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Exploring the sources of and reactions to work frustration in the United Kingdom extending previous models using mixed methodology

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Exploring the Sources of and Reactions to Work Frustration in the United Kingdom: Extending Previous Models using Mixed Methodology

By

Sophie Ward

December 2019

A thesis submitted in partial fulfilment of the University's requirements for the Degree of Doctor of Philosophy

Content removed on data protection grounds

Certificate of Ethical Approval

Applicant:

Sophie Ward

Project Title:

Exploring the Sources of and Reactions to Workplace Frustration: A Triangulation Study

This is to certify that the above named applicant has completed the Coventry University Ethical Approval process and their project has been confirmed and approved as Medium Risk

Date of approval:

20 April 2016

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Applicant:

Sophie Ward

Project Title:

Development and Validation of Two Self-Report Measures of Work Frustration: The Work Frustration Measurement Scale (WFMS), and the Coping Inventory for Frustrating Situations (CIFS)

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Project Title:

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This research is dedicated to Harold Canning MBE.

Abstract

Whilst frustration has become a significant widespread issue across organisations in the last decade, particularly in the United Kingdom (UK), leading to deviant behaviour, low occupational commitment and employee turnover, much of the research conducted on work frustration over the last century has remained limited in scope, often due to a purposeful and/or deductive approach. The current research has sought to provide a more comprehensive and contemporary understanding of the phenomenon, gathering data from a variety of occupations in the UK The ultimate aim to identify alterable factors that can form the basis for successful interventions to a) help reduce work frustration, and b) support employees to react in ways that are more constructive.

In achieving this aim, the following objectives were met 1) explore and identify new and existing sources of work frustration across different organisational sectors, 2) explore and identify a range of behavioural reactions to work frustration across different organisational sectors, 3) develop two comprehensive taxonomies, classifying the sources of work frustration and frustration coping strategies per a set of common conceptual domains and dimensions, 4) develop and validate two new measurement tools; one assessing the sources of work frustration, and another, frustration coping strategies and, 5) to test a new model of work frustration, incorporating both potential mediators and/or moderators, which may influence both frustration tolerance and choice of coping strategy.

To meet the objectives a critical realist approach was taken, enabling the use of a sequential mixed-methods design. The design involved mixing at multiple levels within the research; particularly those beyond the method level (e.g. the paradigm level), and consisted of three phases, phase one informing phase two, and phase two informing phase three, each phase using different albeit complementary approaches to data collection and analysis.

Phase one involved the exploration of the sources of and behavioural reactions to work frustration, using a multi-method approach to data collection (semi-structured interviews, diaries and open-questionnaires), thematic and quantitative content analysis. Phase two entailed the development and initial validation of two new self-report measures of work frustration using a six-step systematic approach to scale development/ validation and factor analytic techniques. Phase three gave rise to the quantitative assessment of a

new model of work frustration using a path-analytic approach, incorporating both potential mediators and/or moderators, which may influence both frustration tolerance and choice of coping strategy.

The principle contributions of this research were fourfold. Firstly, the use of multiple data collection methods that were exploratory in nature, a wide range of frustrators and frustration coping strategies were identified, including contemporary frustrators and constructive coping strategies not reflected in prior research. Secondly, two comprehensive taxonomies, classifying the sources of work frustration and frustration coping strategies per a set of common conceptual domains and dimensions were developed, capturing the sources of frustration and frustration coping strategies across a range of UK occupations. Thirdly, two new measurement scales were developed, the Work Frustration Measurement Scale (WFMS) and the Coping Inventory for Frustrating Situations (CIFS), both of which showed good validity and reliability. Fourthly, a new model of work frustration was developed and tested, which identified three potential moderators (total EQ/ESC, decision-making ability, and stress management) that may be used to develop targeted interventions aimed at increasing employee tolerance to frustration and decreasing the use of aggressive coping strategies. It is expected that the two taxonomies, scales and the model of work frustration developed in this research will aid both research in this area as well as practical interventions for positive coping moving forward, decreasing the use of counter-productive coping strategies, levels of stress/anxiety in individuals, and staff turnover, while also making for a happier workforce.

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Acronyms and Abbreviations

ACTCOPE	Active coping
AGGCOPE	Aggressive coping
BC	Bias corrected
BIS	Behavioural Inhibition System
BOS	Bristol Online Survey
BPS	British Psychological Society
CESS	Comprehensive Evaluation of Social Support Scale
CFA	Confirmatory Factor Analysis
CFI	Comparative Fit Index
CI	Confidence Interval
CIFS	Coping Inventory for Frustrating Situations
CIPD	Chartered Institute of Professional Development
CMV	Common method variance
COR	Conservation of Resources
CWB	Counterproductive Work Behaviour
DECMAK	Decision making
DV	Dependent variable
EFA	Exploratory Factor Analysis
EI	Emotional Intelligence
EIM	Effort-imbalance model
EPC	Expected parameter change
ESEM	Exploratory Structural Equation Modelling
ESC	Emotional and Social Competence
EXFWORK	Experience of frustrators at work
FA	Factor analysis
FAH	Frustration aggression hypothesis
FCOPE	Frustration coping strategies
FRUS	Emotion of frustration
FS	Frustration Scale
FSB	Federation of Small Businesses
GLS	Generalized least squares
GST	General Strain Theory
HCPC	Health and Care Professions Council
ICAW	Interpersonal Conflict at Work
ICC	Intra-class correlation coefficient
INTPER	Interpersonal
IV	Independent variable
JD-R	Job-Demands Resources
JSS	Job Satisfaction Scale

KMO	Kaiser-MeyerOlkin Test of Sampling Adequacy
LOC	Locus of Control
MAP	Minimum average partial test
MCQ	Matrix Coding query
ML	Maximum likelihood
MIs	Modification Indices
MRFA	Minimum rank factor analysis
NA	Negative affectivity
NCP	Non-centrality parameter
OC	Organisational Climate
OCB	Organisational Citizenship Behaviour
OCS	Organisational Constraints Scale
PA	Parallel Analysis
PAF	Principal axis factoring
PCA	Principle components analysis
PIS	Participant Information sheet
POSRE	Positive reinterpretation
QUAL	Qualitative
QUAN	Quantitative
QWI	Quantitative Workload Inventory
RMSEA	Root mean square error of approximation
SE	Standard error
SELFEXP	Self-expression
SELFPER	Self-perception
SME	Subject Matter Expert
SOCCOPE	Social coping
SPSS	Statistical Package for Social Sciences
SRMR	Standardised root mean square residual
SSAVAIL	Social support availability
SSB	Single source bias
STRMANG	Stress management
TA	Thematic analysis
TLI	Tucker-Lewis index
TOS	Test of Sphericity
T-anger	Trait anger
T-anxiety	Trait anxiety
ULS	Unweighted least squares
USA	United States of America
UK	United Kingdom
WFMS	Work Frustration Measurement Scale
WLSMV	Weighted least squares mean-variance adjusted

‘*Conflict-free company has never existed and never will exist. Antagonisms, tensions, aggressions, stereotypes, negative attitudes and the frustrations of perceived conflicting needs will always be present wherever men [and women] are forced to live and work together*.’

Pace (1983: 59)

Thesis Overview

This research aims to explore the area of work frustration in great depth, expanding on previous research (e.g. Fox and Spector 1999, Heacox and Sorenson 2004, Jex, Beehr and Roberts 1992, Keenan and Newton 1984, Lazar, Jones and Schneiderman 2006, Spector 1997) identifying additional frustrators and frustration coping strategies by gathering data from a variety of organisational sectors within the United Kingdom (UK) using both exploratory and confirmatory methods. The ultimate aim is to identify alterable factors that can form the basis for successful interventions to a) help reduce work frustration, and b) support employees to react in ways that are more constructive. To achieve this aim, the following objectives were set:

1. To explore and identify new and existing sources of work frustration across different organisational sectors;
2. To explore and identify a range of behavioural reactions to work frustration across different organisational sectors;
3. To develop two comprehensive taxonomies, classifying the sources of work frustration and frustration coping strategies per a set of common conceptual domains and dimensions;
4. To develop and validate two new measurement tools, one assessing the sources of work frustration, and another, frustration coping strategies;
5. To test a new model of work frustration, incorporating both potential mediators and/or moderators, which may influence both frustration tolerance and choice of coping strategy.

For the purpose of this research, frustration is viewed as an affective response that occurs in response to a stimulus condition (e.g. high workload) that negatively affects an individual's ability to attain or maintain their goal, and a causal stimulus resulting in further affective (e.g. aggression) and behavioural reactions (e.g. turnover). In line with the research of Chen and Spector (1992) frustration is also considered to be a subdomain of stress, the emotion of frustration acting as an early warning sign for stress. Frustration is often experienced by an individual long before the development of stress. Only when an individual encounters prolonged frustration do they usually begin to experience the physiological effects of stress, such as, heightened adrenalin, the latter

of which can also occur without the presence of frustration (Newton, Handy and Fineman 1995: 136).

The seven chapters that follow detail the rationale for this research, the research methodology, findings, novel contributions, limitations and future directions.

Chapter 1 outlines the prevalence of work frustration in the UK along with its associated consequences for individuals and organisations. It also provides an overview of the issues surrounding the frustration literature and a rationale for the current research.

Chapter 2 reviews the literature in relation to work frustration and provides a strong rationale for the research. Firstly, it provides an overview of the definitions within frustration research and their link to goal attainment, along with differences in researcher perceptions. It then introduces and discusses the concept of work frustration in relation to common stress theories and reviews the research conducted on the sources of and behavioural reactions to work frustration. Finally, it discusses the moderators and/or mediators that may play a role in the relationship between the sources of frustration at work, and an individual's emotional and behavioural reactions.

Chapter 3 provides a detailed discussion on research philosophy in the social sciences, its importance as a basis for methodology, and the philosophical position adopted within this research. It provides an overview of the general methodology used to address the aims of this research, qualitative and quantitative, split across three main phases. The chapter also presents the methodological considerations faced within and across each of these phases, including transparency and replicability, reflexivity and ethics, followed by participant recruitment.

Chapter 4 presents the findings from phase one, a multi-method triangulation study involving the use of three different data collection methods and analysed using thematic and quantitative content analysis. The purpose being to gain a more comprehensive understanding of frustration within organisations, particularly the sources of and behavioural reactions to frustration. This chapter also provides two new taxonomies derived from the analysis, one classifying the sources of work frustration, and another, frustration coping strategies, per a set of common conceptual domains and dimensions.

Chapter 5 details phase two of the research, the development and validation of two new self-report measures of work frustration: The Work Frustration Measurement Scale (WFMS) and the Coping Inventory for Frustrating Situations (CIFS). It discusses the steps undertaken to produce valid and reliable scales along with the results, including item generation, content adequacy assessment, questionnaire administration, factor analysis, internal consistency assessment, and construct validity. It then provides a critical discussion on each scale and their implications for theory and practice.

Chapter 6 discusses the final phase of this research (i.e. phase three), testing a conditional process model in which the indirect effect of the sources of work frustration on frustration coping strategies through the emotion of frustration is contingent on social support availability and emotional and social competencies. It presents the theoretical underpinning of the model and its associated hypothesises, followed by an overview of the data collection methods and statistical analysis. Lastly, it provides a critical discussion on the study outcomes and the implications for theory and practice.

