced productivity and quality of work (Australian Human Rights Commission, 2004; Bond, Tuckey, & Dollard, 2010; Kieseker & Marchant, 1999). WorkSafe Victoria (2005) noted that the average cost of a stress claim under WorkCover is nearly twice that of a claim for physical injury, approximately $41,000 compared with $23,400. After assessment of costs from lost opportunities and other hidden costs, a revised estimate of the costs to Australian employers ranged between $6 - $36 billion dollars annually (Australian Human Rights Commission, 2004).

1.5. Purpose and Aims

Aspects of harmful behaviours in the workplace have been examined from a variety of perspectives within the body of organisational literature. Previous research has examined the incidence and types of harmful behaviours, reporting behaviours, individual aspects of the

perpetrator and recipient of harmful behaviours, and the influence of harmful behaviours on organisational outcome measures, such as employee work satisfaction and productivity loss. Zapf and Einarsen (2001) divided the research into three distinct levels. First-level research focused on types, prevalence, frequency, methodological measurement, gender differences, leadership levels, and risks. Second-level research examined various aspects of the recipient of the harmful behaviours. Third-level research investigated remedial strategies developed from an understanding of coping strategies of recipients and changes to organisational culture and policies.

The purpose of this study was to add to existing quantitative organisational research of harmful workplace behaviours. This study examined employee reports of harmful behaviours experienced in a large health organisation, representative of a hierarchical organisation, which delivers a broad range of client services across the state of Queensland. This study had two aims. First, the prevalence of harmful behaviours in a large health organisation was investigated and outcomes were assessed for consistency with previous research. Second, the associations among the number of harmful behaviour experiences, the perceived source of harmful behaviours, and the category of response to harmful behaviours with both employee and organisational measures were examined to identify potential risk factors. Within existing harmful behaviour research there is much definitional, conceptual, and measurement overlap among types of harmful behaviour (Hershcovis, 2011). This has led to assumptions that specific behaviours and specific sources of negative behaviours will produce the same patterns of effect irrespective of the individual circumstances and contexts. The nature, quality, and effect of exposure to harmful behaviours is dependent on the interaction of the intensity, frequency, power, intent, and the consequential outcomes (Hershcovis, 2011). Study of the interactions and their effect patterns has the potential to contribute to the development of more effective preventative measures and remedial

interventions. No studies were located in which the relationships among frequency, source, and response aspects of harmful behaviour, organisational, and individual outcomes were investigated. The response aspect of harmful behaviours was a direct measure, albeit a subjective one, of the emotional, psychological, or physical response to harmful behaviours. Therefore, the second aim of this study which examined three aspects of harmful behaviours represented novel research that addressed a gap in current literature.

1.6. Australian Workplace Legislation

The Australian Commonwealth and its States and Territories addressed harmful workplace behaviours under three separate legislative areas including discrimination, workplace health and safety, and the Criminal Code. Sexual harassment, a form of discrimination, was included under the Federal Sex Discrimination Act 1984 (O'Connell, 2004). Australian States and Territories provided separate sexual discrimination legislation including the New South Wales's Anti-Discrimination Act 1977; Victoria's Equal Opportunity Act 1995; South Australia's Equal Opportunity Act 1984; Western Australia's Equal Opportunity Act 1984; Australian Capital Territory's Discrimination Act 1991; Queensland's Anti-Discrimination Act 1991; Northern Territory's Anti-Discrimination Act 1992; and Tasmania's Anti-Discrimination Act 1998 (O'Connell, 2004). In most cases, employers have to comply with both Federal and State Acts (O'Connell, 2004). O'Connell (2004) stated that a legal determination of sexual harassment under the Federal Act is tested against three criteria, two of which are complainant's subjective evaluations. First, the behaviour must be unwelcome. Second, the behaviour must be of a sexual nature. Third, a reasonable person would expect that a recipient would be humiliated, offended or intimidated by the behaviour in the particular situation.

Workplace harassment is addressed under Work Health and Safety Act 2011 (WHS Act) and the Work Health and Safety Regulation 2011 (the Regulation) in Queensland. The

legal test of workplace harassment under the legislation is similar to that of sexual harassment with the exception that the behaviour must be repeated or persistent and not be sexual in nature. Thus, the behaviour is unwelcome and unsolicited; the recipient evaluates the behaviour as offensive, intimidating, humiliating, or threatening; and a reasonable person would consider the behaviour to be offensive, humiliating, intimidating or threatening. Squelch and Guthrie (2011) stated that in reality there were no defining criteria of workplace bullying or harassment described within legislation with the exception of South Australian legislation. In Australia, a legal determination of workplace bullying or harassment was made in reference to a Code of Practice which provided guidelines to define what is and what is not workplace bullying or harassment (Squelch & Guthrie, 2011). Following the October 2012 report, "Workplace bullying: We just want it to stop" by the Standing Committee on Education and Employment, the Fair Work Act 2009 which is the jurisdiction of Fair Work Commission (FWC), was amended to include new workplace anti-bullying laws (Ashurt's World@Work, 2013; Ball, 2013).

These amendments to the Act require employers to review and or develop anti-bullying and anti-sexual harassment policies and procedures and criteria which defines that workplace bullying includes repeated unreasonable behaviours toward a worker or workers that is a risk to workplace health and safety and the recipient holds a reasonable belief that bullying has occurred (Scopelliti, 2013). Under the new legislation, FWC has the power to order the cessation of workplace bullying, refer matters for investigation and action to relevant workplace health and safety regulators, and financially penalise non-compliance with orders (Scopelliti, 2013). Although eligibility to access this avenue for redress may not require that a worker has attempted to have grievances addressed within the employer organisation's anti-bullying procedures, potential complainants are certainly encouraged to so (Fair Work Commission, 2014). Fair Work Commission will only address claims of bullying

if the worker is still working in the same organisation, the bullying is still occurring, and the organisation is covered by the national anti-bullying laws (Fair Work Commission, 2014). Acts of unlawful discrimination, vilification, or sexual harassment are addressed under anti-discrimination legislation. The Australian Human Rights Commission maintains statutory responsibilities pertaining to federal laws including Age Discrimination Act 2004, Disability Discrimination Act 1992, Racial Discrimination Act 1975, or Sex Discrimination Act 1984 that pertain to discrimination and breaches of human rights (Australian Human Rights Commission, 2014). Acts of unlawful discrimination were not specifically included in general workplace bullying literature but nevertheless, constitute harmful behaviours in the workplace. Forms of blatant discrimination and physical violence appear to be more easily identifiable and therefore, less problematic in defining terminology, unlike harassment or workplace bullying.

1.6.1. Redress of harmful behaviours.

Notably, legal definitions of harassment do not rely on the intent of the perpetrator. The recipient's perception of the behaviours is what counts. However, addressing workplace harassment through legal avenues appears to be a difficult process. Prior to the introduction of workplace harassment legislation in the United States, McDonald Jr (2006a) warned of the potential for wide spread litigation by employees against supervisors if legislation prohibited workplace abuse. There was concern that workplace harassment legislation would render the managers and supervisors ineffectual in addressing poor performing employees (McDonald Jr, 2006a). It was suggested that organisations address workplace communications by introducing policies requiring civil and professional conduct among all employees (McDonald Jr, 2006a). Legal arenas did not have the authority to order civility between employees within organisations (McDonald Jr, 2006b). Legal action against an organisation or its employees may lead to retaliatory action such as ostracism or isolation by co-workers

against the complainant. Yet, few cases citing retaliatory action as a response to the original complaint are successful in the legal arenas of the United States or Canada (McDonald Jr, 2006b).

Psychological harm was not well understood or accepted as a legitimate complaint early in the development of anti-harassment in the workplace legislation in the United States. The complainant had to demonstrate that the organisation was conciliatory toward the actions of co-workers and that the complainant was unable to complete necessary work duties as a result (McDonald Jr, 2006b).

Vickers (2006) raised a problem inherent in litigating workplace bullying in that it is easier to defend against charges than to prove bullying occurred. Psychological injury is difficult to prove in a legal arena and the complainant may not be able to demonstrate the damage to earning potential (Vickers, 2006). In Australia, any monetary compensation won by a litigant is unlikely to adequately compensate for the financial expenditure and the additional emotional and psychological distress of the complainant (Vickers, 2006). Given the difficulties gaining redress under legislation and the increasing development of workplace anti-bullying polices within organisations, the majority of complaints are actioned within organisations. Paradoxically, the existence of an organisation's anti-bullying policies tends to limit the complainant's avenues for redress to an organisation's internal processes, thus, protecting the organisation from external agencies' attention and scrutiny (Vickers, 2006).

1.7. Perception Versus Policy

Within an organisational context, an impediment to justice exists because two *languages* are used in workplace bullying (Branch, 2008; Rayner, 1997). The language of the recipient is one governed by perception to which thoughts, emotions, memories, expectations, and previous learning contribute to current experience. Most often, the recipient is unable to provide a coherent narrative which conveys the perceived situation

(Greenberg & Barling, 1999; Tracy, Lutgen-Sandvik, & Alberts, 2006). The language of the organisation comprises two-dimensional text of stated policies, procedures, rules, and protocols. The rich language of perception translated and interpreted to conform to a simple language of rules and regulations is an exercise in reductionism which represents a latent condition under which anti-bullying policies are developed and grievances are addressed. Vickers (2006) noted that often translated descriptions of incidents occurring in workplaces reduced the seriousness of harmful behaviours (e.g., "a slap" instead of "physical assault"). Events are interpreted as "disputes" or "conflicts" which implies provocative contributions from both perpetrator and recipient (Vickers, 2006). Under these conditions, the harm to the recipient may be overlooked or downplayed (Greenberg & Barling, 1999; Vickers, 2006).

1.8. Approaches to Defining Harmful Behaviours

Many authors have offered definitions of workplace harmful behaviours with a view to establish criteria necessary for empirical investigations and to inform policy development within governments and organisations. Appropriate definitions of harmful behaviours applicable across all industries are elusive (Razzaghian & Shah, 2011). In fact, most authors limited the topic to subsections of harmful behaviours such as sexual harassment, bullying or physical violence in the workplace. Awareness of the issues and problems faced by researchers when defining the concepts of harmful workplace behaviours brings to light the complexity of this area of study. Table 1.1. provides examples of conceptual definitions proposed by researchers that apply to specific forms of harmful behaviours and the main features of each that distinguishes among terms. Some of issues involved in the process to develop definitions that clearly differentiate between acceptable and unacceptable behaviour in the workplace included debate over the inclusion or exclusion of (a) the perpetrator's intent, (b) overlapping constructs and confusing terminology, (c) statements of explicit harm to the recipient, (d) a power imbalance, (e) the persistence of harmful behaviours, and (f) the

level of specificity applied to classification of behaviours. Each are discussed in the following. A detailed table of terms, definitions, and defining characteristics and features of types of harmful behaviours is included in Appendix A.

Table 1.1

Definitions of Common Forms of Harmful Behaviours in the Workplace

Term	Definition	Characteristics or Features
Psychological harassment		
	Repeated and hostile or unwanted behaviour including verbal comments, actions or gestures that affect a recipient's dignity or psychological integrity and creates a harmful work environment (Janusz, 2011).	A lasting harmful effect psychological harassment distinguished the phenomena from incivility (Janusz, 2011) . Intent is not explicit.
Counterproductive work behaviour		
	Behaviour including theft, sabotage, verbal abuse, withholding effort, lying, refusing cooperation, and physical assault that harms an organisation or its employees (Penny & Spector, 2005).	Not distinct from organisational delinquency, organisation-motivated aggression, organisational retaliatory behaviours, workplace aggression, workplace deviance, revenge, and antisocial behaviour in organisations (Penny & Spector, 2005).
Occupational violence		
	Negative behaviours including abuse, threats, or assault directed towards a recipient while at work that are a perceived or actual threat to safety, health, and wellbeing (Farrell & Touran, 2012).	An umbrella term that subsumes workplace bullying (Farrell & Touran, 2012). The main characteristic of occupational violence is the implied or actual risk to health, safety, and wellbeing.
Workplace incivility		
	Behaviour of low intensity with ambiguous intent to harm that contravenes workplace behavioural norms of mutual respect, trust, empathy, cooperation, and motivation (Caza & Cortina, 2007; Cortina & Magley, 2009; Lim, Cortina, & Magley, 2008; Reio & Sanders-Reio, 2011; Sakurai & Jex, 2012).	Ambiguous intent and low intensity (i.e., non-physical behaviour) distinguishes incivility from workplace aggression, physical violence, and other forms of negative behaviour (Caza & Cortina, 2007; Cortina & Magley, 2009; Lim et al., 2008; Reio & Sanders-Reio, 2011; Sakurai & Jex, 2012).

Table 1.1 continued.

Term	Definition	Characteristics or Features
Workplace Violence		
	Defined as one or repeated behaviours which includes emotional abuse, physical assault, threat of assault, and verbal sexual harassment that physically harm or are perceived to physically harm the recipient (Demir & Rodwell, 2012).	Intent is not explicit. Physical harm is the main feature.
Workplace harmful behaviours		
	A term that describes negative behaviours under various terms including petty tyranny, workplace harassment, antisocial behaviour, workplace victimisation, bullying, incivility, mobbing, social undermining, emotional abuse, and abusive supervision (Aquino & Lamertz, 2004).	An umbrella term for interpersonal mistreatment in the workplace.
Workplace bullying		
	An escalating process of repeated and prolonged exposure to intentional or unintentional psychological mistreatment (e.g., teasing, badgering, insults), predominantly, that involves an actual or perceived power imbalance by the recipient who ends up in an inferior position (Agervold & Mikkelsen, 2004; Andersen, Aasland, Fridner, & Lövseth, 2010; Bartlett & Bartlett, 2011; Hauge et al., 2011; Hauge, Skogstad, & Einarsen, 2009, 2010; Hoel & Cooper, 2000; Nielsen et al., 2010).	Repeated, persistent, non-physical behaviour and power disparity are the main features. Intent is ambiguous. Workplace bullying is an umbrella term covering various forms of mistreatment and hostile behaviour that share features of repetition, persistence, and power disparity (Nielsen et al., 2010). The bullying term was interchangeable with mobbing and harassment terms (Andersen et al., 2010).

Table 1.1 continued.

Term	Definition	Characteristics or Features
Mobbing		
	Leymann (1996) suggested the scientific definition of mobbing is, "a social interaction through which one individual (seldom more) is attacked by one or more (seldom more than four) individuals almost on a daily basis and for periods of many months, bringing the person into an almost helpless position with potentially high risk of expulsion." (p. 168)	Mobbing has a set pattern of behaviour (i.e., ganging-up or a shared approach by workers towards a recipient) and is distinct from bullying that has a variety of patterning of behaviour (Einarsen, Hoel, & Notelaers, 2009).
Workplace aggression		
	Direct or indirect physical, psychological, and verbal behaviours perpetrated in an interpersonal or organisational relationship (Dionisi, Barling, & Dupré, 2012).	Intent is not explicit.
Abusive supervision		
	A perceived continuing pattern of non-physical, verbal and nonverbal, hostile behaviours displayed by a supervisor (Aryee, Sun, Chen, & Debrah, 2008; Carlson, Ferguson, PerrewÉ, & Whitten, 2011; Lian, Ferris, & Brown, 2012; Mitchell & Ambrose, 2007; Tepper, Duffy, Henle, & Lambert, 2006).	Distinguishable from other negative behaviours by the identity of the source and disparity of power within the supervisor-subordinate dyad.
Sexual harassment		
	Unwanted, sex-related behaviours including gender harassment, unwanted sexual attention, and sexual coercion which are offensive, beyond the recipient's ability to cope and threaten the recipient's wellbeing (Dionisi et al., 2012).	Sexual harassment is distinct from workplace aggression on the key feature of sex-related behaviour (Dionisi et al., 2012).

1.8.1. The relevance of perpetrator's intention.

Commonly, the covert or overt nature and the underlying intention of the acts were not directly stated in descriptions of harmful workplace behaviours literature. Two perspectives regarding intent were represented in workplace bullying definitions. The first perspective included the intent of the perpetrator to harm (e.g., Bowling & Beehr, 2006; Branch, 2008; Einarsen, 1999; Hodson et al., 2006; Speedy, 2006; Vickers, 2006). The second perspective, consistent with legal definitions, focused on a recipient's perceptions of being bullied whether bullying was intentional or unintentional on behalf of the perpetrator (e.g., Aquino & Lamertz, 2004; Hauge, Skogstad, & Einarsen, 2007). Aquino and Lamertz (2004) clarified that the recipient must perceive that the acts were intended to harm. Individual differences in personality, cognitive functioning and ability, prior experiences, and psychosocial learning determine how people may perceive a given situation in different ways. Therefore, the perpetrator's intention is irrelevant to the definition of bullying. In fact, if the definitions of workplace bullying, harassment, aggression, and incivility included a perpetrator's intent to harm, accountability, remediation or action would be dependent on such an admission (Branch, 2008). Additionally, harmful behaviour in the workplace literature included selective discussions of organisational factors or management styles in which intent was related to achievement of optimal fiscal outcomes.

1.8.2. Difficulties with workplace harassment or bullying terminology.

The term *bullying* has commonly been used interchangeably with *harassment* throughout harmful workplace behaviours literature. In fact, some authors stipulated bullying as the umbrella term which subsumed harassment, intimidation, and aggressive or violent acts in the workplace (Branch, 2008; Einarsen, 1999). This stems from the numerous perspectives and approaches from which harmful workplace behaviours have been examined and discussed. For example, the term *mobbing*, introduced in early Scandinavian research by

Heinz Leymann, referred to the targeting of an individual by a group of employees (Leymann, 1990). However, the term has since been used as both a synonym for bullying and to represent a distinct group of behaviours under the bullying umbrella term (Branch, 2008; Einarsen, 1999; Escartín, Zapf, Arrieta, & Rodríguez-Carballeira, 2011; MacGillivray, Beecher, & Golden, 2009). Throughout the literature, harmful behaviours in the workplace have been labelled harassment, incivility, deviance, emotional abuse, psychosocial hazards, aggression, violence, bullying, negative social behaviour, abusive supervision, counter-productive behaviours, and mobbing (Barker et al., 2008; Branch, 2008; Einarsen, 1999; Productivity Commission, 2010; Speedy, 2006; Tepper et al., 2006). The labels may have an underlying implication that behaviours are intentional and overt which highlights the need for rigour when defining concepts and constructs germane to a workplace context. The labels may not represent the same underlying constructs and some are only applicable to specific relationships (i.e., organisation-worker, customer-worker, worker-worker, team-worker, supervisor-worker or manager- worker).

Branch (2008) attempted to differentiate workplace bullying from the other terms with some success but found considerable overlap and subsuming of types of behaviours within others in an adapted model of counter productive workplace behaviours. The intensity of the behaviour along a continuum was represented in the model. For example, as the level of incivility escalates, it becomes aggression and workplace bullying which was consistent with a definition of bullying, of which intensity is a main feature (Lutgen-Sandvik, Tracy, & Alberts, 2007; Meglich-Sespico, Faley, & Knapp, 2007). However, with this development, according to the author's definitions, the intent to harm changes from ambiguous to purposeful. The adapted model did not clarify whether behaviours were performed independently or in isolation from other behaviours and did not account for the repetition of behaviours which was a defining criterion of workplace bullying and harassment.

1.8.3. Inclusion of an explicit statement of harm to criteria.

Quine (2001) found three criteria generally common among definitions of bullying which included (a) the recipient perceived the behaviour as hurtful; (b) the recipient was affected negatively by stress, anxiety, lack of self-confidence or increased vulnerability; and (c) the bullying behaviours were persistent. Branch (2008) noted that many definitions of bullying lacked explicit statements that the recipient must be harmed or injured as a result of the behaviour. In the latter, harm or injury may be assumed by the recipient's determination that a behaviour or behaviours constituted bullying. The inclusion of harm to criteria has implications for research. For example, a research method used to establish prevalence of bullying that employs an inventory of negative behaviours, against which the respondent indicates whether the particular behaviours have been experienced may be misleading in regard to the psychological or physical harm experienced by individual respondents.

1.8.4. Recognition of relational power.

A perceived power imbalance is inferred by the harm or injury sustained by the recipient. In addition to the power differential established by the formal, organisational structural hierarchy (i.e., management levels), the strength of a perpetrator's personal power based on social status, tenure or permanence, work knowledge and expertise are determined by the recipient's perception (Branch, 2008). Hodson et al. (2006) described this as *relational powerlessness*. It is the perception of personal power that allows workplace bullying to extend in any direction. The recipient's sense of vulnerability (i.e., defencelessness) increases the perceived power differential (Meglich-Sespico et al., 2007).

1.8.5. Inclusions of the persistence of behaviour.

Branch (2008) argued that persistence of a behaviour distinguished workplace bullying from other counterproductive workplace behaviours. However, the concept of persistence or repeated negative behaviours was less convincing when Branch's discussion

concerning ongoing threat was considered. While a behaviour may occur only once, the recipient may maintain a long-lasting expectation or fear that it will reoccur. Ariza-Montes, Muniz, Montero-Simó, and Araque-Padilla (2013) argued that bullying is defined by the recipient's perception of an act as hostile and the recipient's immediate psychological and emotional response to the act is independent of the repetition and persistence of bullying behaviour. No operational definition of bullying or harassment found in the literature search deemed a single act sufficient to establish workplace bullying, with one exception. The Canadian province of Quebec introduced legislation which supported legal action of workplace harassment based on a single, serious event that caused long-term harm because this demonstrated psychological harassment (McDonald Jr, 2006a).

1.8.6. Level of specificity of harmful behaviours.

A review of literature found no agreed-upon topology of workplace bullying. There were no agreed-upon criteria of what behaviours constituted bullying (Kieseker & Marchant, 1999; Rayner & Hoel, 1997; Razzaghian & Shah, 2011). Rayner and Hoel (1997) proposed a classification system with five categories of behaviours, which represented the array of psychological attacks. The first class comprised behaviours that threaten professional status including belittling opinion, public humiliation, and accusations of lack of effort. The second group of behaviours threaten an individual's personal standing within the social context of the workplace by gossiping, name-calling, insults, and teasing. Isolating behaviours such as preventing or blocking opportunities for training or leave, physical or social isolation, and withholding of information constituted a third group. Overwork including unrealistic deadlines, avoidable disruptions, and unwarranted pressure to produce represented the forth group. The fifth comprised behaviours that undervalued work effort, such as, failure to give due credit, allocation of pointless tasks, reduction or removal of responsibilities, constant

reminders of past errors, changing production targets, and failure to plan for or set achievable goals.

Rayner and Hoel (1997) did not describe the underlying intent of each act. Many acts may be unintentional and relate to the context in which they occur, for example, failure to give due credit may be a short fall in a manager's training, failure to set achievable goals may originate from an organisational level or name calling and teasing may have developed as acceptable social communication strategy within an organisational culture. Additionally, categories are not discrete, in that, overlap between categories may be observed under different contexts and situations (Moayed et al., 2006). Physical acts of aggression or violence were not included in Rayner and Hoel's classifications. Speedy (2006) deemed all forms of harmful behaviours to be workplace violence. In light of the issues involved in defining harmful behaviours in the workplace, a broad definition that is appropriate for the current project is offered next.

1.9. Definition of Harmful Behaviours

Harmful behaviours in the workplace are active and passive behaviours that have the potential to exceed a worker's physical and or psychological resources and diminish an organisation's efficiency, productivity, and culture. Forms of harmful behaviours, such as, sabotage, misplacing documentation, tools or resources, and reducing production are covert acts, often performed as retaliatory actions to interpersonal conflicts or organisational constraints (Penny & Spector, 2005). Even so, retaliatory actions harm both the organisation and fellow employees and demonstrate a spiralling effect of harmful behaviour. Harmful behaviours may be perpetrated in an upward, downward, or lateral direction. Therefore, the recipient of harmful behaviours may be an organisation, manager or supervisor, co-worker, or worker. In addition to the lack of agreed-upon defining criteria and topology, there are

methodological issues concerning the measurement of harmful behaviours that continue to obscure prevalence rates of harmful behaviours.

1.10. Measurement of Harmful Behaviours

Inconsistencies among definitions and terminology certainly account for some discrepancy among reported prevalence rates of harmful behaviours, however, different methods of measurement account for even greater variation (Nielsen et al., 2010). Two approaches to measurement include the behavioural experience method and the self-labelling method that are used in empirical studies. The behavioural experience method provides a list of behaviours from which acts experienced by a participant are selected. A scale of the frequency of experiences and a specified time period are generally included. Examples of behavioural experience inventories include the Leymann Inventory of Psychological Terror (LIPT) and the Negative Act Questionnaire (Einarsen et al., 2009).

The self-labelling method, with or without a definition of harmful behaviour, includes a specified time period over the course of which harmful behaviours have been experienced (Nielsen et al., 2010). The behavioural experience inventory is subject to context effects, in that the inventory may include acts that are acceptable under certain circumstances (Nielsen et al., 2010). For example, a person may perceive yelling or shouting as a standard training method used in drill training in the armed forces. The self-labelling without-a-definition method relies on the respondent's perception of an act as harmful. Provision of a definition limits the potential exposure experiences to specific criteria. Therefore, the behavioural experience method is prone to over-reporting and the self-labelling method is prone to under-reporting (Nielsen et al., 2010). Salin (2009), for example, found prevalence rates of 8.8% from the self-labelling with a definition method and 24.1% from a modified version of the Negative Acts Questionnaire. Discrepancies in prevalence rates have implications for legal and organisational policy development and intervention strategies (Nielsen et al., 2010).

Both methods of measurement involve an individual's perceptual and evaluative processes. Experience of harmful behaviours cannot be measured independently from these processes. The manner in which these measures of individual and organisational factors interact with each other has been investigated from a variety of theoretical frameworks to describe workplace harmful behaviours, discover potential risk factors, and guide the development of prevention and intervention strategies. The following section describes theoretical models appropriate to the organisational context involving individual and organisational factors that impact organisational health and employee wellbeing.

1.11. The Job Demands-Resources Model

The Job Demands-Resources (JD-R) model contributes to the understanding of employee wellbeing and health as an outcome of job-related stressors and job-related resources (Schaufeli & Taris, 2014). The JD-R model illustrates that health impairment and motivation are the consequences of job demands and job resources, respectively (Llorens, Schaufeli, Bakker, & Salanova, 2007). Initially developed as a model of burnout (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001), the JD-R model extended the scope of other well-known balance models of work-related stress, such as the Demand-Control Model (D-CM; Devonish, 2013) and the Effort-Reward Imbalance Model (Ariza-Montes et al., 2013).

The D-CM proffers that job strain is a result of an imbalance between job demands and job control in that job strain is the result of high demands (e.g., work overload and time pressure) and low job control, for example, autonomy (Devonish, 2013). However, it follows that an assumption of the D-CM is that a worker who has the latitude to decide how job demands are met will not experience job strain which includes anxiety, exhaustion, dissatisfaction, and health complaints (Bakker & Demerouti, 2007) which demonstrates the lack of scope of the model.

The E-RI model emphasises that job strain is a consequence of an imbalance between effort which is applied to both meet the external job demands and the internal motivation for action, and the rewards that may include salary, esteem, or career opportunities (Ariza-Montes et al., 2013). High demands and low reward conditions violate return expectancy norms of contractual reciprocity which induces emotional and physical stress reactions that have been found to lead to long-term health issues (Ariza-Montes et al., 2013). The underlying motivation for reward emanates from personal characteristics of excessive striving and desire for esteem and approval (Ariza-Montes et al., 2013), which may moderate the relationship between effort-reward imbalance and worker's wellbeing (Bakker & Demerouti, 2007). The assumption that job demands lead to job strain in the presence of reduced resources underlies both D-CM and E-RI model (Bakker & Demerouti, 2007). Both models are limited to a fixed set of variables and do not allow for integration of other wellbeing related work factors (Bakker & Demerouti, 2007). The JD-R model accommodates any job demand and any job resource that may be applicable in the work situation (Schaufeli & Taris, 2014).

Bakker and Demerouti (2007) emphasised the scope and flexibility of the JD-R model that allows for recognition of specific aspects of work environments that comprise, for example, inter-personal occupations (e.g., education, health care, and hospitality) and mentally demanding occupations (e.g., control room operators and air traffic controllers). The JD-R model is shown in Figure 1.1.

The JD-R model's first premise is that job stress risk factors fall under two categories, including job demands and job resources. Job demands are "physical, psychological (cognitive and emotional) effort or skills that are therefore associated with certain physiological and/or psychological costs" (Bakker & Demerouti, 2007, p. 312). Job demands fall within parameters that define the circumstances and work characteristics under which

work is performed but become job stressors when the worker has not sufficiently recovered energy (for effort) from the previous demand, which is consistent with the Effort-Recovery model proposed by Meijman and Mulder (1998). Job resources are "physical, psychological, social, or organisational aspects of the job that are either functional in achieving work goals,

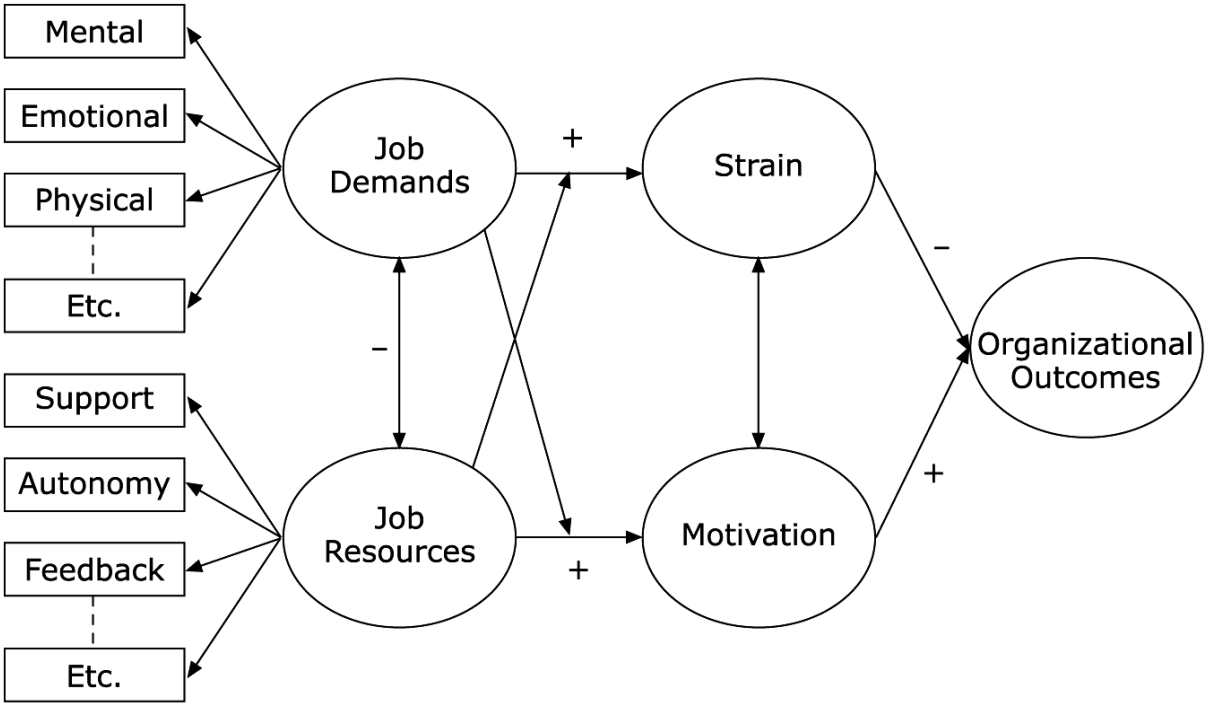


Figure 1.1. The Job Demands-Resources Model of Job Stress. Reproduced from "The Job Demands-Resources model: State of the art," by A. B. Bakker and E. Demerouti, 2007, *Journal of Managerial Psychology, 22*(3), p. 313.

reduce job demands and the associated physiological and psychological costs, and stimulate personal growth, learning, and development"(Bakker & Demerouti, 2007, p. 312). This is consistent with Job Characteristics Theory in that job resources at the task performance level have motivational potential that includes autonomy, feedback, and task significance (Farrell, Bobrowski, & Bobrowski, 2006). Further, the concept of job resources is consistent with Conservation of Resources (COR) theory, described by Hobfoll (2001). The preservation and accrual of resources underlies the purpose of human motivation (Hobfoll, 2001). A strong pool of resources enables the accumulation of other resources and the means by which to

maintain and protect them (Hobfoll, 2001). Job resources exist on every level including the job task, the organisation of the work, interpersonal and social relations, and the organisation (Bakker & Demerouti, 2007). Identification of a job demand and a job resource is dependent on the direction in which it is *valued*. Job demands are valued negatively and job resources are valued positively (Schaufeli & Taris, 2014).

The second proposition of the JD-R model concerns two psychological processes of job strain and motivation (Bakker & Demerouti, 2007). Job strain results from exhaustion or depletion of a worker's mental and physical resources because of poorly designed job tasks, work overload, emotionally demanding tasks or interactions, and health impairment processes (Bakker & Demerouti, 2007). The motivational process assumes the motivational potential of job resources leads to high work engagement, low cynicism, and excellent performance (Bakker & Demerouti, 2007).

The interactions between job demands and job resources showed that different job resources that relate to the specific job characteristics reduced the impact of different job demands on job strain (Bakker & Demerouti, 2007). Social support, role clarity, performance feedback, supervisor communication, and autonomy may moderate the emergence of job strain from job demands (Bakker & Demerouti, 2007). Each job resource, for example, high quality supervisor support, co-worker support, performance feedback, and appraisal, contributes to different physical or psychological needs that maintain or increase motivation, and in turn, increase engagement and performance (Bakker & Demerouti, 2007).

The third proposition of the JD-R model is that in the presence of high job demands, motivation (or work engagement) is particularly influenced by job resources (Bakker & Demerouti, 2007). Consistent with COR theory (Hobfoll, 2001), stress represents potential or actual loss of resources (Bakker & Demerouti, 2007). Resource loss is less likely for individuals with a strong pool of resources and more likely for individuals with fewer

resources (Bakker & Demerouti, 2007). Hobfoll (2001) proposed that a strong pool of resources enabled the accumulation of more resources (i.e., a gain spiral) and people with few resources were likely to experience increased loss of resources (i.e., a loss spiral).

The flexibility of the model was evidenced with its use to predict workplace bullying, physical health issues, and career intentions (Demerouti & Bakker, 2011). The model was adapted and extended to predict PTSD symptomatology from experiences of workplace bullying (as assessed from NAQ) with antecedents of neuroticism, job resources, and job demands (Balducci, Fraccaroli, & Schaufeli, 2011). The JD-R model maintained structure across different national and occupational contexts and was unaffected by different data collection methods (Llorens, Bakker, Schaufeli, & Salanova, 2006; Schaufeli & Taris, 2014). The JD-R model was useful for both subjective (i.e., self-report) and objective data (Demerouti & Bakker, 2011; Schaufeli & Taris, 2014). While most research conducted with the JD-R model was cross-sectional, longitudinal research has found evidence of gain and loss spirals (Andersson & Pearson, 1999; Demerouti, Bakker, & Bulters, 2004; Hakanen, Perhoniemi, & Toppinen-Tanner, 2008), and reciprocal relationships (Llorens et al., 2007).

The JD-R model describes the relationships among antecedents of job strain and motivation, and the health and wellbeing outcomes but does not explain the psychological mechanisms or phenomena that underlie the relationships. Each job resource and each job demand taps different psychological, emotional, and cognitive facets of an individual. For example, supervisor support may affect a supervisee's level of confidence and sense of competence and support from peers may affect a co-worker's sense of belongingness and value. Given this information, intervention strategies may be better targeted toward a specific area, such as, supervision training or team building exercises. Therefore, a theoretical, psychosocial model that addresses the why and how of the relationships described in the JD-R model is presented next.

1.12. Triadic Reciprocal Determinism

Social Learning Theory posits that human behaviour is learned from the environment (e.g., social contexts, culture, and other people) through direct and vicarious observational processes (Campbell et al., 2011). New behaviours or patterns of behaviour are acquired and reinforced by observation of the reward or punishment consequences following a behaviour (Campbell et al., 2011). However, Bandura (1978) emphasised that the learning is not isolated to the current experience and not automatic or invariable as the classical stimuli-response theory suggested because human cognitive skills enable evaluation and predictive processes that involve previous experience and learning (Campbell et al., 2011). Cognitive factors, at least in some part, determine which external events will be observed and which will be ignored (Bandura, 1978). The environment (i.e., the external world) altered by the perceptions formed by an individual's cognitive processes (Bandura, 1978). Therefore, social learning is a process of reciprocal determinism between the individual and the environment (Bandura, 1978). The outcome of the individual-environment interaction is behaviour which influences both the individual (e.g., appraisal of successful action) and the environment (e.g., change, accommodation, or assimilation). The Triadic Reciprocal Determinism model (Bandura, 1983, 1989) illustrates the bidirectional relationships among person, environment, and behaviour, shown in Figure 1.2. Bandura (1978) noted that descriptions of bidirectional interactions among components did not accurately represent the triadic nature of the model. Triadic reciprocal determinism means that there are no dyadic interactions (i.e., only two components interacting). All three components are interlocked, with each component interacting with the other two (Bandura, 1978).

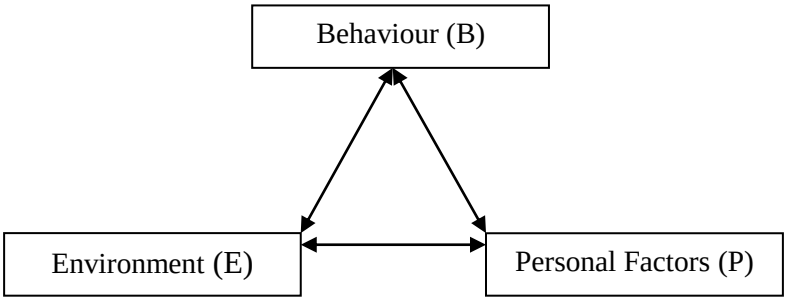


Figure 1.2. Triadic Reciprocal Determinism Model of Social Learning. Adapted from Social Cognitive Theory of Organizational Management, by R. E. Wood and A. Bandura, 1989, *Academy of Management Review, 14*(3), p. 362.

1.13. Triadic Reciprocal Determinism Model of Workplace Aggression

Understanding behaviour in the workplace, by observing what happens (e.g., Job Demands-Resources Model), and how and why it happens (e.g., Triadic Reciprocal Determinism) provide the means to view the process of harmful behaviours, especially aggression in the workplace. Many theories, models, and frameworks have been proffered to explain the phenomenology of various aspects of workplace harmful behaviours.

The lack of agreement among researchers regarding definitions and classifications of constructs within the workplace harmful behaviours field led Hershcovis (2011) to believe that further progress in understanding of the phenomena was unlikely. Hershcovis proposed a model of workplace aggression that reconciled the overlap of constructs under a heading of workplace aggression. The model suggested that acts of workplace aggression were moderated by intent, intensity, frequency, and perceived invisibility of the acts, and the power dynamic of perpetrator-recipient relationship. Blame attribution, forms of injustice, and affect were proposed mediators of workplace aggression that influenced attitudes, behaviours, career success, and recipient's reputation, wellbeing, and relationships. The parsimony of Hershcovis's model is attractive but the usefulness for the current project was limited. Contributions of the organisation, such as, climate, policies, practices, and goals

were not included. Workplace aggression happens within the context of an organisational setting.

A flexible and parsimonious model of workplace harmful behaviours that is broad in scope is presented in Figure 1.3. Bidirectional arrows suggest fluidity between components in that a change in one influences changes in the other two. The concept of reciprocal determinism is consistent with the Triadic Reciprocal Determinism model (Bandura, 1978).

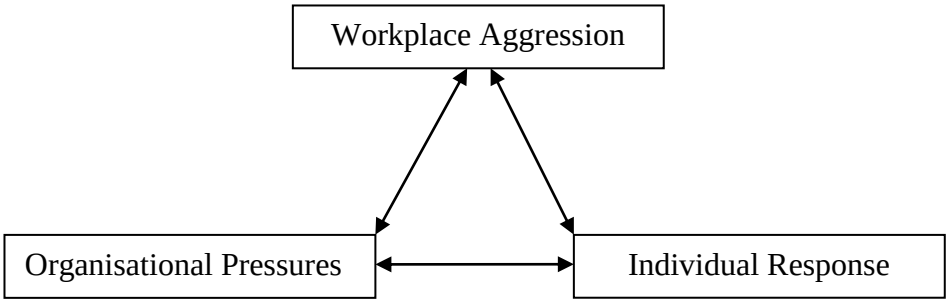


Figure 1.3. The Triadic Reciprocal Determinism of Workplace Aggression Model.

Each component comprises many elements that may influence other elements. For example, a reduction in funds due to a poor economic climate may affect training opportunities within an organisation. An unpleasant external event, such as a disagreement with a spouse may depress an employee's mood which influences perception of work events.

An extended conceptual model, shown in Figure 1.4, includes potential elements of each component. Indeed the model can be further extended to include other influences, climates or circumstances that are external to the work environment but impact the components and the elements within. For example, a political climate in which reduced spending in the health care affects an organisation's human resources and training opportunities that in turn may increase work stressors (e.g., overload) and workers may experience strain and so on. The model is applicable to a single experience or a spiral of multiple events. Workplace aggression may be qualified by frequency and source in addition

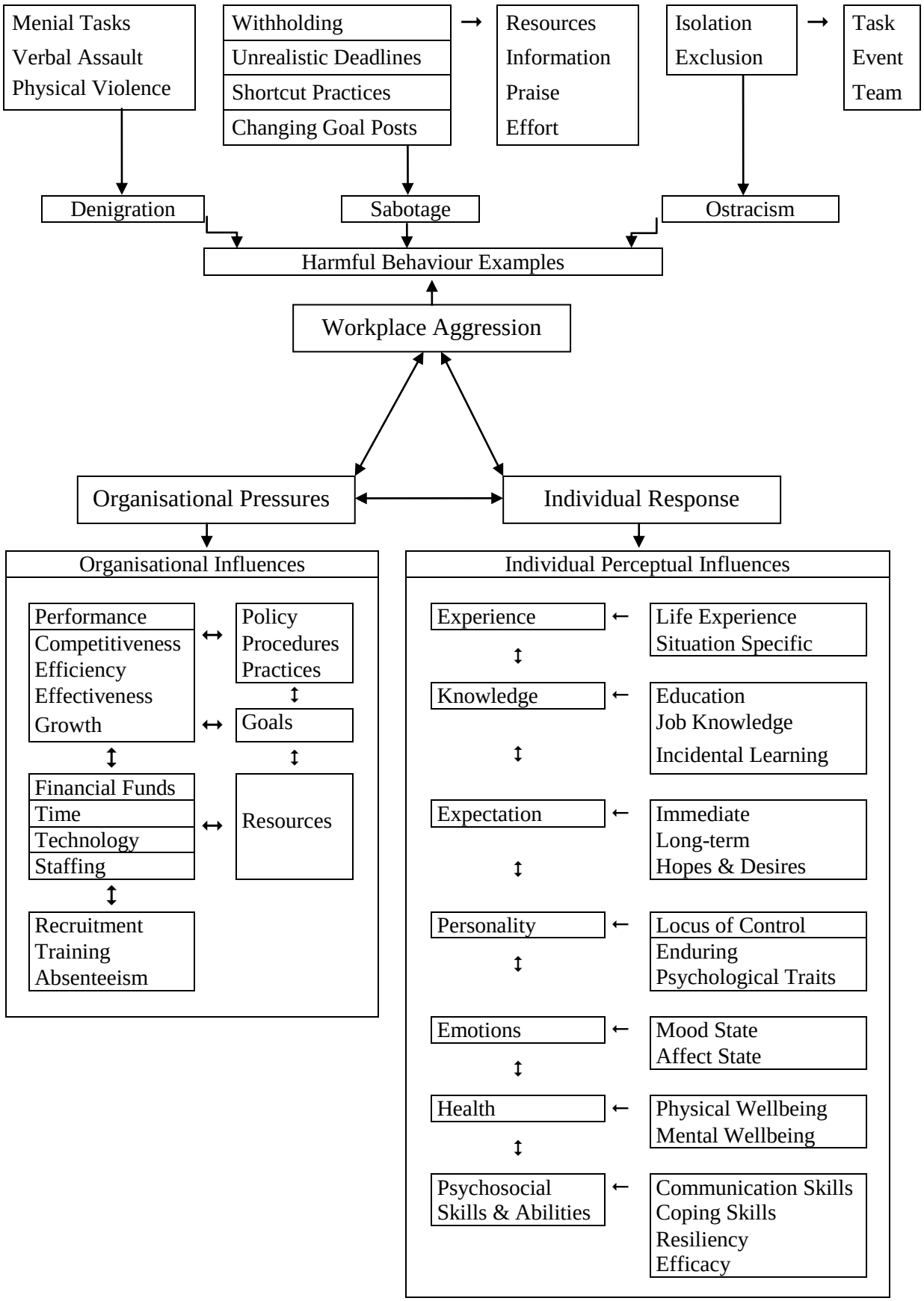


Figure 1.4. An Operational Triadic Reciprocal Determinism Model of Workplace Aggression.

to the act experienced or performed. Organisational pressures may include aspects such as leadership styles, lean processing, organisational change (e.g., down-sizing) or unique stratified hierarchical management levels. Individual response may be associated with a recipient or perpetrator of workplace aggression. The model is applicable to multilevel research investigating relationships from an individual perspective, a team perspective, or management perspective.

1.14. Psychological Factors Associated with Perceptions of Harmful Behaviours

Much of the study of workplace harmful behaviours focuses on organisational factors that have the potential to create psychosocial environments that maintain harmful behaviours in preference to focusing on the recipient of harmful behaviour because early research implied blame or suggested certain types of people invite the experiences (Moreno-Jiménez, Rodríguez-Muñoz, Pastor, Sanz-Vergel, & Garrosa, 2009). However, it is an individual's perceptual experience that determines a behaviour as harmful or innocuous. It is necessary to investigate why some workers perceive harm in behaviours while others do not when each share the same environmental space. Therefore, the assessment of individual differences among psychological factors associated with the perceived experiences of harmful behaviours qualifies the experiences and provides perspective.

The examination of psychological factors that contribute to the perception of workplace harmful behaviour has been and continues to be a research pursuit. Initially, researchers investigated personality and characteristics of the perpetrator (Aquino & Lamertz, 2004) but as research has progressed, the personality factors and characteristics of the recipient have more often been examined (Balducci et al., 2011). Aquino and Bradfield (2000) hypothesised that psychological factors of the recipient determined the level of harm experienced by the recipient. They found that higher levels of victimisation were perceived by recipients who were high in aggressiveness and negative affectivity in comparison to

employees low in these traits. However, their study was limited to the two psychological factors. Bowling, Beehr, Bennett, and Watson (2010) found a significant longitudinal relationship between negative affectivity (i.e., anger, fear, and sadness) and recipients of workplace harmful behaviours. Coyne, Chong, Seigne, and Randall (2003) found that recipients of harmful behaviours tended to be more easily upset, have more difficulty coping with personal criticism, and were more anxious, tense, and suspicious of others than other workers. Indeed, psychological factors appeared to be related to the experience of bullying. Matthiesen and Einarsen (2001) conducted a comprehensive study of personality factors of recipients of harmful behaviours.

Matthiesen and Einarsen (2001) examined the relationships between psychological aspects of recipients and bullying using the MMPI-2 profiles of former and current bullied workers. Approximately 47%, that is, 85 bullied workers from the memberships of two Norwegian bullied workers associations returned completed MMPI-2 protocols. The sample comprised 77% women and 23% men, who ranged in ages between 30 and 74 years (M = 51 years). The participants worked or had worked in office or administration (39%), health care (27%) and education (13%) occupations. University or college degrees were held by 60% of participants and 29% had graduated high school. Only 38% reported current employment with the majority of participants being retired or unemployed, in receipt of disability pensions, or on sick leave. The majority of the bullying reports related to past experience although 22% reported current bullying at work. A third of participants' bullying experiences had ceased more than five years before, 23% reported bullying between two and five years prior, 17% had been bullied between one and two years prior, and 8% reported that bullying had ceased within the previous 6-month period. A number of participants reported being bullied by more than one person, which was evident with 85% identifying supervisors or managers and 50% identifying co-workers as the perpetrators.

Psychological profiles were produced from MMPI-2 (Norwegian translation version) which comprised 556 items that produced three validity scales, 10 clinical scales and 15 content scales (Matthiesen & Einarsen, 2001). Bullying was measured by the Norwegian version of the Negative Acts Questionnaire (NAQ) which identified 22 types of specific bullying behaviours, a total intensity measure and two additional subscales measuring personal degradation and work-related harassment (Matthiesen & Einarsen, 2001). Consistent with their expectations, personality profiles were elevated for recipients of bullying. Elevations of six of the ten clinical scales which indicated severe psychological disturbance showed a pronounced 3-2-1 (i.e., hysteria-depression-hypochondrias) configuration which is usually associated with women and associated with distress in symbiotic relationships (e.g., marital discord or social interactions of the workplace).

The majority of participants were women, but no significant difference between genders was found on the clinical scales. Recipients who were currently working in comparison with those who were not had an additional elevation on the hypomania scale. They found a significant relationship between the length of time since bullying had occurred and the paranoia scale with currently bullied workers who reported the highest levels of suspiciousness.

Three stable clusters that differentiated among types of bullied workers were revealed through cluster analysis. The first cluster group which comprised 32% of participants was characterised by seven clinically elevated scales including an elevated paranoia scale indicating high levels of distrustfulness and scepticism. The second group, 25% of participants, had no clinical elevations in scales which represented *normal* profiles. Characteristics of the third group which comprised 44% of participants showed prominent elevations in paranoia and depression among the four clinically elevated scales. Thus,

Matthiesen and Einarsen (2001) labelled the clusters the seriously affected, the common group, and the disappointed and depressed group, respectively.

No relationship was evident between the two subscales, personal degradation and work-related bullying and the clinical scales. Elevations in Content scales measured high levels of generalised anxiety or negative affectivity, depression, and health concerns for the seriously affected group but fell within normal ranges for the other two groups. Unexpectedly, the common group which had been exposed to the most negative behaviours reported the least psychosomatic symptoms. Conversely, fewer negative acts were reported by participants with higher levels of generalised anxiety, fear of specific acts, and health concerns. The inverse relationship of the frequency of negative acts with the normal profiles of the common group and elevated profile of the seriously affected suggested that characteristics of the individual provide either a vulnerability or resilience to bullying.

Participants of the common group shared a cynical view of the world around them which may be viewed as a coping strategy against bullying (Matthiesen & Einarsen, 2001). People with pre-existing mental health and physical heath problems, high social anxiety, low self-confidence or inadequate social skills may perceive interactions more negatively than others (Matthiesen & Einarsen, 2001).

Matthiesen and Einarsen (2001) noted that these results may not generalise well to other groups of workers (e.g., blue collar workers) because the sample was drawn from memberships of associations that provided support for bullied workers. They concluded that while some specific personality factors affect the level of vulnerability to bullying, no common personality profile of bullied workers could be identified because profiles varied with differing degrees of susceptibility.

Balducci et al. (2011) employed the Job Demands-Resources model to investigate neuroticism (i.e., an aspect of personality) as an antecedent of workplace bullying to predict

symptomatology of Post Traumatic Stress Disorder (PTSD; American Psychiatric Association, 2000; Farrell & Touran, 2012). Questionnaires were administered to 818 non-managerial employees of a large public administration agency in Italy, 2007. Due to the sensitive nature of the study, demographic information was limited to gender, age, and work status. The study sample comprised 609 participants who provided complete questionnaires and represented a response rate of 43.78%. Females comprised less than half of the non-clinical sample (49.4%). Ages ranged between 20 years and over 60 years with the majority (65%) aged 40 years or more. Permanent job contracts were held by the majority of participants (98.3%). Participants completed the Negative Acts Questionnaire – Revised (NAQ-R; Einarsen et al., 2009) and a brief, validated version of PTSD Checklist – Civilian scale (PCL-C) which comprised six items divided into three 2-item subscales measuring re-experiencing, avoidance, and hyper-arousal symptoms from DSM diagnostic criteria of PTSD. Job demands were operationalised by a 6-item measure of role conflict and a 5-item measure of workload. Job resources were operationalised by a 3-item autonomy measure, a 4-item promotion prospects scale, and a 4-item co-worker support scale. A measure of neuroticism from the big five personality inventory comprised nine items. Balducci et al. used Moderated Structural Equation Modelling (MSEM) in their primary analyses.

Balducci et al. (2011) found that there were two pathways to bullying experiences because both personality and work-environmental factors were independently related to bullying. Higher the levels of neuroticism were associated with higher frequency of bullying reports. Balducci et al. proposed that this may be interpreted as the behaviours of people with higher levels of neuroticism generated conflict causing aggressive responses from others. However, following the JD-R model principals, psychosocial characteristics of job demands and job resources were more strongly and directly related to bullying than neuroticism (Balducci et al., 2011). Promotion prospects, co-worker support, and autonomy (i.e., job

resources) were negatively related to bullying and buffered the relationship between job demands and bullying (Balducci et al., 2011). Workers with higher levels of neuroticism may perceive interactions and job demands more negatively than others which suggests a susceptibility or vulnerability consistent with Matthiesen and Einarsen (2001).

Balducci et al. (2011) noted that the sample was drawn from an organisational setting, therefore measures of PTSD symptomatology were not intended as clinically diagnostic criteria. Bullying was found to play a mediating role between the strongly related job demands (i.e., role conflict and workload) and symptoms of PTSD (Balducci et al., 2011). Balsucci et al.'s (2011's) findings support a strain pathway which was consistent with Leymann (1996) who suggested that interpersonal conflict was related to poor working conditions which were in turn related to bullying and bullying was related to traumatic stress reactions.

Personality traits have been shown to produce a susceptibility to bullying and maintaining a cynical view of the world provided a coping strategy against bullying (Matthiesen & Einarsen, 2001). Moreno-Jiménez et al. (2009) proposed that effects of workplace bullying were moderated by psychological detachment and thoughts of revenge. Psychological detachment from work is defined by the ability not to think of work when away from work which provides a recovery period from job-strain (Moreno-Jiménez et al., 2009). Thoughts of revenge is the opposite of psychological detachment because it involves a maladaptive cognitive process in which rumination (i.e., repetitive and intrusive thoughts and feelings) about past work-related events and issues and lead to thoughts of revenge which is the main characteristic (Moreno-Jiménez et al., 2009). The anger type of rumination which is closely related to aggression has been linked with a vulnerability to cardio-vascular disease and thoughts of revenge was associated with depression and reduced satisfaction with life (Moreno-Jiménez et al., 2009).

Moreno-Jiménez et al. (2009) examined surveys of 511 employees from three Spanish telecommunications companies. Data were collected at two points in time separated by one month. The survey included the shortened version of the NAQ as a measure of workplace bullying, a 5-item measure of role conflict, a 4-item measure of workload, a 4-item measure of psychological detachment, a 4-item measure of thoughts of revenge, a 12-item measure of psychological strain and the Positive and Negative Affectivity Schedule (PANAS) as a measure of negative affectivity. Gender, age, and work experience were controlled because these demographic variables are known to co-vary with workplace bullying. Negative affectivity was controlled in order to limit bias of the relationships between self-reported stressors and strain.

Moreno-Jiménez et al. (2009) found that psychological detachment from work moderated the relationship between role conflict and workplace bullying and the relationship between psychological strain and workplace bullying. The ability to not think about work after work provides a coping strategy that allows levels of arousal to return to a baseline. Further, an individual who uses psychological detachment may engage in distraction to control the effects of a stressor (Moreno-Jiménez et al., 2009). Thoughts of revenge were found to moderate (i.e., strengthen) the relationship between role conflict and workplace bullying and between psychological strain and workplace bullying. Individuals who engage in anger rumination showed an accumulation or escalating effect. Individual differences among psychological aspects of people lead to different interpretations of a stressor and in turn, produce different responses to the same stressor (Moreno-Jiménez et al., 2009). Psychological factors determine a level of susceptibility to perceive behaviours negatively. Organisational factors provide the context in which behaviours are perceived.

1.15. Organisational Factors Associated with Risk

Organisational factors have been examined in sets and individually in relation to workplace harmful behaviours. Higher incidence of bullying was found in organisations with poor psychosocial work environments (Agervold, 2009; Agervold & Andersen, 2006). Organisational factors that contributed to the psychosocial environment included changes in role, role clarity, work pressures, work organisation, management or leadership style, social support (i.e., peers or co-workers), supervisor support, and organisational culture (Agervold, 2009). In a health care setting, a qualitative study of harmful behaviour risk factors at job, team, and organisational levels identified that interactions with third parties (e.g., patients) and the infrastructure (i.e., work conditions) were the major risk for violence and sexual harassment (Baillien, Neyens, & De Witte, 2008). Factors related to the job including workload, job ambiguity, job complexity, the level of autonomy over the task, promotional prospects, and job security presented greater risks for bullying (Baillien et al., 2008). Often supervisor support and co-worker or peer support have been treated as one support construct.

Sloan (2012) investigated the buffering effect of co-worker support against stress experienced following exposure to mistreatment by supervisors, customers, and co-workers. Paper surveys were distributed to 2,500 career service workers from one US state in 2004. The response rate of the survey was 62% (n = 1,550). The respondent sample which comprised 59% women, had a mean age of 47 years and worked in a service occupation for at least six months. Full data was available from 1,395 respondents. The co-worker support 3-item measure assessed the perceived expressive or emotional support received from the respondent's co-workers. The unfair treatment measure allowed separate responses of the frequency of mistreatment for supervisor, customer or client, and co-worker sources. A 4-item scale of job satisfaction and a 9-item scale that gauged the frequency with which symptoms of anxiety and depression were experienced measured psychological distress.

Seven items assessed job characteristics which included complexity of work, worker autonomy, and job demands.

Sloan (2012) found that perceptions of unfair treatment were negatively related to job satisfaction, and positively related to psychological distress. Higher levels of co-worker support was associated with higher levels of worker wellbeing. The expected relationships between job characteristics and job satisfaction were observed. That is, autonomy and work complexity were positively related and job demands was negatively related to job satisfaction and co-worker support. The directions were reversed for unfair treatment variables and psychological distress. Least squares regression revealed co-worker support significantly moderated the relationship between supervisor source of unfair treatment and job satisfaction and between supervisor source and psychological distress. The buffering effect of co-worker support was not evident for customer or co-worker sources of unfair treatment. Sloan suggested that the type of co-worker support (i.e., expressive or emotional) was an effective buffer against a source of unfair treatment that represented an organisational power differential dynamic. Under conditions that unfair treatment is limited to co-worker and customer sources, supervisor support may be an effective buffer.

Mayo, Sanchez, Pastor, and Rodriguez (2012) examined the buffering effect of supervisor support on stressors-strain relationship in the context of the level of congruence supervisor support had with the stressor. A sample of 768 participants from 45 organisations in North America completed questionnaires which represented a 59% response rate. Participant sample comprised 55.6% males, with 57% aged between 20 years and 40 years, and 41% had their current supervisors for 2-5 years. Social support and role conflict were assessed by 4-item, 5-point Likert-type sales. An 18-item scale that assessed the adequacy of the physical work environment measured physical stressors. A 7- item scale of job tension and a checklist of medical symptoms and the frequency with which symptoms were

experienced provided two measures of strain. Control variables included demographic and job-related demographic aspects and dispositional optimism. The latter involved a 9-item life orientation measure to control for potential effects of negative affectivity.

Both supervisor support and co-worker support were negatively, significantly correlated with job tensions and medical symptoms but supervisor support was more strongly related (Mayo et al., 2012). Optimism was also negatively, significantly related to both forms of strain. Role conflict and physical stressors were positively, significantly related to job tensions and medical symptoms.

Hierarchical regression revealed supervisor support was a reverse buffer (i.e., increased the effects) of the role conflict-strain pathway. A plot of the interaction showed stronger relationships between role conflict and both forms of strain-at higher levels of supervisor support and weaker relationships at lower levels of supervisor support. Supervisor support significantly, positively buffered the relationship between physical stressors and medical symptoms (i.e., one form of strain). In the presence of high levels of supervisor support, the negative consequences of physical stressors on medical symptoms were reduced. These results were consistent with Mayo et al.'s (2012) source congruence hypothesis. Role conflicts are congruent with a supervisor source because supervisors are responsible for imparting role directions and duties to workers and therefore, are the source of role conflicts. More attention from a supervisor in the presence of role conflict is likely to cause a worker more confusion (Mayo et al., 2012). Supervisor support is enhancing in less congruent relationships, such as between supervisor support and the physical stressors which are largely determined by an organisation's infrastructure, resources, and work procedures that are beyond the control of a supervisor (Mayo et al., 2012).

Co-worker support significantly, and positively buffered the effects of role conflicts-strain pathway (Mayo et al., 2012). A plot of the interaction showed that in the presence of

higher levels of co-worker support, weaker relationships between role conflicts and the two forms of strain were observed. Co-worker support produced no buffering effect (i.e., not significant) for the physical stressors (i.e., job tensions and medical symptoms)-strain pathway. The study by Mayo et al. (2012) showed that supervisor support and co-worker support relate to job factors in different ways because some factors are more congruent with a particular source than the other. Professional development, appraisal and recognition, and performance feedback involve supervisor input therefore supervisor support is likely to be associated with stronger effects on particular job factors than co-worker support.

1.16. Research Questions

The first aim of this study was to establish the prevalence of harmful behaviours within the health organisation. The prevalence rates of harmful behaviour among Australian health care organisations previously mentioned ranged between 25% (Askew et al., 2012) and 35% (Demir & Rodwell, 2012). It was expected that the prevalence of harmful behaviours in the organisation from which the data were obtained for this study would fall within that range.

1. What is the prevalence of harmful behaviours?

In addition to prevalence, the first aim of the study proposed a comparison between employees exposed to harmful behaviours and employees who were not exposed to harmful behaviours on measures of organisational health and individual wellbeing. Exposed workers reported poorer psychosocial environments with lower levels of supervisor support, peer support, role clarity, appraisal and recognition, and higher levels of work overload and pressures (Agervold, 2009; Einarsen, 1999) and higher levels of negative affectivity (Bowling et al., 2010; Johnson, 2009; Mikkelsen & Einarsen, 2002). Therefore, it was expected that measures of the psychosocial workplace factors and individual factors would be

different between people exposed to harmful behaviours and people who were not exposed to harmful behaviours.

2. What is the impact of exposure to harmful behaviours in the workplace on organisational and individual measures?

The second aim of the thesis concerned exploration and examination of the relationships among three aspects of harmful behaviours, organisational factors, and individual factors. The first aspect of harmful behaviours was the frequency with which perceived harmful behaviours are experienced. Empirically and intuitively, it was expected that higher frequency of harmful behaviours would be associated with lower levels of positive factors (e.g., morale) and higher levels of negative factors (e.g., distress).

3. What is the strength of the relationship between frequency of harmful behaviours and both organisational and individual measures?

Different sources of harmful behaviours have different implications for the recipient (Chang & Lyons, 2012). Organisational outsiders such as members of the public, customers, clients, patients, and patient's visitors perpetrate most violent workplace aggression (Agervold & Andersen, 2006; LeBlane & Barling, 2004). In Australian health care settings, patients and or their visitors were the most frequent sources of verbal, physical, and emotional abuse (Steiger, 1990). However, nurses felt less safe and less confident about their role at work because of co-worker bullying than aggression or violence from patients or their visitors (Steiger, 1990). Nurse managers or supervisors had been implicated in bullying and co-worker bullying (Croft & Cash, 2012) because workers may be modelling the supervisor's behaviour toward a colleague or the supervisor's inaction is viewed as approval.

Rayner (1997) found that supervisor or manager sources were involved in the majority of instances reported which was consistent with much of the earlier bullying research reported from many countries. However, continued empirical research had found

this not to be the case (Johnson, 2009). Never-the-less, Einarsen (1999) noted that workers who were bullied by their superiors appeared to endure more psychological harm than workers who were bullied by their peers. He questioned whether leadership-bullying and peer-bullying represented one construct or two distinct constructs. Hershcovis and Barling (2009) found in their meta-analytic review of perpetrator sources that strongest adverse effects on attitudinal and behavioural outcomes were related to supervisor aggression with the next strongest related to co-worker aggression and the weakest related to organisational outsiders. No differences were found between supervisor, co-worker, and outsider sources for health-related outcomes. It was expected that each source type will show different patterns of association with organisational and individual factors.

4. Does the source of harmful behaviours relate to organisational and individual measures differently?

Higher levels of strain were associated with threats of assault or violence (i.e., psychological violence) and may have greater impact on psychological wellbeing as the threats are remembered or recalled (Agervold & Andersen, 2006). The perceptions of danger and fears for safety in regard to the threats may be more salient to traumatic reactions than the nature or number of actual violent incidents (Agervold & Andersen, 2006). Poor staff relationships was a major source of personal distress for nurses (Steiger, 1990; Wu & Newfield, 2007).

Few researchers have directly examined the psychological, emotional, and physical response of the recipient exposed to harmful behaviours. Lists of the psychological, emotional, and physical consequences for an individual exposed to harmful behaviours were common amongst workplace aggression literature. Some studies have included surveys of negative affectivity (e.g., Tepper et al., 2006), anxiety, depression, and PTSD symptomatology (e.g., Bond et al., 2010; Matthiesen & Einarsen, 2004; Tehrani, 2004) while

others have evaluated positive and negative affect states of the participant (e.g., Mikkelsen & Einarsen, 2002). In general, these measures are aggregated to produce a single value representing an overall response to workplace aggression. This implies that the behaviours to which a worker is exposed are similar in characteristics and elicit similar psychological, emotional, or physical reactions.

Escartín, Rodríguez-Carballeira, Zapf, Porrúa, and Martín-Peña (2009) who examined workers' perceived level of severity of various workplace bullying behaviours found that emotionally abusive forms of bullying were the most severe. Additionally, there was no significant difference among the perceptions of recipients, witnesses, and non-exposed co-workers in regard to the severity levels of the various forms of bullying. Workplace harmful behaviours may not be comparable in their level of severity, therefore, changes in other aspects of harmful behaviours (i.e., frequency or source) may not accurately reflect the impact harmful behaviours has on an individual (Escartín et al., 2009). The current study examined four categories of response (i.e., upset at the time, fear for safety, depressed longer than one month, and sought physical or psychological treatment). It was expected that the more severe categories of response would be associated with poorer outcomes for individual and organisational factors.

5. Does response severity of harmful behaviours relate to organisational and individual measures differently?

The effects of the aspects of harmful behaviours may not be consistent across contexts (i.e., individual and organisational measures), particularly in the presence of certain combinations of the harmful behaviour aspects. The underlying constructs of the organisational and individual factors represent different qualities or characteristics that use different mechanisms or relate in different ways to a factor of interest. For example, Mayo et al. (2012) proposed that the reverse buffering effect of supervisor support on the role conflict-

strain path was because a supervisor is responsible for defining the worker's role (i.e., source congruent). Higher levels of support may increase the worker's confusion or increase the conflict, therefore, the worker may perceive the support more negatively. The effects of combinations of the different levels of three aspects of harmful behaviour may provide supporting evidence of distinct differences among the underlying constructs of organisational and individual factors. The final research question, specified by its sub-parts, follows.

6. Are there any interactions among the aspects of harmful behaviours, organisational and individual variables?
    a. Are there any interactions between frequency and source of harmful behaviours in relation to organisational and individual measures?
    b. Are there any interactions between frequency and response severity of harmful behaviours in relation to organisational and individual measures?
    c. Are there any interactions between source and response severity of harmful behaviours in relation to organisational and individual measures?

The last four research questions were operationalised using a limited set of organisational and individual variables that included Trust in Supervisor and Supervisor Support, Supportive Peers, Workplace Morale, Workplace Distress and Work Pressures, Individual Morale, and Individual Distress. Hypotheses drawn from Research Questions 3-5 will be presented in the section that follows.

1.17. Expected Patterns of Association Among Aspects and Factors

Much attention has been paid to the supervisor's role within an organisation in the study of workplace aggression. The position is a conduit through which information, directions, and feedback are disseminated between levels of an organisation. Typically, a supervisor's responsibilities includes a logistical element to ensure adequate time scheduling and resource management, provision of guidance, advice, mentoring, instruction or direction

of subordinate's activities, evaluation and feedback of subordinate's activities, and resolution of interpersonal or logistical conflicts which may arise. A power differential exists between a supervisor and an employee (Hodson et al., 2006) and trust between a supervisor and an employee has a distinctive relationship to behaviour and intentions (Brower, Lester, Korsgaard, & Dineen, 2008). Indeed, the supervisor-employee dyad is a key relationship within an organisation, for example, employee morale was found to be related to the quality of the relationship with a supervisor (Chang & Lyons, 2012). La Guardia and Ryan (2007) noted that a lack of support in a key relationship will negatively affect wellbeing, regardless of the level of support received from other personal and organisational relationships. Demir and Rodwell (2012) who studied psychological antecedents and consequences of workplace aggression found that a high incidence of bullying among Australian nurses was associated with high negative affectivity and low supervisor and co-worker support within the context of high, external social support.

The frequency, source, and response severity of harmful behaviours as experienced by an employee are likely to influence perceptions of the level of supervisor support received (Demir & Rodwell, 2012). Research Question 3 required the investigation of the relationships among frequency of harmful behaviours, organisational and individual factors. The hypothesised pattern of relationships between frequency of harmful behaviours, supervisor support, and individual variables of morale and distress is presented in Figure 1.5. Two separate but similar hypotheses are represented by the figure to reduce repetition. The first shows that higher frequency of harmful behaviours is related to lower levels of Trust in Supervisor and Supervisor Support, and lower levels of Individual Morale. The second shows that higher frequency of harmful behaviours is related to lower levels of Trust in Supervisor and Supervisor Support, and higher levels of Individual Distress. The double-headed arrows between the variables indicate that the figure can be interpreted according to

any order of the three variable types (i.e., aspects, support, and affect). For example, lower levels of Individual Morale are related to higher frequencies of harmful behaviours and lower levels of Trust in Supervisor and Supervisor Support.

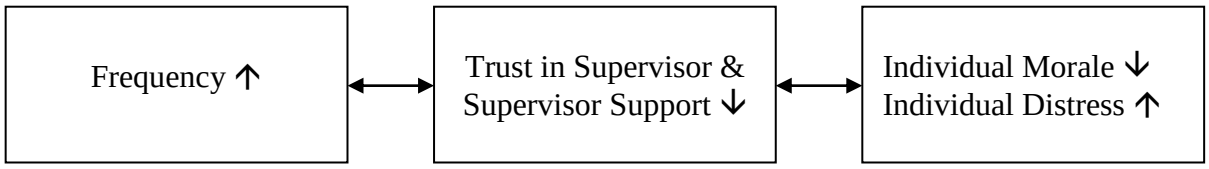


Figure 1.5. Proposed Relationships Among Frequency of Harmful Behaviours, Trust in Supervisor and Supervisor Support, and Individual Affect Variables.

Research Question 4 required the investigation of the relationships among sources of harmful behaviours, organisational, and individual factors. Research has found that the various sources of harmful behaviours had different implications for the recipient (Bowling & Beehr, 2006; Chang & Lyons, 2012). Within the workplace aggression literature, organisational outsiders (e.g., patients, visitors, members of the public) perpetrate the vast majority of violent, physical attacks on employees (LeBlane & Barling, 2004; Spector, Coulter, Stockwell, & Matz, 2007). Hershcovis and Barling (2009) stated that the magnitude of the effect of the harmful behaviours differed according to the source and led to different outcomes for the recipient. Patient and visitor sources were associated with fears for personal safety and a supervisor source was associated with job insecurity and job search behaviours(Hershcovis & Barling, 2009). The source of harmful behaviour has different implications for development of intervention strategies, for example, improved selection and training of supervisors and the development of policies and procedures that effectively manage negative behaviours of patients and their visitors.

Within a health-focused organisation, patients are the clients or customers of services that deal with personal health and wellbeing. The medical profession prioritises patient rights above all else which affords patients the opportunity to become critical and demanding (Seger, Harpaz, & Meshulam, 2011). Patients' relatives and friends have emotional

investments in the patients' health and wellbeing. Patients may feel frustration, distress, and insecurity (LeBlane & Barling, 2004). Patients and their visitors are not held to the same standards of conduct as that of employees who are subject to the policies and procedures established by the health organisation. Damaging verbal or physical behaviours from patients may be symptoms or consequences of a health related issues, therefore, withholding or denial of treatment or care is in contradiction to purpose of the organisation.

Croft and Cash (2012) noted that nurses as carers had less power (i.e., relational powerlessness) than the treating physicians under the medical model which endeavours to cure rather than care for patients. Employees may feel unprotected by the organisation when patients are the source of harmful behaviours (Bowling & Beehr, 2006) and employees' expectations of procedural justice have been violated by the organisation (Chang & Lyons, 2012). The employee's evaluation is extended to the supervisor as the representative of the organisation's policies and procedures. Therefore, the hypotheses are first, that patient sources of harmful behaviours are likely to be associated with lower levels of supervisor support and decreased personal morale, and second, patient sources are associated with increased personal distress, shown in Figure 1.6.

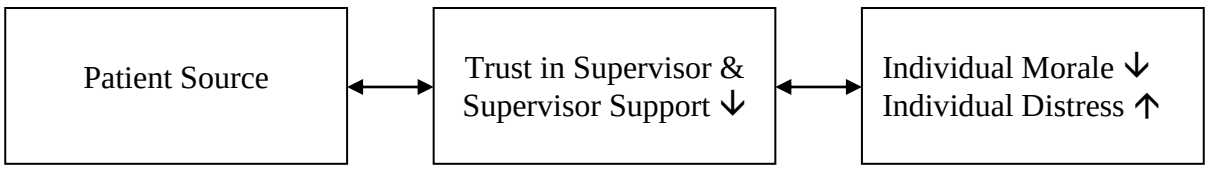


Figure 1.6. Expected Pattern Among Patient Source of Harmful Behaviours, Trust in Supervisor and Supervisor Support, and Individual Affect Variables.

Research Question 5 required the investigation of the relationships among response to harmful behaviours, organisational and individual factors. The response severity of harmful behaviours in the current study did not differentiate between the types of harmful behaviour but was a qualitative description of the recipient's psychological, emotional, and cognitive or behavioural response to the experience. Recipients may be exposed to similar events and

respond in different ways. Individual differences (e.g., personality traits, locus of control, cognitive processes etc.), previous experiences, and current disposition are a few of the plethora of possible aspects involved in an individual's perceptual processes that influence how an event will be evaluated (Demir & Rodwell, 2012). In fact, an event initially viewed as harmless, may be perceived as more damaging over the course of time (Greenberg & Barling, 1999). For example, the repetitious use of teasing as a strategy to manage employee error is associated with individual outcomes of fatigue and poor mental health, and organisationally related outcomes of lower supervisor support and increased role conflict (Hogh, Engström Henriksson, & Burr, 2005). Additionally, one experience, perceived as innocuous at the time of occurrence, may be re-evaluated as hurtful at a later time when reframed by mood or other events (See Branch, 2008).

Harmful behaviours that upset the recipient at the time (Upset) without any lasting effects may be considered the least severe of the four categories of response severity. The fear for safety category (Fear) did not differentiate between psychological and physical concerns. An employee may fear for personal safety in the contexts of job security (Agervold, 2009; De Cuyper, Baillien, & De Witte, 2009), litigation (Seger et al., 2011), physical or verbal attack (Agervold & Andersen, 2006; Mitchell & Ambrose, 2012), inadequate training or use of resources (Ming-Chu, 2009) and sexual harassment (Vijayasiri, 2008). Additionally, the fear response is not limited to transient experiences and may persist if circumstances or contexts are unchanged or similar (Branch, 2008). The third category of response severity was ongoing distress lasting more than one month (Distress) which relied on respondents' subjective evaluations of distress. The forth category of response severity comprised recipients' who reported seeking physical or psychological treatment (Treatment) as a consequence of a harmful behaviour experience. Arguably, this category may be considered the most severe response because intervention was sought. However, no

distinction was made between the type of intervention sought or the related treatment period. Responses to the ambiguous treatment category relied on whether a particular action was taken rather than be a qualitative description of an emotional, psychological, or physical state perceived by the recipient. Therefore, it was assumed that fear for safety, ongoing distress, and treatment responses, respectively, were progressively more severe than upset at the time.

The hypothesised pattern of relationships between response categories of harmful behaviours, supervisor support, and individual variables of morale and distress is presented in Figure 1.7. More severe responses will be associated with decreased Trust in Supervisor and Supervisor Support and decreased Individual Morale. More severe responses will be associated with increased Individual Distress.

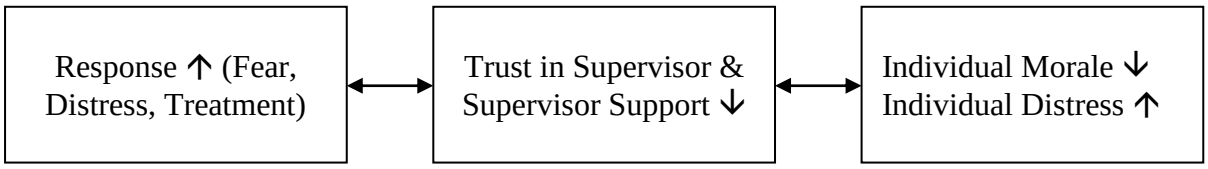


Figure 1.7. Expected Pattern Among Response Categories of Harmful Behaviours, Trust in Supervisor and Supervisor Support, and Individual Affect.

Individual Morale and Individual Distress are measures of an individual's affect and it was expected that these measures would relate highly with organisational measures of Workplace Morale and Workplace Distress. Research Questions 3-5 were revisited but examined the threes aspects of harmful behaviours, Trust in Supervisor and Supervisor Support and two organisational affect factors. It was proposed that each of the aspects of harmful behaviours would show the same negative patterns of association with Trust in Supervisor and Supervisor Support and Workplace Morale and positive associations with Workplace Distress and Work Pressures as depicted in Figures 1.5, 1.6, and 1.7. Figure 1.8 includes the proposed relationships.

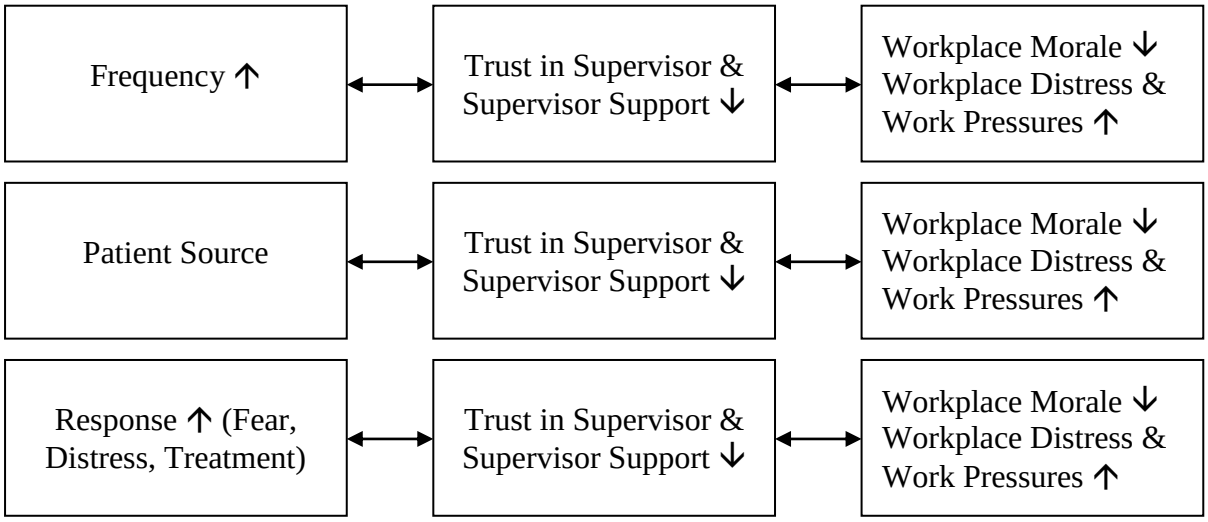


Figure 1.8. Expected Relationships Among Dimensions of Harmful Behaviours, Trust in Supervisor and Supervisor Support, and Workplace Affect.

The patterns of relationships among aspects of harmful behaviours, organisational, and individual measures were analysed in relation to another organisational factor, Supportive Peers, in a final step to address Research Questions 3-5. Support from peers or co-workers was reported in combination with supervisor support measures in a body of literature. These two measures were expected to be strongly related, therefore, the relationships among aspects of harmful behaviours, individual affect, organisational affect and Supportive Peers were expected to produce equivalent patterns as those of Trust in Supervisor and Supervisor Support, displayed in Figure 1.9. Sub-parts (a-c) of Research Question 6 were addressed concurrently with Research Questions 1-3. The method with which the analyses were conducted is described in the next chapter.

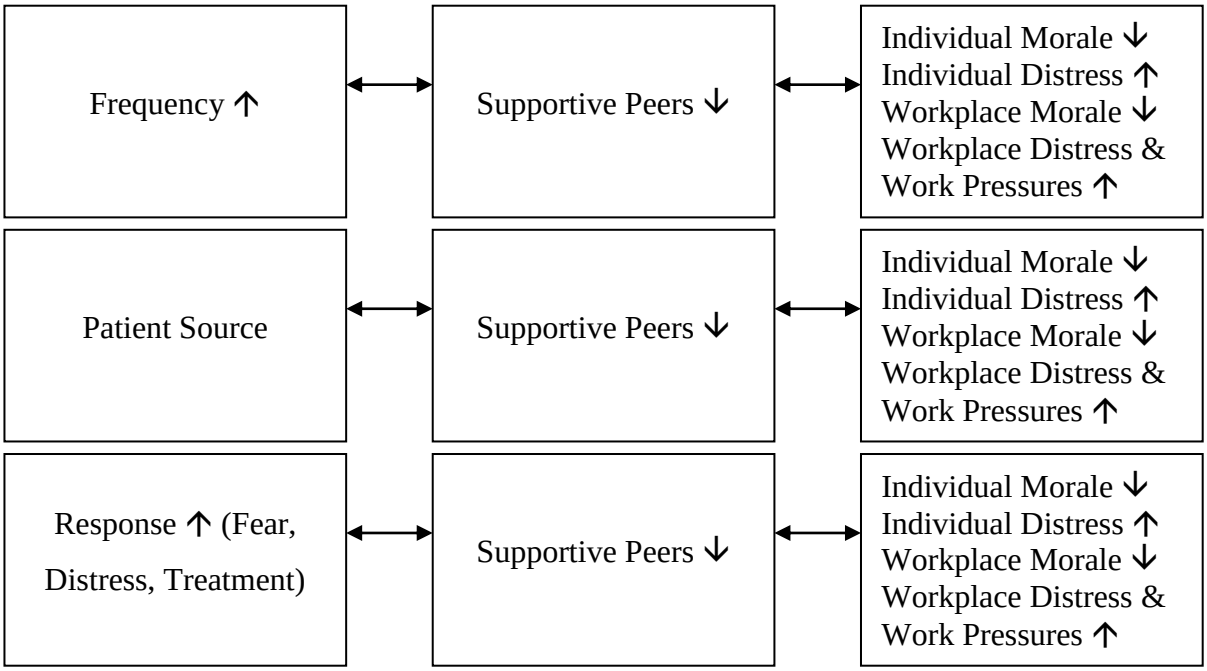


Figure 1.9. Expected Relationships Among Dimensions of Harmful Behaviours, Individual Affect, Organisational Affect, and Supportive Peers.

Chapter 2 – Research Methodology

The sample, measures, and proposed methods used to examine and analyse the data are described in the following pages.

2.1. Participants

Data were obtained from 5,889 employees of a large health organisation. The majority of respondents were female (*n* = 4,575, 77.69%) of which, 1,350 completed web-version and 3,225 completed the paper-version of questionnaire. Males constituted 21.34% (*n* = 1,257) to the total sample, of which 619 completed web version and 638 completed the paper-version of the questionnaire. The 57 participants who did not indicate sex completed the paper-version and were predominantly nursing or operational staff aged between 41-60 years, and who had likely been with the organisation for five years or less. Participants reported age by selecting from age ranges that comprised six groupings with the lowest age group "Under 21 years" through to the highest age group "Over 60 years". The majority of participants (*n* = 1,855, 31.50%) were aged between 41 to 50 years. There were near equal numbers of participants in the next largest groups, 31-40 years (*n* = 1,363, 23.14%) and 51-60 years (*n* = 1,294, 21.97%). Participants aged 21 years or younger and aged over 60 years represented 1.48% (*n* = 87) and 5.52% (*n* = 325) of the sample, respectively. The majority held tertiary qualifications of an undergraduate degree (n = 1,370, 23.26%) or a postgraduate degree (n = 1,327, 22.53%). Professional Diplomas and VET Certificates were held by 749 (12.72%) and 820 (13.92%) participants, respectively. Participants who left school prior to attaining a high school certificate comprised the smallest membership (*n* = 449, 7.62%). The majority of participants (62.3%) had worked for the organisation for 10 years or less. The smallest group (*n* = 527, 8.95%) reported having tenures between 16 and 20 years. The proportions of employees who had served more than 20 years (*n* = 873, 14.82%) was comparable with the proportions of those who served less than 1 year (*n* = 704, 11.95%) and between 1 and 2

years of service (*n* = 923, 15.67%). The majority of participants were employed in the fields of nursing (*n* = 2,471, 42%) and administration (*n* = 1,585, 26.9%). Trades (*n* = 30, 0.51%) and ATSI Health Worker (*n* = 63, 1.07%) occupations represented less than 2% of the total sample. While many participants indicated that they had supervisory or management responsibilities (*n* = 2,391, 40.6%), fewer indicated that their position was a supervisor or manager (*n* = 1,368, 23.2%). This was understandable given the hierarchical structure of a health organisation with a majority of employees working within clinical multidisciplinary teams (*n* = 3,628, 61.6%). Almost half the nursing stream (*n* = 1,125, 45.53%) claimed supervisory or management responsibilities which reflected the latter point. While females out-numbered males 3 to 1, two occupations were male-dominated. A participant working in the medical stream (*n* = 306) was twice as likely to be male (*n* = 194, 63.40%) than female (*n* = 111, 36.27%). In Trades (*n* = 30), employees were nine times more likely to be male (*n* = 27, 90.0%) than female (*n* = 3, 10.0%). The opposite was true for the Nursing stream (*n* = 2,471) where staff were more likely to be female (*n*= 2,217, 89.72%) than male (*n* = 227, 9.19%). A smaller proportion of females reported supervisory or management responsibilities (*n* = 1,752, 38.30%) than the proportion of males who claimed supervisory or management responsibilities (*n* = 623, 49.56%). The demographic and job-related characteristics of the sample were representative of health organisations in Australia (See Demir & Rodwell, 2012; Machin, Fogarty, & Albion, 2004). Table B1 in Appendix B provides a full list of descriptive frequencies for the sample's demographic and job-related characteristics, some of which are not of interest for the current study.

2.2. Materials

The Queensland Public Agency Staff Survey (QPASS) is a an employee opinion survey that can be utilised to assist in organisational development and to contribute to strategic planning by identifying risk factors, factors involved in absenteeism and employee

retention, and to identify qualities, efficiencies, and outcomes, and benchmarking (Hart, Griffin, Wearing, & Cooper, 1996). The Better Workplaces Staff Opinion Survey (Better Workplaces) was developed by the Community and Organisational Research (CORE) Unit at the University of Southern Queensland in consultation with the Queensland Health Workplace Culture team. Better Workplaces included the three individual outcomes and 10 organisational outcomes scales that originated from QPASS and additional scales which measured specific aspects of the organisation. Additional measures comprised trust in leadership levels (i.e., immediate supervisor, manager, and executive manager), employee engagement, management practices, and workplace health and safety, plus opinions of two employee subgroups, those who had management responsibilities (i.e., support for managers scale) and those who worked within clinical teams (i.e., communication, multidisciplinary teamwork, and clinical management practices scales). Information regarding employee's opinions of the organisation's best aspects and aspects that require improvement, career intentions, main reasons for separation intention, and experience of harmful behaviours (e.g., reporting behaviour, frequency of experience, and source) were also included. Better Workplaces comprised 13 biographical items and 134 scale items divided into 23 scales. The biographical items included gender, age, employment status, Aboriginal or Torres Straight Islander status, non-English speaking background, occupational stream, time in location, time in current role, time in organisation, highest level of education, supervisory responsibilities, on secondment to another role, and job sharing.

2.2.1. The scales.

The individual scale measures include Quality of Working Life, Personal Morale, and Personal Distress and provide an operationalised measure of employee wellbeing. Cronbach alphas are provided as a reliability measure of scales and are comparable with reliability

estimates reported in the QPASS manual which ranged from .92 for the Personal Morale scale to .88 for the Personal Distress scale (Hart et al., 1996).

Quality of Working Life measured an individual's satisfaction with personal work goals and the conditions and quality of work life. Participants indicated their level of agreement with statements of satisfaction and quality of working life against a 7-point scale with response anchors of *1 = Strongly disagree, 2 = Disagree, 3 = Slightly disagree, 4 = Neither agree or disagree, 5 = Slightly agree, 6 = Agree and 7 = Strongly agree.* This comprised six items with a score range of 6-42 where higher scores indicated more satisfaction with working life. A sample item was, "If I were able to live my work life over again, I wouldn't change anything". (α = .93).

The *Personal Morale* scale comprised seven items with a score range of 7-49 with higher scores indicating higher levels of morale. Participants indicated how often over the last month they felt a particular positive emotion against a 7-point scale with response anchors of *1= Not at all, 2= Not often, 3 = Some of the time, 4 = Moderately often, 5 = Often, 6 = A lot of the time,* and *7 = All the time*. A sample item, "I'm feeling enthusiastic at work" was typical of the set which covered a variety of positive feelings experienced by an individual while at work. (α = .94).