Chapter 7 provides an overview of the research findings from the previous three chapters and discusses both the theoretical and practical applications of this research. It emphasises the support that this research will provide to the development of future interventions, to both reduce work frustration and support workers to react to frustration in ways that are more constructive. The chapter concludes by examining the limitations of this research and recommendations for future research.

Chapter One
Introduction

1.1 Overview

This chapter outlines the prevalence of work frustration in the UK along with some of the well-known antecedents and consequences of work frustration for both individuals and organisations. It also provides an overview of the primary issues surrounding previous frustration literature, highlighting the need for further research.

1.2 Frustration across the UK Workforce

Work frustration has become a widespread issue for organisations across the globe, including China (Ngai, Yuan, Yuhua, Huilin, Chan and Selden 2016) and Australia (Gottschalk and McEachern 2010), and a significant issue for the UK workforce (Staples 2018). In the UK in 2013, industry estimates suggested that frustrated employees accounted for around 20% or more of an organisation's workforce (Hay Group 2013). This statistic has since risen, especially amongst office workers with an online survey of UK office workers reporting that 97% of employees are now frustrated, with many wanting to escape office life as a result (Staples 2018). This is a finding recently supported by industry research showing that over half of UK office workers are now frustrated primarily due to their employer's lack of investment in timesaving technologies (Personnel Today 2019).

According to recent media, frustration remains in UK organisations because of *'red tape*,' particularly in smaller organisations where, according to the Federation of Small Businesses (FSBs), the Government are failing to adhere to their promise to reduce the issue of significant levels of administration within smaller companies. The FSBs has reported that Britain's small business owners are now spending around 33 hours a month on business administration, and their employees around 70 hours on compliance and red tape, which is having an impact on their ability to focus on the primary aspects of their work (The Telegraph 2016). Furthermore, not only are employees struggling to find the time to do their primary tasks, which are perhaps the most important and fulfilling for them, they are also experiencing a high workload which is a significant predictor of work frustration (Spector 1997).

High workload is present amongst many professions in the UK, particularly those in the public sector. In a recent study on junior doctors, along with contractual changes and a squeeze on training, increasing demand and the balancing of priorities were found to be their main sources of frustration at work (Alderson et al. 2016). Likewise, independent school staff (National Education Union 2018), general practitioners (Croxson, Ashdown and Hobbs 2017), and university academics (Darabi, Macaskill and Reidy 2017) have reported feeling frustrated due to an increasing workload that is negatively impacting on their organisational commitment and the quality of service they provide. For some aircraft pilots the issue of high workload has also been paired with long working hours and cuts in pay, which although initially accepted in an attempt to help their organisation through 'hard times,' has since led to frustration due to the organisation now making billions in profit yet providing very little reward (Forbes 2019).

In addition to the more commonplace frustrators (e.g. high workload), concerns have also been raised regarding those which are more sporadic, such as discrimination at work. Indeed, frustration has been seemingly growing amongst new mothers in the UK who are facing intolerable discrimination at work, with research commissioned by the Equality and Human Rights Commission finding that new mothers are experiencing significant pregnancy and maternity discrimination (Adams et al. 2015). Joeli Brearly, founder of 'Pregnant Then Screwed,' a website designed for women to tell their stories of discrimination as a result of pregnancy in the workplace, recently reported on this intolerable discrimination faced by new mothers and the anger and frustration they experience as a result (Huffington Post 2016). She presented a statement from one female contributor who had her first child at the age of 25 and stated that:

> ''*As the only mother in a young organisation, I found it hard to keep up with the company's "work hard, play hard" culture. Here, leaving on time was frowned upon. Not joining in with after work activities, often involving copious amounts of booze, saw me side-lined, with the company CEO asking me aggressively why I had left a summer sports day event early. The fact I showed up for work early, often having battled tantrums, a night waking and breakfast on the floor before a five-mile cycle to save on tube fares, was never taken into account. The fact, exhausted by midday, I sometimes took a proper lunch hour, was verbally criticised. A succession of inexperienced, largely male managers saw one renege on an agreed "working from home" day on a whim after a minor technical hitch. Another ensured my workload became repetitive and arduous following an altercation over a day off when my son broke his collarbone, despite working through it, head in my laptop while my six-year-old was grey and silent with pain.*

> *Sensing my growing anger and frustration, the company started to stage-manage my exit. Criticism was solicited from co-workers who had no idea about the daily challenges I faced. Thin allegations about my competency were brought and a disciplinary process began, as my mental health began to unravel to the extent I'd often be in tears at my desk*.'' - (Huffington Post 2016)

This statement highlights some of the frustrations that the new mother experienced because of discrimination at work, as well as some of the consequences of this frustration.

Unarguably, frustration can be detrimental to employees, particularly their well-being. According to a meta-analysis of studies, work frustration relates to low levels of job satisfaction, high levels of work anxiety and more physical health symptoms (Spector 1997). Moreover, individuals who engage in ineffective rather than effective coping strategies because of frustration at work are more likely to become perpetrators or victims of bullying (Baillien et al. 2009). Bullying is a '*serious problem in Britain's workplaces'* and results in absenteeism, turnover and lost productivity (ACAS 2015: 1-2) and is estimated to cost the economy £13.75million (Giga, Hoel and Lewis 2008), and the UK taxpayer £2.281 billion per annum (Kline and Lewis 2018).

Additionally, work frustration can have serious consequences for organisations, especially as it has been found to lead to deviant behaviour (Elias 2013: 204) which can significantly harm an organisation (Klotz and Buckley 2013) and includes behaviours such as, absenteeism, decreased productivity, and employee theft and fraud (Spector, Fox and Domagalski 2006). Absenteeism and poor productivity cost the UK economy billions, with absenteeism costing the UK economy up to £31 billion a year (Mintel 2015), and poor productivity around £340 billion a year (Personnel Today 2006). Moreover, frustration at work has been linked to intention to quit (Spector 1997), job-hopping (Staples 2018), and employee turnover (O'Connor et al. 1984), each of which can have a huge financial impact on organisations. The cost of replacing one employee being on average more than £30,000 (Oxford Ergonomics 2014). Worryingly, a recent online survey has also shown that behaviours such as job-hopping may only be a short-term fix, with 37% of respondents reporting frustration in their new job within the first six months (Staples 2018).

It is of high importance therefore, especially given the consequences of work frustration for both the individual and organisation that the sources of work frustration in the UK, and the way in which employees cope with this frustration, is fully understood so that successful interventions can be developed to ensure individual and organisational benefits.

1.3 Overview of the Frustration Literature

Despite work frustration being an ongoing and increasing issue within organisations, research on the topic (discussed in depth in chapter two) has been highly speculative and often narrow in focus due to a purposeful and/or deductive approach (e.g. Fox and Spector 1999, Keenan and Newton 1984, Peters, O'Connor and Rudolf 1980, Spector 1978, Spector 1997, Reio 2011). It has also been reductionist in terms of the methodology utilised, with the majority of data gathered from questionnaires (e.g. Simminger 1971, Spector 1975) or case studies (e.g. Gilmer 1961, Taylor and Walton 1971). As a result, our view of frustration at work has remained static over time. The view being that frustration at work is pre-dominantly the result of job-context constraints (e.g. Fox and Spector 1999, Jex, Beehr and Roberts 1992, Keenan and Newton 1984) and leads primarily to aggressive behaviour (e.g. Dollard, Doob, Miller, Mowrer and Sears 1939, Elias 2013: 204, Spector 1997). Although this may be true, an individual's role (Franke and Foerstl 2018), the physical work environment (Hoefling 2017), and tools and equipment (Deloitte 2018) are continuously changing and evermore complex. As a result, it is likely that additional frustrators have emerged over time, as well as more positive ways of coping with frustration being a significant driving force for change within organisations if guided in the right direction (Andersen 2006).

In addition to the above, the majority of past research has not been generalisable across organisational sectors due to the samples utilised, with numerous studies focusing on a single profession or workplace community (e.g. Jex, Beehr and Roberts 1992, Keenan and Newton 1984, Seok-Eun and Jung-Wook 2007, Lazar, Jones and Shneiderman 2006, Mazzola et al. 2011, Poulston 2009). Furthermore, it has concentrated largely on organisations in the United States (e.g. Chen and Spector 1992, Fox and Spector 1999, Heacox and Sorenson 2004, Lazar, Jones and Schneiderman 2006, Paul and Dykstra 2017, Peters, O'Connor and Rudolf 1980, Reio 2011, Sheptak and Menaker 2016, Spector 1975, Storms and Spector 1987), research on frustration in UK organisations being minimal (E.g. Attard, Mountain and Romano 2016, Baillien, Neyens, De Witte and De Cuyper 2009).

The gaps in our understanding of work frustration and the methodological flaws described above highlight the importance of further research into work frustration, especially given the high prevalence of frustration in UK workplaces and the associated consequences. The following chapter (2) provides an in-depth review of the literature surrounding work frustration, strengthening the rationale for the current research and aiding the formation of its aims and objectives.

Chapter Two
A Review of the Literature

2.1 Introduction

As highlighted in chapter one, the experience of work frustration is an issue for individuals across the globe, including China (Ngai, Yuan, Yuhua, Huilin, Chan and Selden 2016), Australia (Gottschalk and McEachern 2010), and in particular, the UK (Staples 2018), industry research showing that over half of UK office workers are now frustrated (Personnel Today 2019). It is also a significant issue for organisations, leading to a range of negative consequences such as deviant behaviour (Elias 2013), low occupational commitment (Radebe and Dhurup 2015) and employee turnover (O'Connor et al. 1984). It is of high importance therefore that the sources of work frustration and the way in which employees cope with this frustration is fully understood, so that successful interventions can be developed to ensure individual and organisational benefits, such as increased well-being, satisfaction, engagement and productivity, key issues across organisations globally (Gallup 2017).

This chapter will provide a critical review of the research in relation to work frustration. It provides a discussion of present issues within frustration research including the sources of, reactions to and consequences of frustration at work, as well as the moderators and/or mediators that could play an important role in the development of future interventions to reduce work frustration and/or support employees to use positive coping strategies. It presents a foundation for knowledge that is crucial to the understanding and development of the current research outlined in later chapters. To aid reader understanding the review is divided into five six sections

Firstly, this chapter will provide an overview of the definitions of frustration proposed by numerous researchers, the link between frustration and goal attainment, and the view of frustration adopted within the current research. It will then introduce the concept of work frustration in relation to common stress theories (e.g. the job demands resources model), and the way in which occupational researchers often refer to the sources of such frustration. Thirdly, a critical discussion will be provided in relation to specific types of constraint, found in previous research to be associated with work frustration and the blockage of goal maintenance and/or attainment. This discussion is split into three meaningful categories (job context constraints, interpersonal constraints, and personal constraints) to allow for a clear and comprehensive overview. Fourthly, an in-depth

discussion on the behavioural reactions to work frustration is provided, excluding behaviours not previously associated with the emotion of frustration, enabling a more focused and condensed discussion. Fifthly, it will present an analytical discussion in relation to a range of moderators and/or mediators, suggested by past researchers to play a role in frustration tolerance and choice of coping strategy. This will be followed lastly by a critical overview of the research and the rationale for this research.

2.2 Frustration Defined

One of the first scientific definitions of frustration was provided by the Yale-group (Dollard et al. 1939) whose influential research on the frustration-aggression hypothesis (FAH) led to a wealth of research and revised definitions on the topic (E.g. Berkowitz 1989, Keenan and Newton 1984, Papini and Dudley 1997, Spector 1978, Storms and Spector 1987). The group defined frustration as '*an interference with the occurrence of an instigated goal-response at its proper time in the behaviour sequence'* (Dollard et al. 1939: 7). In other words, they suggested that an individual would become frustrated if they were kept from attaining the anticipated pleasure associated with achieving their goal/s, or as stated more loosely by Berkowitz (1978: 692), if their '*active hopes were dashed*.'

The definitions that came to follow were in some respects similar to that provided by Dollard et al. (1983). For example, Zander (1944) proposed that frustration is a '*condition which exists when a response toward a goal believed important and attainable by a given person suffers interference, resulting in a change in behaviour characteristic for that person and situation*' (Zander 1944: 1), a notable addition here being the importance and attainability of the goal sought. Zander pointed to the psychology of individual differences, indicating that an individual's values, motivations, and ability, may have an impact on whether they become frustrated following goal interference. Spector (1978: 816) suggested that frustration was '*both the interference with goal attainment or goal-oriented activity and the interference with goal maintenance,'* a definition later narrowed down in the 1980s by Keenan and Newton who defined frustration in the work context as *'interference with the individual's ability to carry out his day-to-day duties effectively*' (Keenan and Newton 1984).

A common consensus amongst researchers was that frustration occurs because of ones inability to achieve or maintain their goal (Berkowitz 1980, Cicchetti 2016: 543, Dollard et al. 1939: 7, Spector 1978: 816, Storms and Spector 1987: 227), a goal being long or

short-term, and as simple as leaving for work on time, or maintaining a positive self-image (Spector 1997). The ability to achieve or maintain such goal, according to Locke and Latham's (1990) goal setting theory, being influenced by a variety of factors such as, '*ability, goal commitment, feedback in relation to goal pursuit, the complexity of the task for an individual or group, and situational factors'* (Latham and Locke 2007: 291). Situational factors being important determinants of an individual's behavioural and affective reactions at work and related to frustration at work (Peters, O'Connor and Rudolf 1980).

A prominent difference amongst researchers was their perception of frustration itself, with some viewing frustration as an external instigating condition (Dollard et al. 1939, Miller 1941, Spector 1978, Storms and Spector 1987), and others as an individual's reaction to this event (Amsel 1958, Cicchetti 2016, Fox and Spector 1999, Marx 1956, Reio 2011). In the early 1900s, the Yale-group based their FAH on the earlier work of Freud (1917) whom maintained that aggression was a primordial reaction to frustration, occurring due to interference with an individual's motives to seek pleasure and avoid pain. They proposed that, a) '*the occurrence of aggressive behaviour always presupposes the existence of frustration*' and b) '*the existence of frustration always leads to some form of aggression'* (Dollard et al. 1939: 1). They viewed frustration as a causal stimulus condition that they suggested can result in both affective and behavioural reactions, the affective reaction being anger, a viewpoint later taken Spector (1978), a further influential researcher in the area of frustration research.

In his earlier research, Spector (1978: 816) defined frustration as '*both the interference with goal attainment or goal oriented activity and the interference with goal maintenance.'* Consistent with the FAH and Dollard et al.'s (1939) standpoint, he perceived frustration as a causal stimulus condition that leads to affective reaction of frustration. Undoubtedly, due the paucity of prior research at the time, Spector based much of his earlier research (E.g. Spector 1978, Storms and Spector 1987) and frustration model (Spector 1978) on the social psychological work on aggression and FAH (Dollard et al. 1939). Over time however an overwhelming amount of critique in relation to the FAH emerged (E.g. Berkowitz 1962, 1969, 1978, 1980, 1988, 1989), including that provided by Miller (1941), which somewhat changed the view of several researchers (E.g. Cicchetti 2016, Berkowitz 1962, 1969, 1978, 1980, 1988, 1989, Fox and Spector 1999, Reio 2011, Spector 1997) including Spector.

Two years after the 1939 publication, Miller (1941) one of the original proposers of the FAH asserted the validity of the first proposition, '*that the occurrence of aggression always presupposes frustration*.' He suggested however that the second proposition, '*the existence of frustration always leads to some form of aggression*,' was unclear and misleading and required some form of adaption. A suggested reformulation being that '*frustration produces instigations to a number of different types of response, one of which is an instigation to some form of aggression'* (Miller 1941: 338). In essence, frustration may not always result in aggression. Bertowitz (1978) however, although expressing support for Miller's (1941) revision, argued that the first proposition should also be challenged. He asserted that, the same as frustration may not always lead to aggression, aggression might not always be a consequence of frustration. A view held by several psychologists whom questioned whether the universal causal relation assumed between frustration and aggression in the original FAH did even exist (Bandura 1973, Bertowitz 1962, 1969, Feshbach 1964).

Some psychologists (E.g. Cohen 1955, Pastore 1952) proposed that people only become aggressive when frustrations are arbitrary and not if they believe, the goal interference is justified. Pastore (1952) for example, in a study involving a bus which failed to stop for participants, found that when presented with a reasonable explanation for the frustration (i.e. a sign to say the bus was out of service and on its way to the garage), participants showed little upset in comparison to those presented with no reasonable reason. This suggests that people only become aggressive when the thwarting is illegitimate. Pastore was however cautious about his findings, acknowledging that his participants may have been displaying signs of social desirability and not wanted to display any aggressive reactions to normal social situations. A concern also highlighted by Burnstein and Worchel (1962) during their experiment involving groups of male undergraduates prevented from reaching their goal due to persistent questions and interruptions. In one group, the questions and interruptions came from a group member who had an obvious hearing defect, whereas in the other, they had no valid explanation. When asked publicly if they wished to exclude someone from the group, participants rejected an individual with no obvious hearing defect. During private communications however, some participants also rejected the individual with a hearing defect as they were blocking goal attainment, showing a difference in aggressive behaviour dependent on context.

As a result of criticisms and subsequent research (e.g. Berkowitz 1980, 1988, 1989, Miller 1941), Spector later revised his original model of frustration to include the role of cognitive processes and individual differences in the development of frustration (Spector 1997). He began to view frustration as an emotional reaction that could result from an environmental frustrator that he defined in the work context as, '*any event or situation at work that interferes with employees goals'* (Spector 1997: 2). He argued however, in line with Berkowitz (1988), that a situation can only become a frustrator and therefore result in frustration if an individual appraises it as such (Spector 1997: 4). This suggests that not all individuals will experience frustration in the same situations. A notion subsequently supported in research conducted by Reio (2011) who found a positive link between low emotional stability and thrill seeking and frustration, with those less emotionally stable and/or disposed towards thrill seeking behaviour being more likely to experience high levels of frustration.

To capture the complexity of frustration, this research views frustration as both an affective response and stimulus condition (see figure 2.1), an emotional reaction that occurs in response to a stimulus condition that negatively affects an individual's ability to attain or maintain their goal, as well as acts as a causal stimulus resulting in further affective and behavioural reactions. One expects that this view of frustration will provide a more comprehensive understanding of the phenomena and allow for the inclusion of individual difference variables that may act as moderators in the relationship between the sources of frustration at work, the affective response of frustration, and an individual's behavioural response. This will further aid the development of future interventions to reduce work frustration and help workers to react more positively to frustration.

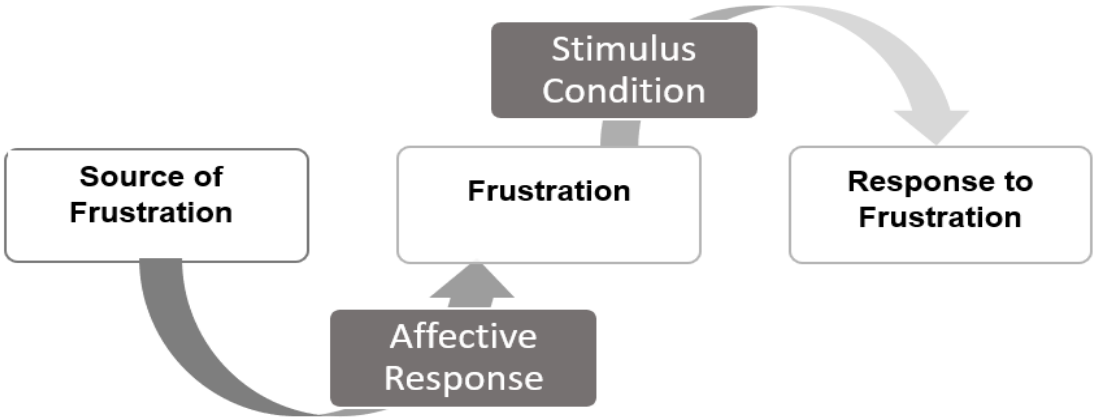

Figure 2.1: Research viewpoint - Frustration as an affective response and stimulus condition

2.3 Frustration at Work

The experience of frustration at work can arise from a variety of events and/or situations that interfere with or hinder the achievement or maintenance of an individual's goal at work (Spector 1997), also known as '*frustrators*' (Spector 1997) and/or '*stressors*' (Spector and Fox 2005). Occupational researchers often refer to them as organisational (i.e. situational) constraints (E.g. Liu, Nauta, Li and Fan 2010, Peters and O'Connor 1980, Pindek and Spector 2016), and/or job demands (Demerouti and Bakker 2011).

Organisational constraints are defined as the characteristics of an individual's immediate work situation (E.g. job-related information, technology and equipment, budgetary support, services from others, task preparation/training, time availability, and the physical work environment) that interfere with effective performance (Pindek and Spector 2016), in particular, the translation of motivation and abilities into effective work performance (Peters and O'Connor 1980). The majority of research surrounding organisational constraints has been centred on the stressor-strain framework (Frese and Zapf 1988, Spector 1998) based on the transactional stress theory (Lazarus 1991, Perrewe and Zellars 1999), with organisational constraints acting as stressors leading to strains and decreased well-being (Spector 1988).

Job stress research often treats frustration as unidimensional (e.g. Peters and O'Connor 1980). However, Liu et al. (2010) suggest that conceptualising constraints so broadly, particularly into a single measure, can blur the impact of each type of constraint on work outcomes, making it difficult for managers to design and implement effective interventions to improve the working environment based on empirical findings. Liu et al. (2010: 454) proposed combining specific types of constraint into meaningful categories, specifically interpersonal constraints. These are the '*obstacles or constraints caused by other people at work, such as co-workers or clients,'* and job context constraints, those *'related to physical obstacles in one's work environment, such as poor equipment or lack of information,*' categories later acknowledged by Pindek and Spector (2016).

Unlike organisational constraints, job demands are not necessarily negative. According to the job demands resources (JD-R) model (Bakker and Demerouti 2007, Bakker, Demerouti, De Boer and Schaufeli 2003a, Bakker, Demerouti, Taris, Schaufeli and Schreurs 2003b, Demerouti, Bakker, Nachreiner and Schaufeli 2001) job demands are the '*physical, psychological, social, or organisational aspects of the job that require sustained physical and/or psychological (cognitive and emotional) effort or skills'*

(Demerouti and Bakker 2011: 2), and can be viewed differently depending on an individual's profession, personality, and on the resources available (Demerouti and Bakker 2011). For example, while an individual who possesses sufficient resource to balance out their demands may view their demands as challenge stressors, especially if aiding their development, an individual who does not possess adequate resource will likely view the demand as a hindrance stressor (Meijman and Mulder 1998).