The *Personal Distress* scale comprised seven items with a score range of 7-49. Higher scores indicated higher levels of distress. Participants indicated how often over the last month they felt a particular negative emotion against a 7-point scale with response anchors of *1= Not at all, 2= Not often, 3 = Some of the time, 4 = Moderately often, 5 = Often, 6 = A lot of the time,* and *7 = All the time*. A sample item, "I'm feeling depressed at work" was typical of the set which covered a variety of negative feelings experienced by an individual while at work. (α = .91).

Organisational Climate was assessed across 50 items taken from the QPASS (Hart et al., 1996) which contributed to 10 scales that measured aspects of the work context that described an individual's perception of the immediate workplace and the organisation as a whole. Participants were asked to indicate the extent of their agreement with statements related to aspects of the workplace or organisation. All organisational climate measures used 5-point scales with response anchors of *1 = Strongly disagree, 2 = Disagree, 3 = Neither agree or disagree, 4 = Agree, and 5 = Strongly agree*. Cronbach alphas are provided as a reliability measure of scales and are comparable with the reliability estimates reported in the QPASS manual which ranged from .88 for the Appraisal and Recognition scale to .73 for the Shared Goals scale (Hart et al., 1996). Organisational Climate scales included the following.

Workplace Morale comprised five items with a score range of 5-25. A sample item, "There is a good team spirit in this work area" was typical of the items that examined the individual's perception of a positive atmosphere created by fellow staff in the work area. Higher scores indicated favourable level of morale in the workplace. (α = .88).

Workplace Distress comprised five items with a score range of 5-25. A sample item, "Staff in this work area feel anxious about their work" was typical of the items that examined the individual's perception of the level of distress in the immediate work unit or area. Higher scores indicated higher levels of distress in the workplace. (α = .87).

Supervisor Support which comprised five items with a score range of 5-25, measured the perception of awareness, approachability, and communication skills of immediate supervisors. The sample item, "The supervisors don't really know the problems faced by staff in this work area" was the only negatively scored item on the scale. Higher scores indicated a participant's perceptions of higher levels of supervisor support. (α = .89).

Decision-Making Involvement which comprised four items with a score range of 4-20, assessed the extent to which the individual may contribute to work-related issues. A sample

item was “There is opportunity for staff to participate in work policy and decision making”. Higher scores indicated a participant’s perception of more involvement in the decision-making processes. (α = .85).

Role Clarity which comprised four items with a score range of 4-20, evaluated the clearness of expectations, duties, and responsibilities of the role within the work area. Higher scores indicated higher levels of lucidity of the work role aspects. A sample item was “My work objectives are always well defined”. (α =.80).

Peer Support which comprised seven items with a score range of 7-35, assessed perceived acceptance, communication, and respect received from co-workers. Higher scores indicated higher levels of perceived support. A sample item was “Staff in this work area can rely on their colleagues for support and assistance when needed”. (α = .88).

Professional Development which comprised five items with a score range of 5-25, examined the employee’s opportunities for further training and professional development. Higher scores indicated the perception that there were opportunities for training and professional growth. A sample item was: “The training and development planning in this work area takes into account my individual needs and interests”. (α = .85).

Appraisal and Recognition which comprised six items with a score range of 6-30, assessed dual aspects of appraisal and feedback of performance. Higher scores indicated regularity and quality of performance feedback and acknowledgement of work performance. Sample items included, “There is structure and process that provides feedback on my work performance” and “I am encouraged in my work by praise, thanks or other recognition”. (α = .91).

Shared Goals which comprised five items with a score range of 5-25, evaluated congruence between the employee’s and the work area’s objectives and goals. A sample item was, “My personal goals are in agreement with the goals of this work area”. (α =.81).

Work Overload which comprised four items with a scale scores range of 4-20, assessed the perception of strain and pressure experienced by staff due to excessive work demands. Higher scores indicated higher levels of strain. A sample item was, "Staff in this work area are overloaded with work". (α =.84).

Six specifically designed scales measured aspects of the organisation including trust in leadership, employee engagement, organisational management practices, and workplace health and safety. Positively scored items were measured using 5-point scales where *1 = Strongly disagree, 2 = Disagree, 3 = Neither agree or disagree, 4 = Agree, and 5 = Strongly agree*. Reverse-scored items were measured similarly but in the reverse direction where *1 = Strongly agree, 2 = Agree, 3 = Neither agree or disagree, 4 = Disagree, and 5 = Strongly disagree*. Trust scales examined staff's perceptions of openness, caring, respect, honesty, approachability, encouragement, and integrity held for each of three levels of management, that is, immediate supervisor, middle to senior management, and executive management. Higher scores on these scales indicated higher levels of trust in the superior held by the employee.

Trust in Supervisor which comprised 10 items with a scale score range of 10-50, evaluated the extent to which the immediate supervisor displays respect, care, and maintains honest communications with staff. A sample item was, "My supervisor encourages me to raise new ideas and find improved ways of doing my job". (α =.96).

Trust in Manager which comprised six items with a scale score range of 6-30, assessed the level of trust the employee held in middle to senior management in regard to responsiveness, fairness, clarity of direction and communication, and reliability. A sample item was, "Senior Manager does what they say they are going to do". (α =.96).

Trust in Executive which comprised five items with a score range of 6-30 assessed the trust held in the District Executive with similarly worded items to the previous scale. A sample item was, "District Executive does what they say they are going to do". (α =.95)

Employee Engagement which comprised five items with a score range of 5-25, assessed the employee's pride in the organisation and the extent to which the employee engaged in altruistic behaviours. Sample items were: "I speak highly of this health service district to my friends" and "I try to help others in this organisation whenever I can. (α = .74).

Management Practices which comprised nine items with a score range of 9-45, examined the extent to which employees agreed that policies and procedures, recruitment, performance appraisals, training, and resources were fair, appropriate, and timely. A sample item was, "There are structures and routines which encourage staff, collectively, to evaluate and improve their work practice". (α =.90).

Workplace Health and Safety which comprised five items with a score range of 5-25, examined an employee's knowledge of reporting, counselling services, and training opportunities. A sample item was, "There is genuine commitment by management to staff safety in my work area". The scale contained one reversed scored item, "My work is physically unsafe for me". (α = .70).

Additional scales which are only applicable to two sub-groups of employees of the organisation, measured aspects of managing staff and three scales assessed the experience of working within multidisciplinary clinical teams. *Managing Others* which comprised four items with a score range of 4-20, assessed supervisor's or manager's perception that he or she was supported by HR and supervisors, possessed confidence with appropriate management skills, and had adequate time and resources to manage others appropriately. A Sample item was, "I am supported by my supervisor/line manager to manage poor performance". (α = .69).

Clinical Communication which comprised five items with a scale score range of 5-25, evaluated efficiency, availability, and input of information of clinical team members. A sample item was, "I receive the information I need to carry out my work to the best of my ability". (α = .86).

Multidisciplinary Teamwork which comprised four items with a score range of 4-20, assessed the approach to patient care, inclusion and respect. A sample item was, "Each member of a multidisciplinary team is respected within the team for their contribution to the team's goals and objectives". (α = .76).

Clinical Management Practice which comprised four items with a score range of 4-20, measured perception of participative funding allocation, rostering, and skill development. A sample item was, "Sufficient time and resources are devoted to clinical skills development". (α = .77).

Better Workplaces incorporated additional measures involving best aspects of the organisation, aspects that require improvement, career intention, and harmful behaviour experience. Two lists, each with the same 16 statements invited respondents to identify multiple, relevant aspects of the organisation which they felt were particularly good or needed improvement (e.g., "Clarity of values and expectations"). Career intention items comprised three positively worded statements that consideration of leaving the job and further, leaving the organisation, and actively seeking alternative employment required yes/no responses. Participants who respond "yes" to considering leaving their jobs are invited to select from a list of 16 main reasons for leaving that covered operational concerns (e.g., "Lack of materials and equipment to do the job"), psychosocial concerns (e.g., "Poor relationships among co-workers" and "Lack of support regarding experiencing harmful behaviours"), and personal concerns (e.g., "Family or personal reasons" and "Retirement") allowed respondents to select all main reasons that applied to their current intention.

Employees' experiences of harmful behaviour were examined by seven statements that include knowledge of the reporting process, trust in the process, and direct experiences with the process. The first two questions asked the extent to which the employee agreed with the statements, "I know how to report harmful behaviours if I experience them in the work area" and "I trust the process for managing harmful behaviours that breach the Code of Conduct". Responses were recorded on 5-point scales with response anchors of *1 = Strongly disagree, 2 = Disagree, 3 = Neither agree or disagree, 4 = Agree, and 5 = Strongly agree*. These items produce single scores ranging from 1-5 for each participant. Employees were invited to "comment on harmful behaviours (such as harassment, bullying, intimidation, discrimination and blaming)" in their work area. No definition of harmful behaviour or description of specific acts was included in the survey. Therefore, reports of harmful behaviours originated from the respondents' perceptual evaluations. Employees were instructed to move to the next section if they responded "no" to the third question, "In the past 6 months I have experienced harmful behaviours directed towards myself in my work area". "Yes" respondents were invited to record the number of different people who had directed harmful behaviour toward them and the number of incidents that negatively affected them. The number of occasions the employee experienced effects (i.e., upset at the time, fear for safety, ongoing distress lasting more than one month, and sought physical or psychological treatment) as a result of the harmful behaviours was recorded across four different sources (co-workers, supervisor/manager, patients/clients, and visitors/relatives). Employees were invited to record the number of instances that were formally reported and the number of instances of which they were aware that some action was taken. An 8-item list of reasons for non-reporting of harmful behaviours allowed respondents to select all relevant reasons (e.g., "I feared victimisation or reprisal").

2.3. Data Collection Procedure

The data used in this project were collected by a consultancy team from the University of Southern Queensland with ethics approval granted by USQ Human Research Ethics Committee. Two versions of Better Workplaces, online web and paper booklets, which were identical in content, were made available to staff. The online version had the advantage that progression through the questionnaire did not allow relevant items to be left unanswered. Personnel from the organisation were invited to complete the questionnaire. Informed consent was implicit because staff members chose to complete and submit the questionnaires electronically or by sealed envelopes. Confidentiality was assured by pooling data from work areas with less than 10 responses with larger groups for analyses. No individual could be identified from the data used in the current project.

2.4. Scoring Procedure

Data from the web version of the survey was entered directly into a spreadsheet. Paper versions were scanned manually. Prior to the computation of scales, reversed scored items were adjusted to reflect the negative direction, for example, scoring "The supervisors don't really know the problems faced by staff in this work area" was reversed so that "1 = Strongly agree, 2 = Agree, 3 = Neither agree or disagree, 4 = Disagree, and 5 = Strongly disagree". Scales were generated by SPSS syntax and provided a sum of scores for each scale for each case. Dichotomous variables were coded "1 = Yes" and "2 = No". Gender was coded "1 = Female" and "2 = Male". Demographic variables with more than two groups and were ordinal in nature were coded in ascending order (e.g., age was coded youngest group to oldest, Under 21 years, …Over 60 years). Categorical variables were coded in the order of appearance in the survey (e.g., occupational stream was coded "1 = Administration", "2 = Heath Practitioner"… "8 = Operational" and "9 = Other".

2.5. Preliminary Analyses

Data screening procedures will incorporate examination of missing data in demographic and scale items, identification of cases with incomplete scale data, and checks for outliers, normality, and linearity. Statistical analyses will be performed using Predictive Analytics Soft-Ware (PASW) version 18.0 (Mulaik, 1990). A Principal Component Analysis (PCA) will be conducted to confirm that the structure of the questionnaire which will aid interpretation of results by providing an opportunity to evaluate inclusion of items to measurement scales. Reliability estimates (alphas) will be calculated for each scale as a measure of adequacy of the internal consistency of scale items. Following the computation of scales, Pearson *r* correlations between measurements will be examined to reveal any problematic relationships. Descriptive statistics will be reported for the scale measures. Next, harmful behaviour data will be examined and the prevalence rate of harmful behaviours, the first research question, will be reported (i.e., Research Question 1). Differences, if any, among demographic and job-related groups will be reported with Pearson Chi-square statistics. Difference between harmful behaviour exposed and non-exposed groups on scale measures will be calculated by ANOVA (One way), which addresses the second research question. Aspects of harmful behaviours, that is, frequency, source, and response data will be inspected for patterns among the data. New categorical variables will be created from the aspects of harmful behaviour variables that are appropriate for use with the main analyses.

2.6. Main Analyses

The main analyses will examine the relationships between the aspects of harmful behaviours and individual and organisational scale measures which are the focus of the remaining research questions. Multivariate analysis employs a number of statistical regression techniques that share the assumptions of normality, linearity, and homogeneity of

variance of the measures. General Linear Models (GLM) will be used to explore and evaluate the relationships if the assumptions are met. However, another multivariate regression technique will be selected if violations of the assumptions, particularly, homogeneity of variance and linearity are presented. For example, Generalized Linear Models (GLZ) are a special type of linear regression technique that may be used when restrictive assumptions of the linear model are violated. The GLZ is an iterative weighted linear regression technique that produces maximum likelihood estimates of parameters (Nelder & Wedderburn, 1972). The GLZ uses a link function mechanism that transforms the data by maximising the range that allows the simple form of linear model to be maintained (Oracle, 2008). A variance function accommodates response variables with non-constant variance by expressing the variance as a function of the predicted response variable (Oracle, 2008).

Chapter 3 - Validation of Better Workplaces Questionnaire and Sample Description

Results are presented in eight stages. First, data will be screened for missing values in demographic variables and out-of-range values. Second, a Principal Component Analysis (PCA) of the scale items will be conducted to assess the underlying structure and validate the scales of the Better Workplaces survey. The resulting principal components will define the scales for analyses. Third, Cronbach alpha reliability estimates of internal consistency will be calculated to support inclusion or exclusion of items to individual scales. Fourth, scale data will be checked for missing data, outliers, normality, multicollinearity, and singularity. Fifth, the demographic profile of the sample will be described. Sixth, harmful behaviour data will be presented including overall prevalence rate and frequency of reports within demographic and job-related groups (i.e., Research Questions 1 and 2). Seventh, the process of forming new, independent, categorical variables from original variables comprising aspects of harmful behaviours will be described. The last stage of results is presented in Chapter 4. Results of multivariate regression, summarised in tables, will address Research Questions 3-6. Hypotheses which were previously described by the relationship models will be tested.

3.1. Data Screening

The data set was compiled from 5,889 valid and useable surveys from 5,906 surveys returned to USQ. The possible participant pool of 16,392 workers who were invited to complete the Better Workplaces Questionnaire returned 3,920 paper versions and 1,969 web versions which resulted in a response rate of 35.93%. Preliminary data screening examined demographic variables and scale items for out-of- range values. Demographic variables included gender, age group, cultural identity, non-English speaking background, and level of education achieved. Other job-related variables included occupation, time in location, time in position, and time with the organisation, employment status (e.g., permanent full-time,

temporary part-time, or casual), supervisory or management responsibilities, on secondment to another position temporarily, and job sharing circumstances. Missing data in the demographic and job variables including gender (1%), age group (0.5%), employment status (0.5%), cultural identity (0.7%), non-English speaking background (0.8%), occupation (0.8%), time in location (0.8%), time on position (1.2%), time in organisation (1%), and education level (1.1%), which were limited to paper-version data (n = 3,920). Tabachnick and Fiddel (2001) suggested that less than 5% missing data with no apparent pattern in a large data set is unlikely to influence analyses. Missing demographic data were considered random events that were unlikely to affect analyses. Further, pair-wise deletion was an acceptable method to deal with missing values in a large data set (Tabachnick & Fidell, 2001). All outliers in demographic variables were plausible values with two exceptions. Cases 1000898 and 1001070 reported more than 20 years of service with the organisation in the same role but selected incompatible age groups of under 21 years and 21-30 years. These were changed to 31-40 years age group to accommodate more than 20 years of service. One case detected by Mahalanobis distance was a multivariate outlier among demographic variables, MAH_{max} = 18.65 > Critical χ^2 (4) = 18.47, p = .001. The case was retained after review because the responses comprised a plausible combination. Descriptive statistics of demographic and job-related data of the sample, which were previously described in the method section is presented in Table B1 in Appendix B.

3.2. Principal Component Analysis

The Better Workplaces survey included six additional scales to the previously validated 13 scales from QPASS (Hart et al., 1996). However, no validation data was available for the Better Workplaces survey. Inconsistencies within the factor structure of survey instrument is a weakness of research methodology (Van Laard, Edwards, & Easton, 2007). Therefore, an exploratory PCA, a data reduction method, was conducted to describe

and summarise the data and evaluate the structure of the Better Workplaces survey. Typically, PCA identifies variables that correlate with each other and therefore, may be assessing the same underlying construct (O'Rourke & Hatcher, 2013). This statistical technique summarises the pattern of correlations among a large set of variables to reveal variables that correlate well with each other to form a relatively independent component (i.e., items/variables →component), which has very low or no correlation with other components (Tabachnick & Fidell, 2001).

The PCA was used in preference to Factor Analysis (FA) because the survey had been designed and administered but had not been previously validated. Principal Component Analysis is used as an initial step for FA to calculate correlations of observed variables, examines the structure of the data, and provides the maximum number and nature of factors (Gorsuch, 2003). The common variance of the variables is used by PCA to explain the maximum amount of variance while FA examines unique variance that is attributed to an underlying construct (i.e., latent variable) which is the cause of the correlation of the variables, that is, Factor →Items/Variables (Gorsuch, 2003). Common criticisms of PCA are that loadings are often over estimated and components are over-extracted (McArdle, 1990; Velicer & Jackson, 1990a, 1990b). However, most researchers agreed that analysis of more that 30 variables PCA and FA produce very similar results (Bentler & Kano, 1990; Gorsuch, 2003; McArdle, 1990).

All 111 items from 19 common scales which were intended to serve as markers for 19 constructs were subject to PCA to evaluate the structure of the survey and to address possible redundancies in the large set of variables. Table 3.1 displays each of the principal components with the range of loadings across items, and the percentage of variance contributed by each. The PCA which used Direct Oblimin rotation (with Kaiser Normalization), stopped the component extraction when the eigen value dropped below 1.0.

The use of the eigen value greater than 1 criterion to determine the number of components is appropriate with more than 30 variables if the average of communalities is greater than 0.6 and there is clear separation between the last selected component and the next unselected component (O'Rourke & Hatcher, 2013). In this present case, the average of communalities was 0.68 and components 16 and 17 contributed 0.93% and 0.80% of the variance, respectively, which showed a small but clear difference. Subsequently, 16 principal components were extracted, which explained 67.86% of the variance. The Kaiser-Meyer-Olkin Measure of Sampling Adequacy approached 1 (KMO = .99) which exceeded the minimum value of .6 required for good PCA (Tabachnick & Fidell, 2001). The rotated factor solution converged in 20 iterations. A second run of the PCA excluding cases with missing

Table 3.1

Summary Table of the Structure of the Better Workplaces Staff Opinion Survey

	Principal Component	No. of Items	Loading	Variance Contributed (%)
PC1	Trust in Supervisor & Supervisor Support	15	.35-.89	38.40
PC2	Individual Morale	7	.62-.84	4.79
PC3	Trust in District Executive	6	.85-.95	4.14
PC4	Workplace Distress & Work Pressures	9	.32-.84	3.11
PC5	Workplace Morale	6	.25-.41	2.34
PC6	Professional Development & Training	5	.25-.65	2.03
PC7	Individual Distress	7	.53-.86	1.88
PC8	Recognition & Appraisal	8	.28-.69	1.65
PC9	Trust in Senior Manager	6	.89-.96	1.58
PC10	Clarity of Roles & Goals	6	.38-.67	1.43
PC11	Organisational Citizenship Behaviours	2	.75-.83	1.35
PC12	Quality of Work Life	6	.71-.83	1.13
PC13	Supportive Peers	11	.33-.72	1.10
PC14	Workplace Health & Safety	5	.41-.69	1.03
PC15	Management Practices	9	.43-.65	.95
PC16	Organisational Pride	3	.54-.82	.93

scale data was performed because missing data can be very influential to PCA (Tabachnick & Fidell, 2001). All item variables loaded on the same components as the first run. A detailed list of loadings is available in Table C1, Appendix C.

Correlations among the principal components, shown in Table 3.2, ranged between *r* = .01 to .64. Multicollinearity is a serious concern with very high correlations of .90 and above (Tabachnick & Fidell, 2001). The highest correlation among components was .64. Therefore, multicollinearity was unlikely to be problem for scales formed from the extracted components. The strongest relationships were among the three trust of a superior components and between the Quality of Work Life and Individual Morale components, which was consistent with literature (e.g., Van Laard et al., 2007). Principal Component 11, Organisational Citizenship Behaviours, weakly related to only one other component, Individual Morale.

Tabachnick and Fidell (2001) suggested that as a rule of thumb, loadings of .32 and above on components extracted by oblique rotation are interpretable. Loadings of .32 are considered poor (10 % overlapping variance), .45 loading is fair (20% overlapping variance), 55 (30% overlapping variance) is good, .63 (40% overlapping variance) is very good, and .71 (50% overlapping variance) is excellent. Three components each included an item variable with a loading less than .32. These items loaded across a number of constructs but most highly on the selected components. Variables may correlate indirectly with other components simply because components correlate with each other. Following oblique rotation, the pattern matrix loadings are measures of singular relationships between the individual components and the individual item variables where overlap between components is partialed-out (Tabachnick & Fidell, 2001). Therefore, the most highly loaded item variables contribute more to the interpretations of the underlying constructs of the components (Tabachnick & Fidell, 2001). Employing a lower loading cut-off is acceptable if

Table 3.2

Correlations Among Principal Components

Principal Component		PC1	PC2	PC3	PC4	PC5	PC6	PC7	PC8	PC9	PC10	PC11	PC12	PC13	PC14	PC15
PC1:	Trust in Supervisor & Supervisor Support															
PC2:	Individual Morale	.40														
PC3:	Trust in the District Executive	.29	.36													
PC4:	Workplace Distress and Work Pressures	-.23	-.27	-.23												
PC5:	Workplace Morale	.21	.20	.12	-.14											
PC6:	Professional Development & Training	.34	.23	.23	-.12	.13										
PC7:	Individual Distress	-.35	-.44	-.27	.36	-.14	-.16									
PC8:	Recognition & Appraisal	.46	.29	.21	-.09	.19	.32	-.16								
PC9:	Trust in the Senior Manager	.56	.42	.55	-.27	.22	.30	-.32	.36							
PC10:	Clarity of Roles & Goals	.32	.30	.21	-.11	.10	.20	-.25	.27	.29						
PC11:	Organisational Citizenship Behaviours	.01	.12	.07	-.08	.02	.04	-.03	.02	.03	.03					
PC12:	Quality of Work Life	.42	.64	.37	-.31	.21	.29	-.45	.33	.43	.31	.07				
PC13:	Supportive Peers	.40	.35	.16	-.10	.24	.22	-.31	.24	.31	.26	.04	.33			
PC14:	Workplace Health & Safety	.28	.19	.25	-.13	.05	.24	-.19	.16	.30	.19	.11	.20	.20		
PC15:	Management Practices	.43	.29	.35	-.24	.20	.29	-.25	.25	.47	.28	.03	.35	.30	.30	
PC16:	Organisational Pride	.29	.43	.37	-.22	.15	.18	-.27	.14	.38	.25	.08	.41	.25	.23	.32

(a) the variable is congruent with the component's construct, (b) the variable correlates with the other variables of the construct, and (c) similar scores are produced on observed variables (Tabachnick & Fidell, 2001). Estimates of internal consistency among items further supported the inclusion of the lower loading item variables to the scales defined by the principal components.

Seven principal components reflected the original scales which emerged clearly in the structure including Individual Morale, Individual Distress, Quality of Work Life, Workplace Health and Safety, Management Practices, Trust in Senior Manager, and Trust in District Executive. The other nine components which gained or lost individual items or were combinations of original scales are detailed in the following.

The Supervisor Support and Trust in Supervisor which comprised 15 items was the first component extracted and accounted for the majority of the variance. This component was a combination of items from two original scales that measured the same underlying construct of the extent to which an immediate supervisor is supportive and trustworthy.

Principal Component 4, Workplace Distress and Work Pressure, comprised nine items. This component is a combination of two original scales that measured the same underlying construct that included both aspects of the perceived negative affect of the staff and the strain of excessive workloads and time constraints experienced within the immediate work area.

Principal Component 5, Workplace Morale, comprised six items. However, the original Workplace Morale scale lost three of five items but gained three items from the former Decision-Making Involvement scale and one item from the former Shared Goals scale. These additions broaden the underlying workplace morale construct to include conditions or reasons (i.e., participatory decision-making and contribution) to the communal attitude and energy of staff in the immediate work area. This was understandable, in that,

participative decision-making contributes to job satisfaction and, in turn, to morale in the workplace (See Burns & Machin, 2012; Deci, Connell, & Ryan, 1998).

Professional Development and Training, Principal Component 6, comprised five items. The original Professional Development scale lost one item to another component but gained an item from the original Shared Goals scale. This item loaded across a number of components but most highly on Professional Development which reflected a proportion of workers whose personal goals related to professional development and training. This is congruent with the construct that related to provision of opportunities and encouragement to pursue training and professional development.

Appraisal and Recognition, Principal Component 8, comprised eight items. Two items, a Professional Development item, and a Decision-Making Involvement item from original scales were included in this component. The former addition makes sense, in that, an interest in a worker's career development is demonstrated by providing feedback, praise, and recognition. The latter item loaded across a number of principal components but more highly on Appraisal and Recognition component. Opportunities to express views and opinions demonstrate the value of an employee, therefore, are a form of recognition.

Clarity of Roles and Goals, Principal Component 10, comprised six items. Two items from the original Shared Goals scale loaded on the same component as the Role Clarity scale items. The underlying construct extended the scale to measure beyond duties and responsibilities of the role to include objectives and goals of the immediate work area as part of the role description.

Organisational Citizenship Behaviours, Principal Component 11, comprised two items. Originating from the Employee Engagement scale, the underlying construct measures the extent to which a worker performs behaviours of benefit to others and the organisation, which is an aspect of employee engagement.

Supportive Peers, Principal Component 13, comprised 11 items. Four additional items loaded on the Supportive Peers component, which included three items from the original Workplace Morale scale and one item from the original Shared Goals scale. These items reflect the attitudinal and co-operative nature of peers which extends the underlying construct beyond assistance, acceptance, and support offered by peers in the work area.

Pride in Organisation, Principal Component 16, comprised three items. This was a second aspect of the original employee engagement scale. The items related to a worker's demonstrative opinion of the organisation.

The validity of the scale measures refers to the extent to which a scale measures what it is purported to measure (Drost, 2011). The internal consistency reliability of a scale is the extent to which the items within the scale are related to an underlying construct (Drost, 2011). Cronbach alpha coefficient is a popular method to evaluate internal consistency of interval or ratio-level data (Christmann & Van Aelst, 2006; Cortina, 1993; Gliem & Gliem, 2003; Hayes & Krippendorff, 2007), such as, Likert-type scales that provide statements for which participants rate their level of agreement or disagreement (Gliem & Gliem, 2003). Proper use of Cronbach alpha as a measurement method of internal consistency requires that the scale contains multiple items which are summed to produce a total representing a quantitive measurement of an underlying factor or aspect that varies in magnitude rather than qualitatively (Gliem & Gliem, 2003). Accurate interpretation of internal consistency depends on there being one underlying stable factor for the scale (Cortina, 1993; Sijtsma, 2009). Coefficient alpha is an estimate of the inter-relatedness of items that uses the mean of all split-half correlations between the scale items (Cortina, 1993). Therefore, internal consistency estimates are not sensitive to the extent to which participants agree (Hayes & Krippendorff, 2007).

Items within each component were congruent with the respective underlying construct. Items from original scales, Decision-Making Involvement and Shared Goals, spread loadings across a number of components thus failing to form respective principal components. Scale variables, described in the next section, were computed in line with the structure revealed by the PCA. Separate FA for each scale confirmed one factor solutions for each of the newly formed scales prior to calculation of reliability estimates (i.e., Cronbach's alpha) of scales formed from principal components which are evaluated in the following section.

3.3. Descriptive Statistics

Coefficient alpha involves accounting for both the variance attributable to participants and the interaction between participants and items (Cortina, 1993) Cronbach alpha values above .70 are acceptable estimates of reliability (Gliem & Gliem, 2003). Table 3.3 provides the descriptive statistics of the scales including reliability, score range, and number of items in each scale. There was little benefit in deleting items from the Trust in Supervisor and Supervisor Support, Trust in District Executive, Individual Distress, Quality of Work Life, and Workplace Health and Safety scales because the gain in reliability was less than .01. Therefore, all scales remained intact. All targeted items were congruent with the underlying constructs of the respective scales. The Organisational Citizenship Behaviour scale reliability was inadequate because it comprised only two items and had the weakest correlations (r = .01-.12) with other components.

Table 3.3

Descriptive Statistics of Scales Formed from Principal Components

Scale	No. of Items	Score Range	Mean	*SD*	Cronbach α
Trust in Supervisor & Supervisor Support	15	15-75	51.72	13.83	.97
Individual Morale	7	7-49	30.76	9.02	.93
Trust in District Executive	6	6-30	16.64	5.11	.95
Workplace Distress & Work Pressures	9	9-45	29.30	7.42	.90
Workplace Morale	6	6-30	18.26	5.13	.88
Professional Development & Training	5	5-25	16.37	4.21	.83
Individual Distress	7	7-49	20.77	9.34	.91
Trust in Senior Manager	6	6-30	18.48	6.13	.96
Recognition & Appraisal	8	8-40	24.44	7.16	.92
Clarity of Role & Goals	6	6-30	20.54	4.29	.83
Organisational Citizenship Behaviour	2	2-10	7.64	1.39	.51
Quality of Work Life	6	6-42	24.78	8.97	.92
Supportive Peers	11	11-55	38.94	8.08	.92
Workplace Health & Safety	5	5-25	18.98	3.08	.70
Management Practices	9	9-45	28.86	7.03	.90
Pride in Organisation	3	3-15	9.90	2.75	.86

Note. $N = 5654 – 5776$.

3.4. Missing Item Data

Tabachnick and Fidell (2001) cautioned that the percentage of cases with missing data was more influential to statistical analyses than the percentage of missing data within cases. Among the sample's data, 995 cases (16.9 %) were missing responses across the 111 items that applied to all participants. All these cases completed the paper-version of the questionnaire. Cases with more than 5% missing data represented 43.52% of all cases with missing data. However, the pattern of missing data across variables is more important than

the amount of missing data within cases (Tabachnick & Fidell, 2001). Examination of each item variable showed no variable with more than 3.72% missing data. In comparison to other variables, items examining Trust in Senior Management and Trust in District Executive had the higher levels of missing data (2.11%-2.29% and 2.53%-3.72%, respectively). Wording of these items differed only by the level of management and these items were presented in the paper-version of the survey in the rank order of lower to higher levels. Participants may have perceived these items as repetitious and had been previously answered by the Trust in Supervisor items. Other than these items, missing data showed no pattern and were considered random events. Participants who left items unanswered were more likely to be female (n = 821, 82.5%), within the age groups 41-50 years (n = 297, 29.8%) and 51-60 years (n = 293, 29.4%), employed on a permanent, full-time basis (n = 524, 52.7%) or in a casual/flexible capacity (n = 309, 31.1%), and worked within the nursing field (n = 465, 46.7%), the administration field (n = 148, 14.9%), or were operational staff (n = 141, 14.2%). Missed items were more attributable to participants who had spent between 1-2 years in their current role or position within the organisation (n = 217, 21.8%). Missing data was least frequently encountered amongst participants who had been with the organisation less than one year (n = 85, 8.5%) than any of the other time groupings that represented tenures from one year to more than 20 years with the organisation. It is common practice with a low percentage of missing data in a large data set to use list-wise deletion in analyses (Howell, 2007).

3.5. Normality

Examination of standardised scores for the scale variables revealed four variables with z scores greater than the absolute value of 3.29, including Clarity of Roles and Goals (z = -3.39), Organisational Citizenship Behaviour (z = -4.06), Supportive Peers (z = -3.46), and Workplace Health and Safety (z = -4.55). Inspection of detrended normal probability plots

showed unequal distribution of points above and below the line for these scale variables which reflected the negative skewness. Skewness is far less influential with large data sets and measures of kurtosis become too sensitive with samples of 200 or more (Tabachnick & Fidell, 2001). Scale variables that related to positive aspects of life or work (e.g., morale, recognition, trust, professional development, support, job satisfaction, and engagement) were negatively skewed and measures of negative aspects of life or work (e.g., personal distress) were positively skewed which is consistent with social sciences research (Pallant, 2009). However, Workplace Distress and Work Pressures scale showed a negative skew value (-0.07). This value was very close to zero (i.e., no skew), therefore was not likely to be of concern. Box plots of the variable distributions showed outliers (i.e., low scores) were present in scales including Trust in Supervisor and Supervisor Support, Workplace Health and Safety, Supportive Peers, and Clarity of Roles and Goals. Outliers with very high scores were present in Workplace Distress and Work Pressures, and Individual Distress scales. The OCB scale showed outliers with both very high scores and very low scores. The differences between variable means and 5% trimmed means of continuous variables were examined to assess the influence of outliers, as recommended by Osborne and Overbay (2004). The 5% trimmed mean differed by less than 2% of a scale unit (e.g., Clarity of Roles and Goals: Mean = 20.44, Trimmed mean = 20.58), which indicated influence of outliers was minimal. The outliers were deemed legitimate scores from the correct population and were not due to sampling error, survey administration, or data entry errors, and were not intentional or motivated efforts to distort the data (see Osborne & Overbay, 2004). Therefore, all outlier cases were retained for the examination of harmful behaviours data in the following chapter.

3.6. Harmful Behaviours Descriptive Statistics

Experience of harmful behaviours in the 6-month period prior to the survey was reported by 26.83% (n = 1580) of the sample (N = 5889). This prevalence rate is associated

with self-labelling without-a-definition measure of harmful behaviours (Research Question 1). The data were sorted by respondents' exposure or non-exposure to harmful behaviours in the previous 6-month period to inspect demographic and job-related characteristics and career intentions of exposed and non-exposed groups. Table 3.4 provides the frequencies and percentages for exposed and non-exposed participants. Differences, indicated by a significant Pearson Chi-Square ($p < .05$), between exposed and non-exposed were present in gender, age group, time in organisation, occupation stream, and job-change intentions.

A greater proportion among females reported experience of harmful behaviours than the proportion among males. Among all participants who reported exposure 80.59% were female. The highest proportion reporting harmful behaviour exposure within age groups was attributed to participants aged 40-51 years. More than a third (33.99%) of all participants reporting exposure were aged 40-51 years. Any type of education beyond high school level showed higher proportions within groups than the overall prevalence rate of harmful behaviour exposure. University degree level of education comprised 47.39% of all participants exposed to harmful behaviours. The lowest proportion of exposure was found among participants who had been with the organisation less than a year in comparison with longer tenures. Participants who reported tenures of 3-10 years comprised 39.04% of all participants exposed to harmful behaviours. Trades, a male-dominated occupation, and Nursing, a female-dominated occupation, had the highest proportions of members who reported harmful behaviour exposure. Participants with supervisory or management responsibilities and those who were supervisors or managers had higher proportions of exposure to harmful behaviours within their respective groups than participants with no supervisory or management roles or responsibilities. Among the exposed group, 74.37% of participants were not supervisors or managers and 55.07% of participants had no supervisory or management responsibilities. The majority of participants considering leaving their job

Table 3.4

Frequency and Percentage of Demographic Groups by Exposure to Harmful Behaviours in the Previous Six Months

Demographic Variable	Harmful Behaviours		*N*	Pearson χ^2
	Exposure (%)	Non-Exposure (%)		
Gender				$\chi^2(1, 5832) = 5.80$, $p = .016$
Female	1,262 (27.58)	3,313 (72.42)	4,575	
Male	304 (24.18)	953 (75.82)	1,257	
Total	1,566 (26.85)	4,266 (73.15)	5,832	
Missing			57	
Age Group				$\chi^2(5, 5858) = 23.69$, $p < .001$
Under 21 Years	10 (11.63)	76 (88.37)	86	
21-30 Years	251 (26.90)	682 (73.10)	933	
31-40 Years	376 (27.55)	989 (72.45)	1,365	
41-50 Years	533 (28.73)	1,322 (71.27)	1,855	
51-60 Years	335 (25.89)	959 (74.11)	1,294	
Over 60 Years	63 (19.38)	262 (80.62)	325	
Total	1,568 (26.77)	4,290 (73.23)	5,858	
Missing			31	
Education Level				$\chi^2(5, 5825) = 7.02$, $p = .219$, ns
Left school early	105 (23.39)	344 (76.61)	449	
Completed High School	280 (25.23)	830 (74.77)	1,110	
VET Certificate (Cert. III, IV, & Diploma)	224 (27.32)	596 (72.68)	820	
Professional Diploma	216 (28.84)	533 (71.16)	749	
Undergraduate Degree	369 (26.93)	1,001 (73.07)	1,370	
Postgraduate Degree	374 (28.18)	953 (71.82)	1,327	
Total	1,568 (26.92)	4,257 (73.08)	5,825	
Missing			64	
Time in Organisation				$\chi^2(6, 5832) = 48.58$, $p < .001$
Less than 1 Year	118 (16.76)	586 (83.24)	704	
1 - 2 Years	263 (28.49)	660 (71.51)	923	
3 - 5 Years	302 (29.64)	717 (70.36)	1,019	

Table 3.4 (continued.)

Demographic Variable	Harmful Behaviours		*N*	Pearson χ^2
	Exposure (%	Non-Exposure (%)		
Time in Organisation (continued.)				
6 - 10 Years	311 (30.40)	712 (69.60)	1,023	
11 - 15 Years	198 (25.95)	565 (74.05)	763	
16 - 20 Years	142 (26.94)	385 (73.06)	527	
More Than 20 Years	236 (27.03)	637 (72.97)	873	
Total	1,570 (26.92)	4,262 (73.08)	5,832	
Missing			57	
Occupation Stream				$\chi^2(8, 5844) = 93.73, p < .001$
Administration	348 (21.96)	1,237 (78.04)	1,585	
Health Practitioner	106 (18.40)	470 (81.60)	576	
Trades	11 (36.67)	19 (63.33)	30	
Medical	71 (23.20)	235 (76.80)	306	
Dental	49 (25.93)	140 (74.07)	189	
Nursing	796 (32.21)	1,675 (67.79)	2,471	
ATSI Health Worker	17 (26.98)	46 (73.02)	63	
Operational	156 (30.23)	360 (69.77)	516	
Other	14 (12.96)	94 (87.04)	108	
Total	1,568 (26.83)	4,276 (73.17)	5,844	
Missing			45	
Supervisor/Manager Role				$\chi^2(3, 5889) = 4.36, p = .225$, ns
Yes	382 (28.59)	954 (71.41)	1,336	
No	1,175 (26.21)	3,308 (73.79)	4,483	
Said No Meant Yes	12 (31.58)	26 (68.42)	38	
Said Yes Meant No	11 (34.38)	21 (65.63)	32	
Total	1,580 (26.83)	4,309 (73.17)	5,889	
Supervisory/Management Responsibilities				$\chi^2(1, 5829) = 13.59, p < .001$
Yes	705 (29.49)	1,686 (70.51)	2,391	
No	864 (25.13)	2,574 (74.87)	3,438	
Total	1,569 (26.92)	4,260 (73.08)	5,829	
Missing			60	

Table 3.4 (continued.)

Demographic Variable	Harmful Behaviours		*N*	Pearson χ^2
	Exposure (%)	Non-Exposure (%)		
Considering Leaving Current Job				$\chi^2(1, 5889) = 221.05, p < .001$
Yes	898 (37.11)	1,522 (62.89)	2,420	
No	682 (19.66)	2,787 (80.34)	3,469	
Total	1,580 (26.83)	4,309 (73.17)	5,889	
Actively Seeking Another Job				$\chi^2(1, 5587) = 212.80, p < .001$
Yes	588 (40.64)	859 (59.36)	1,447	
No	872 (21.06)	3,268 (78.94)	4,140	
Total	1,460 (26.13)	4,127 (73.87)	5,587	
Missing			302	
Stay With Organisation (if job change)				$\chi^2(1, 5637) = 29.27, p < .001$
Yes	988 (24.50)	3,045 (75.50)	4,033	
No	506 (31.55)	1,098 (68.45)	1,604	
Total	1,494 (26.50)	4,143 (73.50)	5,637	
Missing			252	

did not report exposure to harmful behaviours. More than a half of the participants exposed to harmful behaviours (56.84%) were considering leaving their job and 40.27% of the exposed group were actively seeking another job. Yet, 66.13% of participants who reported harmful behaviour exposure would prefer to stay with the organisation if they changed jobs.

3.7. Difference Between Exposed and Non-exposed Groups

Prior to examining harmful behaviour data more thoroughly, it was necessary to establish that total scale scores for participants who responded in the affirmative to a questionnaire item regarding the experience of harmful behaviours in past six months are poorer than for participants who responded in the negative (Research Question 2). Differences between harmful behaviour exposed and non-exposed groups on scale measures were examined by ANOVA (One-way) with list-wise deletion and are presented in Table 3.5.

Table 3.5

Comparison of Scale Variable Means for Harmful Behaviours Exposed and Non-exposed Groups

Scale	*N*	*M* (*SEM*)	*SD*	95% CI	ANOVA
Trust in Supervisor & Supervisor Support					
HB	1298	44.26 (0.43)	15.61	43.41-45.11	$F(1, 4892) = 559.54$, $p < .001$
No HB	3596	54.32 (0.20)	12.11	53.92-54.71	
All	4894	51.65 (0.20)	13.85	51.26-52.04	
Individual Morale					
HB	1298	26.71 (0.25)	9.14	26.21-27.21	$F(1,4892) = 342.74$, $p < .001$
No HB	3596	31.95 (0.14)	8.58	31.66-32.23	
All	4894	30.56 (0.13)	9.03	30.30-30.81	
Trust in District Executive					
HB	1298	15.30 (0.15)	5.49	15.00-15.60	$F(1,4892) = 119.65$, $p < .001$
No HB	3596	17.09 (0.08)	4.89	16.93-17.25	
All	4894	16.62 (0.07)	5.12	16.47-16.76	
Workplace Distress &Work Pressures					
HB	1298	32.69 (0.20)	7.29	32.29-33.09	$F(1,4892) = 403.29$, $p < .001$
No HB	3596	28.06 (0.12)	7.06	27.83-28.29	
All	4894	29.29 (0.11)	7.40	29.08-29.50	
Workplace Morale					
HB	1298	15.64 (0.15)	5.39	15.35-15.93	$F(1,4892) = 494.89$, $p < .001$
No HB	3596	19.19 (0.08)	4.74	19.03-19.34	
All	4894	18.25 (0.07)	5.17	18.10-18.39	
Professional Development & Training					
HB	1298	14.61 (0.13)	4.60	14.36-14.86	$F(1, 4892) = 312.26$, $p < .001$
No HB	3596	16.96 (0.07)	3.90	16.83-17.08	
All	4894	16.33 (0.06)	4.23	16.22-16.45	
Individual Distress					
HB	1298	26.36 (0.28)	10.18	25.81-26.92	$F(1, 4892) = 706.90$, $p < .001$
No HB	3596	18.84 (0.14)	8.14	18.58-19.11	
All	4894	20.84 (0.13)	9.34	20.58-21.10	
Trust in Senior Manager					
HB	1298	16.15 (0.18)	6.54	15.80-16.51	$F(1,4892) = 257.22$, $p < .001$
No HB	3596	19.26 (0.10)	5.77	19.08-19.45	
All	4894	18.44 (0.09)	6.14	18.27-18.61	

Table 3.5 (continued.)

Scale	N	M (SEM)	SD	95% CI	*ANOVA*
Recognition & Appraisal					
HB	1298	21.07 (0.21)	7.53	20.66-21.48	$F(1,4892) = 419.33$, $p < .001$
No HB	3596	25.64 (0.11)	6.65	25.42-25.86	
All	4894	24.43 (0.10)	7.18	24.23-24.63	
Clarity of Role & Goals					
HB	1298	18.57 (0.13)	4.83	18.30-18.83	$F(1,4892) = 349.89$, $p < .001$
No HB	3596	21.11 (0.07)	3.96	20.98-21.24	
All	4894	20.44 (0.06)	4.35	20.32-20.56	
Organisational Citizenship Behaviour					
HB	1298	7.71 (0.04)	1.46	7.63-7.79	$F(1,4892) = 3.73$, $p = .053$, ns.
No HB	3596	7.62 (0.02)	1.34	7.58-7.66	
All	4894	7.64 (0.02)	1.38	7.60-7.68	
Quality of Work Life					
HB	1298	20.31 (0.25)	9.03	19.82-20.80	$F(1,4892) = 459.12$, $p < .001$
No HB	3596	26.26 (0.14)	8.41	25.99-26.54	
All	4894	24.68 (0.13)	8.97	24.43-24.93	
Supportive Peers					
HB	1298	34.51 (0. 25)	9.07	34.02-35.01	$F(1,4892) = 589.21$, $p < .001$
No HB	3596	40.54 (0.12)	7.10	40.31-40.78	
All	4894	38.94 (0.12)	8.12	38.72-39.17	
Workplace Health & Safety					
HB	1298	17.80 (0.10)	3.56	17.61-17.99	$F(1,4892) = 269.60$, $p < .001$
No HB	3596	19.40 (0.05)	2.77	19.30-19.49	
All	4894	18.97 (0.04)	3.08	18.89-19.06	
Management Practices					
HB	1298	25.20 (0.22)	7.77	24.77-25.62	$F(1,4892) = 512.40$, $p < .001$
No HB	3596	30.12 (0.11)	6.30	29.92-30.33	
All	4894	28.82 (0.10)	7.06	28.62-29.01	
Pride in Organisation					
HB	1298	8.77 (0.08)	2.98	8.61-8.94	$F(1,4892) = 282.85$, $p < .001$
No HB	3596	10.23 (0.04)	2.55	10.15-10.31	
All	4894	9.84 (0.40)	2.75	9.77-9.92	

Note. HB = Harmful Behaviours. CI = Confidence Interval.