Of course, job resources are important in combination with job demands. Located at the organisational (e.g. pay, job security, and development opportunities), interpersonal (e.g. supervisor and co-worker support), job (e.g. role clarity), and task level (e.g. skill variety, task significance, autonomy, and feedback) they are the physical, psychological, social, or organisational aspects of the job that can aid the achievement of work goals, reduce job demands and the associated physiological and psychological costs, as well as stimulate personal growth, learning, and development (Bakker & Demerouti, 2007; Bakker et al. 2003a; Bakker et al. 2003b; Demerouti et al. 2001). According to the Conservation of Resources (COR) theory, humans are motivated to maintain and accumulate such resources. If they are threatened, depleted, or not adequately accrued due to high demands then stress will likely arise (Hobfoll 1991, Hobfoll 2001).

Importantly, resources should also be valued in their own right. A view reflected in Hackman and Oldham's (1980) job characteristics model that emphasises the motivational potential of job resources at the task level, including autonomy, feedback, and task significance. Gaining and maintaining sufficient resources alone can aid the achievement and/or maintenance of an individual's goals, reducing the likelihood of experienced frustration. For example, an employee who wishes to upsize into a larger home may be able to achieve this goal if they are to maintain job security through gaining a permanent contract and an increase in salary at work. However, if their job remains temporary and their salary is inconsistent, they may experience frustration due to a lack of resource ultimately hindering goal attainment and maintenance and depleting associated resources. This research therefore acknowledges the positive and negative aspects of job demands, as well as the importance of job resource as a buffer against stress.

In line with Liu et al. (2010), the following section combines specific types of constraint into more meaningful categories to provide a clear and comprehensive overview. Specifically, job context constraints, interpersonal constraints, and personal constraints.

Job Context Constraints for the purpose of this review are those that are primarily task-related and/or physical, such as role stressors, policy and procedural issues, and the physical work environment. *Interpersonal Constraints* are those that primarily caused by other people at work, such as co-workers, mangers, subordinates or clients. *Personal constraints* refer to obstacles that have a negative impact on an individual's life outside of the organisation, including salary, job security and personal development. The following sub-section will now provide a critical discussion in relation to these constraints.

2.4 Sources of Work Frustration

Job Context Constraints

Role Stressors

One of the most prominent role stressors associated with frustration is employee workload (Hirshfield, Hirshfield, Hincks, Russell, Ward and Williams 2011, Jex, Beehr and Roberts 1992, Keenan and Newton 1984, McKinnon 2016, Narayanan et al. 1999, Spector 1997, Spector and Jex 1998, Whinghter, Cunningham, Wang and Burnfield 2008). A construct that, like many others in psychological research, has no single agreed-upon definition. Instead it is seen to encompass any factor reflecting the volume (quantitative) and/or difficulty (qualitative) of one's work, and the impact this can have on them physically and/or mentally (Houdmont, Leka and Sinclair 2012: 222). In a meta-analysis of the research surrounding experienced frustration and work variables, Spector (1997) identified workload as an environmental frustrator in 4 out of the reviewed 12 studies, reporting a mean correlation of .49. Moreover, Jex, Beehr and Roberts (1992) found that the stressor most strongly related to frustration was perceived quantitative workload (.56). A finding later supported by Spector and Jex (1998) whom reported a significant relationship between high quantitative workload and frustration (r =.46), thus suggesting that a high volume of work is associated with high levels of frustration.

Over time, the association between high quantitative workload and frustration appears to have changed, more recent research showing that only 15.1% of respondents report high quantitative workload as an antecedent to frustration, the most strongly associated stressors being organisational constraints (72.4%) and interpersonal conflict (45%) (Mazzola et al. 2011). That is not to say that workload is becoming less of a frustrator in today's organisations, but that the type of workload experienced may be changing. Following an increase in modern technology across organisations, people are now subject to greater mental demands while physical demands are diminishing (Young,

Brookhuis, Wickens and Hancock 2015). Recent research assessing trust in human-computer interaction has supported this proposition, with high mental workload correlated significantly with frustration (Hirshfield et al. 2011). This suggests a potential shift in the requirements of work over time from high physical and low mental demands to high mental and low physical demands. Undoubtedly, the rapid pace of change within organisations is resulting in an increasing amount of mental pressure on workers, the total number of cases of work-related stress, depression and/or anxiety in the UK in 2018/19 being 602,000, rising from 442,000 in 2014/15 (HSE 2019).

Closely related to workload, role ambiguity and role conflict have been found, in early studies, to have a significant positive correlation with frustration (Chen and Spector 1991, Heacox and Sorenson 2004, Juhan 1993, Keenan and Newton 1984, Spector, Dwyer and Jex 1988, Spector and O'Connor 1994). Role ambiguity arising from a lack of job-related information, leads to uncertainty about one's role, objectives and responsibilities. Role conflict occurs when a person is confronted with two or more conflicting or opposing role expectations and the corresponding role demands of others (Kahn, Wolfe, Quinn, Snoek and Rosenthal 1964). Originally introduced by Kahn et al. (1964) role ambiguity and role conflict have long been the focus of researchers assessing workplace stress and satisfaction (Jin, Sun, Jiang, Wang and Wen 2018, Madera, Dawson and Neal 2013, Schwab and Iwanicki 1982, Shupe, Wambaugh and Bramble 2015, Singh, Goolsby and Rhoads 1994). Both of these interfere with task completion (Tubre and Collins 2000) and hinder the pursuit of personal and organisational goals (Glazer and Beehr 2005). Role ambiguity arising from a lack of job-related information, leads to uncertainty about one's role, objectives and responsibilities. Role conflict occurs when a person is confronted with two or more conflicting or opposing role expectations and the corresponding role demands of others (Kahn et al. 1964).

Whilst researchers have shown a positive correlation between frustration and either role ambiguity (e.g. Spector, Dwyer and Jex 1988) or role conflict (e.g. Keenan and Newton 1984), there have been a number of inconsistent findings that bring into question the plausibility and strength of their relationship. Narayanan, Menon and Spector (1999) for example when assessing the sources of frustration amongst individuals from different occupational backgrounds found that role ambiguity and role conflict were rarely mentioned. Additionally, Leischnig, Ivens and Henneberg (2015) in their research surrounding sales people found a weak relationship between both role stressors and frustration (0.19). Research has also often shown role conflict to achieve a greater value

than role ambiguity (Fisher and Gitelson 1983), with several researchers (Chen and Spector 1991, Heacox and Sorenson 2004, Juhan 1993, Keenan and Newton 1984, Spector and O'Connor 1994) reporting correlations between 0.23-.39 for role ambiguity and .36-.67 for role conflict. In research assessing frustration in graduate engineers, the association between role ambiguity and frustration (0.36) was almost zero once the shared variance with role conflict was removed (Keenan and Newton 1984).

Keenan and Newton (1984) suggest that this variation between role ambiguity and conflict may be the result of role ambiguity not being readily attributable to the actions of an identifiable person, whereas conflict is more likely to occur due to the behaviour of specific individuals leading to greater frustration. It could also be that role ambiguity is easier to control or reduce through changed organisational practices than is role conflict (Fisher and Gitelson 1983) and thus viewed as a lower threat to one's goals/resources. Moreover, respondents may view role ambiguity as a non-arbitrary frustrator, one that occurs in error or for good reason (E.g. a computer error) (Pastore 1952). Such frustrators are suggested to result in less frustration than arbitrary frustrators (Spector 1997) (i.e. those caused by someone for no apparent good reason or to be mean). This is likely due to a state of psychological ownership or knowledge hiding, both of which have been associated with frustration as a potential consequence (Pierce, Kostova and Dirks 2003, Singh 2019).

Red tape/Bureaucracy

Red tape, also referred to as bureaucratic constraints, is another frustrator defined as the *'rules, regulations, and procedures that remain in force and entail a compliance burden, but do not advance the legitimate purposes the rules were intended to serve'* (Bozeman 2000: 12). For example, those which are excessive or meaningless (Bennett and Johnson 1979), highly formalised and constraining (Hall 1968), as well as inefficient and unjustifiable (Bozeman 1993).

Such constraints are commonly associated with frustration across varying professions (Fox and Spector 1999, Lewandowski 2003, Loveday and Mitchell 2010, Spector 1978, Suggs, Raina, Gafni, Grant, Skilton, Fan and Szala-Meneok 2009). A study on physicians in Canada for instance showed that they often become frustrated due to what they perceive to be complicated formulary. Using words such as "red tape", "hoops", "barriers", and "bureaucracy" to describe the process, rather than something that helps to facilitate clinical decisions (Suggs et al. 2009). Furthermore, researchers in New

Zealand reported frustration due to the excessive forms required to establish clinical research projects that often become a hindrance to conducting research (Loveday and Mitchell 2010). Additionally, in a recent survey of 671-line managers across 1,352 organisations in Europe, 41% of line managers highlighted that they were frustrated at work by HR Pprocesses (IDC 2016).

Of course, not all rules, regulations and procedures are associated with negative outcomes. Chen and Rainey (2014) argued that formal rules and regulations lead to high work performance, especially in teams, by ensuring organisations are able to attract the right employees and protect them through safety regulations, procedural justice and conflict resolution. It is therefore important to distinguish between red tape and what Chen and Rainey (2014) have referred to as 'green tape,' formal rules that are part of normal bureaucracy, before making any decisions surrounding the use of rules, regulations and procedures and their link to frustration.

Physical Work Environment

A further source identified in the literature is the design of an individual's physical work environment (Krech and Crutchfield 1948, O'Connor, Peters, Rudolf and Pooyan 1982, Peters, Chassie, Lindholm, O'Connor and Rudolf Kline 1982, Peters, O'Connor and Rudolf 1980, Spector 1978). In his early review of the literature, Spector (1978) proposed the physical environment to be a potential source of frustration because of the severe limitations it can place on possible activities. For example, the ambient conditions and spatial organisation, both of which can influence an individual's ability to perform their job effectively, comfortably and safely (Lewis and Zibarras 2013: 234). Peters, O'Connor and Rudolf (1980) who administered an open questionnaire to 62 employees from the Dallas business community to identify a range of performance-relevant situational variables and the associated behavioural and affected consequences later supported this. In doing so they found that participants reported eight key situational variables, including the physical work environment (E.g. temperature and lighting), each of which led to the affective reaction of frustration.

The association between frustration and the physical work environment has also been supported in recent research, with an online survey of 7,000 office workers across 10 European countries finding that a poor physical work environment (including the space available and lighting), was associated with frustration at work. Moreover, 37% of those who had previously left an organisation as a consequence stated that they became

frustrated by their new work space within the first 6 months (Staples 2018), suggesting that constraints within the physical work environment are commonplace. The physical work environment for today's workforce can be highly variable. For instance, refuse collectors and delivery driver's work in very different surroundings to those working in an office and are often faced with different constraints such as traffic jams, time pressures, and low moving vehicles that frequently lead to driver frustration (Ihme, Unni, Rieger and Jipp 2018, Kinnear, Helman, Wallbank and Grayson 2015).

Whilst noting the increasing variation in working environments, it should also be acknowledged that the exact location of an individual's work environment is now becoming more ambiguous, and for this reason, the exact source of their frustration may be less clear. In organisations today, many workers are remote or blended workers (Hoefling 2017), meaning they often work from different locations and have a greater choice about the environment in which they work. One might assume that such workers would encounter fewer frustrations due to working in an environment of their own choosing. Research has shown however that the location in which remote and blended workers undertake their jobs may still lead to frustration because of aspects not directly related to their work environment, such as work-life conflict (Felstead and Henseke 2017) and social isolation (Bell 2012). Moreover, some individuals who work remotely do so as they must travel as part of their work and not through choice. Business travel in particular has been associated with frustration because of increased workloads, sleep problems, burnout and an inability to balance work and home life (Westman and Etzion 2002, Gustafson 2014, Jensen 2014, Mäkelä et al. 2014). The physical environment therefore may not always be a direct stressor; nevertheless, it may indirectly lead to frustration because of subsequent stressors.

Tools and Equipment

In the early 21st century, several researchers showed a link between frustration at work and the use of tools and equipment, especially computer equipment (Bessiere, Newhagen, Robinson and Schneiderman 2006, Lazar et al. 2004, Lazar, Feng and Allen 2006, Lazar, Jones and Shneiderman 2006, Lazar, Jones, Hackley and Schneiderman 2006). Bessiere et al. (2006) found in a diary study conducted on 144 students that frustration was reported due to computers being hard to use, with word processing and email resulting in the highest amount of frustrating experiences, possibly due to their high level of usage. Similarly, Dropkin, Moline, Kim and Gold (2016) found that blended workers experience frustration because of the inability of information technology to

convey certain meanings in communication that can create tensions that would be unlikely to occur in face-to-face conversations.

In research conducted by Unify, a global communications firm, respondents reported regular frustration in relation to work due to the loss of ability to communicate and collaborate through key technologies, as result of the technology not functioning properly, or access being denied (CIPD 2015). 50% of respondents stated that one of their biggest frustrations at work was having too many emails and email downtime, 31% reported their biggest frustrations was being unable to login remotely and/or not having access to files once they have done so, and 15% stated poor phone lines (CIPD 2015). This finding is not surprising given the increasing use of technology in today's organisations and the failure of technology to keep pace with the digital revolution (Insight 2016).

Training and Development

A lack of training and the opportunity to learn and develop, as well as inappropriate or inadequate training, is another source of frustration for employees (Alderson et al. 2016, Clark 2014, Eaton 1952, Kanter 1993, Nursing Standard 2012, Shenge 2014, Sheptak and Menaker 2016, Zhao and Bryant 2006). This is unsurprising given that training is essential to support the development of individuals and teams, enabling an organisation to flourish in a continuously changing environment (Shenge 2014). In line with Kanter's (1977, 1993) theory of structural power in organisations, it empowers employees and allows them to plan for and accomplish goals, correct their deficiencies, access resources, and support, and gives them opportunities to learn and grow (Shenge 2014).

In particular, research on frustration in volunteers within the sports industry has indicated that they attribute feelings of frustration to a lack of appropriate training, along with issues surrounding communication and standardised processes (Sheptak and Menaker 2015). Similarly, Zhao and Bryant (2006) found that teachers undertaking training on new technologies to increase the integration of technology in the classroom have experienced frustration, primarily due to information overload and the training not accommodating their differences in technological ability. In 2014, Clark detailed how Health Care Assistants in the public sector reported frustration due to the absence of promised progression (Clark 2014), supporting a link between frustration and a lack of development opportunity, but also a lack of trust and broken promises from those in

power. An issue more closely related to the employment contract covered later in this review.

Interpersonal Constraints

In addition to job-context constraints, research has also suggested a link between work frustration and the people around us, including a lack of help and social support (Heacox and Sorenson 2004, Keenan and Newton 1985, O'Connor, Peter, Rudolf and Pooyan 1982), an expected finding given that social support acts as a buffer against stress (Cohen and Wills 1985). Heacox and Sorenson (2004) found a significant relationship between a lack of warmth and support and frustration (.52). Others have identified correlations between frustration and physical isolation (Eaton 1952, Lewandowski 2003), as well as erratic workloads and interruptions due to individuals being, absent from work teams (Kurland and Bailey 1999), an issue which links closely to that of inadequate staffing levels. This is a constraint commonly reported amongst nurses, with inadequate staffing levels interfering with their ability to appropriately manage patient care, leading to a heavier workload and job dissatisfaction (Aiken et al. 2002, Scott et al. 2008, Duffield et al. 2011). More prominent however within frustration research is the issue of interpersonal conflict.

Interpersonal Conflict

Most studies in the field of frustration have focused on frustration as a precursor to interpersonal conflict (Dollard et al. 1939, Elias 2013, Spector 1978, 1997). Interpersonal conflict, defined by Barki and Hartwick (2001: 7) as '*a phenomenon that occurs between interdependent parties as they experience negative emotional reactions to perceived disagreements and interference with the attainment of their goals*.' According to Spector (1997), interpersonal conflicts can be frustrators too, as they interfere with one's ability to maintain good relations with others. This assertion is in line with the general strain theory (GST) which purports that strain (i.e. stress) leads to negative emotion, such as frustration, which can in turn lead to deviant behaviour in the absence of legitimate coping strategies (Agnew 1992).

Interpersonal conflict has been found to be a significant source of stress by numerous researchers (E.g. Mazzola, Walker, Shockley and Spector 2011, Narayanan et al. 1999, Parkes 1985), with Narayanan et al. (1999) and Mazzola et al. (2011) reporting frustration as one of the most citied affective states across different occupations such as clerical, academic, sales and graduate employees. It can be argued that in line with

Agnew's (1992) GST and Locke and Latham's (1990) goal setting theory, conflict with others may also be a precursor to frustration, particularly when the individual or group concerned act as a stressor, interfering with a person's ability to attain or maintain their goal. It is important however to acknowledge that the design of the above studies does not allow for confident causal conclusions, providing frequency distributions and no direct associations. As with other studies (E.g. Ashforth 1994, Bruk-lee and Spector 2006, Geddes 1994, Harris, Harvey, and Kacmar 2011, Keenan and Newton 1985, Spector 1997, Spector and Jex 1998) whom have identified a relationship between interpersonal conflict and frustration, a causal relationship cannot be confirmed due to the methodology utilised. Nonetheless, these studies have helped to indicate individuals or groups that may cause conflict and therefore could contribute to frustration, including customers (Mallalieu and Palan 2015), co-workers (Harris, Harvey, and Kacmar 2011, Spector 1978), managers (Elfering, Gerhardt, Grebner and Müller 2017, Keenan and Newton 1985), and subordinates (Elfering et al. 2017, Miles-Jenkins 2011, Spector 1978). Mallalieu and Palan (2015) for example, found that customers in their teens frustrate those working in retail, due to them 'wasting time' and the fact that they are 'not going to buy anything' and 'leave the dressing rooms just piled high with things.' The customers were therefore acting as a stressor for the individual employee, interfering with their work-related goals for reasons that also appear improper.

In addition, research on managers has suggested that they report feeling frustrated as a result of conflict with colleagues, both at their own level (Harris, Harvey, and Kacmar 2011) and at the lower-level (Elfering et al. 2017). Interestingly, whether frustrated by subordinates or by individuals at their own level, managers often take their frustration out on lower-level employees, providing a lack of support, control and appreciation towards them (Elfering et al. 2017), as well as displaying signs of abusive supervision (Harris, Harvey, and Kacmar 2011). They therefore displace their frustration onto subordinates irrespective of the source, likely due to the lower level of retaliatory power held by subordinates. Subordinates act as a lower-risk target for venting behaviours, particularly in comparison to those in higher positions (Tepper, Duffy, Henle and Lambert 2006). This placement of frustration onto subordinates can result in a vicious cycle as conflict-related frustration may increase, with subordinates becoming frustrated with management due to issues such as a lack of support, appreciation (Elfering et al. 2017), and abusive supervision (Ashforth 1994). Abusive supervision can therefore be a cause of displaced frustration, as well as a type of displaced frustration (Harris, Harvey and

Kacmar 2011). Thus, suggesting a continuous cycle of conflict and frustration between subordinates and management if left unresolved.

Personal Constraints

Salary

An individual's salary still perceived today as a motivator across generations (E.g. Baby Boomers, Generation X and Generation Y) (Teng, Jayasingam and Naim Mohd Zain 2018), is a basic condition of employment and an important personal resource. Salary can lead to frustration if perceived as insufficient (Clark 2014, Seok-Eun and Jung-Wook 2007, Nursing Standard 2012, Poulston 2009), inadequate (Seok-Eun and Jung-Wook 2007, Krech and Crutchfield 1948), inequitable (Greenberg 1990, Seok-Eun and Jung-Wook 2007, Poulston 2009), late, absent or incorrect (Poulston 2009). For example, during an investigation of employee theft as a reaction to underpayment inequity in the US, Greenberg (1990) found that the participants, whose pay was reduced, displayed significantly higher theft rates than those who retained the same pay. Given that, pay cuts have been associated with negative affective reactions such as frustration towards organisations (Greenberg 1989), Greenberg suggested that the increase in theft rates may have been due to the frustration experienced as a result of underpayment, particularly as it was unequitable.

In a study examining worker's intention to leave, Kim and Lee (2007) found that insufficient pay was often the main reason employees choose to leave an organisation, especially when it was perceived as inequitable for the workload. These findings can be explained by Adam's (1963) Equity Theory, which purports that employees will become de-motivated and experience negative affective reactions (e.g. frustration) if they perceive their inputs (e.g. time spent on work-related tasks) to be either greater than their outputs (e.g. salary) and/or greater than the inputs of others (e.g. colleagues) with less reward (Adams 1963), a proposition supported in recent research assessing frustration in interns (Helminger 2014, Praktikantenreport 2012).

Employment Contract

Employment contracts (physical and psychological) are essential to support employee motivation, satisfaction and engagement, as well as ensure organisational trust and commitment (Sutton and Griffin 2004). Frustration occurs when such contracts are breached/ violated, or if an individual perceives them to be insufficient to achieve their goals (BMJ Careers 2016, Bordia, Restubog and Tang 2008, Kickil 2001, Morrison and

Robinson 1997, Nursing Standard 2012, Tomprou, Rousseau and Hansen 2015, Ward, Evans and Steptoe-Warren 2016). For example, Kickil (2001) found that when individuals perceived their organisation were failing to fulfil promises, breaching their contract and conducting itself improperly, they had feelings of frustration, along with many other negative emotions. Such emotions may in turn fuel employee cynicism (Chiaburu, Peng, Oh, Banks and Lomeli 2013), leading ultimately to low levels of performance, job satisfaction, and organisational commitment, as well as an increase in turnover (Dean, Brandes and Dharwadkar 1998).