Brown-Forsythe and Welch Robust Tests of Equality of Means were significant ($p = .05$) for all scales with the exception of OCB scale.

Significant difference between means was found on every scale variable with the exception of the OCB measure (p = .053). The non-significant result for the OCB scale was not a concern given the low reliability of the two-item scale. There is also a possibility that this non-significant result was not simply due to low reliability of the measure but may involve respondents' belief in the value of performing OCBs. Zellars, Tepper, and Duffy (2002), for example, found a stronger relationship between abusive supervision and OCB for workers who defined OCB as an extra-role, rather than an in-role behaviour. Vigoda-Gadot (2007) suggested that under exploitative and abusive supervisors extra-role behaviours may become compulsory or expected, and therefore, perceived by the worker as in-role behaviours.

Levene's statistic, which tests homogeneity of variance was significant in all pairs with the exception of Workplace Distress and Work Pressures measure (p = .098). Robust tests of equality of means (i.e., Welch and Brown-Forsythe statistics) were all significant with the exception of the OCB measure (p = .063). The harmful behaviour exposed and non-exposed groups differed in their distributions. Cases that reported harmful behaviour exposure in the previous 6-month period were selected for further analyses.

3.7.1. Management of outliers.

There were a number of unusually high frequencies reported amongst the harmful behaviour data. New variables were created which reduced the highest frequencies to within two standard deviations of the variable's mean. This course of action reduced the influence of outliers that may have been due to exaggeration or data entry errors and allowed retention of the cases that may have other important information. Among the reported number of people who were the source of harmful behaviours in the previous 6-month period, three cases were reduced to a value of 51 (M = 3.73, SD = 23.92). Seven cases were reduced to a value of 99 among the frequencies of experiences that affected the participant negatively (M

= 6.59, *SD* = 46.45). Nine cases were reduced to a value of 12 among the number of formal reports made (*M* = 1.18, *SD* = 5.47). Among the frequencies of the instances that the participant was aware action was taken, 36 cases were reduced to a value of 3 (*M* = 0.61, *SD* = 1.64). Later, this exact process of reducing outliers to within two standard deviations of the mean will be applied to each of the variables that comprise frequency, source, and response severity of harmful behaviours in preparation for the categorisation of continuous data.

3.7.2. Knowledge and process of reporting harmful behaviours.

More than a third (34.7%, *n* = 532) of exposed group reported one person, 28.3% (*n* = 434) reported two people, 13.8% (*n* = 212) reported three people, 9.3% (*n* = 142) reported four people, and 13.9% (*n* = 213) reported five or more people as the source of harmful behaviour exposure. The exposed group recorded the number of harmful behaviour experiences that affected them negatively. More than a quarter (26.1%, *n* = 356) recorded one experience, 25.9% (*n* = 354) recorded two, 14.5% (*n* = 198) recorded three, 10.7% (*n*= 146) recorded four, and 22.8% (*n* = 311) recorded five or more experiences that negatively affected them in the previous six months. Yet, the majority (53.9%, *n* = 851) did not make a formal report. Nearly a quarter (24.7%, *n* = 391) of participants who experienced harmful behaviours reported one, 11% (*n* = 174) reported two, and 10.4% (*n* = 164) formally reported three or more incidents. A majority (65.3%, *n* = 1032) were unaware of any action taken in regard to their reports. Less than a quarter (23%, *n* = 364) were aware of one report actioned, 7.5% (*n* = 118) were aware of two, and 4.2% (*n* = 66) were aware of three or more reports actioned. Most of the exposed group (83.2%, *n* = 1302) agreed that they knew how to report harmful behaviours in the work area. However, less than a third (31.5%, *n* = 491) held trust in the process of managing harmful behaviours that breached the Code of Conduct.

3.8. Aspects of Harmful Behaviours

Table 3.6 presents the number of participants who entered frequencies of harmful behaviour experiences in the survey. The cells do not represent discreet (i.e., independent) groups because participants were able to enter values in any number of cells to describe harmful behaviour experiences by sources (i.e., co-worker, supervisor or manager, patient or client, and patient's visitor or relative) and the severity of responses (i.e., upset at the time [U], feared for safety [F], distressed more than one month [D], and physical or psychological harm for which treatment was sought [T]).

Table 3.6

Number of Participants who Contributed to Source and Response Severity Categories

Source	Response Severity (*n*)				Total
	Upset at Time	Fear for Safety	Distress > 1 Month	Treatment Sought	
Co-worker	893	636	318	144	1991
Supervisor or Manger	150	86	264	67	567
Patient or Client	494	463	99	31	1087
Visitor or Relative	151	181	47	9	388
Total	1688	1366	728	251	4033

Note. N = 1580. Values were entered in all applicable cells in the questionnaire, thus, a total of 4,033 entries were made by 1,580 recipients.

Nearly 10,000 harmful behaviour experiences were reported by 1,580 recipients. The number of harmful behaviours experienced by the source and the severity of their response to the experience is displayed in Table 3.7. As previously mentioned, the outliers amongst these 16 variables were reduced to within two standard deviations of the mean. Table D1, Appendix D provides a list of the number of data values adjusted for each variable. The patterns evident in the overall frequency of experiences showed that harmful behaviours from co-workers more often caused upset at the time than fears for safety or distress lasting more than one month and least often resulted in seeking physical or psychological treatment (U>F>D>T). The overall pattern evident with a supervisor or manager source showed that

participants were distressed longer than one month more often than were upset at the time, held fears for safety, or sought physical or psychological treatment (D>U>F>T). Harmful behaviours from a patient or client source produced the same pattern as co-worker source of harmful behaviours (i.e., U>F>D>T). Patients' visitors or relatives were more often the source of fears for safety than causing upset at the time, which in turn was more frequent than distress lasting more than one month and least often resulted in seeking physical or psychological treatment (F>U>D>T). The patterns found for the frequency of harmful behaviour experiences across sources were not entirely consistent when particular demographic groups were examined.

Table 3.7

Number of Experiences of Harmful Behaviours Reported by Source and Response Severity

Source	Response Severity				Total
	Upset at Time	Fear for Safety	Distress > 1 Month	Treatment Sought	
Co-worker	2508	1694	884	371	5457
Supervisor or Manager	275	194	547	163	1179
Patient or Client	1133	1043	230	57	2463
Visitor or Relative	290	380	92	28	790
Total	4206	3311	1753	619	9889

3.8.1. Demographic patterns of the aspects of harmful behaviours.

Co-workers were more often the cause of upset at the time than, in turn, feared for safety, distressed longer than one month or sought physical or psychological treatment (U>F>D>T). This pattern was consistent across demographic and job-related groups including Gender, Age Group, Level of Education, Occupational Stream, and Time with the Organisation.

Females were more often upset at the time by co-workers and patients or clients, distressed by a supervisor or manager, and feared for safety from a patient's visitor or

relative. The frequencies of harmful behaviours reported by males were consistent with the overall patterns with one exception. Males feared for their safety more often from patients or clients than were upset at the time, distressed longer than one month, or sought physical or psychological treatment (F>U>D>T).

Consistent with the overall patterns, people aged 51 to 60 years were more often upset at the time by co-workers and patients or clients, distressed longer than one month by a supervisor or manager, and feared for safety from a patient's visitor or relative. Frequencies of harmful behaviours from a co-worker source were consistent across all age groups (U>F>D>T). People under 21 years of age were more often upset at the time by supervisors or managers than were distressed, feared for safety, or sought physical or psychological treatment (U>D>F>T). People aged 21 to 30 years were more often distressed by supervisors or managers and in turn, upset at the time, which was consistent the overall pattern, but sought physical or psychological treatment more frequently than enduring prolonged distress (D>U>T>F). The 21 to 30 age group and people over 60 years of age feared for safety more often from patient or client sources than were upset at the time (F>U>D>T). People under 21 years of age feared for safety or were distressed longer than one month more often from a patient's visitor or relative source than felt upset at the time or sought physical or psychological treatment (F=D>U=T). People aged 31years through to 50 years of age were more often upset at the time by visitor or relative sources than feared for safety, were distressed for more than one month, or sought physical or psychological treatment (U>F>D>T).

There were seven deviations from the overall patterns of the frequency of harmful behaviours across the six levels of education groups. The patterns of co-worker sources of harmful behaviours were consistent with the overall pattern across educational level groups. The supervisor or manager source of harmful behaviours showed deviations from the overall

pattern (D>U>F>T) across four of the groups. People who left school early were more often upset at the time by supervisors or managers than feared for safety, were distressed longer than one month, or sought physical or psychological treatment (U>F>D>T). Participants who held VET Certificate or equivalent qualifications were upset at the time by supervisors or managers more often than distressed, feared for safety, or sought physical or psychological treatment (U>D>F>T). People holding a professional diploma or an undergraduate degree were more often distressed than upset at the time by supervisors or managers, consistent with the overall pattern, but physical or psychological treatment was sought more often than fearing for safety (D>U>T>F). Postgraduate degree holders more often feared for safety from patients or clients than felt upset at the time, were distressed longer than one month, or sought physical or psychological treatment (F>U>D>T). People with a maximum of high school level of education were upset at the time by patients' visitors or relatives or held fears for safety more often than were distressed, or sought physical or psychological treatment (U≥F>D>T).

Occupational groups of Nursing and Health Practitioner were more often upset at the time by co-workers and patients or clients, distressed longer than one month by supervisors or managers, and held fears for safety from patients' visitors or relatives. Deviations from the patterns of source and response severity were present in Administration, Trades, Medical, Dental, Operational, and Other occupational groups. Trades and Operational staff were more often upset at time by a supervisor or manager than feared for safety, distressed longer than one month, and in turn, sought physical or psychological treatment (F>U≥D>T). The Other occupation category was more often upset by supervisors or managers, and in turn, were distressed longer than one month more often than feared for safety or sought treatment (U>D>F=T). Medical staff were more often reported distress in response to a supervisor or manager source, which was consistent with the overall pattern, but feared for safety more

often than were upset at the time or sought treatment (D>F>U>T). Administration, Trades, Medical, and Dental personnel more often feared for safety from a patient or client source than were upset at the time (F>U>D>T). Medical staff more often feared for safety from a patient's visitor or relative, consistent with the overall pattern but in turn, were more often distressed longer than one month rather than upset at time (F>D>U>T). Dental personnel were more often upset at the time by a visitor or relative than held fears for safety (U>F>D>T).

People who had been with the organisation less than one year through to five years and between 16 through to more than 20 years were more often upset at the time by co-workers and patients or clients, distressed longer than one month by a supervisor or manager, and feared for safety from a patient's visitor or relative. Patterns of frequencies of harmful behaviours across co-worker and supervisor or manager sources were consistent with the overall patterns. People who had been with the organisation 11 to 15 years more often feared for safety from a patient or client source than were upset at the time (F>U>D>T). People who had been with the organisation 6 to 15 years, encompassing two groups, were more often upset at the time by visitors or relatives than held fears for safety (U>F>D>T).

3.9. Creation of Independent Groups

Respondents provided harmful behaviour information across three harmful behaviour aspects including frequency, source, and response severity. Frequency, a continuous variable, was recoded into low, moderate, and high frequency groups to produce a categorical variable. Royston, Altman, and Sauerbrei (2006) objected to the common practice of dichotomising continuous predictor variables because of the potential loss of variance and power. They refuted the belief that achievement of a significant result based on less variance and power indicated that a much stronger relationship existed between the continuous predictor and other variable. In this case, the sample was large enough that power was not

likely to be an issue. Further, the analyses were exploratory in nature. Converting a continuous variable to a categorical variable aided observation and interpretation of any observed deviations from linear trajectories and points of interaction. Percentiles were used as a guide to form relatively equal groups of respondents who experienced 1-2, 3-6, and more than six harmful behaviours in the previous six months. The frequency of harmful behaviour variable included Low (n = 429), Moderate (n = 569), and High (n = 434) groups. The approach to devising independent source of harmful behaviour groups was less straight forward.

Source and response severity data were combined in the questionnaire, in that, respondents identified the source and their response to the behaviour by entering a value in a cell or a number of cells. It was possible for respondents to enter values into 16 cells which represented four sources, each with four categories of response severity (i.e., a 4x4 matrix). For example, one respondent may have indicated two incidences of being upset by a co-worker, one by a supervisor, three by a patient and none by a visitor. Against the fear for safety response the same respondent may have entered no incidences by a co-worker that made the respondent fear for safety, one incidence by a supervisor, two by a patient and one by a visitor. There may have been no values entered under the source types (i.e., columns) against the distress or treatment responses (i.e., rows). In this example the respondent has reported 10 incidences of harmful behaviours in total with the supervisor source causing upset once and fear for safety twice and the patient source causing upset three times and fear for safety twice. Independent source groups were developed by a process of dummy coding, that is, 0 = not selected and 1= selected. The resulting four-number-codes represented 14 out of a possible 16 different combinations of sources, for example, 1000 = co-worker only, 0101 = supervisor and visitor, and 1111= all sources (i.e., co-workers, supervisors, patients/clients, and visitors/relatives were reported as perpetrators of harmful behaviours toward a

respondent). Combinations were assigned, with reference to the overall patterns of frequencies of harmful behaviours, to five groups that represented both the main characteristic (i.e., predominant source type) of the group and provided adequate numbers for each group. Five independent groups, presented in Table 3.8, included all source types (i.e., co-worker, supervisor, patient/client, and visitor/relative) combined, an exclusive co-worker source group, a supervisor source group that comprised supervisor, co-worker and patient sources, a patient source group that comprised patient and co-worker sources, and a visitor source group which included various combinations of other sources with a visitor source. The all sources group which included co-worker, supervisor, patient/client, and visitor/relative sources of harmful behaviours represented no less than four harmful behaviour experiences, therefore, the category could not be associated with low frequency of harmful behaviour category with 1-2 harmful behaviours.

The decision to include an all sources group (i.e., co-worker, supervisor, patient/client, and visitor/relative sources) instead of pooling data with visitor source allowed the visitor source group which spaned all frequency categories, as a more direct representation of visitor source of harmful behaviours that is not immediately associated with moderate or high frequency of harmful behaviour groups as is the case for all sources group that by inclusion of each source type a minimum frequency of four harmful behaviours is represented. Five sources instead of four increased the disparity between group sizes, however, goodness of fit statistics were comparable between five source groups models and four source group models. The all sources category is a reference group that represents participants who have experienced at least four harmful behaviours from four different sources in the previous 6-month period. These assignments to groups resulted in the same patterns across severity of response categories and provided adequate group sizes necessary for analyses.

Table 3.8

Frequencies of Harmful Behaviours by Source and Response Severity for Independent Groups

			Number of Harmful Behaviours Reported								
			Source				Response Severity				
Source Group	Combination	*N*	Co-worker	Supervisor	Patient	Visitor	Upset	Fear	Distress	Treatment	Total
All Sources	CSPV	153	888	443	531	405	925	806	407	129	2267
Co-worker	C	408	1200	0	0	0	649	260	205	86	1200
Supervisor	CSP, CS, SP, S	314	1359	671	444	0	735	464	956	319	2474
Patient	CP, P	393	1338	0	961	0	1212	924	106	57	2299
Visitor	CPV, CSV, SPV, CV, PV, SV	164	672	65	527	385	685	857	79	28	1649
Totals		1432	5457	1179	2463	790	4206	3311	1753	619	9889

Note. C = Co-worker, S = Supervisor or Manager, P = Patient or Client, and V = Visitor or Relative.

Formation of response severity groups followed a similar process of dummy coding and defining a new variable with 15 different combinations of the four responses. Assignment to a response group was determined by the most severe response of the combination, in that, physical or psychological treatment was the most severe and upset at the time was least severe. Table 3.9 displays the number of participants included in each response severity group and their distribution across source and frequency groups of harmful behaviours.

Table 3.9

Categorical Groups Across Levels of Severity of Response by Source and Frequency of Harmful Behaviours

		Source Group					Frequency		
Response	*N*	All Sources	Co-worker	Supervisor	Patient	Visitor	Low	Mod.	High
Upset	460	28	202	42	157	31	230	154	76
Fear	517	59	115	45	190	108	128	209	180
Distress	291	44	57	144	30	16	59	142	90
Treatment	164	22	34	83	16	9	12	64	88
Total *N*	1432	153	408	314	393	164	429	569	434

3.10. Summary of Preliminary Analyses

This chapter reported the validation of the scale measures of the Better Workplaces questionnaire and the formation of scales from 16 principal components. Screening of data revealed no concerns for missing data but violations of the assumption of homogeneity of variance and linearity which are required for most multivariate analyses were noted. Outliers amongst scale variables were retained. Outliers amongst harmful behaviour aspect variables were adjusted to within two standard deviations of the respective variable mean and were retained. In answer to Research Question 1, the prevalence rate of harmful behaviours was 26.83% of the sample. Significant statistical differences were found between harmful behaviour exposed and non-exposed groups on organisational and individual measures in answer to Research Question 2. Inspection of harmful behaviour variables in relation to

demographic and job-related variables revealed some differences among groups. Examination of frequency, source, and response data revealed participants reported co-worker source more frequently and these experiences accounted for the majority of harmful behaviours reported. Three different patterns of response in relation to the sources of harmful behaviours were evident. The harmful behaviour aspect variables were coded and assigned to independent, categorical variables in preparation for the main analyses reported in the next chapter.

Chapter 4 - Main Analyses of the Impact of Three Aspects of Harmful Behaviours

Research Questions 3-6 that relate to the proposed relationships among the selected variables and the frequency, source, and response severity of harmful behaviours are examined in the first section of this chapter. Given the violation of the homogeneity of variance assumption for regression, an alternate multivariate technique was chosen for analyses. Generalized Linear Models (GLZ) are a type of linear regression which is useful because the assumptions of linearity and homogeneity can be relaxed (Oracle, 2008). However, with this type of statistical technique the levels of the variable must be independent from other levels and relatively equal cell sizes are required.

4.1. Simple Main Effects and Interactions

Three GLZs were conducted for each of the variables of interest that included Trust in Supervisor and Supervisor Support, Individual Morale, Individual Distress, Workplace Morale, Workplace Distress and Work Pressures, and Supportive Peers. Each was entered as the dependent variable into a linear-type GLZ. The aspects of harmful behaviour variables were entered in pairs as predictors to examine the effects of each and the presence of any interactions between the aspects in regard to the scale variable. Simple main effects and interactions were requested and the maximum likelihood estimate was chosen to calculate parameter estimates. Wald Chi Square, Wald Confidence Intervals (95%), and statistics summarising goodness of fit, descriptives, and model were requested. Summary tables of the simple main effects and interactions are presented in the following in preference to statistical tables of each GLZ analysis, which are provided in a series of tables in Appendix E. Model fit statistics indicated poor fit of the models which may have been due to unequal cell sizes, outliers, lack of linearity, and heterogeneous variability. Transformation of variables was excluded as a remediation method because of difficulties associated with interpretation. Parameter estimates for each model are provided in Appendix F.

4.2. Results of GLZ Analyses

The summary tables display the model for each of the three combinations of harmful behaviour aspects for each of the organisational and individual measures. The aspects were paired frequency with source, frequency with response, and source with response. The first of the tables is described in detail as a guide to interpretation of the summary tables. The pattern of means in the tables was produced from the parameter estimates of the GLZ models. Words (e.g., Low, Mod., and High) and letters (e.g., U, F, D, and T; C, S, P, and V) representing levels and categories of each of the harmful behaviour aspects are used in preference to statistical means because the relationship among categories and levels is immediately apparent. Tables of the estimated marginal means of groups for each of the GLZ models are available in Appendix G.

Tests of significant difference between group means were produced by the GLZ analyses and reported in the parameter estimates in the output of the analyses (see Appendix F). Within the up-coming tables, the use of square brackets around terms indicates, first, that there was no significant difference between means of the groups within the brackets (e.g., [U > F]) and second, there was significant difference between means of bracketed groups (e.g., [U > F] > [D > T]. The reference group, against which significant difference was tested is marked with an asterisk (e.g., [D > T]*). The hypotheses models (e.g., Figure 4.1) are reproduced from the original figures in Chapter 1 to provide consistency and familiarity. Although it is a departure from convention, greyed-out portions comprising variables and arrows within the figures serve as reminders of the original figures. Greyed-out variables were not assessed in the particular analysis to which the figure refers.

Table 4.1

Summary Table of Effects Among Harmful Behaviour Aspects for Measures of Trust in Supervisor and Supervisor Support

Trust in Supervisor and Supervisor Support			
Model	Aspect	Overall Sig Diff	Pattern of Means
Frequency/Source	Frequency	✓	Low>Mod.> High
	Source	✓	[C>S>P]>[V>A]*
	Frequency x Source	ns	
Frequency/Response	Frequency	✓	[Low>Mod.]> [High]*
	Response	✓	[U]>[T>D]*>[F]
	Frequency x Response	✓	
Source/Response	Source	✓	C>P>S>V>A
	Response	✓	U>T>D>F
	Source x Response	ns	

Note. C = Co-worker, S = Supervisor, P = Patient, V = Visitor, A = All Sources, U = Upset at the time, F = Feared for safety, D = Distressed more than 1 month, and T = Sought physical of psychological treatment. [ ] = Surrounds reference group involved with significant difference. * Denotes significant difference (p = .05).

4.2.1. Trust in Supervisor and Supervisor Support

Higher scores of Trust in Supervisor and Supervisor Support indicated the perception of more trust in and support from a supervisor. Table 4.1 showed that significant simple main effects (✓) existed between levels of frequency and between sources in the first model related to mean scores of Trust in Supervisor and Supervisor Support. No interaction between frequency and source was evident (ns). The pattern of means for frequency showed that people who experienced low frequencies of harmful behaviours (Low) tended to report higher levels of trust in and support from a supervisor. As the frequency of harmful behaviours increased the trust in and support from a supervisor decreased, shown in Figure 4.1. Therefore, the impact of greater frequency of harmful behaviours is a more negative perception of trust in and support from a supervisor.

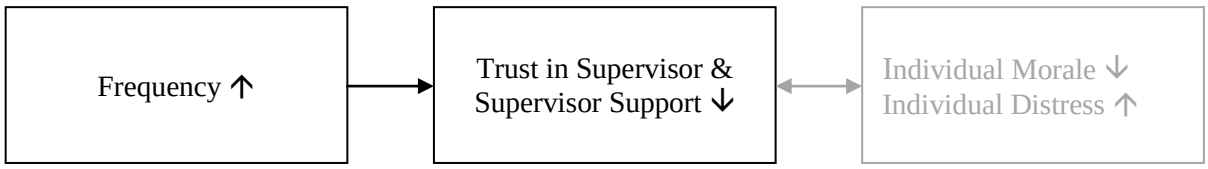


Figure 4.1. Relationship Between Frequency of Harmful Behaviours and Trust in Supervisor and Supervisor Support in the Frequency by Source Model.

Participants who reported a combination of all sources (i.e., harmful behaviour directed towards the recipient was perpetrated by co-workers, supervisors, patients, and visitors) and visitors as the perpetrators of harmful behaviours reported lower levels of trust in and support from a supervisor (>V>A) than other sources. In fact, means of Trust in Supervisor and Supervisor Support for co-worker, supervisor, and patient sources ([C>S>P]) were significantly different to visitor and all sources ([V>A]*). Therefore, the source of harmful behaviours that included visitors impact the perception of trust in supervisor and supervisor support more negatively than harmful behaviours perpetrated by co-worker, supervisor, and patient sources, shown in Figure 4.2.

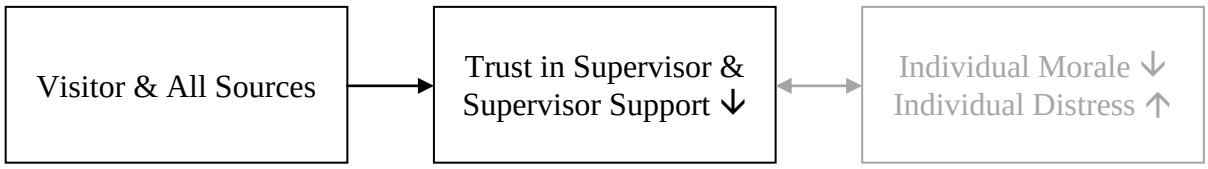


Figure 4.2. Association of Source of Harmful Behaviours and Trust in Supervisor and Supervisor Support in the Frequency by Source Model.

The frequency by response model produced significant simple main effects and a significant interaction between levels of frequency and response categories for measures of Trust in Supervisor and Supervisor Support. The pattern of means for frequency indicated participants who reported low and moderate frequencies ([L>M]) achieved significantly different means to participants who reported high frequencies of harmful behaviours ([High]*). Therefore, the impact of higher frequencies of harmful behaviours is a more negative appraisal of Trust in Supervisor and Supervisor Support, consistent with Figure 4.1.

The pattern of means for the response categories showed that participants who reported upset at the time recorded significantly higher levels of trust in and support from a supervisor ([U>]) than those who reported seeking treatment or were distressed longer than one month ([>T>D]*). Participants who reported fears for safety recorded significantly lower levels of trust in and support from a supervisor ([>F]) than participants included in the treatment and distress categories ([>T>D]*). Therefore, the impact of harmful behaviours that elicit fears for safety is a more negative appraisal of trust in and support from a supervisor, shown in Figure 4.3.

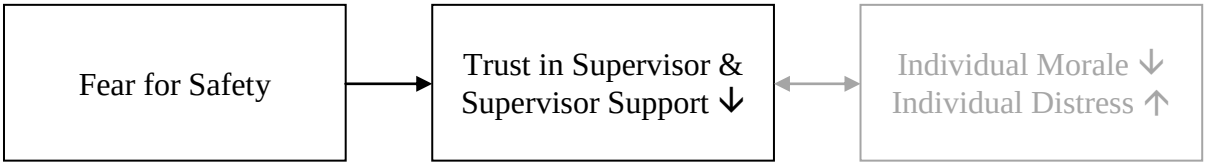
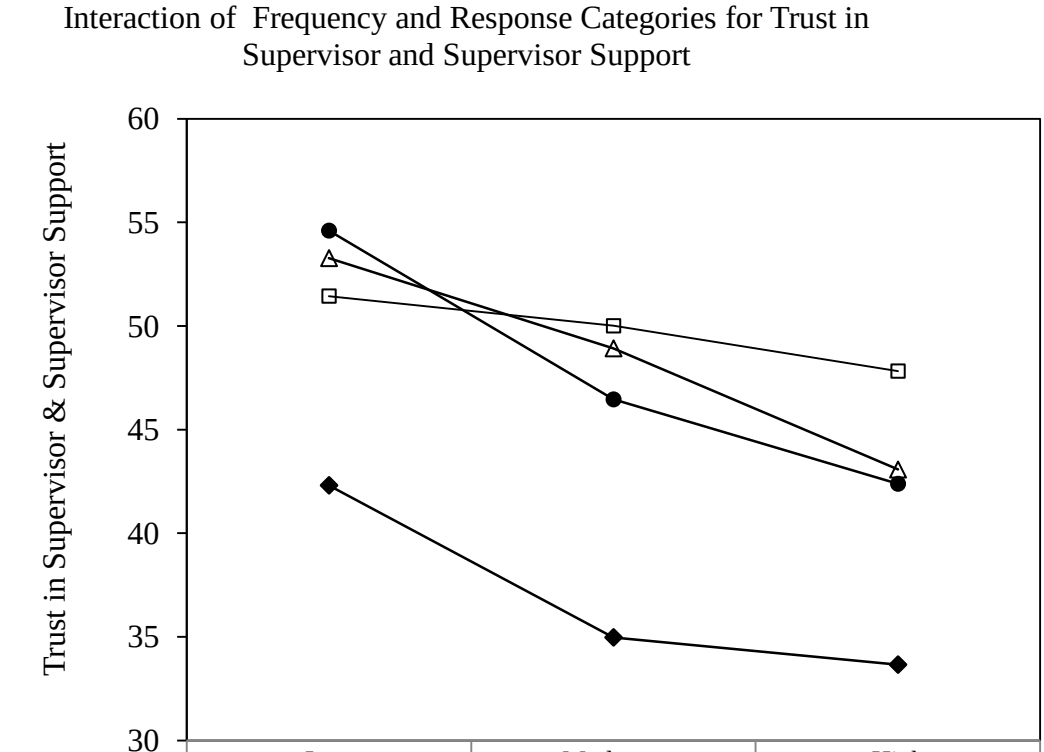


Figure 4.3. Association of Fears for Safety Response to Harmful Behaviours and Trust in Supervisor and Supervisor Support in the Frequency by Response Model.

A significant interaction between response categories and frequency levels, depicted in Figure 4.4, shows that mean scores of Trust in Supervisor and Supervisor Support decrease with increases in the frequency of harmful behaviours between low to moderate levels for participants who reported fears for safety and prolonged distress. Harmful behaviours that upset at the time had little impact on the appraisal of Trust in Supervisor and Supervisor Support.

The source by response model produced significant simple main effects (✓) for both source and response but no interaction (ns) was evident. The pattern of means for source showed that people who experienced harmful behaviours from all sources (i.e., all four perpetrator types) and visitors (>V>A) tended to report lower levels of trust in and support from a supervisor, consistent with Figure 4.2. Trust in Supervisor and Supervisor Support means were lower for participants who reported fears for safety (>F) than other response categories, consistent with Figure 4.3. Therefore, the impact of fears for safety response to a

harmful behaviour is a more negative appraisal of Trust in Supervisor and Supervisor Support.



	Low	Moderate	High
Upset	51.44	50.01	47.82
Fear	42.31	34.97	33.66
Distress	54.60	46.46	42.38
Treatment	53.27	48.92	43.07

Figure 4.4. Interaction of Response with the Frequency of Harmful Behaviours for Measures of Trust in Supervisor and Supervisor Support. Trust in Supervisor and Supervisor Support scores ranged between 15-75. Group means are included in the table below the graph of the interactions. Error bars were excluded for visual clarity.

4.2.2. Individual Morale

Higher scores for Individual Morale indicated higher levels of positive affect reported by the participant in relation to self at work. Scores ranged between 7-49. All models from GLZ analyses are presented in Table 4.2. Significant simple main effects and lack of significant interactions indicated that frequency, source, and response categories independently affect the appraisal of Individual Morale.

Table 4.2

Summary Table of Effects Among Harmful Behaviour Aspects for Measures of Individual Morale

Individual Morale			
Model	Aspect	Overall Sig Diff	Pattern of Means
Frequency/Source	Frequency	✓	Low>Mod.> High
	Source	✓	[S]>C>V>[P]>[A]*
	Frequency x Source	ns	
Frequency/Response	Frequency	✓	[Low]>[Mod.]>[High]*
	Response	✓	D>T>U>F
	Frequency x Response	ns	
Source/Response	Source	✓	C>P>S>V>A
	Response	✓	U>D>[T]*>[F]
	Source x Response	ns	

Note. C = Co-worker, S = Supervisor, P = Patient, V = Visitor, A = All Sources, U = Upset at the time, F = Feared for safety, D = Distressed more than 1 month, and T = Sought physical of psychological treatment. [ ] = Surrounds group involved with significant difference. * Denotes significant difference (p = .05) positioned against the parameter estimate reference group.

The first model, frequency by source, produced significant simple main effects of both frequency and sources of harmful behaviours in appraisals of Individual Morale. No interaction between frequency and source was evident. The pattern of means for frequency showed that people who experienced low frequencies of harmful behaviours tended to report higher levels of positive affect. As the frequency of harmful behaviours increased, Individual Morale decreased, shown in Figure 4.5. Therefore, the impact of greater frequency of harmful behaviours is a more negative appraisal of Individual Morale.

Participants who reported a combination of all sources as the perpetrators of harmful behaviours reported lower levels of Individual Morale than other sources. The pattern of means for source shows supervisor ([S]) and patient ([P]) source means were significantly

Figure 4.5. Association Between Frequency of Harmful Behaviours and Individual Morale in the Frequency by Source Model.

different from all sources mean ([A])*, yet, co-worker and visitor source means were higher than patient source. This was due to the size of the associated standard errors of the means and resulting confidence intervals. Attention is turned to the patient source because all sources is a reference group inherently associated with frequency and includes patient source within the combination. Therefore, the impact of all sources and patient source is a more negative perception of Individual Morale, depicted in Figure 4.6.

Figure 4.6. Association Between Patient Sources of Harmful Behaviours and Individual Morale in the Frequency by Source Model.

The frequency by response model revealed significant simple main effects for frequency and response but there no interaction was present. The pattern of means for frequency showed that participants who experienced increasing frequencies of harmful behaviours reported decreasing levels of positive affect, which is consistent with Figure 4.5. Therefore, the impact of frequency of harmful behaviours is a more negative appraisal of Individual Morale. The pattern of means for response categories indicated that participants who recorded fears for safety in response to harmful behaviours reported the lower levels of positive affect. Therefore, harmful behaviours that elicit fears for safety negatively impact appraisals of Individual Morale, shown in Figure 4.7.

Figure 4.7. Association of Fears for Safety Response to Harmful Behaviours and Individual Morale in the Frequency by Response Model.

The source by response model produced significant simple main effects for both source and response but there was no interaction. The pattern of means for sources indicated that the reference group combination of all sources (i.e., perpetrators include co-workers, supervisors, patients, and visitors) was associated with lower measures of positive affect. The visitor source among the separate source groups was associated with lower levels of Individual Morale. Therefore, the impact of all sources and visitor source of harmful behaviours is a more negative appraisal of Individual Morale, shown in Figure 4.8. The pattern of means for response showed a significant difference between treatment response and fears for safety response which was associated with the lowest level of Individual Morale. Therefore, harmful behaviours that elicit fears for safety impact perceptions of Individual Morale, previously depicted in Figure 4.7.

Figure 4.8. Association Between Visitor Sources of Harmful Behaviours and Individual Morale in the Source by Response Model.

4.2.3. Individual Distress

Higher scores for Individual Distress indicated higher levels of negative affect reported by the participant in relation to self at work. Table 4.3 provides a summary of the models that assessed the association between aspects of harmful behaviours and Individual Distress.

Table 4.3

Summary Table of Effects Among Harmful Behaviour Aspects for Measures of Individual Distress

Individual Distress			
Model	Aspect	Overall Sig Diff	Pattern of Means
Frequency/Source	Frequency	✓	High>Mod.>Low
	Source	✓	[A]*>V>[P>S>C]
	Frequency x Source	ns	
Frequency/Response	Frequency	✓	[High]*>[Mod.]>[Low]
	Response	✓	[F]>[T>D>U]*
	Frequency x Response	✓	
Source/Response	Source	✓	[A]*>V>S>P>[C]
	Response	✓	[F]>D>[T]*>U
	Source x Response	✓	

Note. C = Co-worker, S = Supervisor, P = Patient, V = Visitor, A = All Sources, U = Upset at the time, F = Feared for safety, D = Distressed more than 1 month, and T = Sought physical of psychological treatment. [ ] = Surrounds group involved with significant difference. * Denotes significant difference (p = .05) positioned against the parameter estimate reference group.

The frequency by source model of Individual Distress produced significant simple main effects for frequency and source but there was no interaction. The pattern of means for frequency showed that increasing levels of frequency were accompanied by increasing levels of Individual Distress, as shown in Figure 4.9. Therefore, frequency of harmful behaviours impacts the appraisal of Individual Distress.

Figure 4.9. Association Between Frequency of Harmful Behaviours and Individual Distress in the Frequency by Source Model.

The pattern of means for source showed that all sources was associated with higher levels of Individual Distress but was not statistically different to the visitor source which had

the next highest mean. Therefore, combinations of all sources and visitor sources of harmful behaviours impact appraisal of Individual Distress, shown in Figure 4.10.

Figure 4.10. Association Between Visitor Sources of Harmful Behaviours and Individual Distress in the Frequency by Source Model.

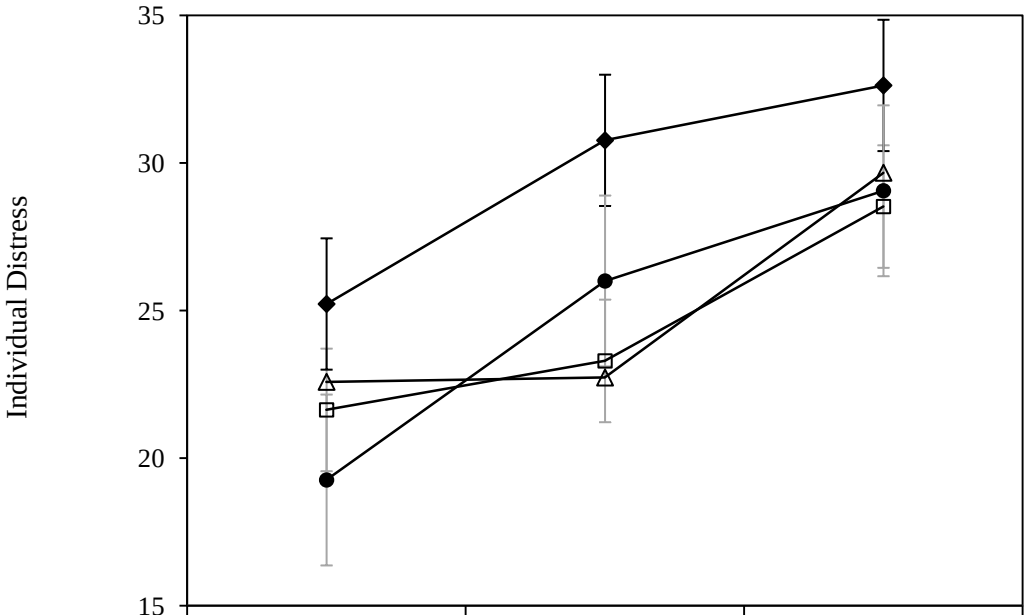
The frequency by response model of Individual Distress produced significant simple main effects for both terms and a significant interaction between levels of frequency and categories of response. The pattern of means for frequency showed increasing frequency was associated with increasing Individual Distress, consistent with Figure 4.9. Therefore, frequency of harmful behaviours impacts appraisal of Individual Distress. The pattern of means of response to harmful behaviours showed that fear for safety was related to higher levels of Individual Distress. Significant differences emerged between the fear category and other response categories. Therefore, harmful behaviour that elicits fear for safety impacts Individual Distress, as shown in Figure 4.11.

Figure 4.11. Association Between Fears for Safety Response and Individual Distress Frequency by Response Model.

A significant interaction between frequency levels and response categories, depicted in Figure 4.12, shows that mean scores of Individual Distress increase for participants who reported fears for safety with higher frequency of harmful behaviours. While threshold or tolerance effects are evident at low to moderate frequency of harmful behaviours for upset and treatment response categories, higher levels of Individual Distress were associated with

higher frequencies for these response groups. Therefore, the interaction between frequency and response impacts appraisal of Individual Distress.

Interaction of Frequency and Response for Individual Distress



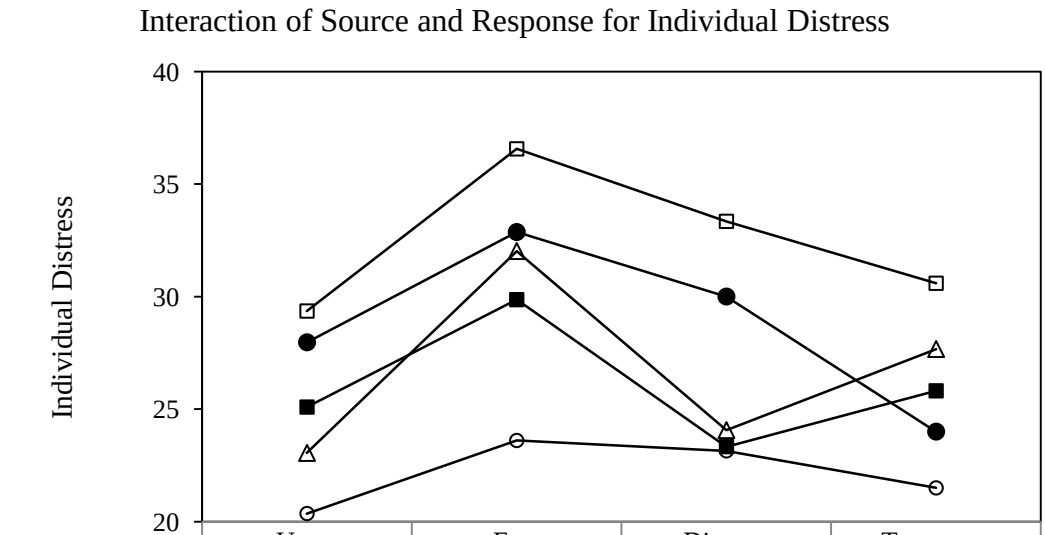
	Low	Moderate	High
Upset	21.63	23.29	28.52
Fear	25.22	30.76	32.63
Distress	19.26	26.00	29.06
Treatment	22.58	22.73	29.67

Figure 4.12. Interaction of Frequency and Response Categories of Harmful Behaviours for Measures of Individual Distress. Individual Distress scores ranged between 7-49. Group means are included in the table below the graph of the interactions. Error bars show the standard error of the mean.

The source by response model of Individual Distress produced significant simple main effects for both terms and a significant interaction between sources and categories of response. The pattern of means for source showed that all sources then visitor sources were associated with higher levels of Individual Distress. Therefore, consistent with Figure 4.10, sources of harmful behaviours that include all sources and visitor sources more negatively impact the appraisal of Individual Distress than other sources. Consistent with Figure 4.11, the pattern of means for response to harmful behaviours showed fear for safety was

associated with higher levels of Individual Distress. Therefore, the impact of harmful behaviours the elicit fears for safety is an increasing level of distress.

Interaction between source and response category was significant. The all sources category, which was inherently associated with higher frequencies of harmful behaviour, provided a comparison pattern for other categories, displayed in Figure 4.13. Among the sources of harmful behaviours the largest change in Individual Distress was apparent for supervisor source across response categories. Increase in Individual Distress was associated with behaviours perpetrated by supervisor or manager sources that elicited fears for safety. Therefore, the impact of specific combinations of source and response to harmful behaviours is a higher level of Individual Distress.



	Upset	Fear	Distress	Treatment
Co-worker	20.36	23.61	23.15	21.50
Supervisor	23.05	32.02	24.06	27.67
Patient	25.09	29.86	23.33	25.81
Visitor	27.97	32.87	30.00	24.00
All Sources	29.36	36.56	33.34	30.59

Figure 4.13. Interaction of Source and Response of Harmful Behaviours for Measures of Individual Distress. Individual Distress scores ranged between 7-49. Group means are included in the table below the graph of the interactions. Errors bars were excluded for visual clarity.

4.2.4. Workplace Morale

Higher scores for Workplace Morale indicated more positive perceptions of the morale of staff in the work area. Table 4.4 provides a summary of the GLZ models of aspects of harmful behaviours for Workplace Morale.

Table 4.4

Summary Table of Effects Among Harmful Behaviour Aspects for Measures of Workplace Morale

Workplace Morale			
Model	Aspect	Overall Sig Diff	Pattern of Means
Frequency/Source	Frequency	ns	Low>Mod.>High
	Source	✓	[C]>S>P>V>[A]*
	Frequency x Source	ns	
Frequency/Response	Frequency	✓	[Low]>[Mod.>High]*
	Response	✓	U>[T]*>D>[F]
	Frequency x Response	ns	
Source/Response	Source	✓	C>S>P>V>A
	Response	✓	U>D>[T]*>[F]
	Source x Response	ns	

Note. C = Co-worker, S = Supervisor, P = Patient, V = Visitor, A = All Sources, U = Upset at the time, F = Feared for safety, D = Distressed more than 1 month, and T = Sought physical of psychological treatment. [ ] = Surrounds group involved with significant difference. * Denotes significant difference (p = .05) positioned against the parameter estimate reference group.

The frequency by source model of Workplace Morale produced a significant simple main effect for source but frequency failed to produce an effect and there was no interaction between aspects. Figure 4.14 depicts the lack of association between levels of frequency of harmful behaviours and appraisal of Workplace Morale.

Figure 4.14. Lack of Association Between Frequency of Harmful Behaviours and Workplace Morale in the Frequency by Source Model.

The pattern of means for source of harmful behaviours shows that means of Workplace Morale was significantly lower for participants who reported all sources (i.e., co-worker, supervisor, patient, and visitor perpetrators) than those who reported co-worker sources. All sources group was associated with at least a moderate frequency of harmful behaviours, yet frequency failed to produce an effect, as noted previously. Therefore, the impact of harmful behaviours perpetrated by combinations of all sources is a more negative appraisal of Workplace Morale, shown in Figure 4.15.

Figure 4.15. Association Between Source of Harmful Behaviours and Workplace Morale in the Frequency by Source Model.

The frequency by response model produced significant simple main effects for both frequency and response but there was no interaction. The pattern of means for frequency showed a significant difference in Workplace Morale means between low and moderate to high levels. Therefore, the impact of greater frequency of harmful behaviours is a more negative appraisal of Workplace Morale, illustrated by Figure 4.16.

Figure 4.16. Association Frequency of Harmful Behaviours and Workplace Morale in the Frequency by Response Model.

The pattern of means for response categories showed significantly lower means of Workplace Morale for participants who reported fears for safety in response to harmful behaviours. Therefore, harmful behaviours that elicit fears for safety impact appraisals of Workplace Morale, as shown in Figure 4.17.

Figure 4.17. Association between Fear for Safety and Workplace Morale in the Frequency by Response Model.

The source by response model produced significant simple main effects for both source and response in relation to measures of Workplace Morale but no interaction emerged. Pattern of means indicated that the impact of all sources (i.e., co-worker, supervisor, patient, and visitor perpetrators) was a more negative appraisal of Workplace Morale, consistent with Figure 4.15. The patter of means for response, consistent with Figure 4.17, shows that the impact of harmful behaviours that elicit fears for safety is a more negative appraisal of Workplace Morale than for other response categories.

4.2.5. Workplace Distress and Work Pressures

Higher scores for Workplace Distress and Work Pressures indicated perception of more negative affect and job-related stressors in the work area. Table 4.5 provides a summary of the three GLZ models assessing aspects of harmful behaviours on measures of Workplace Distress and Work Pressures.

No effect was evident for frequency in the frequency by source model of Workplace Distress and Work Pressures but a significant simple main effect for source and a significant interaction between frequency and source emerged. Figure 4.18 depicts the lack of association between frequency and Workplace Distress and Work Pressures. The pattern of means for source showed that visitor sources of harmful behaviours then all sources were related to higher levels of Workplace Distress and Work Pressures. Therefore, visitor source and all sources of harmful behaviours impact the appraisal of Workplace Distress and Work Pressures, as shown in Figure 4.19.

Table 4.5

Summary Table of Effects Among Harmful Behaviour Aspects for Measures of Workplace Distress and Work Pressures

Workplace Distress and Work Pressures			
Model	Aspect	Overall Sig Diff	Pattern of Means
Frequency/Source	Frequency	ns	High>Mod.>Low
	Source	✓	V>[A]*>[P]>S>[C]
	Frequency x Source	✓	
Frequency/Response	Frequency	✓	High>Mod.>Low
	Response	✓	[F]>[T]*>D>[U]
	Frequency x Response	✓	
Source/Response	Source	✓	A>V>S>P>C
	Response	✓	T>F>D>U
	Source x Response	✓	

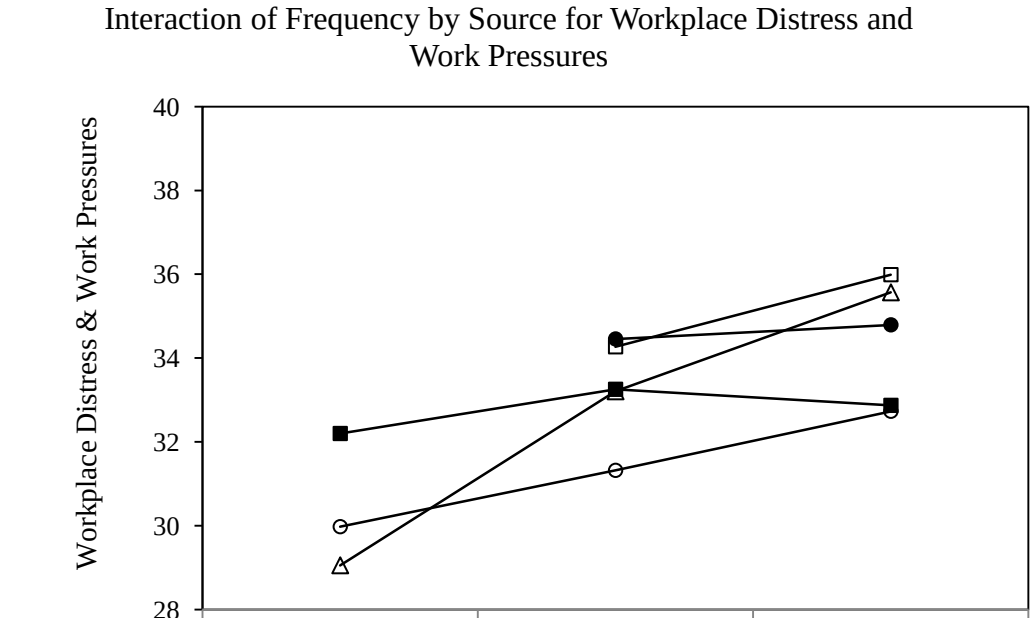
Note. C = Co-worker, S = Supervisor, P = Patient, V = Visitor, A = All Sources, U = Upset at the time, F = Feared for safety, D = Distressed more than 1 month, and T = Sought physical of psychological treatment. [ ] = Surrounds group involved with significant difference. * Denotes significant difference (p = .05) positioned against the parameter estimate reference group.

Figure 4.18. Lack of Association Between Frequency of Harmful Behaviours and Workplace Distress and Work Pressures in the Frequency by Source Model.

Figure 4.19. Association between Source of Harmful Behaviours and Workplace Distress and Work Pressures in the Frequency by Source Model.

The interaction between frequency and source is displayed in Figure 4.20. Examination of cell sizes revealed visitor source by low frequency cell comprised a single

case with a mean of 39. This datum was removed from the figure to aide clarity. The interaction between source and frequency showed that increasing frequency of harmful behaviours from a supervisor source was associated with higher levels of Workplace Distress and Work Pressures.



	Low	Moderate	High
Co-worker	29.98	31.32	32.73
Supervisor	29.06	33.21	35.57
Patient	32.20	33.25	32.87
Visitor		34.46	34.79
All Sources		34.27	35.99

Figure 4.20. Interaction of Frequency and Source of Harmful Behaviours for Workplace Distress and Work Pressures. Workplace Distress and Work Pressures scores ranged between 9-45. Group means are included in the table below the graph of the interactions. Errors bars were excluded for visual clarity.

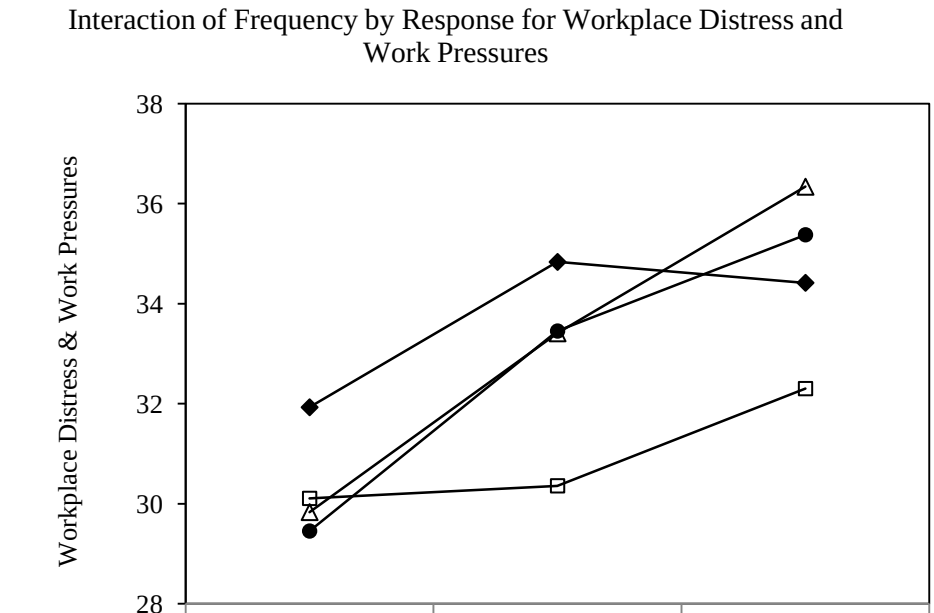
The frequency by response model revealed significant simple main effects and a significant interaction between aspects of harmful behaviours. The pattern of means for frequency indicated that increasing frequency was related to increasing levels of Workplace Distress and Work Pressures, illustrated by Figure 4.21.

Figure 4.21. Association between Frequency of Harmful Behaviours and Workplace Distress and Work Pressures in the Frequency by Response Model.

The pattern of means for response to harmful behaviours, shown in Figure 4.22, illustrates that harmful behaviours that elicit fears for safety are associated with higher levels of Workplace Distress and Work Pressures.

Figure 4.22. Association between Response to Harmful Behaviours and Workplace Distress and Work Pressures in the Frequency by Response Model.

The interaction between frequency and response is shown by Figure 4.23. Levels of Workplace Distress and Work Pressures increase with higher levels of frequency of harmful behaviours for participants who reported ongoing distress and for those who reported seeking physical or psychological treatment in responses to a harmful behaviour.



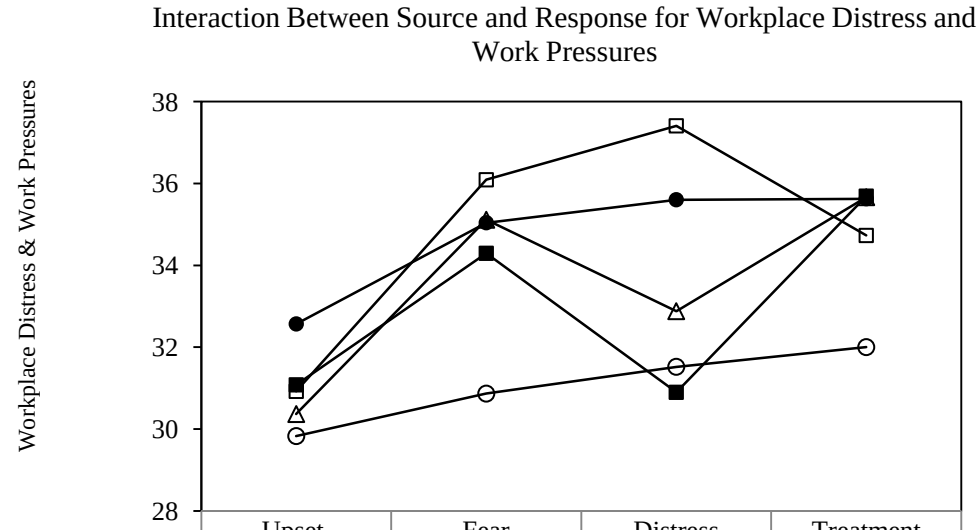
	Low	Moderate	High
Upset	30.11	30.36	32.30
Fear	31.93	34.83	34.42
Distress	29.45	33.45	35.38
Treatment	29.83	33.41	36.34

Figure 4.23. Interaction of Frequency and Response Aspects of Harmful Behaviours for Workplace Distress and Work Pressures. Group means are included in the table below the graph of the interactions. Errors bars were excluded for visual clarity.

The source by response model produced significant simple main effects for both source and response and a significant interaction between the two harmful behaviour aspects. The pattern of means for source, consistent with Figure 4.19, showed visitor source and all sources (i.e., co-workers, supervisors, patients, and visitors) were associated with higher levels of Workplace Distress and Work Pressures. The pattern of means for response showed that the seeking of physical of psychological treatment in response to a harmful behaviour was associated with higher levels of Workplace Distress and Work Pressures, displayed in Figure 4.24 and Work Pressures in the Source by Response Model.

Figure 4.24. Association between Response to Harmful Behaviours and Workplace Distress

An interaction between source and response categories, depicted in Figure 4.25, shows treatment and fear for safety responses to supervisor and patient sources were associated with higher levels of Workplace Distress and Work Pressures. Interestingly, ongoing distress from a patient source did not impact appraisal of Workplace Distress and Work Pressures.



	Upset	Fear	Distress	Treatment
Co-worker	29.83	30.86	31.52	32.00
Supervisor	30.37	35.11	32.88	35.66
Patient	31.08	34.29	30.90	35.69
Visitor	32.57	35.04	35.60	35.63
All Sources	30.92	36.09	37.40	34.73

Figure 4.25. Interaction of Source and Response Aspects of Harmful Behaviours for Workplace Distress and Work Pressures.

4.2.6. Supportive Peers

Higher scores for Supportive Peers indicated perception of higher levels of support from co-workers in workplace. Table 4.6 provides a summary of the three models assessing aspects of harmful behaviours on measures of Supportive Peers.

Table 4.6

Summary Table of Effects Among Harmful Behaviour Aspects for Measures of Supportive Peers

Supportive Peers			
Model	Aspect	Overall Sig Diff	Pattern of Means
Frequency/Source	Frequency	ns	Low>Mod.>High
	Source	✓	[C>S]>P>V>[A]*
	Frequency x Source	ns	
Frequency/Response	Frequency	✓	[Low]>Mod.>[High]*
	Response	✓	[T]*>D>U>[F]
	Frequency x Response	ns	
Source/Response	Source	✓	[C]>P>S>V>[A]*
	Response	✓	[T]*>D>U>[F]
	Source x Response	ns	

The frequency by source model of Supportive Peers produced a significant simple main effect for source but frequency failed to produce an effect and there was no interaction between aspects. Figure 4.26 depicts the lack of association between levels of frequency of harmful behaviours and appraisal of Supportive Peers.

Figure 4.26. Lack of Association Between Frequency of Harmful Behaviours and Supportive Peers in the Frequency by Source Model.

The pattern of means for source of harmful behaviours showed that a combination of all sources was associated with lower levels of Supportive Peers, depicted in Figure 4.27.

Visitor and patient sources are also implicated because the pattern of means showed they were not significantly different from the all sources reference group. Therefore, harmful behaviours perpetrated by a combination of all sources, visitors, and patients impact appraisals of the level of support received from peers more negatively.

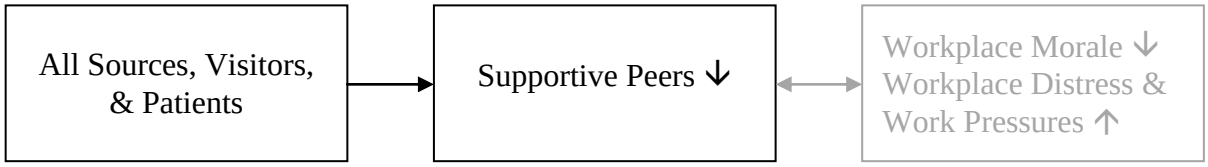


Figure 4.27. Association Between Source of Harmful Behaviours and Supportive Peers Frequency by Source Model.

The frequency by response model revealed significant simple main effects for frequency and response but no interaction emerged. Figure 4.28 displays the relationship of increasing frequency of harmful behaviours with decreasing Supportive Peers. Therefore,

Figure 4.28. Relationship Between Frequency of Harmful Behaviours and Supportive Peers in the Frequency by Response Model.

the impact of higher frequency of harmful behaviours is a more negative appraisal of support received from co-workers in the workplace. A significant simple main effect emerged for the fears for safety response. Therefore, the impact of harmful behaviours that elicit fears for safety is a more negative appraisal of the support received from peers, displayed in Figure 4.29.

Figure 4.29. Relationship Between Response to Harmful Behaviours and Supportive Peers in the Frequency by Response Model.

The source by response model revealed significant simple main effects for source and response but no interaction was evident. The pattern of means showed that patient, supervisor, and visitor sources were not significantly different from all sources. The combination of all sources, patient, supervisor, and visitor sources were associated with more negative appraisals of the support received from co-workers, as shown in Figure 4.30. A significant simple main effect emerged for the fears for safety response. Therefore, the impact of harmful behaviours that elicit fears for safety is a more negative appraisal of the support received from peers which is consistent with Figure 4.29.

Figure 4.30. Relationship Between Source of Harmful Behaviours and Supportive Peers.

4.3. Chapter Summary

A total of 18 GLZs were conducted in order to address Research Questions 3-6. The impact of frequency, source, and response severity of harmful behaviours on organisational factors (i.e., Trust in Supervisor and Supervisor Support, Workplace Morale, and Workplace Distress and Work Pressures, and Supportive Peers) and individual factors (i.e., Individual Morale and Individual Distress) was tested. A discussion of these results will be presented in the next chapter. Results of the main analyses (i.e., the GLZs) will be discussed according to the format outlined by the Research Questions and related hypotheses.

Chapter 5 - Discussion

5. Summary of Results

The preliminary analysis involved a number of steps to prepare the data for the main analyses. Data screening revealed no concerns about missing data or outliers that have the potential to influence analyses. A PCA was used as an initial step to define scale measures of organisational and individual factors because the Better Workplaces survey had not been validated previously. Sixteen principal components were extracted and the magnitude of the loadings across components determined the inclusion or exclusion of items to scales. Cronbach alpha reliability estimates calculated for each of the scale indicated high internal consistency with the exception of the OCB scale which comprised two items. Correlations among the components were acceptable (r = .01- .64). Descriptive statistics of demographic and work-related characteristics of the sample were produced. A comparison between people who were exposed to harmful behaviours in the previous 6-month period and people who not revealed significant statistical differences on organisational climate and individual affect measures with the exception of the OCB scale which may have been due to the low reliability of the scale, mixed perceptions of in-role and extra-role behaviours, or a combination of both.

Poorer outcomes across organisational climate and individual wellbeing measures for the exposed group established a baseline from which to proceed with the examination of the relationships among organisational factors, individual factors, and aspects of harmful behaviours that included the frequency of incidence, the source type, and the psychological, emotional, or physical response to the harmful behaviour. Patterns emerged in the examination of frequency of harmful behaviours. Harmful behaviours perpetrated by co-workers and patients more often upset the recipient at the time. Ongoing distress lasting more than one month was the most frequent response when the perpetrator was identified as a supervisor. Harmful behaviours from visitors or relatives of patients more often induced

fears for safety. Some deviations from these overall frequency patterns emerged among demographic and job-related variables. Survey respondents had different levels of contact with co-workers, supervisors, patients, and visitors because of the diversity of occupations, duties and responsibilities within the large health organisation.

The main analyses focused on the relationships between frequency, source, and response aspects of harmful behaviours and four measures of organisational health and two individual wellbeing measures. Frequency, source, and response aspects of harmful behaviours showed different relationships with the organisational and individual factors. Frequency was an important predictor of Trust in Supervisor and Supervisor Support, Individual Morale, and Individual Distress. The visitor source of harmful behaviours was a predictor of Trust in Supervisor and Supervisor Support. The fears for safety response was a predictor of Trust in Supervisor and Supervisor Support, Individual Morale, Individual Distress, and Workplace Morale. Visitor and the combination of all sources were predictors of Workplace Distress and Work Pressures, Workplace Morale, and Peer Support. The interactions of aspects of harmful behaviours with organisational and individual measures revealed that specific characteristics of the measures may determine the different impacts of frequency, source, and response aspects of harmful behaviours. These are discussed in relation to the research questions in the following.

5.1. Research Question 1: Prevalence of Harmful Behaviours

Part 1 of the first aim of the current study concerned the prevalence of harmful behaviours in the organisation. More than a quarter of the participants affirmed that they had experienced harmful behaviours in the workplace in the previous six months. The prevalence rate of 26.83% was high in comparison with the estimate of 15% in 2005 (WorkSafe Victoria, 2005). However, that estimate was not industry-specific. Higher prevalence rates have been associated with education and health care industries. This study's prevalence rate,

associated with the health care industry, was high by comparison to international studies, for example, a prevalence rate of 13% among Portuguese nurses (Sá & Fleming, 2008).

Consistent with expectations, the prevalence rate fell within the range of 25%-35% which was based on Australian studies of doctors (Askew et al., 2012) and nurses (Demir & Rodwell, 2012) that used the self report method, one without and one with a definition of bullying, respectively. The current study's prevalence rates within medical (23.2%) and nursing (32.21%) occupations was very similar to the rates reported by Askew et al. (2012) and Demir and Rodwell (2012). Given that the current study's data was collected in 2008 and the similarities with the more recently established prevalence rates, it may appear that little has changed since the introduction and development of anti-bullying policies within Australian health care organisations. However, much of the harmful behaviour reported in these studies did not meet bullying criteria.

In general, prevalence rates of workplace harmful behaviours are not established by the use of strict criteria. Agervold (2009) found less than one percent (0.4%) of a sample of government employees reported harmful behaviour experiences that met the criterion of one act per week as set out by Leymann (1996). A very small minority (n = 23, > 0.02%) of the current study's participants reported more than 25 experiences over a 6-month period that negatively affected them. Such low rates would be unlikely to draw the attention of researchers and even less likely, the attention of organisations. A behaviour can be harmful and have lasting effects when it occurs infrequently (Branch, 2008). The interest of researchers, organisations, and governments in the harmful workplace behaviours is not dependent on a limited set of behaviours that conform to specific criteria but to the consequential effects on productivity. The current study used a self-report without-a-definition methodology which is prone to under reporting (Nielsen et al., 2010). Therefore,

the prevalence of harmful behaviours found in the current study was high. Evidence of the impact of a high prevalence of harmful behaviours in the workplace is presented next.

5.2. Research Question 2: Difference Between Exposed and Non-exposed Harmful Behaviour Groups

Part 2 of the first aim of the current study concerned the impact of the experience of harmful behaviours to organisational and individual factors. Statistically significant difference was found in relation to every organisational and individual measure with the exception of the OCB measure. This measured an aspect of employee engagement but the scale reliability was poor. The differences between non-exposed participants and participants who were exposed to harmful behaviours were consistent with previous research. Workplace harmful behaviours are associated with poorer psychosocial environments (Agervold, 2009; Einarsen, 1999) that included lower levels of supervisor support, peer support, role clarity, appraisal and recognition, and higher levels of work overload and work pressure (Agervold, 2009; Einarsen, 1999) and negative affectivity (Bowling et al., 2010; Johnson, 2009; Mikkelsen & Einarsen, 2002; Tepper et al., 2006).

Recipients of harmful behaviours were less happy, enthusiastic, and energised and experienced more negative affectivity than other workers. They perceived the attitudes and spirit of co-operation within their work areas more negatively, viewed peers or co-workers as less helpful or supportive, and felt more pressure to perform under the perceived excessive workloads. Workers exposed to harmful behaviours had less trust in the three levels of leadership and had less confidence in management practices and workplace health and safety practices than other workers. They perceived that there was less opportunity for professional development and training, less clarity of their work roles and the goals of the workplace, less recognition of their work efforts, and less feedback on their work performance than workers who were not exposed to harmful behaviours. Overall, workers exposed to harmful

behaviours were less satisfied with the quality of their work life and were not as proud of the organisation as other workers.

The cumulative effect of harmful behaviour exposure was demonstrated by the poorer outcomes of organisational and individual factors. However, individuals do not share the same perceptual experiences and harmful behaviours differ in various aspects, such as frequency, source, and response severity. The second aim of the current study was to examine three aspects of harmful behaviours to identify the potential risk factors that frequency, source, and response severity pose to organisational and individual measures.

5.3. Research Question 3: Impact of Frequency of Harmful Behaviours

The first aspect of harmful behaviours was the frequency with which participants experienced them over a period of six months. Hypotheses concerning the frequency of harmful behaviours and organisational factors were supported. Significant simple main effects were evident for both GLZ models (i.e., frequency by source and frequency by response) that indicated that the frequency of harmful behaviours is important to the appraisal of Trust in Supervisor and Supervisor Support. Levels of the trust in a supervisor and perceived level of supervisor support decreased as the frequency of harmful behaviours increased. The frequency of harmful behaviour was a risk factor for Trust in Supervisor and Supervisor Support.

However, significant simple main effects of frequency were limited to the frequency by response models for the other organisational factors that included Supportive Peers, Workplace Morale, and Workplace Distress and Work Pressures. In the absence of the identity of the source of harmful behaviours, frequency is a risk factor for the perceived level of support received from peers or co-workers, the morale in the work area, and the distress and pressure felt in the work area. This is consistent with concept that the effect on a

measure is determined by the particular characteristics of each of the aspects of harmful behaviours and the contextual relationship in which it occurs (Chang & Lyons, 2012).

Hypotheses relating to frequency of harmful behaviours and individual factors were supported. Significant simple main effects were present for both frequency by source and frequency by response models of Individual Morale and Individual Distress. Higher levels of frequency are associated with lower levels of morale and higher levels of distress experienced by an individual at work. In summary, the frequency with which harmful behaviours occur is an important risk factor for organisational and individual measures. Figure 5.1 displays the associations among frequency of harmful behaviours, organisational factors, and individual factors.

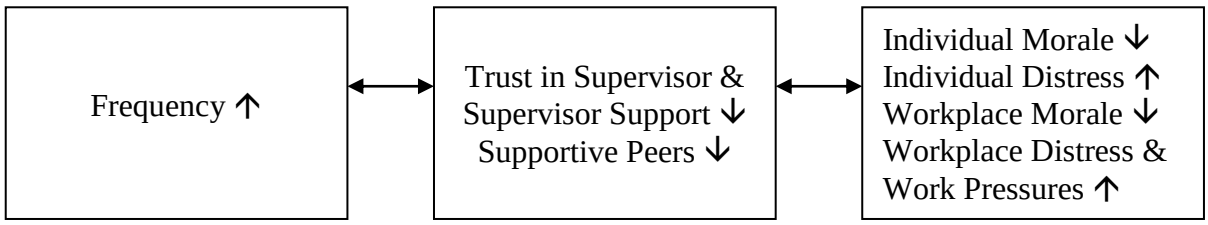


Figure 5.1. Relationships Among Frequency of Harmful Behaviours, Organisational Factors, and Individual Factors.

5.4. Research Question 4: Impact of Source of Harmful Behaviours

The second aspect of harmful behaviours in the workplace was the source, which included an all source group and separate groups of co-workers, supervisors or managers, patients or clients, and the patient's relatives or visitors. Significant simple main effects of source emerged in frequency by source and source by response models for all organisational and individual factors which indicated that source was an important risk factor. However, the type of source was not consistent across all factors or across GLZ models of each factor. The group that comprised all sources of harmful behaviours was associated with at least a moderate level of frequency and was designated as the reference group to which other source groups were compared. Therefore, all sources group was expected to be associated with the

lowest or highest means relative to a particular factor and the intention was to focus on the next closest group that represented a single source. However, the expected pattern concerning the all sources group was not entirely consistent across factors or across models for each factor.

The support factors of the organisational variables (i.e., Trust in Supervisor and Supervisor Support and Supportive Peers) showed identical patterns of source group means for the frequency by source models. All sources and visitor sources were associated with lower levels of Trust in Supervisor and Supervisor Support and Supportive Peers. The perceptions of higher levels of support were associated with co-worker then supervisor sources of harmful behaviours. In effect, co-worker and supervisor sources of harmful behaviour had the least impact on appraisals of supervisor support. Perhaps, there may be an element or component of supervisor support that provides protection against (or buffers) harm from co-worker and supervisor sources but is ineffective for visitor sources. In the context of a supervisor-worker relationship, the former may be an example of the presence of interactional justice (i.e., an employee's expectations based on the contract between the organisation and worker) and the latter may represent a violation of procedural justice which is the expectation of an employee in regard to the protection policies and procedures set out by the organisation (Chang & Lyons, 2012).

In the source by response models which showed the same association of all sources and visitor sources as the frequency by source models, co-worker then patient sources were associated with higher levels of support. Patients or clients are considered to be organisational outsiders who are similar to visitors or relatives and therefore, relate to the concept of procedural justice (Chang & Lyons, 2012). Yet, in this instance patient sources were more closely associated with co-worker source that relates to the concept of

interactional justice. It appears that patients or clients may not be perceived as organisational outsiders in all contexts.

There was even greater variation in the source means patterns between the affect factors of the organisational variables (i.e., Workplace Morale and Workplace Distress and Work Pressures). Consistent with the frequency by source models for the organisational support factors, all sources and visitor sources were associated with lower levels of morale in the work area. Co-worker then supervisor sources of harmful behaviours were associated with higher levels of morale in the work area in the source by response model. This was inconsistent with the support factors and for the affect factor, Workplace Distress and Work Pressures which showed lower levels of distress were associated with patient source then supervisor source. The frequency by source model of Workplace Distress and Work Pressures showed co-worker then supervisor source was associated with lower levels of distress and pressure in the work area but higher levels were associated with visitor source then all sources (i.e., co-worker, supervisor, patient, and visitor perpetrators).

The individual affect factors (i.e., Individual Morale and Individual Distress) differed in the patterns of means for the frequency by source models. It was expected that the same order of source group means would be observed for both affect factors but in reverse order. All sources then patient source were associated with lower levels of individual morale and all sources then visitors were associated with higher levels of individual distress. Both source by response models of the affect factors showed that all sources then visitors were associated with lower levels of individual morale and higher levels of individual distress. This led to two conclusions. First, the hypotheses concerning patients as the proposed source of harmful behaviours that would have most impact on organisational and individual factors were rejected. Among the single source groups, visitor sources of harmful behaviours were associated with poorer organisational and individual outcomes, as shown in Figure 5.2.

Second, patients and patient's visitors or relatives appeared to be conceptually different sources of harmful behaviours. For example, patients may predominantly influence the level of happiness or sadness felt by a worker and visitors may predominately influence the level of anxiousness or calmness.

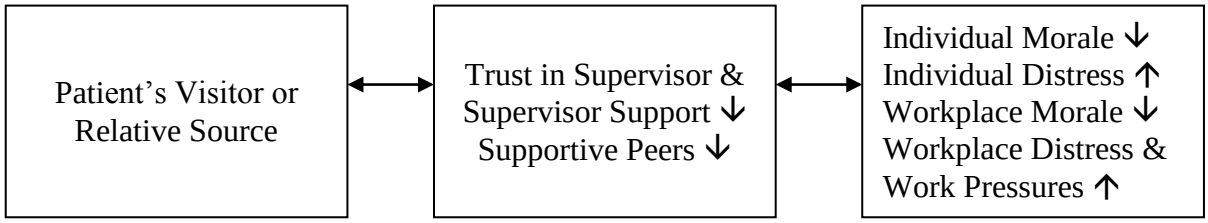


Figure 5.2. Relationships Among Visitor Source of Harmful Behaviours, Organisational Factors, and Individual Factors.

5.5. Research Question 5: Impact of Response Severity of Harmful Behaviours

The third aspect of harmful behaviours in the workplace was the psychological, emotional, cognitive or behavioural response to the behaviours that were categorised according to an assumed increase in the level of severity which included upset at the time, fear for safety, distress lasting longer than one month, and the seeking of psychological or physical treatment. Significant simple main effects of response severity emerged in frequency by response and source by response models for all organisational and individual factors.

Harmful behaviour that elicits fear for safety was associated with poorer outcomes across every organisational and individual factor. Although there was no significant difference between groups, the pattern of response group means in the source by response model showed that recipients who sought psychological or physical treatment, then fears for safety, perceived higher levels of distress and work pressures in the work area. There were no significant differences between upset, distressed, or treatment group means in the majority of the patterns of means across both models for each of the organisational and individual factors. Two conclusions were drawn from this. First, the hypotheses that proposed more

severe response categories are associated with poorer organisational and individual outcomes were rejected. Harmful behaviours that elicit fears for safety are associated with poorer outcomes of organisational and individual factors, as shown in Figure 5.3. Second, the assumed order of the levels of severity of the categories did not account for the different psychological, emotional, cognitive, and physical aspects of an individual that are involved in the attachment or assignment of the meaning given to external events in different contexts which was consistent with recent research (e.g., Chang & Lyons, 2012; Greenberg & Barling, 1999).

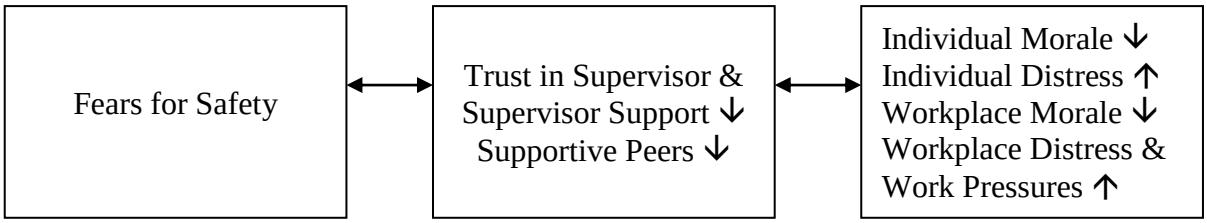


Figure 5.3. Relationships Among Fears for Safety Response to Harmful Behaviours, Organisational Factors, and Individual Factors.

5.6. Research Question 6: Interactions Among Aspects of Harmful Behaviours

The last of the research questions required examination of interactions among frequency, source, and response severity of harmful behaviours that emerged in GLZ analyses of organisational and individual measures. The examination of interactions was exploratory in nature because no research was located that would inform hypotheses with regard to the interaction of frequency, source, and response aspects of harmful behaviours.

5.6.1. RQ6(a): Interaction of Frequency and Source of Harmful Behaviours.

Among all the organisational and individual measures, only one interaction between the frequency and source of harmful behaviours emerged from GLZ analyses. The frequency by source model for Workplace Distress and Work Pressures produced no significant simple main effect for frequency but an interaction between frequency and source was evident (see Table 4.5). The level of distress in the work area and work pressures increased at moderate

and further at high frequency levels for supervisor source of harmful behaviours (see Figure 4.21). Co-worker source produced a steady increase in the levels of workplace distress across frequency levels of harmful behaviours which is consistent with the expectation that higher levels of frequency of harmful behaviours is associated with increasingly poorer outcomes. The level of Workplace Distress and Work Pressures was unaffected by increasing levels of frequency when the perceived perpetrators were patients or patient's visitors. Seemingly, it did not matter how many harmful behaviours were perpetrated by patients or their visitors, what mattered was that the harmful behaviours happened at all. This may be evidence of a perceived violation of procedural justice against all staff in a work area. In support of this, a dramatic increase in distress and pressure in the workplace was associated with a supervisor perpetrator and more than two incidences of harmful behaviours. Supervisors are responsible for the work-flow and management of work pressures. Supervisors who perpetrate more than a couple of harmful behaviours contribute to the perception of increasing work distress and pressure. In effect, perpetrator supervisors become part of the problem rather than the solution. The particular source of harmful behaviours may need to be considered in measurement of distress in the work area and the related work pressures (e.g., strain from excessive workloads).

5.6.2. RQ6(b): Interaction of Frequency and Response Severity of Harmful Behaviours.

Interactions between frequency and response severity of harmful behaviours emerged in Trust in Supervisor and Supervisor Support, Individual Distress, and Workplace Distress and Work Pressures. Both frequency and response aspects of harmful behaviours were important in the perceived level of Trust in Supervisor and Supervisor Support (see Table 4.1) and the interaction of the two aspects revealed some differences among the response categories (see Figure 4.5). The visual separation between the fear for safety category and

the other response categories, although informative, was not the point of interest in the interaction. As the frequency of harmful behaviours increased recipients who endured ongoing distress or sought treatment perceived the trust in and support from supervisors more negatively. There was little impact to the perceived trust in and support from a supervisor from harmful behaviours that upset at time across levels of frequency.

Frequency and response severity aspects of harmful behaviours were both important to the perceived level of Individual Distress. An interaction between frequency and response categories revealed some differences between the types of response at increasing levels of frequency. The level of individual distress did not increase for recipients who were upset at the time or sought physical or psychological treatment in response to harmful behaviours from low to moderate frequency. Individual distress increased for these categories when the frequency of harmful behaviour was high (i.e., >6). The moderate level of frequency may be a limit or a threshold of a person's coping skills and strategies or resiliency against upsetting experiences. Particular, additional features of the treatment category may also be involved. It would be useful to know whether the treatment sought was physical, psychological or a combination of both. The moderate level of the frequency of harmful behaviours may be the point past which a person's self-efficacy, self-worth, and sense of control of the external environment is eroded.

Both frequency and response aspects of harmful behaviours were important to the evaluations of Workplace Distress and Work Pressures (see Table 4.5). An interaction between frequency and response (see Figure 4.24) produced some interesting relationships between frequency levels and response categories. Recipients who endured ongoing distress or sought physical or psychological treatment perceived increasing levels of distress and pressures in the work area with increasing frequency of harmful behaviours. Evaluations of recipients who feared for safety levelled off or slightly improved (i.e., lower scores) past the

moderate level of frequency. Conversely, recipients who were upset at the time by harmful behaviours perceived higher levels of distress and pressure in the work area at the high frequency level. The upset category may reflect personal qualities such as resiliency, coping abilities, and tolerance while the fear category may reflect an acceptance of a loss of control over the external environment or perhaps, more responsibility or blame is directed internally as the experiences become more frequent (e.g., "It must be me").

5.6.3. RQ6(c): Interaction of Source and Response Severity of Harmful Behaviours.

Interactions between the source and response categories of harmful behaviours emerged for the organisational and individual variables that measured negative affect. Source and response aspects were both important to the measure of Workplace Distress and Work Pressures. The graphic of the interaction of source and response aspects (see Figure 4.26.) provided partial support for the assumed order of response severity (i.e., upset, fear, distress, and treatment). Increases in the level of distress and pressure in the work area were evident across the response categories in the assumed order of severity for both the co-worker and visitor source groups. Participants who had endured ongoing distress in response to a supervisor, a co-worker, or patient source of the harmful behaviours perceived lower levels of Workplace Distress and Work Pressures than those who reported visitor or all sources. The highest level of distress and pressures in the work area was associated with participants who identified the all source group and endured ongoing distress. It may be that workers who are subjected to harmful behaviours from co-workers, supervisors, patients, and visitors (i.e., the all source group) and who endured ongoing distress as a response felt unprotected and unsupported in their work areas, which may lead to a more negative appraisal of the work area affect. This may also apply to participants who identified visitor perpetrators but to a lesser extent.

The interaction between source and response in measures of the work area affect also showed that for those participants who sought physical or psychological treatment and reported visitor, supervisor, or patient sources appraised the work area affect more negatively than those who reported co-worker source of harmful behaviours. This may reflect a lack of protection and support for workers in their work areas. All sources, supervisor, visitor, and patient sources of harmful behaviours that elicit fears for safety were associated with more negative appraisals of the work area affect than those who reported co-worker source. A lack of protection and support for workers may likely be caused by ineffective organisational policies and procedures in regard to harmful behaviours perpetrated by organisational outsiders, particularly visitors or relatives of patients (e.g., a procedural justice violation) and a lack of training in regard to supervision skills (e.g., an interactional justice violation).

An interaction between source and response for measures of the other negative affect variable, Individual Distress, shared some features in common with the interaction that emerged for Workplace Distress and Work Pressures. Both source and response aspects were independently important to the measures of Individual Distress (see Table 4.3). Participants who endured ongoing distress in response to harmful behaviours perpetrated by supervisor, patient, and co-worker sources reported less personal distress than participants who reported all sources and visitor sources of harmful behaviours. The graphic of the interaction provided no support for the assumed progression of severity across response categories (see Figure 4.14.). It may have been useful to know whether the types of harmful behaviour (e.g., physical, verbal, emotional, or psychological attacks) differed between sources.

Higher levels of Individual Distress were associated with participants who feared for their safety in response to harmful behaviours perpetrated by all sources, visitor, supervisor, and patient sources. Among the response categories, supervisor source was associated with higher levels of Individual Distress when harmful behaviours elicited fears for safety, and to

a lesser degree, when physical or psychological treatment was sought. Feeling upset at the time or enduring ongoing distress in response to harmful behaviours perpetrated by a supervisor source had little impact on the level of Individual Distress.

Poorer outcomes were associated with all sources, visitors, supervisors, and patient sources that implicated ineffective organisational policies and procedures relating to workplace harmful behaviours. However, the lack of impact of supervisor and patient sources that caused ongoing distress was unexpected. The magnitude of the effect of a harmful behaviour differs by the source type of the perpetrator which was consistent with Hershcovis and Barling (2009). It may be that the type of harmful behaviours that lead to ongoing distress differ for different source types. A possible explanation may be found in the source congruence theory proposed by Mayo et al. (2012). The measure of Individual Distress may be more congruent with visitor sources than with supervisor or patient sources of behaviours that caused ongoing distress. It was suggested earlier that visitor sources may be more strongly associated with a worker's level of anxiousness or calmness and a patient source may be more strongly associated with a worker's level of happiness or sadness. Additionally, the quality of the relationship with a supervisor was related to a worker's morale which was consistent with Chang and Lyons (2012). Anxiety relates to distress and indeed may be considered a common symptom of distress and therefore may be more congruent with a visitor source of harmful behaviours that caused ongoing distress.

5.7. A Brief Summary of Results

The prevalence of harmful behaviours was high but consistent with rates found in similar organisations in Australia. Individual and organisational measures were poorer for participants who reportedly experienced harmful behaviours in the previous 6-month period than participants who had no harmful behaviour experiences. Each of the aspects of harmful behaviours had important, independent relationships with individual and organisational

factors. The impact of the frequency of harmful behaviours was a more negative appraisal of support and affect factors. The type of source and the particular support or affect factor determined the impact of the source of harmful behaviours. Research commonly referred to patients and their visitors or relatives as a single source (e.g., Demir & Rodwell, 2012; Spector et al., 2007; Steiger, 1990). Among the single source groups, the visitor source was associated with poorer outcomes of individual and organisational factors. Differences in outcomes between visitor and patient sources indicated that patients and their visitors or relatives are two distinct sources of harmful behaviours that have different associations with individual and organisational factors and aspects of harmful behaviour interact in different ways.

Poorer outcomes were also associated with participants who experienced harmful behaviours from each source type (i.e., the all sources group). This group was associated with at least a moderate frequency level of harmful behaviours and increasing frequency of harmful behaviours is associated with poorer outcomes. However, ongoing distress rather than frequency was implicated in source by response interactions. The research by Matthiesen and Einarsen (2001) and Tepper et al. (2006) suggested that there may be psychological (e.g., paranoia) or affective (e.g., negative affectivity) differences between people who reported all sources and people who reported some or one source of harmful behaviour. An adapted model of Job Demands-Resources can illustrate the associations among aspects of harmful behaviours, organisational, and individual factors.

5.8. Illustration of the Associations Using the JD-R Model

The flexibility of the JD-R model allows some factors to be predicted outcomes (e.g., Individual Morale) or antecedents to strain and motivation that predict outcomes. In the example provided, the relationships found among the support factors and the aspects of harmful behaviours which was a focus of the current study is illustrated in Figure 5.4. The

support factors of Trust in Supervisor and Supervisor Support and Supportive Peers are valued positively, therefore are examples of job resources. Although not illustrated, Individual Morale and Workplace Morale also fit under resources. Examples of positively valued personal qualities, abilities or attributes that are called upon in work-related contexts are also included as resources. Harmful behaviour in the workplace is negatively valued and is represented by frequency, source, and response severity aspects as stressors. Negatively valued aspects, such as Workplace Distress and Work Pressures and Individual Distress which may be considered to be stressors are not included in this example in the interests of clarity. The strength of the resources and strength of stressors determines the amount or intensity of strain and the level of motivation which in turn, predict levels of employee wellbeing or organisational health.

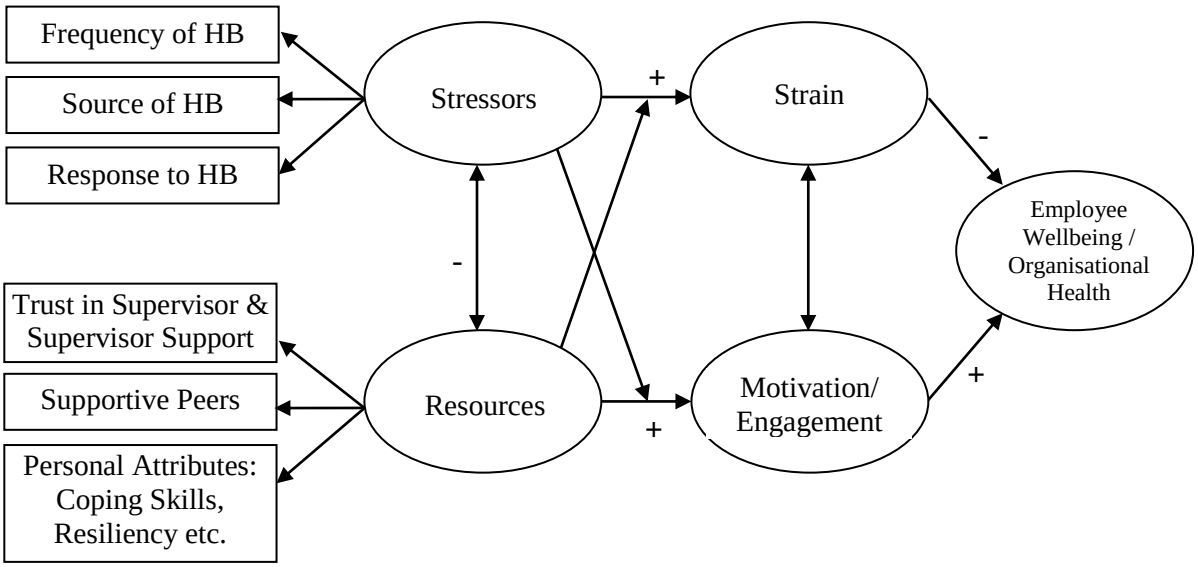


Figure 5.4. Effects of the Aspects of Harmful Behaviours and Support Factors in a JD-R Model of Employee Wellbeing. Adapted from "The Job Demands-Resources model: State of the art," by A. B. Bakker and E. Demerouti, 2007, *Journal of Managerial Psychology, 22*(3), p. 313.