2.5 Behavioural Reactions to Work Frustration

Research has noted a variety of reactions to work frustration, many of which have significant consequences for both the organisation and its employees. The most cited behavioural reaction to frustration being aggressive behaviour (Baillien et al. 2009, Dollard et al. 1939, Duffy et al. 2012, Elias 2013: 204, Gaucher and Chebat 2019, Spector 1997, Spector, Fox and Domagalski 2006, Tepper et al. 2006, Toscano and Windau 1998), often displayed through antisocial (Spector 1997), deviant or counterproductive work behaviour (CWB) (Elias 2013: 204). Such behaviours have been explained using numerous theories beyond that of Dollard et al.'s (1939) FAH (Greenberg 1990, Spector 1978), including the GST (Agnew 1992), and Adam's equity theory (Greenberg 1990, Spector 1978). The GST implies that aggression is a consequence of strain (E.g. emotional frustration), experienced due to organisational stressors. This has been shown in research conducted by Gibson, Swatt and Jolicoeur (2001) who found that violent behaviour displayed by police officers in the domestic environment was indirectly related to occupational strain through negative affect (e.g. anger and depression). The equity (justice) concept suggests aggressive behaviour results from a cognition-based response to experienced injustice (Fox, Spector and Miles 2001). In other words, aggressive behaviour results from an individual's perception that they have been treated unfairly.

Similarly, theories of reciprocity (Cropanzano and Mitchell 2005) and displaced anger (Dollard et al. 1939) have been used to explain the displacement of anger because of frustration on an organisation (Gaucher and Chebat 2019). Gaucher and Chebat (2019) found that frustration stemming from uncivil customers was often directed towards the retailer, although not necessarily to get revenge on the organisation. They suggested that the direction of aggressive behaviour towards the organisation might be the result of customers being a more direct target. Behaviours such as absenteeism were a method

of self-protection, avoiding an environment in which they were being unfairly treated (Grandey et al. 2004). Unfortunately, such behaviours can significantly harm the organisation (Klotz and Buckley 2013). Absenteeism and poor productivity for example have cost the UK economy billions, with absenteeism costing the UK economy up to £31 billion a year (Mintel 2015), and poor productivity around £340 billion a year (Personnel Today 2006).

A prominent form of aggressive behaviour highlighted in the literature has been bullying behaviour. Research has shown that individuals, who engage in ineffective rather than effective coping strategies because of frustration at work, are more likely to become perpetrators or victims of workplace bullying (Baillien et al. 2009). Bullying being a major problem in UK workplaces which results in absenteeism, turnover and lost productivity (ACAS 2015: 1-2) and in 2007 was estimated to cost the economy a huge £13.75million (Giga, Hoel and Lewis 2008). In line with the theory of displaced anger (Dollard et al. 1939), individuals who dealt with frustration in an active-ineffective way were more likely to become perpetrators of bullying by projecting their frustration onto others. This is possibly due to the frustrator not being present, or the fear of further retaliation from the frustrator if confronted. Individuals who dealt with their frustration in a passive-ineffective way however, were more likely to become victims of bullying, as they gradually begin to violate norms within the team and organisation by distancing themselves and decreasing their performance (Baillien et al. 2009).

Further aggressive behaviours have included social undermining (Duffy et al. 2012) and abusive supervision (Tepper et al. 2006). Abusive supervision occurring due to subordinates having relatively low levels of retaliatory power (Tepper et al. 2006). They are therefore a low-risk target in compared to those in high authority positions, meaning they are an easier target of frustration. Victim precipitation research supports this notion, showing that aggression is often displaced onto individuals who are unable or unwilling to defend themselves (Aquino 2000). Moreover, severe criminal activity including employee theft and fraud (Spector, Fox and Domagalski 2006), and more shockingly the act of homicide (Toscano and Windau 1998) is a consequence. In 1992, the act of homicide because of worker frustration led to the death of four people in a revenge shooting at Concordia University. A massacre which regrettably was no single case, with statistics revealing homicide as the second leading cause of death in the workplace in 1996 (Toscano and Windau 1998).

Of course, aggressive behaviours are not the only reactions found to occur because of frustration at work. Although less frequently cited, frustration has also been linked to goal abandonment (Spector 1997). The act of goal abandonment explained by Alderfer's (1972) 'frustration-regression syndrome' which hypothesises that if someone becomes frustrated in an attempt to reach their goal, they would likely regress towards fulfilling a lower need instead, thus abandoning their initial goal. Furthermore, intention to quit (Spector 1997), low occupational commitment (Radebe and Dhurup 2016), and employee turnover (O'Connor et al. 1984) are three further strategies, each of which have a large financial impact on organisations, especially given that the cost of replacing one employee is on average more than £30,000 (Oxford Ergonomics 2014). What's more, a link can also be inferred between frustration at work and risk taking behaviour, with researchers finding a significant relationship between negative affect at work and risky driving behaviour among taxi drivers (Havarneanu, Mairean and Popusoi 2019), and between job dissatisfaction and risk taking (i.e. taking short cuts) due to role ambiguity and overload (Gracia and Martinez-Corcoles 2018).

There is certainly no shortage of agreement that frustration is associated with negative outcomes (e.g. aggression). However, it should also be considered that frustration might lead to positive outcomes, such as, increased effort to achieve a goal (Spector 1978). Research by Ayoko, Konrad and Boyle (2012) investigating frustration because of conflict in virtual teams, established that initial expression of frustration did not always lead to negative outcomes. They found that virtual teams often responded to conflict immediately, through either frustration or anger. During initial interactions, frustration was aimed at the situation and the task. Only as the interactions progressed did destructive interpersonal attacks occur. Interestingly, when aimed at the situation and task, the expression of frustration was not necessarily destructive. Instead, it allowed them to realise important gaps in their understanding of the team project, aiding positive change. With this in mind, one might argue that frustration can prompt change and help us to identify potential issues that require attention. Albeit organisations and practitioners must ensure affective conflicts are guided in the right direction, enabling change rather than hindering it. Despite claims that there are no simple techniques for transforming frustration to productive conflict (Andersen 2006); one would argue that given the right methodology and an open mind, researchers might be able to identify productive coping strategies and factors that may lead to such. The possibility of positive outcomes also inferred in the early 1900s by Mowrer:

> ‘*The fact that fire can consume and destroy does not lessen its capacity to create and conserve. Likewise, the fact that frustration, in even mild degree, is always objectionable from the narrow, individualistic point of view and when more severe may lead to some of the most painful and devastating suffering of which man is capable does not necessarily justify the conclusion that it is an unmitigated evil.’ (Mowrer 1938 :129)*

It is for us, however, to identify these positive outcomes and gain a detailed understanding of how and why individuals may choose to react in a productive rather than counterproductive manner.

2.6 Moderators and Mediators

In light of the evidence discussed, it is clear that there are a range of sources and behavioural reactions to the emotion of frustration at work. That said many of the findings; particularly surrounding the sources of frustration have been inconsistent, with some researchers identifying significant associations while others have not. Fisher and Gitelson (1983) attribute such inconsistencies to not only methodological or statistical flaws, but also moderators. Additional factors that may explain differences across samples, such as anticipation of punishment (Dollard et al. 1939, Graham, Charwat, Honig and Weltz 1951, Miller 1941, Spector 1978).

Dollard et al. (1939) for example, claimed that the absence of overt aggression after a frustration was due to inhibitions evoked by threat of punishment and that anticipation of punishment would lead to indirect forms of aggression rather than a direct attack on the target. Moreover, they suggested that it might lead to displaced aggression, such as that described earlier in which subordinates become the target of manager frustration due to a lower level of risk (Tepper et al. 2006). Conversely, Miller (1941) argued that the original statement (i.e. that the absence of overt aggression after a frustration was only due to inhibitions evoked by the threat of punishment) should not have been implied. Instead, he asserted that other factors might play a role in how an individual chooses to cope with frustration, independently or in combination. For instance, Berkowitz (1989) proposed that social rules might influence the form of aggression displayed**.** The majority of individuals in society would believe that acting aggressively, particularly overtly, would not be justified by social rules (Cohen 1955). Consequently, expectations of disapproval from society may inhibit them from displaying aggressive behaviour in certain social contexts.

Pearce-McCall and Newman (1986) purported that individuals may differ in their response to and anticipation of punishment because of their personality and psychopathology. They suggested that response to punishment may vary from preoccupation with unpleasant outcomes evident in the negatively biased thinking of depressed individuals (Beck 1976), to insensitivity to punishment seen in psychopaths, likely due to a defence coping response (Cleckley 1982, Hare, Wood, Britain and Shadman 1970). The research assessing the influence of personality on frustration tolerance, choice of coping strategy and the stress-strain relationship is certainly extensive, focusing on well-known attributes such as, negative affectivity (NA) (E.g. Chen and Spector 1991), trait anxiety (T-anxiety) and trait anger (T-anger) (E.g. Fox and Spector 1999), and neuroticism (E.g. Reio 2011).

Research investigating the association between the stress-strain relationship and NA, the dispositional tendency to experience negative emotions across time and situations (Watson and Clark 1984) has been conflicting. On the one hand, research has shown high NA to correlate with measures of stress, frustration, and somatic complaints at work (E.g. Chen 1989, Chen and Spector 1991, Spector and O'Connell 1994, Watson, Pennebaker and Folger 1987), as well as greater sensitivity and reactivity to negative events (Chen and Spector 1991, Douglas and Martinko 2001). On the other hand, researchers have found NA to have no significant association with selected constraints (autonomy and workload) and affective reactions (job satisfaction and frustration) (Spector and O'Connell 1994), as well as interpersonal or organisational aggression (Hershcovis et al. 2007). Likewise, despite finding a significant positive correlation between NA and both work stressors and strains, Chen and Spector (1991) reported that NA did not explain the major portion of relations between stressors and strains, with the exception of the relation between stressors and physical strains, suggesting that NA may only play a small role in the stress-strain relationship.

Similarly, Spector and O'Connell (1994) found no significant relationship between frustration and both Type A impatience-irritability (the tendency to become angry and frustrated) and Type A achievement striving (the tendency to work hard to achieve goals). These two major dimensions of Type A personality are expected to relate closely to organisational constraints and affective outcomes (E.g. frustration) given the findings of prior research (Caplan and Jones 1975, Spence et al. 1987). Failure to find a strong and stable link between frustration and both NA and Type A is consistent with the claims of Spector et al. (1988) whom stated that relations between stressors and affective

strains are at best only modestly influenced by disposition. Nonetheless, whilst NA and Type A do not explain all relationships between stresses and strains, it is important not to dismiss all dispositional variables in determining an individual's frustration tolerance and choice of coping strategy.

Closely related to NA, Spielberger's (1966, 1972a, 1972b, 1977, 1979a, 1983) constructs of trait anxiety (T-anxiety) and trait anger (T-anger) may help to determine an individuals' frustration tolerance and choice of coping strategy. According to Spielberger and Sydeman (1994) individuals high in T-anxiety perceive more organisational stressors (i.e. frustrators) and respond to them with more frequent and intense negative affective reactions such as frustration, tension, apprehension, nervousness, and worry. On the other hand, individuals high in T-anger are more likely to experience the emotional state of anger (subjective feelings of irritation, annoyance, fury or rage, and associated physiological arousal) whenever they encounter frustrating or annoying conditions (Spielberger, Krasner and Solomon 1988, Spielberger and Sydeman 1994), as well as react in a counterproductive manner (Deffenbacher 1992, Fox and Spector 1999). Indeed, research has shown a significant relationship between T-anxiety and frustration (Fox and Spector 1999), suggesting individuals high in T-anxiety may have lower frustration tolerance than those low in T-anxiety. Additionally, Fox and Spector (1999) have found T-anger to be strongly associated with affective and deviant behavioural reactions, especially when combined with the likelihood of no punishment. This supports the claims of Miller (1941) that other factors may independently or in combination with fear of punishment, play a role in how an individual chooses to cope with frustration.