An example of the association between higher frequencies of harmful behaviours, lower levels of Trust in Supervisor and Supervisor Support, and personal attributes is depicted in Figure 5.5. High levels of harmful behaviours, low levels of Trust in Supervisor

and Supervisor Support and (the proposed) limited personal attributes leads to high level of strain and reduced level of motivation which in turn, negatively effects an individual or organisational outcome. The limited resources provide little or no buffering effect of the stressor-strain pathway but the high frequency of harmful behaviour stressor buffers the resources-motivation pathway leading to reduced motivation or engagement. The model may be adapted to represent source types, response severity categories, and combinations of the aspects of harmful behaviours that were associated with individual and organisational factors. The psychological mechanisms that underlie these associations are discussed next.

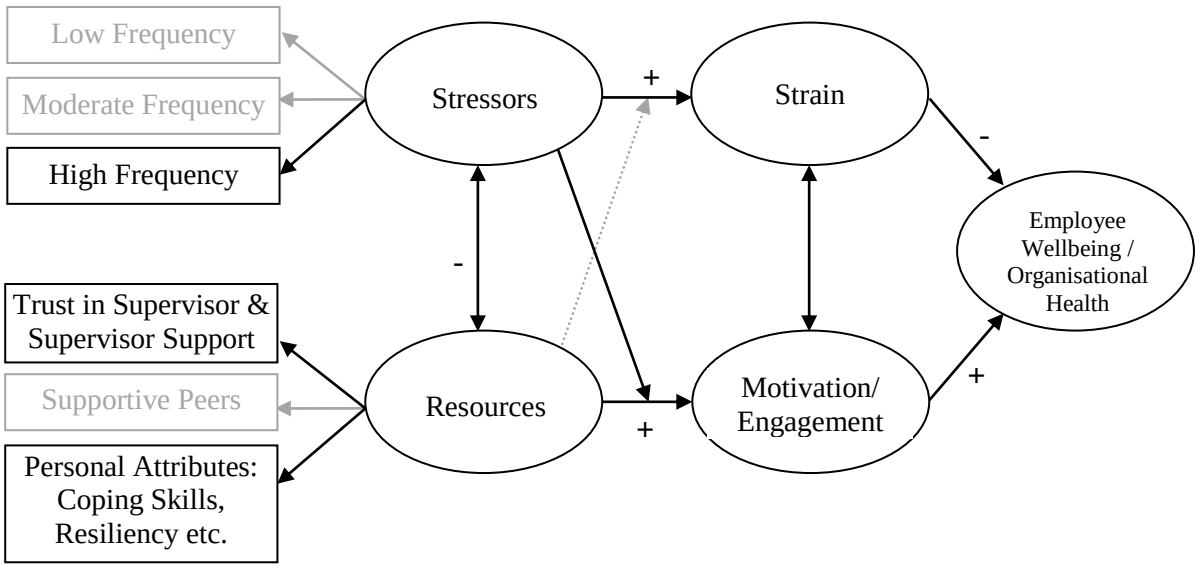


Figure 5.5. Resource and Stressor Antecedents that Impact Strain and Motivation Pathways.

5.9. Psychological Mechanisms Involved in the Spiral of Harmful Behaviours

Harmful behaviours do not occur as unrelated events in a workplace. The process is not cyclic which implies that the same phenomena are repeated. It is an escalating or de-escalating spiral (Andersson & Pearson, 1999; Demerouti et al., 2004; Hakanen et al., 2008; Llorens et al., 2007). The process is not confined to the involvement of same elements from among harmful behaviours, an organisation, and an individual (e.g., frequency, sense of competence, resiliency, staff training, or communication) but affects other elements as the process escalates or de-escalates. The Triadic Reciprocal Determinism Model of Workplace

Aggression provides a framework to explain the perceptual processes and the harmful behaviour spiral related to participants who reported visitor sources and a moderate level of harmful behaviours that elicited fears for safety, shown in Figure 5.6.

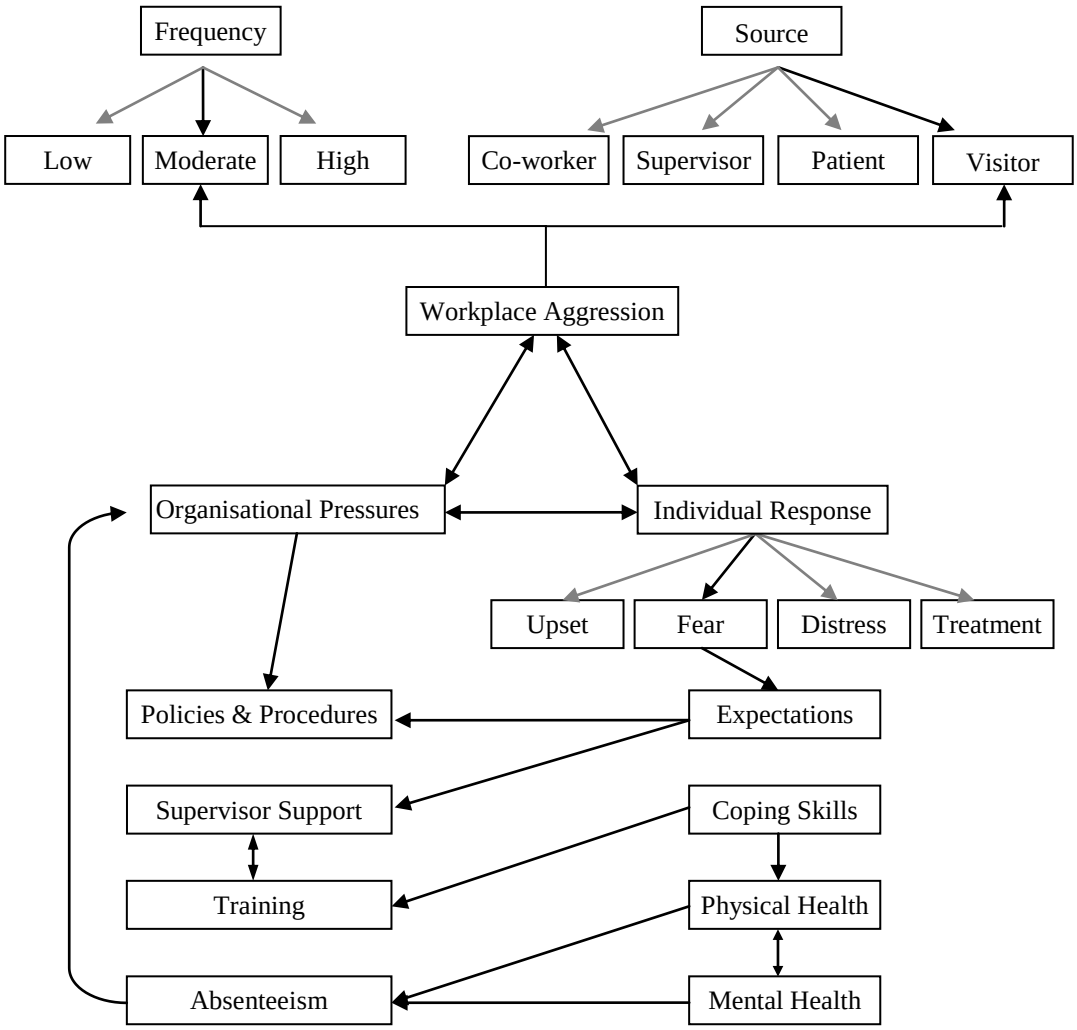


Figure 5.6. The Beginning of a Workplace Harmful Behaviours Spiral in the Triadic Reciprocal Determinism Model of Workplace Aggression.

The pathway (i.e., the darker arrows) shows the association between harmful behaviours and the recipient. The recipient's expectations of the organisation's and the supervisor's ability to protect a worker from harm are violated (i.e., procedural justice and interactional justice, respectively). Fears for safety challenge an individual's resilience and coping strategies and affects both physical health (e.g., lowered immune system, difficulties sleeping, etc.), and mental health (i.e., anxiety and depression) which may lead to

absenteeism. Absenteeism, in turn, increases workloads and work pressures which produces an environment in which harmful behaviour has the potential to flourish. Perceived organisational pressures increase because the individual may view organisational policies and procedures, supervisor support, and training resources as ineffectual or inadequate to provide protection from harm. It is likely that the recipient will perceive future interactions more negatively. Work performance may be negatively affected. An unsupported and unprotected worker may employ maladaptive coping strategies that result in harm to others. All of which lead to a spiral of escalating harmful behaviours, and an increasingly negative perception of organisational and individual factors.

5.10. Theoretical and Practical Implications

The results of the current study have both theoretical and practical implications. The JD-R model of job stress (Bakker & Demerouti, 2007) was adapted to accommodate aspects of harmful behaviours as antecedents of demands or stressors. The flexibility of the model provided the means by which the relationships between organisational factors, individual factors and aspects of harmful behaviour may be viewed as antecedent predictors of employee wellbeing or organisational health via dual pathways of stressors-strain and resources-motivation. The Triadic Reciprocal Determinism Model of Workplace Aggression, developed from the Triadic Reciprocal Determinism Model of Social Learning (Bandura, 1978, 1983, 1989) was similarly useful in explaining the perceptual processes involved in the spiral of workplace harmful behaviours. The simplicity of the model which describes complex associations is applicable for multi-level research. Both models are applicable to the suggested interventions that follow.

The findings of the current study have practical implications for organisations. Examination of three aspects of harmful behaviour revealed that some aspects and combinations of aspects affect organisational and individual factors more than others. This

knowledge will enable better planning and targeting of intervention strategies and the development of effective organisational policies and procedures to manage workplace harmful behaviours. For example, improvement in supervision support (i.e., increasing resources) will buffer the effects of work overload (i.e., job stressors) in the strain pathway of the JDR model leading to a better outcome for the health of the organisation or wellbeing of the employee. Improvement in supervision support may be accomplished by training the supervisor in assertive communication, identification of negative behaviours, better work process practices, and work load management practices. All of which are supported by the Triadic Reciprocal Determinism Model of Workplace Aggression because changes in the quality of support will effect changes in the employee's perception of improved supervisor support and the employee will perceive or perpetrate fewer negative behaviours.

Much of the literature regarding workplace harmful behaviours uses terminology such as bullying or harassment but often these are types of behaviour rather than the set of behaviours with parameters of frequency, duration, and intent that define legal or research criteria. Organisational policy needs to reflect that all bullying, harassment, aggression, and violence are harmful behaviours but note that harmful behaviours are not defined exclusively by these terms. Withholding effort, praise, resources, attention, communication, and instruction are also harmful behaviours. Further, behaviours perceived as innocuous by an observer (e.g., a look, a gesture, tone of voice, shrug, or sigh) can be perceived by the recipient as hurtful and humiliating. Any behaviour perceived as harmful requires attention and acknowledgement. Simple statements that declare the organisation has an anti-bulling policy is not sufficient (Salin, 2008). An overt, strong commitment by an organisation to manage harmful workplace behaviour is an initial step and incorporates every level of management.

A multi-pronged approach that involves policy development, education and training for all workers, specific training for managers and supervisors, and assignment of a specific department within the organisation to manage education, training, reporting, and resolution is recommended. A policy that sets out the expected behaviours that emphasise elements of respect for the dignity of workers and the commitment to a safe working environment demonstrate both the value of a worker to an organisation and a positive approach to managing negative behaviours. Inclusion to duty statements of the worker's responsibilities concerning respect of others, behaving professionally, and reporting inappropriate behaviours reminds workers that they too bare some responsibility towards harmful behaviours in the workplace.

The human resource department or organisational equivalent could establish a dedicated pro-active approach to prevention by educating all workers in identifying harmful behaviour, guidelines on how to address the behaviour, the reporting process, and transparency of the processes through induction programs, performance reviews, and training (Salin, 2008). This department may also manage staff opinion surveys, collect, maintain and monitor data of harmful behaviours (Salin, 2008). Eriksen, Nygren, and Rudmin (2011) suggested the regular use of the NAQ as a *psychological triage* that identifies the most frequent negative acts at the time which would inform organisations on targeted interventions. Given the results of the current study, the use of the NAQ may not accurately reflect the behaviours that are problematic. A checklist of behaviours, sources, and psychological or physical reactions (i.e., a *tick and flick* survey) that is administered on a regular basis may be more appropriate. Moreno-Jiménez et al. (2009) suggested the training of skills that assist workers in dealing with negative thoughts that arise from interpersonal conflict. This may be an appropriate intervention within an employee assistance (and counselling) program. Regular communication of the status of harmful behaviours from the

organisation down to the employees may encourage or inspire effort to improve the working environment and demonstrates the organisation's commitment to provide a safe working environment for all employees. This has certainly been the case in safety climate research (Spector et al., 2007). The detrimental effect of increasing frequency of harmful behaviours in the workplace is common knowledge among organisational psychologists. Yet, there has been no consensus of an appropriate methodology in regard to the assessment of prevalence rates of harmful behaviour in the workplace. The current study found frequency of harmful behaviours was an important risk factor for both organisational health and individual wellbeing. In fact, as few as three harmful behaviour incidences over the previous 6-month period were associated with poorer organisational and individual measures. This is consistent with Branch (2008), in that, a single harmful behaviour incident may evoke long-term fears of reoccurrence which leads to decline in wellbeing. This has implications for researchers in regard to the rigour applied to defining various forms of harmful behaviour and the measurement of specific phenomenon under investigation. This frequency finding has implications for organisations in regard to the importance of clear, well defined and administered policies and procedures that recognise the potential harm of a few negative acts.

The conclusions about the most detrimental source of harmful behaviours are mixed. In the current study patient's visitors or relatives were the most detrimental source of harmful behaviours. Some defect, lack or application of organisational policy and procedures in regard to harmful behaviours is implicated and may be addressed with further development of policies and or demonstrative commitment to existing policies. Additionally, a lack in supervisor support was implicated which directs intervention toward better training of supervisors regarding harmful behaviours in the workplace.

The most detrimental behaviours were those that elicited fears for safety. Ineffective organisational policies and procedures and training resources are implicated. Commitment to

or development of no tolerance or low tolerance of aggressive behaviour is recommended. Training is also implicated. Mental health facilities conduct aggressive management training for staff who work with potentially violent patients. However, with the exception of security personnel, no resource exists that provides staff defensive strategies for use with visitors or members of the public because of the potential for litigation and other legal consequences. Procedures that de-escalate potentially violent situations involving members of the public may be developed and may include training of passive techniques of specific body language or withdrawal. Organisational policy may need to place more emphasis on professional conduct and adherence to workplace health and safety regulations which may improve the safety culture.

There are practical implications for harmful behaviour research. The examination of the relationships among three aspects of harmful behaviours, organisational factors, and individual factors revealed that some aspects and particular aspect combinations have more impact than others. There were differences found between the patient group and the visitor group concerning the response severity aspect of harmful behaviours. Patients and their visitors or relatives appear to be two distinct groups that have different types of relationships with staff. This has implications for future investigations of sources of harmful behaviours in workplace.

5.11. Future Research

The findings of the current study demonstrated that the impact of harmful behaviour was determined by the frequency, the source, and the response severity of harmful behaviours in relation to particular organisational or individual factors. The assumption that frequency of harmful behaviours has a linear relationship with organisational factors and individual factors is well supported by empirical research. However, this current study found deviations from the linear pattern for different sources of harmful behaviours and responses to harmful

behaviour incidences. The findings of the exploratory study suggest that the experience of harmful behaviours in the workplace is more complex than current research may present. Assumptions that different types of organisational outsiders (i.e., patients and relatives and visitors of patients) have the same relationships with organisational insiders is questionable (e.g., Farrell & Touran, 2012). In the current study patients were on a par with co-workers when perceived as perpetrators of harmful behaviours. Visitor sources of harmful behaviours had the greatest impact on measures of organisational health and employee wellbeing. The worker-visitor relationship and worker-patient relationship differ in the responsibilities (e.g., duty of care, level of control, and level of information sharing). Support from a supervisor is different in content, context, and purpose to support from co-workers. The specific and varied characteristics of each relationship type, organisational factor, and individual factor contributes to the way in which harmful behaviour is perceived.

The use of cross-sectional data has the benefit of providing a snap-shot view of phenomena but does not allow for causal inference of the phenomena under investigation. Longitudinal studies of harmful behaviours in the workplace that investigate the frequency and sources of harmful behaviour and the recipients' emotional, psychological and physical responses is a worthy pursuit. Currently, there is a lack of literature that reports the effectiveness of intervention strategies. No literature regarding a worker's recovery from exposure to harmful behaviours as a result of better organisational policies and procedures was located. Investment in longitudinal research may demonstrate the benefit to organisations in the form of fiscal outcomes, productivity, and reputation.

In current harmful behaviour research there is a tendency toward aggregation of the psychological, emotional, and physical response to harmful behaviour to a single value which may indicate the severity or intensity of the impact of harmful behaviours but obscures the characteristics of the types or response. The current study found that harmful behaviours

which elicited fears for safety had greater impact on organisational health and employee wellbeing. Replication of this study and further investigation of the relationships among aspects of harmful behaviours is warranted.

Understanding of the mechanisms that underlie the recipient's cognitive processes that mitigate the response to harmful behaviour is an important research aim to better target specific interventions and inform policy development. For example, Martinko, Gundlach, and Douglas (2002) presented causal reasoning which involves cognitive processes of perceptions of disequilibria and attributions, centrally in their integrated model of counter-productive workplace behaviours. The perception of disequilibria (i.e., out of balance, unfair, inequitable or unjust) involves the antecedent contributions of situational factors (e.g., policies, procedures, leadership style, home life, and prior outcomes, etc.) and individual difference factors (i.e., locus of control, negative affectivity, gender, and self-efficacy, etc.). The resulting counterproductive work behaviour is attributed to the source or cause of the injustice. They argued that attribution styles and processes have a major role in the development of theory of counter-productive work behaviours. Hershcovis and Barling (2006) included the perceptions of distributed, procedural, and interactional injustices as contributing factors of insider-initiated workplace aggression. Although, they did not elaborate on the evaluative cognitive processes involved, many recommendations of proactive procedures were drawn from and directly related to the perception of justice (e.g., clear communication of work distribution and open door policy).

5.12. Limitations

Generalisability is the first limitation of the current study. The relationships within a health organisation are different to the relationships within business-orientated, manufacturing, hospitality, and educational organisations. The results of the current study may not generalise beyond a large, Australian health organisation. Second, the cross-

sectional design of the design of the study limited the analyses to examination of associations or relationships between aspects of harmful behaviours, organisational, and individual measures and did not demonstrate causal relationships that may be tested in longitudinal designs. Third, the Better Workplaces questionnaire was a self-report inventory which is subject to common method variance (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). The fear for safety and treatment categories of the response severity aspect of harmful behaviours were ambiguous and may have been interpreted differently by participants. Additionally, workplace harmful behaviours is an emotive subject that may have evoked a response bias from participants who had been exposed to harmful behaviours. However, this may have reflected the psychological harm caused by harmful behaviours which was a point of the research.

A further limitation pertains to the self-labelling method used to measure recipients' reports of harmful behaviours. No definitions of the examples of harmful behaviour (i.e., harassment, bullying, or intimidation) were supplied in the survey. Participants responded based on their perceptual experience of behaviour that bullied, harassed, intimidated or harmed them. The self-labelling method is prone to under-reporting (Nielsen et al., 2010). The provision of definitions may have strengthened the results and returned a higher prevalence rate or alternatively, limited potential positive responses because definitional criteria may be too narrow. Ultimately, the survey was designed to be useful to the organisation as an evaluative and benchmarking tool and was not designed for theoretical research purposes.

The use of archival data to explore the relationships among aspects of harmful behaviour, individual wellbeing and organisational health presented some challenges, in that, research questions were limited by the type of data and the format of the data available. The common criticism concerning the use of archival data is that it is a rehash of the original

analyses (Shultz, Hoffman, & Reiter-Palmon, 2005). The PCA and main analyses represented novel use of the data set. Even though the use of archival data may require unique skills, its use entirely appropriate for exploratory research (Shultz et al., 2005)

Last, the independent groups that represented specific levels or categories of the aspects of harmful behaviours may not have comprised the optimal, representative combinations. The creation of combined groups was necessary because the survey used an integrated arrangement to collect the harmful behaviour data. This is a problem inherent in the use of archival data that was collected for other purposes. However, the validity of the current study is supported because the results of the first part were consistent with previous research in regard to relationship between harmful behaviours in workplace and the psychosocial environment. Additionally, the results of the second part of the current study which was novel research, therefore, exploratory in nature, were consistent with related theory.

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Appendix A: Definitions or Constructs of Harmful Behaviours in the Workplace

Table A1

Distinguishing and Overlapping Features of Definitions of Terms Under the Harmful Behaviours in the Workplace Umbrella

Term	Definition or Construct	Distinguishing Features and Assumptions
Mistreatment		
	Recipient's perception of unjust and abusive interpersonal mistreatment (Harlos & Axelrod, 2005).	A general term to describe a behaviour.
Mental harassment		
	Repeated acts intended to eviscerate the recipient's working conditions, dignity, physical or mental health, career, and rights (Bonafons, Jehel, & Coroller-Béquet, 2009).	Shares the features of repetition and intent with bullying definitions but excludes physical behaviours (Bonafons et al., 2009).
Psychological harassment		
	Recurring non-physical acts that negatively affect physical or mental wellbeing of an employee (Yuen, 2005).	Presented as a culturally alternative term for moral harassment (i.e., French translation of le harcelement moral), mobbing (Sweden, Germany, and Italy), victimization (Sweden), and workplace bullying (United States and the United Kingdom) (Yuen, 2005).
	Repeated and hostile or unwanted behaviour including verbal comments, actions or gestures that affect a recipient's dignity or psychological integrity and creates a harmful work environment (Janusz, 2011).	A lasting harmful effect on a recipient of psychological harassment distinguished the phenomena from incivility (Janusz, 2011).

Table A1 (continued.)

Term	Definition or Construct	Distinguishing Features and Assumptions
Workplace harassment		
	Harassment is defined as behaviours that discriminate, humiliate, negatively affect dignity, socially exclude, criticise, intimidate, or cause psychological and sometimes physical abuse which occurs repeatedly and is persistent over time (Nolfe, Petrella, Blasi, Zontini, & Nolfe, 2007).	Nolfe et al. (2007) did not distinguish harassment from among several other terms including scapegoating, mobbing-psychological terror, workplace trauma, work harassment, bullying, and abusive behaviour and emotional abuse.
	An escalating process of repeated and persistent negative behaviours perpetrated with the intent to eviscerate the recipient who is defenceless and often involves an actual or perceived power imbalance (Mathisen, Einarsen, & Mykletun, 2008).	Interchangeable with bullying (Mathisen et al., 2008).
	Intentional behaviours that bother, scare or emotionally abuse an individual (Hollins Martin & Martin, 2010).	Harassment is not distinct from bullying because both behaviours involve a misuse of power, are unpleasant, threatening, malevolent, or offensive and intended to undermine, humiliate, denigrate or harm the recipient (Hollins Martin & Martin, 2010).
	Repeated behaviour that is unwelcome and unsolicited, and would be considered offensive, humiliating, intimidating, or threatening by a reasonable person (Johnstone, Quinlan, & McNamara, 2011).	Harassment is distinct from sexual harassment because the latter is addressed under antidiscrimination legislation (Johnstone et al., 2011).
Counterproductive workplace behaviours		
	Comprises a variety of behaviours that are directed at an organisation (e.g., theft) or individual (e.g., abuse) in response to organisational constrains or acts of incivility (Meier & Spector, 2013).	Presented as consequential or retaliatory behaviours.

Table A1 (continued.)

Term	Definition or Construct	Distinguishing Features and Assumptions
Counterproductive workplace behaviours (continued.)		
	Behaviour including theft, sabotage, verbal abuse, withholding effort, lying, refusing cooperation, and physical assault that harms an organisation or its employees (Penny & Spector, 2005).	Not distinct from organisational delinquency, organisation-motivated aggression, organisational retaliatory behaviours, workplace aggression, workplace deviance, revenge, and antisocial behaviour in organisations (Penny & Spector, 2005).
	The result of a progression of workplace conflict to bullying (Ayoko, Callan, & Härtel, 2003).	Distinct from other definitions of counterproductive workplace behaviours on which a single act may be referred to as a counterproductive behaviour (Ayoko et al., 2003).
Workplace incivility		
	Behaviour of low intensity with ambiguous intent to harm that contravenes workplace behavioural norms of mutual respect, trust, empathy, cooperation, and motivation (Caza & Cortina, 2007; Cortina & Magley, 2009; Lim et al., 2008; Reio & Sanders-Reio, 2011; Sakurai & Jex, 2012).	Distinct from harassment and sabotage which may be dealt with as an offence under the law (Lim et al., 2008). Ambiguous intent and low intensity (i.e., non-physical behaviour) distinguishes incivility from workplace aggression, physical violence, and other forms of negative behaviour (Caza & Cortina, 2007; Cortina & Magley, 2009; Reio & Sanders-Reio, 2011; Sakurai & Jex, 2012). However, Croft and Cash (2012) proposed incivility was an umbrella term that subsumed bullying and lateral violence.

Table A1 (continued.)

Term	Definition or Construct	Distinguishing Features and Assumptions
Workplace incivility (continued.)		
	Behaviour of low intensity with ambiguous intent to harm that contravenes workplace behavioural norms of mutual respect, trust, empathy, cooperation, and motivation (Caza & Cortina, 2007).	Low intensity of the behaviour and ambiguous intent distinguishes incivility from other negative behaviours (Caza & Cortina, 2007). Bullying, harassment, and workplace aggression may include acts of incivility.
Workplace deviance		
	Behaviours that violate organisational norms that are perpetrated with the intention to harm the organisation (i.e., Organizational deviance) and or the individual (i.e., interpersonal deviance) (Mitchell & Ambrose, 2007).	The use of organisational norms as the point at which deviation is determined distinguishes workplace deviance from bullying, aggression, incivility, and violence in which features of the behaviours are most prominent. Sex-related behaviour (i.e., sexual harassment) is not distinct from types of interpersonal deviance (Mitchell & Ambrose, 2007).
Workplace terror		
	A type of psychological terror or mobbing which is systematic, directed, unethical communication and antagonistic behaviour that is perpetrated by one or more individuals toward an individual (Yildirim, 2009).	
Workplace victimisation		
	Verbal and non-verbal behaviours that cause physical or psychological harm to a recipient (Bowling et al., 2010).	An umbrella term that subsumes abuse, bullying, incivility, interpersonal conflict, and petty tyranny (Bowling et al., 2010).
Interpersonal conflict		
	A large variety of interpersonal mistreatment in the workplace that ranges from minor disagreements to physical assault and may be overt or subtle behaviours (Sliter, Pui, Sliter, & Jex, 2011).	An umbrella term for interpersonal mistreatment and abuse in the workplace under which incivility, verbal aggression, and bullying are included (Sliter et al., 2011).

Table A1 (continued.)

Term	Definition or Construct	Distinguishing Features and Assumptions
Interpersonal workplace aggression		
	Intentional harm directed toward an individual by other individuals in the workplace (Arnold, Dupré, Hershcovis, & Turner, 2011).	Distinct from specific forms of aggression, such as bullying because it may be a single act (Arnold et al., 2011).
Occupational violence		
	Negative behaviours including abuse, threats, or assault directed towards a recipient while at work that are a perceived or actual threat to safety, health, and wellbeing (Farrell & Touran, 2012).	Occupational violence subsumes workplace bullying (Farrell & Touran, 2012). The main characteristic of occupational violence is the implied or actual risk to health, safety, and wellbeing.
Aggression and violence		
	Aggression is defined as behaviour that delivers a "noxious stimulus" to a recipient, with the intent and expectation of harming the recipient (Greenberg & Barling, 1999). Violence is defined as the perpetration of acts with the intent or perceived intent to physically harm or injure the recipient (Greenberg & Barling, 1999).	Violence is conceptually distinguished from aggression by the intent to cause physical harm or injury.
Verbal abuse		
	A non-physical form of workplace violence which may be overt or subtle that threatens, attacks, accuses, disrespects, devalues, intimidates, patronises, disparages, and humiliates a recipient (Sofield & Salmond, 2003).	
Horizontal violence		
	A persistent pattern of behaviour towards a recipient that is intended to control, diminish, or devalue the recipient and create a risk to health an safety (Hinchberger, 2009)	Horizontal violence, intergroup violence, and adult bullying are separate types of bullying (Hinchberger, 2009).

Table A1 (continued.)

Term	Definition or Construct	Distinguishing Features and Assumptions
Horizontal violence (continued.)		
	Non-physical, overt and covert hostile behaviours directed toward a recipient who may subsequently experience psychological, emotional, or spiritual harm (King-Jones, 2011).	
	Verbal, psychological, and physical acts directed toward a recipient in the workplace (Gallant-Roman, 2008).	
Work-related violence		
	Behaviours within the work context that abuse, threaten or assault a recipient and are an explicit or implicit risk to a recipient's health, safety, and wellbeing (Agervold & Andersen, 2006).	The broad definition focuses on the effect of the behaviours, that is, serious psychological reactions to negative work-related behaviours (e.g., abuse and threats) that are described generally (Agervold & Andersen, 2006). The definition does not distinguish among source, frequency, duration, physical and psychological forms of behaviours or intentions of the perpetrators.
Workplace violence		
	Violent acts comprising physical assaults and threats of physical assault directed toward a recipient or recipients which are categorised into four types (Gallant-Roman, 2008). Type I is an organisational outsider with no legitimate relationship with the organisation (i.e., a criminal), Type II is an organisational outsider with a legitimate relationship with the organisation (i.e., patient, client or customer), Type III is a former (*sic*) [or current] employee, Type IV is an individual who has a personal relationship with the employee but not with the organisation.	The definition of workplace violence is not explicit in regard to verbal and psychological aggression, yet Gallant-Roman (2008) proposed horizontal violence as a form of workplace violence (i.e., Type III) that subsumed bullying and aggressive behaviours.

Table A1 (continued.)

Term	Definition or Construct	Distinguishing Features and Assumptions
Workplace violence (continued.)		
	Behaviours that include physical assault, verbal abuse, or sexual harassment and other behaviour which is less overt (Jackson, Clare, & Mannix, 2002).	Aggression, harassment, bullying (i.e., a form of harassment), intimidation, and assault are different forms of workplace violence (Jackson et al., 2002).
	Comprises physical and psychological behaviours including physical assault, threat of physical assault, and psychological aggression directed toward a recipient and vicarious violence which negatively affects the observer (Schat & Kelloway, 2003).	
	A variety of behaviours performed in the workplace that includes verbal abuse threats, unwanted sexual advances to physical assault and homicide (Sofield & Salmond, 2003).	Defined by negative behaviours which are all, including sex-related acts, considered forms of violence (Sofield & Salmond, 2003).
Workplace harmful behaviours		
	A term that describes negative behaviours under various terms including petty tyranny, workplace harassment, antisocial behaviour, workplace victimisation, bullying, incivility, mobbing, social undermining, emotional abuse, and abusive supervision (Aquino & Lamertz, 2004).	An umbrella term for interpersonal mistreatment in the workplace that does not stipulate source, frequency and duration of the behaviours, the perceived or actual intent of the behaviour or the type of behaviour itself.
Adult bullying		
	An early definition of bullying is frequent behaviours or actions that have a negative effect on the recipient's work tasks coupled with a feeling of being harassed (Rayner & Hoel, 1997).	Early literature included sexual and racial harassment under the wider harassment context which was not distinct from bullying but included as a component of bullying (Rayner & Hoel, 1997). The origin of the bullying term was from education literature that reported schoolyard bullying as predominantly physically violent behaviour

Table A1 (continued.)

Term	Definition or Construct	Distinguishing Features and Assumptions
Adult bullying (continued.)		
		which is not reflected in adult work contexts (Rayner & Hoel, 1997).
Mobbing		
	Leymann (1996) suggested the scientific definition of mobbing was, "a social interaction through which one individual (seldom more) is attacked by one or more (seldom more than four) individuals almost on a daily basis and for periods of many months, bringing the person into an almost helpless position with potentially high risk of expulsion." (p. 168)	Mobbing has a set pattern of behaviour (i.e., ganging-up or shared approach by workers towards a recipient) and is distinct from bullying that has a variety of patterning of behaviour (Einarsen et al., 2009).
	Systematic behaviour comprising threats, humiliation, and violence that persists over a period of at least six months and is perpetrated by a worker toward other workers and involves a power imbalance (Tengilimoğlu, Mansur, & Dziegielewski, 2010).	This definition describes one perpetrator and more than one recipient which is akin to abusive supervision.
Workplace bullying or mobbing		
	An escalating process of intentional behaviours that harass, offend, socially exclude or negatively affect the recipient's work tasks that occur regularly (i.e., weekly) over a duration of at least six months against which the recipient experiences increasing difficulty to defend against because of the power imbalance between perpetrator and recipient (Ariza-Montes et al., 2013; Escartín et al., 2009; GlasØ, Bele, Nielsen, & Einarsen, 2011; Lind, Glasø, Pallesen, & Einarsen, 2009; Samnani, 2013).	Classified under the same umbrella as aggressive behaviour (Ariza-Montes et al., 2013). Bullying and mobbing labels are interchangeable.

Table A1 (continued.)

Term	Definition or Construct	Distinguishing Features and Assumptions
Workplace bullying		
	Interpersonal aggression more severe than incivility that leads to physical or psychological harm and is defined by features of frequency, intensity, duration, and power imbalance (Lutgen-Sandvik et al., 2007; Meglich-Sespico et al., 2007).	A form of interpersonal aggression and antisocial behaviour in the workplace (Lutgen-Sandvik et al., 2007). Distinct from other bullying definitions in regard to a feature of intensity rather than intentionality. An implication or assumption underlying common bullying definitions is that an escalation of severity of behaviour from the initial low intensity to more severe over the course of time is likely.
	An escalating process of repeated and prolonged exposure to intentional or unintentional psychological mistreatment (e.g., teasing, badgering, insults), predominantly, that involves an actual or perceived power imbalance by the recipient who ends up in ends up in an inferior position (Agervold & Mikkelsen, 2004; Andersen et al., 2010; Bartlett & Bartlett, 2011; Hauge et al., 2011; Hauge et al., 2009, 2010; Hoel & Cooper, 2000; Nielsen et al., 2010).	Intentionality as a defining characteristic of bullying is debatable (Agervold & Mikkelsen, 2004). Bartlett and Bartlett (2011) and (Hoel & Cooper, 2000) emphasised the subjective perception of negative behaviours. Nielsen et al. (2010) referred to workplace bullying as an umbrella term covering various forms of mistreatment and hostile behaviour in the workplace that shared features of repetition, persistence, and power disparity. Andersen et al. (2010) suggested bullying was interchangeable with mobbing and harassment labels.
	Workplace bullying is defined by features of persistence and repetition of behaviours and the intention to harm the recipient (Agervold, 2009; Hogh et al., 2005; Lind et al., 2009; Meglich-Sespico et al., 2007; Sá & Fleming, 2008).	Meglich-Sespico et al. (2007) noted the most distinguishing feature of this form of counterproductive behaviour is the prolonged, frequent exposure to physical and non-physical behaviours with the intent to eviscerate the recipient. Agervold (2009) viewed bullying as direct attacks on a

Table A1 (continued.)

Term	Definition or Construct	Distinguishing Features and Assumptions
Workplace bullying (continued.)		
		recipient's personality and self-esteem. However, Agervold (2009) distinguished between bullying and violence on the basis of psychological versus physical harm. Further, bullying was synonymous with work-related bullying or adult bullying. Sá and Fleming (2008) used bullying or mobbing interchangeably with "oppressed group" behaviour or horizontal violence. Lind et al. (2009) called bullying a form of coercive interpersonal influence that could alternatively be labelled mobbing, victimization, emotional abuse, and psychological terror.
	An escalating process of repeated and prolonged exposure (Agervold, 2007; Balducci, Cecchin, & Fraccaroli, 2012; Barling, Dupré, & Kelloway, 2009; Cooper-Thomas et al., 2013; Devonish, 2013; Salin, 2001) to patterning of a variety (Einarsen et al., 2009) of direct and indirect negative social acts (e.g., harassment, offensive, exclusion, and negatively affect work tasks) which are predominantly forms of psychological mistreatment by one or more perpetrators whereby the recipient feels defenceless (Baillien, De Cuyper, & De Witte, 2011; GlasØ et al., 2011; Hauge et al., 2009; Hogh, Hansen, Mikkelsen, & Persson, 2012) and ends up in an inferior position	Intent is ambiguous and power disparity was not explicit in this definition. Prolonged exposure of negative behaviour distinguishes bullying from isolated interpersonal conflicts (Mikkelsen & Einarsen, 2002). Bullying is distinct from conflict (Agervold, 2007), emotional abuse, victimisation, and harassment on the basis of repetition and persistence of behaviours which are emphasised features of bullying (Balducci et al., 2012). Bullying is distinguished from workplace violence because violence is primarily physical and irregular in frequency (Cooper-Thomas et al., 2013). Bullying as a form of workplace aggression is distinct from workplace

Table A1 (continued.)

Term	Definition or Construct	Distinguishing Features and Assumptions
Workplace bullying (continued.)		
	(Escartín et al., 2009; Hauge et al., 2009; Rodríguez-Muñoz, Baillien, De Witte, Moreno-Jiménez, & Pastor, 2009). Recipients perceive the treatment as unjust, unfair, offensive, and degrading (Mikkelsen & Einarsen, 2002).	violence because the latter involves an intention to physically harm or threat to physically harm. Therefore, all violence and bullying is aggression but not all aggression is violent and bullying (Barling et al., 2009). However, Hauge et al. (2007) distinguished between bullying and other forms of negative behaviour by two main features of frequency and duration and not by the forms of negative behaviour which include verbal and physical attacks. Contrary to Balducci et al. (2012), Agervold (2007) used bullying interchangeably with workplace aggression, workplace incivility, and emotional abuse labels. Mikkelsen and Einarsen (2002) proposed workplace abuse, mobbing, or workplace harassment as alternative labels for workplace bullying. Escartín et al. (2009) stated that bullying and mobbing were used interchangeably.
	Intentional, repeated, unwelcome, negative physical, verbal, or psychologically intimidating behaviours that are perpetrated by a source of power towards a recipient who has difficulty in defending himself or herself (Bartlett & Bartlett, 2011).	Primarily psychological behaviours distinguish bullying from physical aggression and violence. The persistence of the bullying behaviours is not explicit.

Table A1 (continued.)

Term	Definition or Construct	Distinguishing Features and Assumptions
Workplace bullying (continued.)		
	Persistent, primarily psychological, negative behaviours involving non-work-related and work-related issues directed toward a recipient who has difficulties in defending himself or herself (Baillien, Neyens, De Witte, & De Cuyper, 2009; Rodwell & Demir, 2012).	Distinguished from general conflicts on the basis the recipient is forced into an inferior position and the perpetrator intends to continue the bullying behaviour (Baillien et al., 2009). Rodwell and Demir (2012) distinguished bullying from violence on the physical or psychological nature of the behaviours therefore violence is related to a threat or perceived threat of physical harm. The repetition of acts is another distinguishing feature of bullying from violence which may be a single act. Sources of bullying tend to be internal (i.e., supervisors and co-workers) and sources of violence may be internal and external (i.e., patients, patients relatives or visitors) which is another point of distinction (Rodwell & Demir, 2012).
	Bullying is defined by the recipient's perception of an act as hostile and the recipient's immediate psychological and emotional response to the act is independent of the repetition and persistence of bullying behaviour (Ariza-Montes et al., 2013).	Intimidation, harassment, victimization, aggression, emotional abuse, and psychological harassment or mistreatment are forms of bullying which is commonly defined by factors of intentionality, frequency, duration, power imbalance, and the recipient is affected negatively (Ariza-Montes et al., 2013).
Workplace violence		
	Defined as one or repeated behaviours which includes emotional abuse, physical assault, threat of assault, and verbal sexual harassment that physically harm or are perceived to physically harm the recipient (Demir & Rodwell, 2012).	Intent is not explicit.

Table A1 (continued.)

Term	Definition or Construct	Distinguishing Features and Assumptions
Workplace bullying or lateral/horizontal violence		
	Refers to negative behaviour in the workplace of an individual or group (Johnson, 2009).	Bullying and lateral/horizontal violence terms are used interchangeably.
Workplace aggression		
	Includes similar and overlapping behavioural domains to emotional abuse, workplace incivility, workplace violence, antisocial work behaviour, psychological abuse, bullying, and workplace harassment (Barling et al., 2009).	Distinctions between the definitions of these include variations in intentionality, targets, consideration given to perpetrators, actions, and degrees of severity of actions (e.g., threatened physical assault, physical assault, and psychological aggression).
	A variety of forms of interpersonal behaviours associated with the construct of aggression (Glomb, 2002).	A general description that does not distinguish among forms or intent.
	Direct or indirect physical, psychological, and verbal behaviours perpetrated in an interpersonal or organisational relationship (Dionisi et al., 2012).	Intent is not explicit.
	Behaviour directed toward an individual that is potentially harmful, motivates avoidance and occurs while working (Schat & Frone, 2011).	Includes physical violence and psychological aggression as separate forms of workplace aggression (Schat & Frone, 2011). Intent is not explicit.
	Workplace aggression is any negative behaviour that occurs in the workplace from different source types. Type I is an organisational outsider with no legitimate relationship with the organisation (i.e., a criminal), Type II is an organisational outsider with a legitimate relationship with the organisation (i.e., patient, client or customer), Type III is a current or former employee, Type IV is an individual who has	Workplace aggression is not defined by psychological or physical behaviours, intentionality or resulting harm, and the work-related context is not emphasized. This perspective is distinct from other definitions that limit sources of workplace aggression to organisational insiders and legitimate outsiders.

Table A1 (continued.)

Term	Definition or Construct	Distinguishing Features and Assumptions
Workplace aggression (continued.)		
	a personal relationship with the employee but not with the organisation (Chang & Lyons, 2012).	
	Comprises a variety of behaviours perpetrated by organisational insiders that are represented by three categories including expressions of hostility, obstructionism (e.g., misplacing resources), and overt aggression (e.g., physical assault and destruction of property) within which psychologically aggressive acts are most frequently perpetrated (LeBlane & Barling, 2004).	Defined by the type of behaviour rather than frequency, duration or intent.
	Negative behaviours ranging in intensity from less severe forms to extreme forms, such as physical violence that is intended to harm an individual or organisation (Autrey, Howard, & Wech, 2013).	An umbrella term subsuming bullying, passive and relational aggression, lateral, horizontal, and physical violence, intimidation, and workplace incivility (Autrey et al., 2013). Intent is explicit.
	Behaviour intended to physically and or psychologically harm a worker or workers which is perpetrated within a work-related context by organisational insiders or outsiders (Barling et al., 2009; Davidsen, 2013).	Barling et al. (2009) distinguished between workplace aggression and workplace violence on the basis of the intent is to cause physical harm or injury which is emphasised in the violence definition versus predominantly psychological acts emphasised in aggression. Workplace aggression is an umbrella term that subsumes emotional abuse, workplace incivility, workplace violence, antisocial work behaviour, psychological abuse, bullying, and workplace harassment which have some overlap in features or characteristics including type, frequency, duration and severity of actions,

Table A1 (continued.)

Term	Definition or Construct	Distinguishing Features and Assumptions
Workplace aggression (continued.)		
		intentionality, recipients, sources and outcomes (Barling et al., 2009).
	Behaviour of one or more individuals directed towards a recipient with the intent to harm the recipient's wellbeing (Aquino & Thau, 2009).	Describes the nature of an act rather than a system of negative behaviours. Intent is explicit.
	Demir and Rodwell (2012) included a variety of behaviours related to bullying and violence. Bullying was defined by repeated behaviour by other workers towards the recipient that cause psychological harm or perceived harm. Workplace violence was defined as one or repeated behaviours which includes emotional abuse, physical assault, threat of assault, and verbal sexual harassment that physically harm or are perceived to physically harm the recipient. Intent was not explicit.	The distinction between two forms of workplace aggression, bullying and violence, is psychological versus physical harm.
	Psychological and physical forms of aggressive behaviour intended to harm an individual by direct or subtle means (Hogh et al., 2005).	Aggression may involve a single act intended to harm which is distinct from bullying that involves repeated and persistent acts intended to harm (Hogh et al., 2005).
Abusive supervision		
	A perceived continuing pattern of non-physical, verbal and nonverbal, hostile behaviours displayed by a supervisor (Aryee et al., 2008; Carlson et al., 2011; Lian et al., 2012; Mitchell & Ambrose, 2007; Tepper et al., 2006).	Distinguishable from other negative behaviours by the identity of the source and disparity of power within the supervisor-subordinate dyad.