Neuroticism, the trait disposition to experience negative affect, such as emotional instability, anger, anxiety, and depression (Costa and McCrae 1992) also has strong links with experienced frustration and deviant behaviour (Raymund, Garcia, Wang, Lu, Kiazad and Restubog 2015, Reio 2011, Taylor and Kluemper 2012, Widiger and Oltmanns 2017). Individuals high in neuroticism experience even minor frustrations as overwhelming, interpreting ordinary situations as threatening (Widiger and Oltmanns 2017). They often use maladaptive coping strategies when experiencing environmental stress due to dispositional vulnerability for a wide array of different forms of psychopathology, such as substance abuse (Widiger and Oltmanns 2017). Raymund et al. (2015) for example, found a positive relationship between abusive supervision (a source of frustration) and employee deviance, mediated by neuroticism, with those higher in neuroticism more likely to experience frustration and engage in deviant

behaviour. Interestingly, similar to the findings of Fox, Spector and Miles (2001), Taylor and Kluemper (2012) found neuroticism to influence the relation between role stress and interpersonal aggression, but not organisational aggression, again signifying that personality may have little influence on aggression towards the organisation in comparison to environmental or other factors.

Less prominent personality dimensions investigated include agreeableness and conscientiousness, with lower levels of both factors found to influence the relationship between stressors and interpersonal aggression (Taylor and Kluemper 2012). For example, Reio (2011) identified thrill seeking as a significant predictor of frustration frequency and incivility. This reinforces Zuckerman's (1994) notion that thrill seeking is associated with increased hostility and anger. Pearce-McCall and Newman (1986) have also reported differences amongst introverts and extrovert, with introverts having a lower perception of control when faced with punishment than extroverts do. Introverts inhibit ongoing behaviour, unlike extroverts whom increase their expectancies for success, showing persistence in the face of frustration. Gray's (1982) Reinforcement Sensitivity Theory that details the use of the Behavioural Inhibition System (BIS) may explain these differences. When faced with warnings of punishment the BIS is activated, subsequently acting to inhibit ongoing behaviour through analysing environmental stimuli and producing an increase in nonspecific arousal (Gray 1982: 13). It could be that extraverts react to punishment primarily in terms of the arousal component of the BIS and less in terms of its interruptive and analytical components. Alternatively, differences may reflect different expectancies concerning controllability, with extraverts having a higher expectation for control and introverts often displaying signs of 'learned helplessness' (Wortman and Brehm 1975).

The direct and moderating impact of perceived control at work on frustration and aggression has been investigated in a number of studies assessing work locus of control (LoC) (*Eatough and Chang 2018,* Fox and Spector 1999, Spector and O'Connell 1994, Storms and Spector 1987, Perlow and Latham 1993). A marked concept defined by Spector and O'Connell (1994) as the extent to which people believe they can or cannot control reinforcements at work. People who believe they can control their own rewards are classed as internals, and those who believe that others or luck control rewards are considered externals. Storms and Spector (1987) showed support for the role of Work LoC as a moderator in the relationship between frustration and coping strategies, particularly sabotage. Individuals with low perceived control (externals) were more likely

to respond counterproductively to organisational frustration. Similarly, Perlow and Latham (1993) found individuals with higher levels of externality were more likely to behave abusively toward clients at work. Allen and Greenberger's (1980) suggestion that persons with lowered perceived control may attempt to modify their environment and increase their feelings of control through destructive acts may explain these findings. Spector and O'Connor (1994) however found that while internals experienced lower levels of job stressor and work anxiety, there was no significant relationship between frustration and locus of control (.15). They suggested that locus of control may not impact on frustration levels but may influence the way in which an individual copes with the frustration they experience, particularly whether they react in an aggressive manner.

In line with cognitive-behavioural models, such as Beck's (1976) Cognitive Therapy, appraisal or interpretation of the situation has also been seen as a potential moderator (Cohen 1955, Pastore 1952, Spector 1997, Zander 1944). Spector (1997) for example, indicated that for an individual to experience frustration they must perceive the frustrator to interfere in some way with their goal. Once frustrated an individual will only become aggressive if the frustrator is viewed as arbitrary (i.e. caused by someone for no apparent good reason or to be mean) and not if they believe the goal interference is justified (Spector 1997). Similarly, according to Zander (1944: 32), for an individual to perceive a situation as frustrating and consequently display aggressive behaviours, their goal needs to be within their field of aspiration. In other words, they will only become frustrated and display aggressive behaviours if the frustrator interferes with an important and expected outcome.

Research has also shown the importance of motivational factors in determining frustration, such as achievement motivation (I.e. the motivation to achieve successful goals) (Chand 2015) and goal orientation (Whinghter, Cunningham, Wang and Burnfield 2008). The latter is a comprehensive motivational concept that captures mastery (I.e. gaining new knowledge) and performance goals (I.e. gaining a positive evaluation of competence or avoiding negative evaluation) (Madjar, Bachner and Kushnir 2012). For example, Chand (2015) found that high achiever sportspersons with superior achievement motivation are better able to tolerate frustration than low achievers with poor achievement motivation (Chand 2015). Moreover, Whinghter et al. (2008) found that individuals who have high levels of avoiding goal orientation (i.e. focus on avoiding criticism of their abilities) and low levels of mastery goal orientation (I.e. possess little desire to learn and develop) are more likely to experience frustration due to workload

than individuals with low levels of avoiding goal orientation and high levels of mastery goal orientation. In essence, when faced with a potentially frustrating situation, individuals who possess high achievement motivation and/or mastery goal orientation are less likely to experience frustration than those who possess low achievement motivation and/or high-performance goal orientation.

Positively related to achievement motivation (Magnano, Craparo and Paolillo 2016) and mastery goal orientation, (Spence, Oades and Cauti 2004) emotional intelligence (EI), defined by Mayer, Salovey and Caruso (2000: 396) as '*the ability to perceive and express emotion, assimilate emotion in thought, understand and reason with emotion, and regulate emotion in the self and others,'* has also been linked to frustration and aggression (e.g. Kumari and Gupta 2015, Schutte, Schuettpelz and Malouff 2001, Ward, Evans and Steptoe-Warren 2016, Winters, Clift and Dutton 2004). Winters, Clift and Dutton (2004). For example, in a study investigating the relationship between spousal battering and 'mixed EI,' a combination of traits, social skills and competencies (O'Boyle et al. 2011) found that those scoring low on impulsiveness, (a facet of mixed EI), had lower frustration tolerance and lacked control of aggressive, hostile behaviour, thus suggesting that individuals lower on impulsiveness may be more likely to experience frustration and respond to that frustration in a more aggressive manner. Nonetheless, much of this research has often focused on areas unrelated to the workplace, such as domestic abuse (Winters, Clift and Dutton 2004) and frustration tolerance in children and adolescence (Kumari and Gupta 2015).

Several researchers (E.g. Newton, Teo, Pick, Ho and Thomas 2016, Yoo and Salovey 2009, Ward, Evans and Steptoe-Warren 2016) have begun to assess EI as a potential moderator on the stress-strain relationship in the work-context albeit with mixed results. Yoo and Salovey (2009) for instance have found high EI ability (I.e. emotion-related cognitive abilities [Petrides 2010]) to be related to more intense stress-related emotions in stressful situations. In particular, emotion management consistently predicted higher frustration, perhaps because they are better at identifying and labelling their own emotional state. Newton et al. (2016) on the other hand, found that while high trait EI (I.e. emotional self-perceptions [Petrides 2010]) in nurses buffered the negative effect of role overload on job satisfaction and workplace relations, it acted to amplify the negative effects of role underload and management disagreement. Contrary to expectations, they found that individuals with low trait EI experienced a buffering effect, reducing the negative effects on employee adjustment. This is possibly because individuals with low

trait EI may not experience frustration or boredom caused by underload, or the tension caused by conflict with supervisors.

Before assessing the concept of EI further, one would argue that researchers first consider which collections of abilities and traits are true models of EI, and those that may be more important for predicting individual and organisational outcomes (e.g. job satisfaction and performance). Despite popularization of the topic (Bar-On 1997, Elias et al. 1997, Goleman 1995, Mayer and Salovey 1993), opinion about EI has varied greatly, especially in occupational psychology (Ashkanasy and Daus 2005) with researchers debating conflicting definitions and models of EI (e.g. Bar-On 1997, Mayer and Salovey 1997), and the significance of EI for important organisational outcomes (Cherniss 2010). In fact, the many models and 'streams' of EI (e.g. ability model, trait model, and mixed model) have led some researchers (e.g. Murphy 2006, Locke 2005: 428) to question what being '*emotionally intelligent'* actually means.

According to Cherniss (2010), while most major theorists accept the definition of EI provided by Mayer, Salovey and Caruso (2000: 396), few models of EI (e.g. the Mayer–Salovey–Caruso model) fit this definition well. Models such as the Bar-On (1988) model of emotional and social Intelligence go well beyond this definition, including traits and other personal qualities (e.g. motivation, happiness, and self-regard) that may pose serious problems for researchers if seen as representations of EI. Cherniss (2010) argues that rather than being models of EI, these latter models are actually models of emotional and social competence (ESC), described by Emmering and Boyatzis (2012) as a learned capability based on emotional intelligence (EI) which results in superior performance.

Models of ESC (e.g. Bar-On's 1988 Model) move beyond pure trait and ability-based models of EI, to include a comprehensive set of emotional and social competencies with explicit links to personality and motivation theory. In other words, models of ESC encompass a wide range of psychological concepts in addition to intelligence. These include personality, motivation, and psychological capital (i.e. hope, resilience, self-confidence and optimism) (Şimşek and Aktaş 2016). That is not to say that models of ESC are superior to models of trait and ability EI, just that they may be more helpful in practice to select and develop certain emotional and social competencies, rather than EI alone. As stated by McClelland (1973), competence ultimately is more important for success in work and in life than is intelligence. A notion supported by O'Boyle et al.

(2011) who found in a meta-analysis of studies that 'mixed models' of EI (i.e. ESC) were predictive of performance across a wide range of occupations, while the predictive power of ability-based measures of EI were inconsistent.

Given the above, one would recommend further exploration of the concept of ESC in organisational frustration research, rather than EI alone. The inclusion of a more comprehensive set of emotional and social competencies that move beyond EI to encompass a broad range of key psychological concepts (e.g. personality, motivation, and psychological capital), potentially aiding the identification of a wide range of mediators and/or moderators. Variables that could inform the development of effective workplace interventions (e.g. stress management training, communication and empathy training) to increase frustration tolerance and promote the use of positive and productive coping strategies.