Table A1 (continued.)

Term	Definition or Construct	Distinguishing Features and Assumptions
Supervisor aggression		
	Behaviour of a supervisor toward a recipient who perceives the behaviour as hostile (Mitchell & Ambrose, 2012).	Distinct from abusive supervision definition because sustained hostility is not emphasized.
Sexual harassment		
	Unwanted, sex-related behaviours including gender harassment, unwanted sexual attention, and sexual coercion which are offensive, beyond the recipient's ability to cope with and threaten the recipient's wellbeing (Dionisi et al., 2012).	Both sexual harassment and workplace aggression negatively affect the recipient's physical and psychological wellbeing. Sexual harassment is distinct from workplace aggression on the key feature of sex-related behaviour (Dionisi et al., 2012).

Appendix B: Demographic and Job-Related Characteristics

Table B1

Descriptive Statistics of Demographic and Job Related Variables of the Sample

Demographic/Job-Related Variable		Frequency	Percent
Survey Version			
	Web	1,969	33.44
	Paper	3,920	66.56
	Total	5,889	100.00
Gender			
	Female	4,575	77.69
	Male	1,257	21.34
	Total	5,832	99.03
	Missing	57	0.97
Age Group			
	Under 21 Years	86	1.46
	21-30 Years	933	15.84
	31-40 Years	1,365	23.18
	41-50 Years	1,855	31.50
	51-60 Years	1,294	21.97
	Over 60 Years	325	5.52
	Total	5,858	99.47
	Missing	31	0.53
Education Level			
	Left School Early	449	7.62
	Completed High School	1,110	18.85
	VET Certificate (includes Certificate III & IV, & Diploma)	820	13.92
	Professional Diploma (e.g., Nursing)	749	12.72
	Undergraduate Degree	1,370	23.26
	Postgraduate Degree	1,327	22.53
	Total	5,825	98.91
	Missing	64	1.09
Cultural ID			
	Yes	194	3.29
	No	5,651	95.96
	Total	5,845	99.25
	Missing	44	0.75

Table B1 (continued).

Demographic/Job-Related Variable		Frequency	Percent
Non-English Speaking Background			
	Yes	545	9.25
	No	5,297	89.95
	Total	5,842	99.20
	Missing	47	0.80
Employment Status			
	Permanent Full-Time	3,311	56.22
	Permanent Part-Time	604	10.26
	Casual/Flexible	1,462	24.83
	Temporary Full-Time	145	2.46
	Temporary Part-Time	339	5.76
	Total	5,861	99.52
	Missing	28	0.48
Occupational Stream			
	Administration	1,585	26.91
	Health Practitioner	576	9.78
	Trades	30	0.51
	Medical	306	5.20
	Dental	189	3.21
	Nursing	2,471	41.96
	ATSI Health Worker	63	1.07
	Operational	516	8.76
	Other	108	1.83
	Total	5,844	99.24
	Missing	45	0.76
Time in Location			
	Less than 1 year	1,307	22.19
	1 - 2 years	1,378	23.40
	3 - 5 years	1,163	19.75
	6 - 10 years	856	14.54
	11 - 15 years	491	8.34
	16 - 20 years	305	5.18
	More than 20 years	339	5.76
	Total	5,839	99.15
	Missing	50	0.85

Table B1 (continued).

Demographic/Job-Related Variable		Frequency	Percent
Time in Role			
	Less than 1 year	1,411	23.96
	1 - 2 years	1,376	23.37
	3 - 5 years	1,145	19.44
	6 - 10 years	838	14.23
	11 - 15 years	419	7.11
	16 - 20 years	262	4.45
	More than 20 years	370	6.28
	Total	5,821	98.85
	Missing	68	1.15
Time in Organisation			
	Less than 1 year	704	11.95
	1 - 2 years	923	15.67
	3 - 5 years	1,019	17.30
	6 - 10 years	1,023	17.37
	11 - 15 years	763	12.96
	16 - 20 years	527	8.95
	More than 20 years	873	14.82
	Total	5,832	99.03
	Missing	57	0.97
Supervisory or Management Responsibilities			
	Yes	2,391	40.60
	No	3,438	58.38
	Total	5,829	98.98
	Missing	60	1.02
Current Role			
	Primary Role	5,423	92.09
	On Secondment	466	7.91
Job-Sharing			
	Not Job-Sharing	5,638	95.74
	Job-Sharing	251	4.26

Appendix C: Table of Principal Component Loadings

Table C1

Table of Principal Component Loadings

Item Variable	Principal Component															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
TrstSupvr07: My supervisor treats people with care and respect	.89															
TrstSupvr14: My supervisor provides me with truthful and honest information	.86															
TrstSupvr04: My supervisor and I trust each other	.84															
TrstSupvr06: My supervisor welcomes feedback from staff	.81															
TrstSupvr11: My supervisor manages conflict fairly and promptly	.78															
TrstSupvr08: My supervisor asks for my opinion before making decisions that affect my work	.76															
TrstSupvr12: My supervisor encourages me to raise new ideas and find improved ways of doing my job	.71															
TrstSupvr05: My supervisor provides clear and constructive feedback	.67															
TrstSupvr02: My supervisor supports me to improve my skills and performance	.62					.31										
TrstSupvr01: My supervisor makes work expectations clear	.59									.34						
SupSpprt40: The supervisors in this work area can be relied upon when things get tough	.53															
SupSpprt02: I am able to approach the supervisors in this work area to discuss concerns and grievances	.53															

Table C1 (continued.)

Item Variable	Principal Component															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
SupSpprt24: There is support from the supervisors in this work area	.51															
SupSpprt35: There is good communication between the staff and supervisors in this work area	.42															
SupSpprt14Rev: The supervisors don't really know the problems faced by staff in this work area	.35															
Morale07: Feeling cheerful at work		-.84														
Morale03: Feeling enthusiastic at work		-.83														
Morale09: Feeling happy at work		-.79														
Morale13: Feeling energised at work		-.79														
Morale05: Feeling proud at work		-.76														
Morale11: Feeling delighted at work		-.76														
Morale01: Feeling positive at work		-.62														
TrstExec16: District Executive genuinely listens and is responsive to issues raised by staff			.95													
TrstExec15: District Executive builds a culture of openness and trust			.94													

Table C1 (continued.)

Item Variable	Principal Component															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
TrstExec18: District Executive sets a clear vision and direction for the future			.92													
TrstExec17: District Executive does what they say they are going to do			.90													
TrstExec13: District Executive makes fair, transparent and consistent decisions			.89													
TrstExec14: District Executive regularly communicates with staff			.85													
WrkOverload17: Staff in this work area are overloaded with work				.84												
WrkOverload27: There is no time for staff to relax in this work area				.75												
WrkOverload43: There is constant pressure for staff to keep working				.74												
WkplDistrs10: Staff in this work area experience a lot of stress				.73												
WrkOverload05: There is too much expected of staff in this work area				.73												
WkplDistrs32: Staff in this work area feel anxious about their work				.47												
WkplDistrs48: There is a lot of tension in this work area				.43												
WkplDistrs22: Staff in this work area are frustrated with their job				.42	.36											

Table C1 (continued.)

Item Variable	Principal Component															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
WkplDistrs38: Staff in this work area feel depressed about their job				.32												
DcMkgInvl30: Staff are frequently asked to participate in the decisions concerning administrative policies and procedures in this work area					-.41											
WkplMoral29: The morale in this work area is high					-.38											
DcMkgInvl46: There is opportunity for staff to participate in work policy and decision making					-.36											
WkplMoral19: There is a lot of energy in this work area					-.34											
SharGoal47: There is agreement about work practices in this work area					-.33											
DcMkgInvl20: I am happy with the decision: making processes used in this work area					-.25											
ProfDevel39: It is not difficult to gain access to training courses						.65										
ProfDevel01: I am encouraged to pursue further training and development						.60										
ProfDevel34: There are opportunities in this work area for developing new skills						.56										
ProfDevel23: The training and development planning in this work area takes into account my individual needs and interests						.46										
SharGoal37: My personal goals are in agreement with the goals of this work area						.25										

Table C1 (continued.)

Item Variable	Principal Component															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Distress08: Feeling anxious at work							.86									
Distress12: Feeling uneasy at work							.80									
Distress04: Feeling afraid at work							.77									
Distress14: Feeling depressed at work							.67									
Distress02: Feeling tense at work							.67									
Distress06: Feeling unhappy at work							.60									
Distress10: Feeling negative at work							.53									
ApprsRecog18: I am regularly given feedback on how I am performing in my role								-.69								
ApprsRecog28: There is structure and process that provides feedback on my work performance								-.60								
ApprsRecog44: I am happy with the quality of feedback I received on my work performance								-.59								
ApprsRecog12: I have the opportunity to discuss and receive feedback on my work performance								-.56								
ApprsRecog06: I am encouraged in my work by praise, thanks or other recognition								-.47								

Table C1 (continued.)

Item Variable	Principal Component															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
ProfDevel13: Others in this work area take an active interest in my career development and professional growth								-.44								
ApprsRecog50: Staff receive recognition for good work								-.41								
DcMkgInvl08: There are forums in this work area where I can express my views and opinions								-.28								
TrstMan21: Senior Manager builds a culture of openness and trust									-.96							
TrstMan22: Senior Manager genuinely listens and is responsive to issues raised by staff									-.96							
TrstMan20: Senior Manager regularly communicates with staff									-.93							
TrstMan23: Senior Manager does what they say they are going to do									-.91							
TrstMan19: Senior Manager makes fair, transparent and consistent decisions									-.90							
TrstMan24: Senior Manager sets a clear vision and direction for the future									-.89							
RolClar41: I am clear about my professional responsibilities										.67						
RolClar15: My work objectives are always well defined										.63						
RolClar03: I am always clear about what others expect of me										.59						

Table C1 (continued.)

Item Variable	Principal Component															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
RolClar25: I always know how much authority I have in this work area										.51						
SharGoal31: This work area has a clearly stated set of objectives and goals					-.30					.43						
SharGoal21Rev: The goals of this work area are not easily understood										.38						
EmpEng05: I volunteer to do things outside my job that contribute to the health service district's objectives											-.83					
EmpEng04: I try to help others in this organisation whenever I can											-.75					
WrkLQual01: In most ways my work life is close to my ideal												.83				
WrkLQual04: So far, I have obtained the important things I want in my work life												.82				
WrkLQual05: If I were able to live my work life over again, I wouldn't change anything												.80				
WrkLQualO6: The quality of my work life is excellent												.75				
WrkLQual03: I am satisfied with my life at work												.73				
WrkLQual02: The conditions of my life at work are excellent												.71				
PeerSup49: I receive support from my colleagues													.72			

Table C1 (continued.)

Item Variable	Principal Component															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PeerSup26: Staff in this work area can rely on their colleagues for support and assistance when needed													.68			
PeerSup04: I feel accepted by other staff in this work area													.64			
PeerSup42: There is good communication among staff in this work area													.60			
PeerSup33: Staff frequently discuss and share ideas with one another about how best to carry out their work													.55			
WkplMoral07: There is a good team spirit in this work area													.54			
SharGoal09: The staff are committed to the work area's goals and values													.45			
WkplMoral45: Staff take pride in this work area					-.30								.41			
PeerSup16: There is good communication between groups in this work area													.40			
PeerSup11: I have the opportunity to be involved in cooperative work with other members of staff													.38			
WkplMoral36: Staff go about their work with enthusiasm					-.32								.33			
WHS04: I have access to a confidential counselling service (Employee Assistance Scheme : EAS) when required														-.69		

Table C1 (continued.)

Item Variable	Principal Component															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
WHS02: Staff are encouraged to always report hazards, incidents and 'near misses'														-.64		
WHS05: I am always released for mandatory Workplace Health and Safety training														-.58		
WHS01: There is genuine commitment by management to staff safety in my work area														-.56		
WHS03Rev: My work is physically unsafe for me														-.41		
ManPrac08: Poor performance is appropriately managed															-.65	
ManPrac04: Work is allocated fairly															-.57	
ManPrac01: Recruitment and selection practices are transparent and fair															-.56	
ManPrac02: Problems are managed in a timely and appropriate manner															-.55	
ManPrac03: Staff are treated fairly when mistakes are made															-.55	
ManPrac07: There are clear guidelines and policies for how we work										.38					-.45	
ManPrac09: There are structures and routines which encourage staff, collectively, to evaluate and improve their work practices															-.44	

Table C1 (continued.)

Item Variable	Principal Component															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
ManPrac05: Staff are provided with the right equipment to complete their work															-.44	
ManPrac06: Staff receive the training that they need to do their work						.40									-.43	
EmpEng02: I would be happy for my friends and family to use this health service district's services																-.82
EmpEng01: I speak highly of this health service district to my friends																-.76
EmpEng03: This health service district really inspires the very best in me in the way of job performance																-.54

Appendix D: Adjustment of Frequency Outliers Within Aspects of Harmful Behaviour

Table D1

Reduction of Frequency Values Within Source and Response Severity of Harmful Behaviour Experiences

Source	Response Severity	*N*	Mean	*SD*	*M* + 2*SD*	Limit Value	No. of Values Changed
Co-worker							
	Upset	893	3.32	9.27	21.86	21	8
	Fear for Safety	636	2.98	4.45	11.89	11	17
	Distress > 1 Month	318	3.20	6.70	16.59	16	6
	Treatment Sought	144	2.99	4.66	12.31	12	5
Supervisor or Manager							
	Upset	150	2.32	7.45	17.22	17	1
	Fear for Safety	86	2.55	3.18	8.91	8	5
	Distress > 1 Month	264	2.49	6.73	15.95	15	4
	Treatment Sought	67	2.73	3.96	10.66	10	2
Patient or Client							
	Upset	494	2.57	3.96	10.50	10	13
	Fear for Safety	463	2.59	3.64	9.87	9	19
	Distress > 1 Month	99	3.10	10.18	23.47	23	1
	Treatment Sought	31	2.13	2.69	7.51	7	3
Visitor or Relative							
	Upset	151	2.17	2.68	7.53	7	9
	Fear for Safety	181	2.35	2.70	7.75	7	11
	Distress > 1 Month	47	3.40	14.46	32.32	32	1
	Treatment Sought	9	3.11	3.92	10.95	10	0

Appendix E: Statistical Tables of the GLZs for Selected Variables

Table E1

Effects of Frequency, Source, and Response Aspects of Harmful Behaviours for Trust in Supervisor and Supervisor Support

Variable	Descriptives			GLZ				Omnibus Test			Goodness of Fit (Pearson $\chi 2$)		
Trust in Supervisor and Supervisor Support	*N*	*M*	*SD*	Model	χ^2	*df*	Sig.	χ^2	*df*	Sig.	χ^2	*df*	Value/*df*
	1378	44	15.6	Intercept	1226.00	1	.000	149.78	13	.000	298589.92	1364	218.91
				Frequency	6.14	2	.046						
				Source	46.04	4	.000						
				Frequency x Source	10.62	7	.156						
				Intercept	7729.16	1	.000	295.08	11	.000	268707.55	1366	196.71
				Frequency	39.03	2	.000						
				Response	207.20	3	.000						
				Frequency x Response	15.49	6	.017						
				Intercept	6865.95	1	.000	318.26	19	.000	264225.56	1358	194.57
				Source	52.26	4	.000						
				Response	164.05	3	.000						
				Source x Response	15.66	12	.207						

Table E2

Effects of Frequency, Source, and Response Aspects of Harmful Behaviours for Individual Morale

Variable	Descriptives			GLZ				Omnibus Test			Goodness of Fit (Pearson $\chi 2$)		
Individual Morale	*N*	*M*	*SD*	Model	χ^2	*df*	Sig.	χ^2	*df*	Sig.	χ^2	*df*	Value/*df*
	1396	26.86	9.13	Intercept	1266.83	1	.000	99.83	13	.000	108265.69	1382	78.34
				Frequency	13.55	2	.001						
				Source	17.40	4	.002						
				Frequency x Source	13.52	7	.060						
				Intercept	7500.20	1	.000	125.41	11	.000	106300.04	1384	76.81
				Frequency	43.10	2	.000						
				Response	57.45	3	.000						
				Frequency x Response	10.60	6	.102						
				Intercept	6256.25	1	.000	128.61	19	.000	106055.91	1376	77.08
				Source	31.18	4	.000						
				Response	47.11	3	.000						
				Source x Response	11.87	12	.456						

Table E3

Effects of Frequency, Source, and Response Aspects of Harmful Behaviours for Individual Distress

Variable	Descriptives			GLZ				Omnibus Test			Goodness of Fit (Pearson $\chi 2$)		
Individual Distress	*N*	*M*	*SD*	Model	χ^2	*df*	Sig.	χ^2	*df*	Sig.	χ^2	*df*	Value/*df*
	1405	26.55	10.15	Intercept	1185.04	1	.000	254.65	13	.000	120754.51	1391	86.81
				Frequency	16.21	2	.000						
				Source	68.74	4	.000						
				Frequency x Source	8.61	7	.282						
				Intercept	5899.21	1	.000	247.71	11	.000	121352.46	1393	87.12
				Frequency	84.97	2	.000						
				Response	79.71	3	.000						
				Frequency x Response	18.44	6	.005						
				Intercept	6087.65	1	.000	308.13	19	.000	116244.43	1385	83.93
				Source	120.14	4	.000						
				Response	73.23	3	.000						
				Source x Response	24.63	12	.017						

Table E4

Effects of Frequency, Source, and Response Aspects of Harmful Behaviours for Workplace Morale

Variable	Descriptives			GLZ				Omnibus Test			Goodness of Fit (Pearson $\chi 2$)		
Workplace Morale	*N*	*M*	*SD*	Model	χ^2	*df*	Sig.	χ^2	*df*	Sig.	χ^2	*df*	Value/*df*
	1391	15.63	5.32	Intercept	1253.06	1	.000	115.81	13	.000	36233.16	1377	26.31
				Frequency	2.97	2	.226						
				Source	25.63	4	.000						
				Frequency x Source	7.90	7	.342						
				Intercept	7494.15	1	.000	177.98	11	.000	34649.50	1379	25.13
				Frequency	33.14	2	.000						
				Response	98.65	3	.000						
				Frequency x Response	4.87	6	.560						
				Intercept	6704.59	1	.000	193.10	19	.000	34274.96	1371	25.00
				Source	37.47	4	.000						
				Response	84.00	3	.000						
				Source x Response	14.46	12	.272						

Table E5

Effects of Frequency, Source, and Response Aspects of Harmful Behaviours for Workplace Distress and Work Pressures

Variable	Descriptives			GLZ				Omnibus Test			Goodness of Fit (Pearson $\chi 2$)		
Workplace Distress and Work Pressures	*N*	*M*	*SD*	Model	χ^2	*df*	Sig.	χ^2	*df*	Sig.	χ^2	*df*	Value/*df*
	1381	32.81	7.18	Intercept	3197.50	1	.000	108.61	13	.000	65845.21	1367	48.17
				Frequency	4.82	2	.090						
				Source	12.25	4	.016						
				Frequency x Source	15.40	7	.031						
				Intercept	16952.57	1	.000	129.09	11	.000	64876.19	1369	47.39
				Frequency	40.64	2	.000						
				Response	35.36	3	.000						
				Frequency x Response	20.42	6	.002						
				Intercept	15964.43	1	.000	139.84	19	.000	64373.17	1361	47.30
				Source	34.91	4	.000						
				Response	39.56	3	.000						
				Source x Response	22.18	12	.036						

Table E6

Effects of Frequency, Source, and Response Aspects of Harmful Behaviours for Supportive Peers

Variable	Descriptives			GLZ				Omnibus Test			Goodness of Fit (Pearson $\chi 2$)		
Supportive Peers	*N*	*M*	*SD*	Model	χ^2	*df*	Sig.	χ^2	*df*	Sig.	χ^2	*df*	Value/*df*
	1373	34.47	9.06	Intercept	2130.86	1	.000	107.14	13	.000	104247.46	1359	76.71
				Frequency	4.34	2	.114						
				Source	26.86	4	.000						
				Frequency x Source	5.41	7	.610						
				Intercept	12371.18	1	.000	122.97	11	.000	103052.76	1361	75.72
				Frequency	41.42	2	.000						
				Response	47.58	3	.000						
				Frequency x Response	0.70	6	.995						
				Intercept	10700.60	1	.000	131.24	19	.000	102433.68	1353	75.71
				Source	36.75	4	.000						
				Response	38.70	3	.000						
				Source x Response	16.51	12	.169						

Appendix F: Parameter Estimates of Effects of Aspects of Harmful Behaviours for Selected Variables

Table F1

Group Differences Among Frequency and Source Aspects of Harmful Behaviours for Trust in Supervisor and Supervisor Support

Parameter	*B*	*SE*	95% CI (Wald)		Hypothesis Test		
			Lower	Upper	χ^2 (Wald)	*df*	Sig.
Intercept	36.06	1.51	33.10	39.02	570.20	1	.000
Low Frequency	14.18	14.81	-14.86	43.21	0.92	1	.338
Moderate Frequency	2.73	2.51	-2.18	7.65	1.19	1	.276
High Frequency	0.00	.	.	.	.	.	.
Co-worker Source	13.23	3.21	6.94	19.53	16.99	1	.000
Supervisor Source	6.44	2.06	2.41	10.47	9.80	1	.002
Patient Source	4.86	2.06	0.82	8.91	5.57	1	.018
Visitor Source	-0.24	2.25	-4.65	4.17	0.01	1	.914
All Sources	0.00	.	.	.	.	.	.
Low Frequency * Co-worker Source	-12.68	15.11	-42.30	16.93	0.70	1	.401
Low Frequency * Supervisor Source	-2.23	15.09	-31.80	27.34	0.02	1	.883
Low Frequency * Patient Source	-10.85	14.94	-40.14	18.44	0.53	1	.468
Low Frequency * Visitor Source	0.00	.	.	.	.	.	.
Moderate Frequency * Co-worker Source	-3.80	4.04	-11.71	4.11	0.89	1	.346
Moderate Frequency * Supervisor Source	-0.37	3.11	-6.46	5.72	0.01	1	.904
Moderate Frequency * Patient Source	-2.24	3.11	-8.34	3.87	0.52	1	.473
Moderate Frequency * Visitor Source	2.17	3.43	-4.56	8.90	0.40	1	.527
Moderate Frequency * All Sources	0.00	.	.	.	.	.	.
High Frequency * Co-worker Source	0.00	.	.	.	.	.	.
High Frequency * Supervisor Source	0.00	.	.	.	.	.	.
High Frequency * Patient Source	0.00	.	.	.	.	.	.
High Frequency * Visitor Source	0.00	.	.	.	.	.	.
High Frequency * All Sources	0.00	.	.	.	.	.	.
(Scale)	216.68	8.25	201.09	233.48			

Table F2

Group Differences Among Frequency and Response Aspects of Harmful Behaviours for Trust in Supervisor and Supervisor Support

Parameter	*B*	*SE*	95% CI (Wald)		Hypothesis Test		
			Lower	Upper	χ^2 (Wald)	*df*	Sig.
(Intercept)	43.07	1.52	40.09	46.06	799.15	1	.000
Low Frequency	10.20	4.48	1.43	18.98	5.19	1	.023
Moderate Frequency	5.85	2.35	1.24	10.45	6.19	1	.013
High Frequency	0.00	.	.	.	.	.	.
Upset Response	4.75	2.23	0.37	9.13	4.52	1	.033
Fear Response	-9.41	1.85	-13.05	-5.78	25.80	1	.000
Distress Response	-0.69	2.12	-4.85	3.47	0.11	1	.746
Treatment Response	0.00	.	.	.	.	.	.
Low Frequency * Upset Response	-6.58	4.86	-16.10	2.94	1.84	1	.175
Low Frequency * Fear Response	-1.55	4.77	-10.91	7.81	0.11	1	.745
Low Frequency * Distress Response	2.02	5.08	-7.94	11.97	0.16	1	.691
Low Frequency * Treatment Response	0.00	.	.	.	.	.	.
Moderate Frequency * Upset Response	-3.66	3.08	-9.71	2.38	1.41	1	.235
Moderate Frequency * Fear Response	-4.53	2.75	-9.93	0.86	2.71	1	.100
Moderate Frequency * Distress Response	-1.77	3.02	-7.70	4.15	0.34	1	.558
Moderate Frequency * Treatment Response	0.00	.	.	.	.	.	.
High Frequency * Upset Response	0.00	.	.	.	.	.	.
High Frequency * Fear Response	0.00	.	.	.	.	.	.
High Frequency * Distress Response	0.00	.	.	.	.	.	.
High Frequency * Treatment Response	0.00	.	.	.	.	.	.
(Scale)	195.00	7.43	180.97	210.12			

Table F3

Group Differences Among Source and Response Aspects of Harmful Behaviours for Trust in Supervisor and Supervisor Support

Parameter	*B*	*SE*	95% CI (Wald)		Hypothesis Test		
			Lower	Upper	χ^2 (Wald)	*df*	Sig.
(Intercept)	44.50	2.95	38.71	50.29	227.20	1	.000
Co-worker Source	6.29	3.79	-1.13	13.72	2.76	1	.097
Supervisor Source	-0.67	3.35	-7.24	5.90	0.04	1	.841
Patient Source	3.90	4.64	-5.19	12.99	0.71	1	.400
Visitor Source	2.72	5.48	-8.02	13.46	0.25	1	.619
All Sources	0.00	.	.	.	.	.	.
Upset Response	1.12	4.01	-6.75	8.98	0.08	1	.781
Fear Response	-14.55	3.46	-21.33	-7.77	17.69	1	.000
Distress Response	-6.67	3.64	-13.81	0.48	3.35	1	.067
Treatment Response	0.00	.	.	.	.	.	.
Co-worker Source * Upset Response	1.55	4.77	-7.79	10.90	0.11	1	.744
Co-worker Source * Fear Response	6.83	4.40	-1.79	15.45	2.41	1	.121
Co-worker Source * Distress Response	6.67	4.73	-2.61	15.95	1.99	1	.159
Co-worker Source * Treatment Response	0.00	.	.	.	.	.	.
Supervisor Source * Upset Response	3.00	4.85	-6.50	12.51	0.38	1	.536
Supervisor Source * Fear Response	4.63	4.33	-3.85	13.12	1.14	1	.285
Supervisor Source * Distress Response	11.45	4.14	3.33	19.57	7.64	1	.006
Supervisor Source * Treatment Response	0.00	.	.	.	.	.	.
Patient Source * Upset Response	-1.32	5.49	-12.08	9.43	0.06	1	.809
Patient Source * Fear Response	2.27	5.08	-7.68	12.23	0.20	1	.655
Patient Source * Distress Response	3.77	5.74	-7.48	15.01	0.43	1	.511
Patient Source * Treatment Response	0.00	.	.	.	.	.	.
Visitor Source * Upset Response	0.34	6.60	-12.60	13.28	0.00	1	.959
Visitor Source * Fear Response	1.35	5.93	-10.27	12.96	0.05	1	.820
Visitor Source * Distress Response	1.44	6.88	-12.05	14.93	0.04	1	.834

Table F3 (continued.)

Parameter	*B*	*SE*	95% CI (Wald)		Hypothesis Test		
			Lower	Upper	χ^2 (Wald)	*df*	Sig.
Visitor Source * Treatment Response	0.00	.	.	.	.	.	.
All Sources * Upset Response	0.00	.	.	.	.	.	.
All Sources * Fear Response	0.00	.	.	.	.	.	.
All Sources * Distress Response	0.00	.	.	.	.	.	.
All Sources * Treatment Response	0.00	.	.	.	.	.	.
(Scale)	191.75	7.30	177.95	206.61			

Table F4

Group Differences Among Frequency and Source Aspects of Harmful Behaviours for Individual Morale

Parameter	*B*	*SE*	95% CI (Wald)		Hypothesis Test		
			Lower	Upper	χ^2 (Wald)	*df*	Sig.
Intercept	22.55	0.91	20.77	24.33	616.51	1	.000
Low Frequency	7.54	8.86	-9.82	24.91	0.72	1	.395
Moderate Frequency	1.90	1.48	-0.99	4.80	1.66	1	.198
High Frequency	0.00	.	.	.	.	.	.
Co-worker	2.67	1.92	-1.10	6.44	1.93	1	.165
Supervisor	2.72	1.24	0.28	5.15	4.78	1	.029
Patient	3.12	1.24	0.70	5.54	6.36	1	.012
Visitor	0.90	1.34	-1.73	3.54	0.45	1	.502
All Sources	0.00	.	.	.	.	.	.
Low Frequency * Co-worker	-2.67	9.04	-20.39	15.04	0.09	1	.767
Low Frequency * Supervisor	-0.15	9.02	-17.83	17.52	0.00	1	.986
Low Frequency * Patient	-6.86	8.94	-24.38	10.66	0.59	1	.443
Low Frequency * Visitor	0.00	.	.	.	.	.	.
Moderate Frequency * Co-worker	1.42	2.40	-3.29	6.12	0.35	1	.555
Moderate Frequency * Supervisor	0.09	1.85	-3.53	3.70	0.00	1	.963
Moderate Frequency * Patient	-0.71	1.84	-4.32	2.90	0.15	1	.700
Moderate Frequency * Visitor	0.19	2.03	-3.80	4.18	0.01	1	.925
Moderate Frequency * All Sources	0.00	.	.	.	.	.	.
High Frequency * Co-worker	0.00	.	.	.	.	.	.
High Frequency * Supervisor	0.00	.	.	.	.	.	.
High Frequency * Patient	0.00	.	.	.	.	.	.
High Frequency * Visitor	0.00	.	.	.	.	.	.
High Frequency * All Sources	0.00	.	.	.	.	.	.
(Scale)	77.55	2.94	72.01	83.53			

Table F5

Group Differences Among Frequency and Response Aspects of Harmful Behaviours for Individual Morale

Parameter	*B*	*SE*	95% CI (Wald)		Hypothesis Test		
			Lower	Upper	χ^2 (Wald)	*df*	Sig.
Intercept	24.70	0.95	22.84	26.57	673.15	1	.000
Low Frequency	7.46	2.69	2.19	12.74	7.68	1	.006
Moderate Frequency	4.16	1.45	1.32	6.99	8.24	1	.004
High Frequency	0.00	.	.	.	.	.	.
Upset Response	1.58	1.41	-1.18	4.35	1.26	1	.262
Fear Response	-1.62	1.16	-3.89	0.65	1.95	1	.162
Distress Response	0.63	1.33	-1.98	3.24	0.22	1	.638
Treatment Response	0.00	.	.	.	.	.	.
Low Frequency * Upset Response	-3.93	2.95	-9.70	1.85	1.78	1	.182
Low Frequency * Fear Response	-4.03	2.88	-9.67	1.61	1.96	1	.162
Low Frequency * Distress Response	-0.25	3.07	-6.28	5.78	0.01	1	.935
Low Frequency * Treatment Response	0.00	.	.	.	.	.	.
Moderate Frequency * Upset Response	-1.57	1.92	-5.33	2.19	0.67	1	.414
Moderate Frequency * Fear Response	-3.22	1.70	-6.56	0.12	3.57	1	.059
Moderate Frequency * Distress Response	-1.52	1.88	-5.19	2.16	0.65	1	.419
Moderate Frequency * Treatment Response	0.00	.	.	.	.	.	.
High Frequency * Upset Response	0.00	.	.	.	.	.	.
High Frequency * Fear Response	0.00	.	.	.	.	.	.
High Frequency * Distress Response	0.00	.	.	.	.	.	.
High Frequency * Treatment Response	0.00	.	.	.	.	.	.
(Scale)	76.15	2.88	70.70	82.01			

Table F6

Group Differences Among Source and Response Aspects of Harmful Behaviours for Individual Morale

Parameter	*B*	*SE*	95% CI (Wald)		Hypothesis Test		
			Lower	Upper	χ^2 (Wald)	*df*	Sig.
Intercept	25.14	1.86	21.49	28.78	182.97	1	.000
Co-worker	3.95	2.38	-0.72	8.63	2.75	1	.098
Supervisor	1.53	2.10	-2.59	5.64	0.53	1	.467
Patient	1.24	2.86	-4.37	6.85	0.19	1	.665
Visitor	1.24	3.60	-5.81	8.29	0.12	1	.731
All Sources	0.00	.	.	.	.	.	.
Upset Response	2.09	2.50	-2.82	6.99	0.69	1	.405
Fear Response	-4.86	2.18	-9.14	-0.58	4.96	1	.026
Distress Response	-1.27	2.28	-5.73	3.19	0.31	1	.576
Treatment Response	0.00	.	.	.	.	.	.
Co-worker * Upset Response	-0.89	2.98	-6.73	4.95	0.09	1	.765
Co-worker * Fear Response	3.59	2.77	-1.84	9.02	1.68	1	.195
Co-worker * Distress Response	1.28	2.97	-4.54	7.10	0.18	1	.667
Co-worker * Treatment Response	0.00	.	.	.	.	.	.
Supervisor * Upset Response	-0.88	3.04	-6.83	5.07	0.08	1	.772
Supervisor * Fear Response	0.35	2.72	-4.98	5.69	0.02	1	.897
Supervisor * Distress Response	3.64	2.58	-1.43	8.70	1.98	1	.159
Supervisor * Treatment Response	0.00	.	.	.	.	.	.
Patient * Upset Response	-0.22	3.39	-6.87	6.43	0.00	1	.947
Patient * Fear Response	2.93	3.15	-3.24	9.10	0.87	1	.352
Patient * Distress Response	3.70	3.53	-3.22	10.62	1.10	1	.295
Patient * Treatment Response	0.00	.	.	.	.	.	.
Visitor * Upset Response	-1.85	4.27	-10.21	6.52	0.19	1	.665

Table F6 (continued.)

Parameter	*B*	*SE*	95% CI (Wald)		Hypothesis Test		
			Lower	Upper	χ^2 (Wald)	*df*	Sig.
Visitor * Fear Response	1.98	3.87	-5.61	9.57	0.26	1	.609
Visitor * Distress Response	1.46	4.41	-7.18	10.10	0.11	1	.740
Visitor * Treatment Response	0.00	.	.	.	.	.	.
All Sources * Upset Response	0.00	.	.	.	.	.	.
All Sources * Fear Response	0.00	.	.	.	.	.	.
All Sources * Distress Response	0.00	.	.	.	.	.	.
All Sources * Treatment Response	0.00	.	.	.	.	.	.
(Scale)	75.97	2.88	70.54	81.82			

Table F7

Group Differences Among Frequency and Source Aspects of Harmful Behaviours for Individual Distress

Parameter	*B*	*SE*	95% CI (Wald)		Hypothesis Test		
			Lower	Upper	χ^2 (Wald)	*df*	Sig.
Intercept	34.34	0.96	32.47	36.21	1289.77	1	.000
Low Frequency	-4.34	9.33	-22.62	13.95	0.22	1	.642
Moderate Frequency	-2.45	1.56	-5.50	0.60	2.47	1	.116
High Frequency	0.00	.	.	.	.	.	.
Co-worker	-9.52	2.00	-13.43	-5.61	22.74	1	.000
Supervisor	-5.57	1.31	-8.13	-3.01	18.15	1	.000
Patient	-4.99	1.30	-7.55	-2.44	14.71	1	.000
Visitor	-2.00	1.41	-4.77	0.76	2.02	1	.156
All Sources	0.00	.	.	.	.	.	.
Low Frequency * Co-worker	0.61	9.51	-18.03	19.24	0.00	1	.949
Low Frequency * Supervisor	-4.67	9.49	-23.28	13.93	0.24	1	.622
Low Frequency * Patient	1.05	9.41	-17.39	19.49	0.01	1	.911
Low Frequency * Visitor	0.00	.	.	.	.	.	.
Moderate Frequency * Co-worker	0.18	2.50	-4.72	5.09	0.01	1	.942
Moderate Frequency * Supervisor	-0.62	1.94	-4.42	3.19	0.10	1	.750
Moderate Frequency * Patient	-0.06	1.94	-3.86	3.73	0.00	1	.973
Moderate Frequency * Visitor	0.21	2.14	-3.98	4.40	0.01	1	.922
Moderate Frequency * All Sources	0.00	.	.	.	.	.	.
High Frequency * Co-worker	0.00	.	.	.	.	.	.
High Frequency * Supervisor	0.00	.	.	.	.	.	.
High Frequency * Patient	0.00	.	.	.	.	.	.
High Frequency * Visitor	0.00	.	.	.	.	.	.
High Frequency * All Sources	0.00	.	.	.	.	.	.
(Scale)	85.95	3.24	79.82	92.54			

Table F8

Group Differences Among Frequency and Response Aspects of Harmful Behaviours for Individual Distress

Parameter	*B*	*SE*	95% CI (Wald)		Hypothesis Test		
			Lower	Upper	χ^2 (Wald)	*df*	Sig.
Intercept	29.67	1.01	27.68	31.65	855.94	1	.000
Low Frequency	-7.08	2.87	-12.70	-1.46	6.10	1	.014
Moderate Frequency	-6.94	1.55	-9.97	-3.90	20.05	1	.000
High Frequency	0.00	.	.	.	.	.	.
Upset Response	-1.15	1.50	-4.08	1.79	0.58	1	.445
Fear Response	2.96	1.23	0.54	5.37	5.76	1	.016
Distress Response	-0.61	1.41	-3.38	2.16	0.19	1	.666
Treatment Response	0.00	.	.	.	.	.	.
Low Frequency * Upset Response	0.19	3.13	-5.95	6.34	0.00	1	.950
Low Frequency * Fear Response	-0.32	3.07	-6.33	5.69	0.01	1	.917
Low Frequency * Distress Response	-2.71	3.27	-9.12	3.69	0.69	1	.406
Low Frequency * Treatment Response	0.00	.	.	.	.	.	.
Moderate Frequency * Upset Response	1.71	2.04	-2.30	5.71	0.70	1	.403
Moderate Frequency * Fear Response	5.08	1.82	1.51	8.64	7.80	1	.005
Moderate Frequency * Distress Response	3.88	2.00	-0.04	7.80	3.76	1	.052
Moderate Frequency * Treatment Response	0.00	.	.	.	.	.	.
High Frequency * Upset Response	0.00	.	.	.	.	.	.
High Frequency * Fear Response	0.00	.	.	.	.	.	.
High Frequency * Distress Response	0.00	.	.	.	.	.	.
High Frequency * Treatment Response	0.00	.	.	.	.	.	.
(Scale)	86.37	3.26	80.22	93.00			

Table F9

Group Differences Among Source and Response Aspects of Harmful Behaviours for Individual Distress

Parameter	*B*	*SE*	95% CI (Wald)		Hypothesis Test		
			Lower	Upper	χ^2 (Wald)	*df*	Sig.
Intercept	30.59	1.94	26.79	34.39	248.84	1	.000
Co-worker	-9.09	2.49	-13.97	-4.21	13.34	1	.000
Supervisor	-2.92	2.19	-7.22	1.38	1.77	1	.183
Patient	-4.78	2.99	-10.64	1.08	2.56	1	.110
Visitor	-6.59	3.76	-13.95	0.77	3.08	1	.079
All Sources	0.00	.	.	.	.	.	.
Upset Response	-1.23	2.59	-6.31	3.85	0.23	1	.634
Fear Response	5.97	2.28	1.50	10.45	6.84	1	.009
Distress Response	2.75	2.38	-1.91	7.41	1.34	1	.247
Treatment Response	0.00	.	.	.	.	.	.
Co-worker * Upset Response	0.09	3.09	-5.97	6.15	0.00	1	.976
Co-worker * Fear Response	-3.87	2.89	-9.54	1.81	1.78	1	.182
Co-worker * Distress Response	-1.10	3.09	-7.17	4.96	0.13	1	.721
Co-worker * Treatment Response	0.00	.	.	.	.	.	.
Supervisor * Upset Response	-3.38	3.15	-9.56	2.79	1.15	1	.283
Supervisor * Fear Response	-1.62	2.85	-7.20	3.96	0.32	1	.569
Supervisor * Distress Response	-6.36	2.70	-11.65	-1.07	5.55	1	.019
Supervisor * Treatment Response	0.00	.	.	.	.	.	.
Patient * Upset Response	0.51	3.52	-6.40	7.42	0.02	1	.884
Patient * Fear Response	-1.92	3.29	-8.37	4.53	0.34	1	.559
Patient * Distress Response	-5.23	3.68	-12.45	1.99	2.02	1	.156
Patient * Treatment Response	0.00	.	.	.	.	.	.
Visitor * Upset Response	5.20	4.44	-3.50	13.91	1.37	1	.242
Visitor * Fear Response	2.90	4.04	-5.02	10.82	0.51	1	.473

Table F9 (continued.)

Parameter	*B*	*SE*	95% CI (Wald)		Hypothesis Test		
			Lower	Upper	χ^2 (Wald)	*df*	Sig.
Visitor * Distress Response	3.25	4.60	-5.76	12.26	0.50	1	.480
Visitor * Treatment Response	0.00	.	.	.	.	.	.
All Sources * Upset Response	0.00	.	.	.	.	.	.
All Sources * Fear Response	0.00	.	.	.	.	.	.
All Sources * Distress Response	0.00	.	.	.	.	.	.
All Sources * Treatment Response	0.00	.	.	.	.	.	.
(Scale)	82.74	3.12	76.84	89.09			

Table F10

Group Differences Among Frequency and Source Aspects of Harmful Behaviours for Workplace Morale

Parameter	*B*	*SE*	95% CI (Wald)		Hypothesis Test		
			Lower	Upper	χ^2 (Wald)	*df*	Sig.
Intercept	30.59	1.94	26.79	34.39	248.84	1	.000
Co-worker	-9.09	2.49	-13.97	-4.21	13.34	1	.000
Supervisor	-2.92	2.19	-7.22	1.38	1.77	1	.183
Patient	-4.78	2.99	-10.64	1.08	2.56	1	.110
Visitor	-6.59	3.76	-13.95	0.77	3.08	1	.079
All Sources	0.00	.	.	.	.	.	.
Upset Response	-1.23	2.59	-6.31	3.85	0.23	1	.634
Fear Response	5.97	2.28	1.50	10.45	6.84	1	.009
Distress Response	2.75	2.38	-1.91	7.41	1.34	1	.247
Treatment Response	0.00	.	.	.	.	.	.
Co-worker * Upset Response	0.09	3.09	-5.97	6.15	0.00	1	.976
Co-worker * Fear Response	-3.87	2.89	-9.54	1.81	1.78	1	.182
Co-worker * Distress Response	-1.10	3.09	-7.17	4.96	0.13	1	.721
Co-worker * Treatment Response	0.00	.	.	.	.	.	.
Supervisor * Upset Response	-3.38	3.15	-9.56	2.79	1.15	1	.283
Supervisor * Fear Response	-1.62	2.85	-7.20	3.96	0.32	1	.569
Supervisor * Distress Response	-6.36	2.70	-11.65	-1.07	5.55	1	.019
Supervisor * Treatment Response	0.00	.	.	.	.	.	.
Patient * Upset Response	0.51	3.52	-6.40	7.42	0.02	1	.884
Patient * Fear Response	-1.92	3.29	-8.37	4.53	0.34	1	.559
Patient * Distress Response	-5.23	3.68	-12.45	1.99	2.02	1	.156
Patient * Treatment Response	0.00	.	.	.	.	.	.
Visitor * Upset Response	5.20	4.44	-3.50	13.91	1.37	1	.242
Visitor * Fear Response	2.90	4.04	-5.02	10.82	0.51	1	.473
Visitor * Distress Response	3.25	4.60	-5.76	12.26	0.50	1	.480

Table F10 (continued.)

Parameter	*B*	*SE*	95% CI (Wald)		Hypothesis Test		
			Lower	Upper	χ^2 (Wald)	*df*	Sig.
Visitor * Treatment Response	0.00	.	.	.	.	.	.
All Sources * Upset Response	0.00	.	.	.	.	.	.
All Sources * Fear Response	0.00	.	.	.	.	.	.
All Sources * Distress Response	0.00	.	.	.	.	.	.
All Sources * Treatment Response	0.00	.	.	.	.	.	.
(Scale)	82.74	3.12	76.84	89.09			

Table F11

Group Differences Among Frequency and Response Aspects of Harmful Behaviours for Workplace Morale

Parameter	*B*	*SE*	95% CI (Wald)		Hypothesis Test		
			Lower	Upper	χ^2 (Wald)	*df*	Sig.
Intercept	15.19	0.54	14.13	16.25	787.16	1	.000
Low Frequency	3.54	1.60	0.40	6.67	4.90	1	.027
Moderate Frequency	1.14	0.84	-0.50	2.78	1.85	1	.174
High Frequency	0.00	.	.	.	.	.	.
Upset Response	0.80	0.79	-0.76	2.35	1.01	1	.314
Fear Response	-2.30	0.66	-3.60	-1.01	12.16	1	.000
Distress Response	-0.12	0.76	-1.60	1.36	0.03	1	.873
Treatment Response	0.00	.	.	.	.	.	.
Low Frequency * Upset Response	-1.53	1.73	-4.93	1.87	0.78	1	.378
Low Frequency * Fear Response	-0.84	1.70	-4.18	2.50	0.24	1	.622
Low Frequency * Distress Response	-0.21	1.81	-3.76	3.34	0.01	1	.906
Low Frequency * Treatment Response	0.00	.	.	.	.	.	.
Moderate Frequency * Upset Response	-0.19	1.10	-2.34	1.96	0.03	1	.861
Moderate Frequency * Fear Response	-0.84	0.98	-2.77	1.08	0.74	1	.390
Moderate Frequency * Distress Response	0.12	1.08	-1.99	2.24	0.01	1	.910
Moderate Frequency * Treatment Response	0.00	.	.	.	.	.	.
High Frequency * Upset Response	0.00	.	.	.	.	.	.
High Frequency * Fear Response	0.00	.	.	.	.	.	.
High Frequency * Distress Response	0.00	.	.	.	.	.	.
High Frequency * Treatment Response	0.00	.	.	.	.	.	.
(Scale)	24.91	0.94	23.13	26.83			

Table F12

Group Differences Among Source and Response Aspects of Harmful Behaviours for Workplace Morale

Parameter	*B*	*SE*	95% CI (Wald)		Hypothesis Test		
			Lower	Upper	χ^2 (Wald)	*df*	Sig.
Intercept	15.73	1.06	13.65	17.80	220.84	1	.000
Co-worker	2.24	1.37	-0.45	4.94	2.66	1	.103
Supervisor	-0.24	1.20	-2.59	2.11	0.04	1	.841
Patient	-2.16	1.63	-5.36	1.03	1.76	1	.184
Visitor	0.61	1.96	-3.24	4.46	0.10	1	.758
All Sources	0.00	.	.	.	.	.	.
Upset Response	1.05	1.43	-1.74	3.84	0.54	1	.461
Fear Response	-3.97	1.24	-6.40	-1.53	10.20	1	.001
Distress Response	-1.39	1.31	-3.95	1.17	1.14	1	.286
Treatment Response	0.00	.	.	.	.	.	.
Co-worker * Upset Response	-0.64	1.71	-3.99	2.71	0.14	1	.709
Co-worker * Fear Response	1.74	1.59	-1.38	4.86	1.20	1	.274
Co-worker * Distress Response	0.72	1.71	-2.64	4.08	0.18	1	.674
Co-worker * Treatment Response	0.00	.	.	.	.	.	.
Supervisor * Upset Response	0.29	1.72	-3.07	3.66	0.03	1	.865
Supervisor * Fear Response	1.21	1.55	-1.83	4.26	0.61	1	.434
Supervisor * Distress Response	2.50	1.48	-0.41	5.40	2.83	1	.092
Supervisor * Treatment Response	0.00	.	.	.	.	.	.
Patient * Upset Response	1.93	1.93	-1.86	5.71	0.99	1	.319
Patient * Fear Response	4.16	1.79	0.64	7.67	5.38	1	.020
Patient * Distress Response	4.83	2.02	0.88	8.78	5.74	1	.017
Patient * Treatment Response	0.00	.	.	.	.	.	.
Visitor * Upset Response	-1.93	2.36	-6.56	2.69	0.67	1	.413
Visitor * Fear Response	0.41	2.13	-3.76	4.58	0.04	1	.846

Table F12 (continued.)

Parameter	*B*	*SE*	95% CI (Wald)		Hypothesis Test		
			Lower	Upper	χ^2 (Wald)	*df*	Sig.
Visitor * Distress Response	-0.07	2.47	-4.91	4.76	0.00	1	.976
Visitor * Treatment Response	0.00	.	.	.	.	.	.
All Sources * Upset Response	0.00	.	.	.	.	.	.
All Sources * Fear Response	0.00	.	.	.	.	.	.
All Sources * Distress Response	0.00	.	.	.	.	.	.
All Sources * Treatment Response	0.00	.	.	.	.	.	.
(Scale)	24.64	0.93	22.88	26.54			

Table F13

Group Differences Among Frequency and Source Aspects of Harmful Behaviours for Workplace Distress and Work Pressures

Parameter	*B*	*SE*	95% CI (Wald)		Hypothesis Test		
			Lower	Upper	χ^2 (Wald)	*df*	Sig.
(Intercept)	35.99	0.71	34.59	37.39	2553.56	1	.000
Low Frequency	4.21	6.95	-9.41	17.83	0.37	1	.545
Moderate Frequency	-1.72	1.19	-4.06	0.62	2.08	1	.149
High Frequency	0.00	.	.	.	.	.	.
Co-worker	-3.26	1.53	-6.26	-0.26	4.54	1	.033
Supervisor	-0.42	0.97	-2.32	1.48	0.19	1	.663
Patient	-3.12	0.97	-5.02	-1.21	10.29	1	.001
Visitor	-1.20	1.06	-3.28	0.88	1.27	1	.259
All Sources	0.00	.	.	.	.	.	.
Low Frequency * Co-worker	-6.96	7.09	-20.86	6.94	0.96	1	.326
Low Frequency * Supervisor	-10.72	7.07	-24.59	3.15	2.30	1	.130
Low Frequency * Patient	-4.88	7.01	-18.62	8.86	0.48	1	.486
Low Frequency * Visitor	0.00	.	.	.	.	.	.
Moderate Frequency * Co-worker	0.31	1.92	-3.46	4.08	0.03	1	.872
Moderate Frequency * Supervisor	-0.64	1.47	-3.52	2.24	0.19	1	.663
Moderate Frequency * Patient	2.10	1.47	-0.79	4.99	2.04	1	.154
Moderate Frequency * Visitor	1.38	1.63	-1.81	4.57	0.72	1	.395
Moderate Frequency * All Sources	0.00	.	.	.	.	.	.
High Frequency * Co-worker	0.00	.	.	.	.	.	.
High Frequency * Supervisor	0.00	.	.	.	.	.	.
High Frequency * Patient	0.00	.	.	.	.	.	.
High Frequency * Visitor	0.00	.	.	.	.	.	.
High Frequency * All Sources	0.00	.	.	.	.	.	.
(Scale)	47.68	1.81	44.25	51.37			

Table F14

Group Differences Among Frequency and Response Aspects of Harmful Behaviours for Workplace Distress and Work Pressures

Parameter	*B*	*SE*	95% CI (Wald)		Hypothesis Test		
			Lower	Upper	χ^2 (Wald)	*df*	Sig.
(Intercept)	36.34	0.74	34.89	37.79	2417.19	1	.000
Low Frequency	-6.50	2.11	-10.64	-2.36	9.48	1	.002
Moderate Frequency	-2.93	1.16	-5.20	-0.66	6.40	1	.011
High Frequency	0.00	.	.	.	.	.	.
Upset Response	-4.04	1.09	-6.17	-1.90	13.69	1	.000
Fear Response	-1.92	0.90	-3.69	-0.15	4.51	1	.034
Distress Response	-0.96	1.05	-3.02	1.09	0.84	1	.359
Treatment Response	0.00	.	.	.	.	.	.
Low Frequency * Upset Response	4.31	2.31	-0.21	8.83	3.49	1	.062
Low Frequency * Fear Response	4.02	2.26	-0.41	8.45	3.16	1	.076
Low Frequency * Distress Response	0.58	2.42	-4.17	5.33	0.06	1	.810
Low Frequency * Treatment Response	0.00	.	.	.	.	.	.
Moderate Frequency * Upset Response	0.99	1.52	-1.99	3.96	0.42	1	.515
Moderate Frequency * Fear Response	3.35	1.36	0.69	6.01	6.08	1	.014
Moderate Frequency * Distress Response	1.01	1.50	-1.93	3.94	0.45	1	.501
Moderate Frequency * Treatment Response	0.00	.	.	.	.	.	.
High Frequency * Upset Response	0.00	.	.	.	.	.	.
High Frequency * Fear Response	0.00	.	.	.	.	.	.
High Frequency * Distress Response	0.00	.	.	.	.	.	.
High Frequency * Treatment Response	0.00	.	.	.	.	.	.
(Scale)	46.98	1.79	43.60	50.62			

Table F15

Group Differences Among Source and Response Aspects of Harmful Behaviours for Workplace Distress and Work Pressures

Parameter	*B*	*SE*	95% CI (Wald)		Hypothesis Test		
			Lower	Upper	χ^2 (Wald)	*df*	Sig.
(Intercept)	34.73	1.46	31.87	37.58	569.18	1	.000
Co-worker	-2.73	1.87	-6.39	0.93	2.13	1	.144
Supervisor	0.94	1.65	-2.30	4.17	0.32	1	.571
Patient	0.96	2.24	-3.44	5.36	0.18	1	.669
Visitor	0.90	2.82	-4.63	6.42	0.10	1	.750
All Sources	0.00	.	.	.	.	.	.
Upset Response	-3.81	2.00	-7.72	0.10	3.64	1	.056
Fear Response	1.36	1.71	-2.00	4.72	0.63	1	.427
Distress Response	2.68	1.80	-0.84	6.20	2.22	1	.136
Treatment Response	0.00	.	.	.	.	.	.
Co-worker * Upset Response	1.63	2.36	-3.00	6.27	0.48	1	.489
Co-worker * Fear Response	-2.50	2.17	-6.76	1.77	1.32	1	.251
Co-worker * Distress Response	-3.16	2.34	-7.75	1.44	1.81	1	.178
Co-worker * Treatment Response	0.00	.	.	.	.	.	.
Supervisor * Upset Response	-1.49	2.39	-6.18	3.20	0.39	1	.534
Supervisor * Fear Response	-1.91	2.14	-6.11	2.28	0.80	1	.372
Supervisor * Distress Response	-5.46	2.04	-9.46	-1.46	7.16	1	.007
Supervisor * Treatment Response	0.00	.	.	.	.	.	.
Patient * Upset Response	-0.80	2.68	-6.06	4.46	0.09	1	.765
Patient * Fear Response	-2.76	2.47	-7.60	2.09	1.24	1	.265
Patient * Distress Response	-7.47	2.78	-12.92	-2.01	7.20	1	.007
Patient * Treatment Response	0.00	.	.	.	.	.	.
Visitor * Upset Response	0.75	3.37	-5.86	7.36	0.05	1	.824
Visitor * Fear Response	-1.95	3.04	-7.90	4.00	0.41	1	.521

Table F15 (continued.)

Parameter	*B*	*SE*	95% CI (Wald)		Hypothesis Test		
			Lower	Upper	χ^2 (Wald)	*df*	Sig.
Visitor * Distress Response	-2.70	3.49	-9.54	4.13	0.60	1	.438
Visitor * Treatment Response	0.00	.	.	.	.	.	.
All Sources * Upset Response	0.00	.	.	.	.	.	.
All Sources * Fear Response	0.00	.	.	.	.	.	.
All Sources * Distress Response	0.00	.	.	.	.	.	.
All Sources * Treatment Response	0.00	.	.	.	.	.	.
(Scale)	46.61	1.77	43.26	50.22			

Table F16

Group Differences Among Frequency and Source Aspects of Harmful Behaviours for Supportive Peers

Parameter	*B*	*SE*	95% CI (Wald)		Hypothesis Test		
			Lower	Upper	χ^2 (Wald)	*df*	Sig.
Intercept	30.40	0.91	28.61	32.19	1107.31	1	.000
Low Frequency	5.74	8.77	-11.44	22.93	0.43	1	.512
Moderate Frequency	1.91	1.51	-1.06	4.88	1.59	1	.207
High Frequency	0.00	.	.	.	.	.	.
Co-worker	5.75	1.91	2.01	9.50	9.08	1	.003
Supervisor	4.16	1.23	1.74	6.58	11.35	1	.001
Patient	1.32	1.24	-1.11	3.76	1.14	1	.287
Visitor	0.86	1.34	-1.77	3.50	0.41	1	.522
All Sources	0.00	.	.	.	.	.	.
Low Frequency * Co-worker	-4.09	8.94	-21.62	13.44	0.21	1	.648
Low Frequency * Supervisor	-0.66	8.93	-18.16	16.84	0.01	1	.941
Low Frequency * Patient	-1.71	8.85	-19.04	15.63	0.04	1	.847
Low Frequency * Visitor	0.00	.	.	.	.	.	.
Moderate Frequency * Co-worker	-2.01	2.41	-6.73	2.72	0.69	1	.405
Moderate Frequency * Supervisor	-2.11	1.87	-5.76	1.55	1.28	1	.259
Moderate Frequency * Patient	-0.53	1.87	-4.20	3.14	0.08	1	.777
Moderate Frequency * Visitor	-0.94	2.05	-4.97	3.08	0.21	1	.646
Moderate Frequency * All Sources	0.00	.	.	.	.	.	.
High Frequency * Co-worker	0.00	.	.	.	.	.	.
High Frequency * Supervisor	0.00	.	.	.	.	.	.
High Frequency * Patient	0.00	.	.	.	.	.	.
High Frequency * Visitor	0.00	.	.	.	.	.	.
High Frequency * All Sources	0.00	.	.	.	.	.	.
(Scale)	75.93	2.90	70.45	81.82			

Table F17

Group Differences Among Frequency and Response Aspects of Harmful Behaviours for Supportive Peers

Parameter	*B*	*SE*	95% CI (Wald)		Hypothesis Test		
			Lower	Upper	χ^2 (Wald)	*df*	Sig.
Intercept	34.93	0.93	33.10	36.76	1398.02	1	.000
Low Frequency	6.40	2.67	1.17	11.64	5.75	1	.016
Moderate Frequency	0.94	1.45	-1.90	3.78	0.42	1	.517
High Frequency	0.00	.	.	.	.	.	.
Upset Response	-2.33	1.39	-5.06	0.40	2.79	1	.095
Fear Response	-4.73	1.14	-6.97	-2.48	17.07	1	.000
Distress Response	-0.88	1.33	-3.48	1.71	0.44	1	.505
Treatment Response	0.00	.	.	.	.	.	.
Low Frequency * Upset Response	-1.22	2.92	-6.94	4.51	0.17	1	.677
Low Frequency * Fear Response	-1.29	2.86	-6.89	4.31	0.20	1	.651
Low Frequency * Distress Response	-1.00	3.06	-7.00	4.99	0.11	1	.743
Low Frequency * Treatment Response	0.00	.	.	.	.	.	.
Moderate Frequency * Upset Response	0.91	1.92	-2.86	4.68	0.23	1	.635
Moderate Frequency * Fear Response	0.61	1.71	-2.74	3.95	0.13	1	.722
Moderate Frequency * Distress Response	0.43	1.88	-3.26	4.11	0.05	1	.821
Moderate Frequency * Treatment Response	0.00	.	.	.	.	.	.
High Frequency * Upset Response	0.00	.	.	.	.	.	.
High Frequency * Fear Response	0.00	.	.	.	.	.	.
High Frequency * Distress Response	0.00	.	.	.	.	.	.
High Frequency * Treatment Response	0.00	.	.	.	.	.	.
(Scale)	75.06	2.86	69.65	80.89			

Table F18

Group Differences Among Source and Response Aspects of Harmful Behaviours for Supportive Peers

Parameter	*B*	*SE*	95% CI (Wald)		Hypothesis Test		
			Lower	Upper	χ^2 (Wald)	*df*	Sig.
Intercept	33.14	1.84	29.53	36.75	323.79	1	.000
Co-worker	5.68	2.38	1.02	10.34	5.71	1	.017
Supervisor	2.38	2.08	-1.70	6.46	1.31	1	.253
Patient	0.36	2.84	-5.20	5.93	0.02	1	.898
Visitor	4.20	3.42	-2.50	10.90	1.51	1	.219
All Sources	0.00	.	.	.	.	.	.
Upset Response	1.78	2.58	-3.27	6.83	0.48	1	.490
Fear Response	-5.10	2.17	-9.36	-0.84	5.51	1	.019
Distress Response	-1.14	2.27	-5.59	3.32	0.25	1	.617
Treatment Response	0.00	.	.	.	.	.	.
Co-worker * Upset Response	-2.66	3.05	-8.63	3.31	0.76	1	.382
Co-worker * Fear Response	2.12	2.77	-3.30	7.54	0.59	1	.444
Co-worker * Distress Response	-1.26	2.96	-7.07	4.55	0.18	1	.670
Co-worker * Treatment Response	0.00	.	.	.	.	.	.
Supervisor * Upset Response	-3.97	3.07	-9.99	2.05	1.67	1	.196
Supervisor * Fear Response	0.14	2.71	-5.17	5.44	0.00	1	.960
Supervisor * Distress Response	2.44	2.58	-2.62	7.50	0.89	1	.345
Supervisor * Treatment Response	0.00	.	.	.	.	.	.
Patient * Upset Response	-0.82	3.44	-7.56	5.91	0.06	1	.811
Patient * Fear Response	3.98	3.13	-2.16	10.11	1.62	1	.204
Patient * Distress Response	3.90	3.51	-2.98	10.78	1.24	1	.266
Patient * Treatment Response	0.00	.	.	.	.	.	.
Visitor * Upset Response	-5.79	4.16	-13.95	2.37	1.93	1	.164

Table F18 (continued.)

Parameter	*B*	*SE*	95% CI (Wald)		Hypothesis Test		
			Lower	Upper	χ^2 (Wald)	*df*	Sig.
Visitor * Fear Response	-1.74	3.71	-9.00	5.52	0.22	1	.638
Visitor * Distress Response	-2.00	4.29	-10.41	6.42	0.22	1	.642
Visitor * Treatment Response	0.00	.	.	.	.	.	.
All Sources * Upset Response	0.00	.	.	.	.	.	.
All Sources * Fear Response	0.00	.	.	.	.	.	.
All Sources * Distress Response	0.00	.	.	.	.	.	.
All Sources * Treatment Response	0.00	.	.	.	.	.	.
(Scale)	74.61	2.85	69.23	80.40			

Appendix G: Tables of Estimated Marginal Means of GLZ Analyses of Selected Variables.

Table G1

Estimated Marginal Means of the Trust in Supervisor and Supervisor Support Frequency by Source Model

Group		Mean	Std. Error	95% CI	
				Lower	Upper
Trust in Supervisor & Supervisor Support		44.15	1.14	41.92	46.39
Frequency	Low	49.88	3.75	42.52	57.24
	Moderate	42.81	0.68	41.48	44.14
	High	40.92	0.82	39.31	42.54
Source	Co-worker	49.44	1.10	47.29	51.59
	Supervisor	47.28	1.03	45.26	49.29
	Patient	42.20	0.76	40.70	43.70
	Visitor	42.18	4.97	32.44	51.92
	All Sources	37.43	1.25	34.97	39.89
Frequency by Source					
Low	Co-worker	50.79	0.92	48.99	52.60
	Supervisor	54.46	2.49	49.58	59.33
	Patient	44.26	1.36	41.59	46.92
	Visitor	50.00	14.72	21.15	78.85
Moderate	Co-worker	48.23	1.40	45.48	50.98
	Supervisor	44.86	1.19	42.54	47.19
	Patient	41.42	1.20	39.08	43.77
	Visitor	40.73	1.65	37.50	43.95
	All Sources	38.80	2.00	34.87	42.72
High	Co-worker	49.30	2.83	43.74	54.85
	Supervisor	42.50	1.40	39.77	45.24
	Patient	40.93	1.40	38.18	43.68
	Visitor	35.82	1.67	32.55	39.09
	All Sources	36.06	1.51	33.10	39.02

Table G2

Estimated Marginal Means of Trust in Supervisor and Supervisor Support Frequency by Response Model

Group		Mean	Std. Error	CI (95%)	
				Lower	Upper
Trust in Supervisor & Supervisor Support		45.74	0.52	44.72	46.76
Frequency	Low	50.41	1.22	48.02	52.79
	Moderate	45.09	0.66	43.80	46.38
	High	41.73	0.72	40.32	43.14
Response	Upset	49.76	0.74	48.31	51.20
	Fear	36.98	0.64	35.72	38.23
	Distress	47.81	0.89	46.06	49.56
	Treatment	48.42	1.61	45.27	51.57
Frequency by Response					
Low	Upset	51.44	0.94	49.60	53.28
	Fear	42.31	1.27	39.81	44.81
	Distress	54.60	1.88	50.91	58.29
	Treatment	53.27	4.21	45.02	61.52
Moderate	Upset	50.01	1.15	47.75	52.26
	Fear	34.97	0.98	33.06	36.88
	Distress	46.46	1.20	44.11	48.80
	Treatment	48.92	1.79	45.41	52.42
High	Upset	47.82	1.63	44.62	51.03
	Fear	33.66	1.06	31.59	35.73
	Distress	42.38	1.48	39.48	45.28
	Treatment	43.07	1.52	40.09	46.06

Table G3

Estimated Marginal Means of Trust in Supervisor and Supervisor Support Source by Response Model

Group		Mean	Std. Error	CI (95%)	
				Lower	Upper
Trust in Supervisor & Supervisor Support		44.02	0.53	42.98	45.06
Source	Co-worker	49.53	0.86	47.84	51.22
	Supervisor	43.58	0.90	41.80	45.35
	Patient	44.55	1.17	42.26	46.85
	Visitor	42.98	1.62	39.80	46.16
	All Sources	39.47	1.22	37.08	41.87
Response	Upset	48.78	0.91	46.99	50.56
	Fear	35.41	0.70	34.05	36.78
	Distress	44.95	1.08	42.84	47.06
	Treatment	46.95	1.43	44.15	49.75
Source by Response					
Co-worker	Upset	53.46	0.99	51.52	55.41
	Fear	43.07	1.33	40.47	45.67
	Distress	50.80	1.87	47.14	54.46
	Treatment	50.79	2.37	46.14	55.45
Supervisor	Upset	47.95	2.22	43.60	52.29
	Fear	33.91	2.06	29.87	37.96
	Distress	48.61	1.17	46.32	50.91
	Treatment	43.83	1.59	40.72	46.94
Patient	Upset	48.19	1.12	45.99	50.39
	Fear	36.12	1.02	34.11	38.13
	Distress	45.50	2.62	40.37	50.63
	Treatment	48.40	3.58	41.39	55.41
Visitor	Upset	48.68	2.49	43.80	53.55
	Fear	34.02	1.36	31.36	36.68
	Distress	42.00	3.58	34.99	49.01
	Treatment	47.22	4.62	38.18	56.27
All Sources	Upset	45.62	2.72	40.29	50.94
	Fear	29.95	1.80	26.42	33.48
	Distress	37.83	2.14	33.65	42.02
	Treatment	44.50	2.95	38.71	50.29

Table G4

Estimated Marginal Means of Individual Morale Frequency by Source Model

Group		Mean	Std. Error	CI (95%)	
				Lower	Upper
Individual Morale		26.78	0.68	25.45	28.12
Frequency	Low	30.03	2.24	25.63	34.42
	Moderate	26.53	0.40	25.75	27.32
	High	24.43	0.49	23.47	25.40
Source	Co-worker	27.95	0.66	26.67	29.24
	Supervisor	28.39	0.60	27.22	29.57
	Patient	26.30	0.45	25.41	27.19
	Visitor	26.67	2.97	20.84	32.49
	All Sources	23.50	0.74	22.06	24.95
Frequency by Source Model					
Low	Co-worker	30.09	0.54	29.03	31.16
	Supervisor	32.66	1.43	29.86	35.46
	Patient	26.36	0.81	24.77	27.94
	Visitor	31.00	8.81	13.74	48.26
Moderate	Co-worker	28.54	0.84	26.90	30.18
	Supervisor	27.26	0.71	25.87	28.64
	Patient	26.87	0.71	25.48	28.25
	Visitor	25.55	0.98	23.62	27.48
	All Sources	24.46	1.17	22.17	26.74
High	Co-worker	25.22	1.69	21.90	28.54
	Supervisor	25.27	0.85	23.61	26.93
	Patient	25.67	0.84	24.03	27.32
	Visitor	23.46	0.99	21.51	25.40
	All Sources	22.55	0.91	20.77	24.33

Table G5

Estimated Marginal Means of Individual Morale Frequency by Response Model

Group		Mean	Std. Error	CI (95%)	
				Lower	Upper
Individual Morale		27.52	0.32	26.89	28.14
Frequency	Low	30.26	0.73	28.82	31.70
	Moderate	27.43	0.40	26.64	28.22
	High	24.85	0.45	23.96	25.74
Response	Upset	28.33	0.46	27.42	29.23
	Fear	24.54	0.40	23.77	25.32
	Distress	28.61	0.55	27.53	29.70
	Treatment	28.58	0.97	26.68	30.47
Frequency by Response					
Low	Upset	29.82	0.58	28.68	30.96
	Fear	26.52	0.78	24.99	28.05
	Distress	32.54	1.16	30.28	34.81
	Treatment	32.17	2.52	27.23	37.10
Moderate	Upset	28.88	0.71	27.49	30.26
	Fear	24.02	0.61	22.83	25.22
	Distress	27.97	0.75	26.51	29.43
	Treatment	28.86	1.09	26.72	31.00
High	Upset	26.29	1.04	24.24	28.33
	Fear	23.09	0.66	21.80	24.37
	Distress	25.33	0.93	23.51	27.15
	Treatment	24.70	0.95	22.84	26.57

Table G6

Estimated Marginal Means of Individual Morale Source by Response Model

Group		Mean	Std. Error	CI (95%)	
				Lower	Upper
Individual Morale		26.47	0.33	25.81	27.13
Source	Co-worker	29.07	0.54	28.01	30.13
	Supervisor	26.43	0.57	25.31	27.54
	Patient	26.96	0.72	25.56	28.37
	Visitor	25.76	1.04	23.72	27.81
	All Sources	24.12	0.76	22.63	25.62
Response	Upset	28.05	0.57	26.93	29.16
	Fear	23.64	0.44	22.78	24.50
	Distress	27.47	0.66	26.17	28.77
	Treatment	26.73	0.91	24.94	28.52
Source by Response					
Co-worker	Upset	30.29	0.62	29.08	31.49
	Fear	27.82	0.82	26.21	29.44
	Distress	29.09	1.19	26.77	31.42
	Treatment	29.09	1.49	26.16	32.02
Supervisor	Upset	27.87	1.41	25.10	30.64
	Fear	22.16	1.30	19.61	24.70
	Distress	29.03	0.74	27.57	30.48
	Treatment	26.66	0.97	24.75	28.57
Patient	Upset	28.24	0.71	26.85	29.62
	Fear	24.45	0.64	23.19	25.70
	Distress	28.80	1.59	25.68	31.92
	Treatment	26.38	2.18	22.10	30.65
Visitor	Upset	26.61	1.57	23.54	29.68
	Fear	23.50	0.85	21.83	25.16
	Distress	26.56	2.18	22.29	30.83
	Treatment	26.38	3.08	20.34	32.41
All Sources	Upset	27.22	1.68	23.93	30.51
	Fear	20.28	1.14	18.03	22.52
	Distress	23.86	1.31	21.29	26.44
	Treatment	25.14	1.86	21.49	28.78

Table G7

Estimated Marginal Means of Individual Distress Frequency by Source Model

Group		Mean	Std. Error	CI (95%)	
				Lower	Upper
Individual Distress		27.26	0.72	25.86	28.66
Frequency	Low	23.73	2.36	19.10	28.36
	Moderate	27.42	0.42	26.59	28.25
	High	29.92	0.52	28.91	30.93
Source	Co-worker	22.82	0.68	21.49	24.16
	Supervisor	24.74	0.64	23.49	25.99
	Patient	27.41	0.48	26.48	28.35
	Visitor	30.15	3.13	24.01	36.28
	All Sources	33.12	0.78	31.59	34.64
Frequency by Source Model					
Low	Co-worker	21.09	0.57	19.97	22.21
	Supervisor	19.76	1.52	16.77	22.74
	Patient	26.06	0.84	24.41	27.71
	Visitor	28.00	9.27	9.83	46.17
Moderate	Co-worker	22.56	0.88	20.83	24.28
	Supervisor	25.71	0.74	24.25	27.16
	Patient	26.84	0.74	25.39	28.28
	Visitor	30.10	1.04	28.07	32.13
	All Sources	31.89	1.23	29.49	34.30
High	Co-worker	24.82	1.75	21.39	28.26
	Supervisor	28.77	0.89	27.02	30.52
	Patient	29.35	0.88	27.61	31.08
	Visitor	32.34	1.04	30.31	34.37
	All Sources	34.34	0.96	32.47	36.21

Table G8

Estimated Marginal Means of Individual Distress Frequency by Response Model

Group		Mean	Std. Error	CI (95%)	
				Lower	Upper
Individual Distress		25.95	0.34	25.28	26.61
Frequency	Low	22.17	0.78	20.64	23.70
	Moderate	25.70	0.43	24.85	26.54
	High	29.97	0.48	29.02	30.91
Response	Upset	24.48	0.49	23.52	25.44
	Fear	29.54	0.42	28.71	30.36
	Distress	24.77	0.59	23.62	25.92
	Treatment	24.99	1.03	22.97	27.02
Frequency by Response					
Low	Upset	21.63	0.62	20.42	22.84
	Fear	25.22	0.82	23.60	26.84
	Distress	19.26	1.22	16.87	21.65
	Treatment	22.58	2.68	17.33	27.84
Moderate	Upset	23.29	0.75	21.82	24.76
	Fear	30.76	0.64	29.50	32.03
	Distress	26.00	0.79	24.44	27.56
	Treatment	22.73	1.17	20.44	25.03
High	Upset	28.52	1.10	26.36	30.68
	Fear	32.63	0.70	31.25	34.00
	Distress	29.06	0.99	27.13	30.99
	Treatment	29.67	1.01	27.68	31.65

Table G9

Estimated Marginal Means of Individual Distress Source by Response Model

Group		Mean	Std. Error	CI (95%)	
				Lower	Upper
Individual Distress		27.21	0.35	26.53	27.89
Source	Co-worker	22.15	0.56	21.05	23.26
	Supervisor	26.70	0.59	25.54	27.87
	Patient	26.02	0.75	24.56	27.49
	Visitor	28.71	1.09	26.58	30.84
	All Sources	32.46	0.79	30.91	34.02
Response	Upset	25.17	0.59	24.01	26.33
	Fear	30.98	0.46	30.09	31.88
	Distress	26.78	0.69	25.42	28.13
	Treatment	25.91	0.95	24.04	27.78
Source by Response					
Co-worker	Upset	20.36	0.64	19.10	21.62
	Fear	23.61	0.85	21.94	25.27
	Distress	23.15	1.23	20.74	25.55
	Treatment	21.50	1.56	18.44	24.56
Supervisor	Upset	23.05	1.48	20.16	25.94
	Fear	32.02	1.36	29.36	34.68
	Distress	24.06	0.77	22.55	25.58
	Treatment	27.67	1.02	25.67	29.68
Patient	Upset	25.09	0.73	23.65	26.53
	Fear	29.86	0.66	28.57	31.16
	Distress	23.33	1.66	20.08	26.59
	Treatment	25.81	2.27	21.36	30.27
Visitor	Upset	27.97	1.63	24.77	31.17
	Fear	32.87	0.88	31.14	34.60
	Distress	30.00	2.27	25.54	34.46
	Treatment	24.00	3.22	17.70	30.30
All Sources	Upset	29.36	1.72	25.99	32.73
	Fear	36.56	1.20	34.20	38.92
	Distress	33.34	1.37	30.65	36.03
	Treatment	30.59	1.94	26.79	34.39

Table G10

Estimated Marginal Means of Workplace Morale Frequency by Source Model

Group		Mean	Std. Error	CI (95%)	
				Lower	Upper
Workplace Morale		15.46	0.39	14.69	16.24
Frequency	Low	16.85	1.30	14.30	19.40
	Moderate	15.13	0.24	14.67	15.59
	High	14.69	0.29	14.13	15.25
Source	Co-worker	17.14	0.38	16.40	17.89
	Supervisor	16.41	0.35	15.72	17.10
	Patient	15.11	0.26	14.59	15.62
	Visitor	14.13	1.72	10.75	17.50
	All Sources	14.06	0.43	13.20	14.91
Frequency by Source Model					
Low	Co-worker	17.89	0.32	17.26	18.51
	Supervisor	18.69	0.85	17.03	20.36
	Patient	15.80	0.46	14.89	16.71
	Visitor	15.00	5.10	5.00	25.00
Moderate	Co-worker	16.50	0.49	15.55	17.46
	Supervisor	15.99	0.41	15.19	16.79
	Patient	14.94	0.41	14.13	15.74
	Visitor	13.88	0.57	12.76	14.99
	All Sources	14.33	0.69	12.97	15.69
High	Co-worker	17.04	0.98	15.11	18.96
	Supervisor	14.54	0.48	13.60	15.48
	Patient	14.59	0.49	13.64	15.54
	Visitor	13.51	0.58	12.37	14.65
	All Sources	13.78	0.52	12.75	14.81

Table G11

Estimated Marginal Means of Workplace Morale Frequency by Response Model

Group		Mean	Std. Error	CI (95%)	
				Lower	Upper
Workplace Morale		16.05	0.19	15.69	16.41
Frequency	Low	17.67	0.43	16.82	18.53
	Moderate	15.69	0.23	15.23	16.15
	High	14.78	0.26	14.28	15.28
Response	Upset	16.97	0.26	16.46	17.48
	Fear	13.88	0.23	13.44	14.33
	Distress	16.60	0.32	15.97	17.22
	Treatment	16.75	0.57	15.62	17.87
Frequency by Response					
Low	Upset	18.00	0.33	17.34	18.65
	Fear	15.58	0.45	14.71	16.46
	Distress	18.39	0.67	17.09	19.70
	Treatment	18.73	1.50	15.78	21.68
Moderate	Upset	16.93	0.41	16.14	17.73
	Fear	13.18	0.35	12.50	13.86
	Distress	16.33	0.43	15.49	17.16
	Treatment	16.33	0.64	15.08	17.58
High	Upset	15.99	0.58	14.85	17.12
	Fear	12.89	0.38	12.14	13.63
	Distress	15.07	0.53	14.03	16.10
	Treatment	15.19	0.54	14.13	16.25

Table G12

Estimated Marginal Means of Workplace Morale Source by Response Model

Group		Mean	Std. Error	CI (95%) Lower	CI (95%) Upper
Workplace Morale		15.50	0.19	15.12	15.87
Source	Co-worker	17.35	0.31	16.73	17.96
	Supervisor	15.41	0.32	14.78	16.04
	Patient	15.21	0.41	14.42	16.01
	Visitor	14.86	0.58	13.72	16.00
	All Sources	14.65	0.44	13.79	15.50
Response	Upset	16.80	0.32	16.16	17.43
	Fear	13.35	0.25	12.86	13.84
	Distress	16.02	0.38	15.26	16.77
	Treatment	15.82	0.51	14.82	16.81
Source by Response					
Co-worker	Upset	18.38	0.36	17.68	19.08
	Fear	15.74	0.47	14.82	16.66
	Distress	17.30	0.68	15.97	18.62
	Treatment	17.97	0.88	16.25	19.69
Supervisor	Upset	16.83	0.78	15.31	18.35
	Fear	12.73	0.74	11.28	14.18
	Distress	16.59	0.42	15.77	17.41
	Treatment	15.49	0.56	14.39	16.59
Patient	Upset	16.54	0.40	15.75	17.32
	Fear	13.75	0.36	13.04	14.47
	Distress	17.00	0.91	15.22	18.78
	Treatment	13.56	1.24	11.13	15.99
Visitor	Upset	15.45	0.89	13.70	17.20
	Fear	12.78	0.49	11.82	13.74
	Distress	14.87	1.28	12.35	17.38
	Treatment	16.33	1.65	13.09	19.58
All Sources	Upset	16.78	0.96	14.91	18.65
	Fear	11.76	0.65	10.48	13.04
	Distress	14.33	0.77	12.83	15.83
	Treatment	15.73	1.06	13.65	17.80

Table G13

Estimated Marginal Means of Workplace Distress and Work Pressures Frequency by Source Model

Group		Mean	Std. Error	CI (95%) Lower	CI (95%) Upper
Workplace Distress and Work Pressures		33.48	0.53	32.43	34.53
Frequency	Low	32.56	1.76	29.11	36.01
	Moderate	33.30	0.32	32.67	33.93
	High	34.39	0.39	33.62	35.16
Source	Co-worker	31.34	0.52	30.32	32.37
	Supervisor	32.61	0.48	31.67	33.55
	Patient	32.78	0.36	32.08	33.47
	Visitor	36.08	2.33	31.51	40.65
	All Sources	35.13	0.60	33.96	36.30
Frequency by Source Model					
Low	Co-worker	29.98	0.43	29.14	30.82
	Supervisor	29.06	1.15	26.80	31.31
	Patient	32.20	0.63	30.96	33.44
	Visitor	39.00	6.91	25.47	52.53
Moderate	Co-worker	31.32	0.66	30.02	32.62
	Supervisor	33.21	0.55	32.12	34.29
	Patient	33.25	0.56	32.16	34.35
	Visitor	34.46	0.78	32.93	35.98
	All Sources	34.27	0.96	32.39	36.15
High	Co-worker	32.73	1.35	30.08	35.38
	Supervisor	35.57	0.66	34.28	36.85
	Patient	32.87	0.66	31.58	34.17
	Visitor	34.79	0.79	33.25	36.33
	All Sources	35.99	0.71	34.59	37.39

Table G14

Estimated Marginal Means of Workplace Distress and Work Pressures Frequency by Response Model

Group		Mean	Std. Error	CI (95%)	
				Lower	Upper
Workplace Distress and Work Pressures		32.65	0.25	32.16	33.14
Frequency	Low	30.33	0.58	29.20	31.46
	Moderate	33.01	0.32	32.38	33.65
	High	34.61	0.35	33.91	35.30
Response	Upset	30.92	0.36	30.22	31.63
	Fear	33.73	0.31	33.11	34.34
	Distress	32.76	0.44	31.90	33.63
	Treatment	33.19	0.76	31.69	34.69
Frequency by Response					
Low	Upset	30.11	0.46	29.21	31.00
	Fear	31.93	0.61	30.73	33.13
	Distress	29.45	0.92	27.64	31.27
	Treatment	29.83	1.98	25.96	33.71
Moderate	Upset	30.36	0.56	29.25	31.46
	Fear	34.83	0.48	33.89	35.77
	Distress	33.45	0.59	32.30	34.60
	Treatment	33.41	0.89	31.66	35.16
High	Upset	32.30	0.80	30.73	33.87
	Fear	34.42	0.52	33.39	35.44
	Distress	35.38	0.74	33.92	36.83
	Treatment	36.34	0.74	34.89	37.79

Table G15

Estimated Marginal Means of Workplace Distress and Work Pressures Source by Response Model

Group		Mean	Std. Error	CI (95%)	
				Lower	Upper
Workplace Distress and Work Pressures		33.41	0.26	32.89	33.93
Source	Co-worker	31.05	0.43	30.22	31.89
	Supervisor	33.50	0.44	32.64	34.37
	Patient	32.99	0.56	31.88	34.09
	Visitor	34.71	0.83	33.09	36.33
	All Sources	34.78	0.61	33.59	35.98
Response	Upset	30.95	0.45	30.07	31.84
	Fear	34.28	0.34	33.60	34.95
	Distress	33.66	0.53	32.62	34.70
	Treatment	34.74	0.72	33.34	36.14
Source by Response					
Co-worker	Upset	29.83	0.49	28.87	30.78
	Fear	30.86	0.65	29.59	32.13
	Distress	31.52	0.95	29.66	33.37
	Treatment	32.00	1.17	29.71	34.29
Supervisor	Upset	30.37	1.07	28.28	32.46
	Fear	35.11	1.02	33.12	37.11
	Distress	32.88	0.58	31.74	34.01
	Treatment	35.66	0.78	34.14	37.19
Patient	Upset	31.08	0.55	29.99	32.16
	Fear	34.29	0.50	33.31	35.28
	Distress	30.90	1.27	28.41	33.38
	Treatment	35.69	1.71	32.34	39.03
Visitor	Upset	32.57	1.25	30.12	35.01
	Fear	35.04	0.67	33.73	36.35
	Distress	35.60	1.76	32.14	39.06
	Treatment	35.63	2.41	30.89	40.36
All Sources	Upset	30.92	1.37	28.24	33.60
	Fear	36.09	0.90	34.32	37.86
	Distress	37.40	1.05	35.34	39.47
	Treatment	34.73	1.46	31.87	37.58

Table G16

Estimated Marginal Means of Supportive Peers Frequency by Source Model

Group		Mean	Std. Error	CI (95%)	
				Lower	Upper
Supportive Peers		34.45	0.67	33.13	35.77
Frequency	Low	37.55	2.22	33.20	41.90
	Moderate	33.61	0.41	32.81	34.40
	High	32.81	0.49	31.85	33.78
Source	Co-worker	36.67	0.65	35.40	37.94
	Supervisor	36.18	0.61	35.00	37.37
	Patient	33.53	0.45	32.64	34.41
	Visitor	33.49	2.94	27.73	39.26
	All Sources	31.35	0.76	29.87	32.84
Frequency by Source Model					
Low	Co-worker	37.80	0.54	36.74	38.86
	Supervisor	39.64	1.45	36.79	42.49
	Patient	35.76	0.80	34.19	37.32
	Visitor	37.00	8.71	19.92	54.08
Moderate	Co-worker	36.06	0.83	34.42	37.69
	Supervisor	34.36	0.70	32.98	35.74
	Patient	33.10	0.71	31.71	34.49
	Visitor	32.23	0.97	30.32	34.13
	All Sources	32.31	1.21	29.94	34.68
High	Co-worker	36.15	1.68	32.86	39.43
	Supervisor	34.55	0.83	32.93	36.18
	Patient	31.72	0.84	30.07	33.37
	Visitor	31.26	0.99	29.32	33.19
	All Sources	30.40	0.91	28.61	32.19

Table G17

Estimated Marginal Means of Supportive Peers Frequency by Response Model

Group		Mean	Std. Error	CI (95%)	
				Lower	Upper
Supportive Peers		35.26	0.32	34.64	35.88
Frequency	Low	38.47	0.73	37.04	39.90
	Moderate	34.37	0.41	33.57	35.17
	High	32.95	0.45	32.06	33.83
Response	Upset	34.95	0.46	34.04	35.85
	Fear	32.42	0.40	31.65	33.20
	Distress	36.30	0.56	35.21	37.39
	Treatment	37.38	0.96	35.49	39.27
Frequency by Response					
Low	Upset	37.79	0.58	36.65	38.92
	Fear	35.31	0.78	33.79	36.84
	Distress	39.45	1.16	37.18	41.72
	Treatment	41.33	2.50	36.43	46.24
Moderate	Upset	34.45	0.72	33.04	35.87
	Fear	31.75	0.61	30.56	32.94
	Distress	35.41	0.74	33.96	36.87
	Treatment	35.87	1.11	33.69	38.04
High	Upset	32.60	1.04	30.57	34.63
	Fear	30.20	0.66	28.91	31.50
	Distress	34.05	0.94	32.21	35.89
	Treatment	34.93	0.93	33.10	36.76

Table G18

Estimated Marginal Means of Supportive Peers Source by Response Model

Group		Mean	Std. Error	CI (95%)	
				Lower	Upper
Supportive Peers		34.26	0.33	33.61	34.91
Source	Co-worker	37.25	0.54	36.19	38.31
	Supervisor	34.06	0.56	32.96	35.15
	Patient	34.15	0.71	32.76	35.54
	Visitor	33.84	1.01	31.85	35.82
	All Sources	32.02	0.78	30.49	33.55
Response	Upset	34.79	0.58	33.65	35.93
	Fear	31.46	0.44	30.60	32.32
	Distress	35.14	0.67	33.83	36.45
	Treatment	35.66	0.88	33.93	37.39
Source by Response					
Co-worker	Upset	37.93	0.62	36.73	39.14
	Fear	35.84	0.82	34.23	37.44
	Distress	36.42	1.16	34.14	38.70
	Treatment	38.82	1.50	35.87	41.77
Supervisor	Upset	33.33	1.37	30.65	36.00
	Fear	30.56	1.29	28.03	33.08
	Distress	36.82	0.74	35.37	38.28
	Treatment	35.52	0.97	33.61	37.42
Patient	Upset	34.46	0.71	33.06	35.85
	Fear	32.38	0.64	31.13	33.63
	Distress	36.27	1.58	33.18	39.36
	Treatment	33.50	2.16	29.27	37.73
Visitor	Upset	33.32	1.55	30.28	36.36
	Fear	30.49	0.85	28.83	32.15
	Distress	34.20	2.23	29.83	38.57
	Treatment	37.33	2.88	31.69	42.98
All Sources	Upset	34.91	1.80	31.38	38.44
	Fear	28.04	1.15	25.77	30.30
	Distress	32.00	1.33	29.39	34.61
	Treatment	33.14	1.84	29.53	36.75