2.7 Summary of the Literature Review

Frustration, it can be argued, is an increasingly complex construct. However, while definitions of frustration may vary, with some defining frustration as an external instigating condition, and others as an individual's reaction to an event, there appears to be little doubt as to the significant impact it can have on individuals, teams and organisations. This review provides a foundation for knowledge on the research and theory surrounding work frustration, which is essential in guiding the current research and subsequent chapters. As such, the chapter was divided into five key sections, exploring the concept of frustration itself, followed by its manifestation in the work context, the sources of and behavioural reactions to the emotion, as well as the potential moderators involved.

The first section outlined some of the key definitions highlighted in frustration research and the common consensus amongst researchers that frustration occurs as a result of interference with one's ability to achieve or maintain their goal, a goal of which could be long or short-term, and in the context of the workplace, personal or work-related. Further, the contrasting views of researchers were discussed, with early researchers such as Freud (1917) and Dollard et al. (1939) perceiving frustration as an external instigating condition, while others (e.g. Amsel 1958, Cicchetti 2016, Fox and Spector 1999, Marx 1956, Reio 2011) perceived frustration as an individual's reaction to an event. The latter perception instigated by disagreement surrounding the FAH and whether the universal causal relation assumed between frustration and aggression did exist.

The second section examined frustration in the context of the workplace, highlighting common terms utilised in organisational research to describe the sources of frustration, such as '*frustrators,*' '*stressors*,' organisational (i.e. situational) constraints, and/or job demands. The use of theory to aid ones understanding of the experience of work frustration as a whole was also explored, with theories such as the stressor-strain framework (Frese and Zapf 1988, Spector 1998), JD-R model (Bakker and Demerouti 2007, Bakker, Demerouti, De Boer and Schaufeli 2003a, Bakker, Demerouti, Taris, Schaufeli and Schreurs 2003b, Demerouti, Bakker, Nachreiner and Schaufeli 2001), and the COR theory (Hobfoll 1991, Hobfoll 2001). This offered explanations as to why certain stressors and/or demands lead to psychological strain (i.e. frustration). The importance of resources was highlighted, with a lack of or significantly depleted resources alone hindering the achievement and/or maintenance of one's goals.

The following two sections provided a critical discussion of the research and theory investigating the sources of frustration at work and an individual's behavioural reactions. It was clear that there is a substantial body of research on certain frustrators at work. In particular, there is a good amount of knowledge surrounding job context constraints, specifically role stressors (i.e. workload, role ambiguity and role conflict), red tape, the physical work environment, tools and equipment, and training and development. Moreover, aggression as a behavioural reaction to frustration has been explored to a great extent, with much of the research focusing on antisocial, deviant and/or CWB, drawing on numerous theories (E.g. FAH, GST, equity theory, and theories of reciprocity and displaced anger) to provide a thorough understanding of the rationale behind such behaviours.

The final section reviewed the relationship between the sources of frustration at work, the emotion itself, and an individual's behavioural reactions, exploring the potential moderators/mediators involved which may explain numerous inconsistencies in frustration research. The influence of personality on an individual's level of frustration tolerance, choice of coping strategy and the stress-strain relationship being widely explored, with researchers assessing the role of well-known attributes such as, NA (E.g. Chen and Spector 1991), T-anxiety and T-anger (E.g. Fox and Spector 1999), and introversion-extroversion (E.g. Pearce-McCall and Newman 1986). The findings however indicated that the relations between stressors and affective strains are at best only modestly influenced by disposition. Additional factors were also highlighted,

including work LoC (Storms and Spector 1987), cognitive appraisal (Spector 1997), motivation (Whinghter et al. 2008), and EI (Yoo and Salovey 2009). The research on EI being limited, particularly in relation to frustration in the work-context, while also ignoring the distinction between EI and ESC proposed by Cherniss (2010).

2.8 Conclusions and Rationale for the Current Research

Despite the importance of the findings discussed, our current state of knowledge regarding frustration at work does need to be broadened, with the research conducted often being narrow in focus due to its purposeful and/or deductive approach. The eight situational constraints identified by Peters, O'Connor and Rudolf's (1980) for example, were not entirely representative, with only those that may negatively affect performance being identified. There are however situational constraints which can lead to frustration without having a negative effect on performance. Keenan and Newton (1984) themselves acknowledged that due to the paucity of prior research it was difficult for them to make predictions about what features of the work environment may be related to the level of frustration experience, often resulting in research based highly on assumptions. Thus suggesting a greater need for exploratory research.

The majority of findings have also been correlational in nature and therefore no causal relationships could be established. Although logically it seems reasonable to view the affective reactions as dependent variables, suggesting the organisational variables to exert a causal influence on for example, frustration, other possibilities do exist. Interestingly, recent preliminary research has shown that frustration itself may be a criterion for workload amongst bus traffic controllers in Malaysia (Bin, Azlis-Sani, Yunos, Ismail, and Tajedi 2016). Thus, suggesting that a cause and effect relationship may be difficult to establish.

In most cases, the research has also not been generalisable across sectors, with numerous studies focusing on a single profession or workplace community (e.g. business community) (CIPD 2015, Jex, Beehr and Roberts 1992, Keenan and Newton 1984, Seoh-Eun and Jung-Wook 2007, Lazar, Jones and Shneiderman 2006, Mazzola et al. 2011, Peters, O'Connor and Rudolf 1980, Poulston 2009). Individuals working within different organisational sectors are likely to experience different and perhaps more frustrators than others, particularly those working in the public sector where work stress is more common (HSE 2015).

Additionally, the majority of research has not been generalisable to UK organisations, as it has concentrated largely on organisations in the United States (US) (e.g. Chen and Spector 1992, Fox and Spector 1999, Heacox and Sorenson 2004, Lazar, Jones and Schneiderman 2006, Paul and Dykstra 2017, Peters, O'Connor and Rudolf 1980, Reio 2011, Sheptak and Menaker 2015, Spector 1975, Storms and Spector 1987). As stated by Molinsky (2013) *'just because two cultures share a common language or are in a similar part of the world does not necessary mean that they share a common business culture*.' Both the US and UK experience different business challenges and thus may experience different frustrators at work. For example, in 2013 the top challenge for US businesses was finding qualified candidates, whereas for UK businesses, government regulation and global competition were the most problematic (British Council 2013). US employees may also react differently to frustrators at work in comparison to those in the UK, especially given that individuals in the US are typically more confident and enthusiastic at work, while those in the UK are more understated in their emotional expressiveness and tend to engage in self-deprecation (Molinsky 2013).

Frustrators such as workload, the physical work environment and tools and equipment are also adapting and now more complex, highlighting a need for more up-to-date research to develop our understanding and identify any additional frustrators that are to be expected. A shift in the requirements of work over time has led to higher mental demands and low physical demands in comparison to earlier years, suggesting a potential increase in the experience of qualitative workload. The exact location of an individual's work environment has also become increasingly unclear, with many workers engaging in blended or remote working (Hoefling 2017), as well as traveling for business. This leads to workers encountering changeable and sometimes uncertain environments that may indirectly lead to frustration because of other constraints, for example, social isolation and distractions at home due to different time zones. The increasing use of technology in organisations brings with it benefits, but also additional barriers, with further training required and a greater risk of technological failure, an issue enhanced by the failure of organisations to keep up to date with the digital revolution (Insight 2016).

While there is no shortage of agreement within the literature that frustration is associated with negative outcomes, we must also consider that frustration may lead to positive outcomes. Frustration in organisations is inevitable and, in some cases, needed to prompt change and identify potential issues that require attention (Andersen 2006). Researchers therefore need to identify possible positive outcomes and gain a detailed

understanding of how and why one may choose to react in a productive rather than counterproductive manner. Doing so will help ensure affective conflicts are guided in the right direction, enabling change rather than hindering it. This is particularly important given the costs to organisations and detrimental impact on employee well-being such as, low levels of job satisfaction, high levels of work anxiety and more physical health symptoms (Spector 1997).

Based on the review of the literature the aim of this research is to identify alterable factors that can form the basis of successful interventions to a) help reduce work frustration, and b) support employees to react in ways that are more constructive, with the objectives being:

1. To explore and identify new and existing sources of work frustration across different organisational sectors;
2. To explore and identify a range of behavioural reactions to work frustration across different organisational sectors;
3. To develop two comprehensive taxonomies, classifying the sources of work frustration and frustration coping strategies per a set of common conceptual domains and dimensions;
4. To develop and validate two new measurement tools, one assessing the sources of work frustration, and another, frustration coping strategies.
5. To test a new model of work frustration, incorporating both potential mediators and/or moderators, which may influence both frustration tolerance and choice of coping strategy.

The following chapter will outline the methodological approach taken in this research to meet each of these objectives and the overall research aim.

Chapter Three
General Methodology

3.1 Overview

The previous two chapters have provided a foundation for knowledge in relation to the prior research surrounding work frustration. Knowledge that is crucial to the understanding and navigation of this research. Both chapters' highlight important gaps in our understanding of the concept, along with the methodological flaws of prior research on work frustration.

The current research addressed the need for greater exploratory research surrounding the sources of and behavioural reactions to frustration and identified new frustrators in today's organisations and anticipated positive coping strategies. Based on the exploratory research it was expected that new and/or adapted measure(s) of frustration would be developed to enable the assessment of more contemporary frustrators in organisations as well as a range of coping strategies beyond aggression. This led to the development of a new model of work frustration, incorporating potential moderators that are alterable, and thus helps form the development of effective interventions to increase frustration tolerance and promote positive and productive coping strategies.

This chapter first provides a detailed discussion on research philosophy in the social sciences. Research philosophy, according to Saunders, Lewis and Thornhill (2009: 107), is the nature of knowledge and the way in which that knowledge is developed. It outlines the importance of research philosophy as a basis for methodology and presents a critical review of two different philosophical positions that have dominated the social sciences and contributed to what is commonly known as the 'paradigm wars.' It then provides a discussion on the contemporary philosophical positions of pragmatism and critical realism. Critical realism being the philosophical position adopted within this research.

This chapter then proceeds to provide an overview of the methodological approaches used within this research to address its objectives. The methodology of which involved both qualitative and quantitative methods and was separated into three main phases; Phase one involved the use of multi-method triangulation, along with thematic and content analysis to identify the sources of and reactions to work frustration and developed two new formal systems for classifying such per a set of common conceptual domains. Phase two, involved the use of a six-step process to support the development

and validation of two new measures to aid researchers and practitioners with the investigation of work frustration. Phase three involved the use of conditional process analysis to assess a new model of work frustration, utilising the measures formed in phase two along with pre-validated scales. Finally, this chapter presents the methodological considerations faced in each of these phases, including transparency and replicability, reflexivity, sample size, correlation type, and ethics, followed by participant recruitment.

3.2 Research Philosophy

Two main ways in which we can think about research philosophy are; ontology which is focused on the nature of reality, and epistemology, which is concerned with what represents acceptable knowledge in a field of study (Saunders, Lewis and Thornhill 2009: 107). According to Hay (2002: 63), '*ontology logically precedes epistemology which logically precedes methodology*.' That is, the research philosophy that a researcher adopts holds assumptions that are paramount to the way in which they view the world, and will in turn, form the basis of their approach to research and the methods they use. It is for this reason that this chapter focuses first on the philosophical position adopted within this research, critical realism, before discussing the methods utilised. In order to help build a rationale for the use of critical realism, the two main philosophical positions, positivism and constructivism, which have dominated the social sciences and contributed to the emergence of critical realism are first explored. This is followed by an overview of pragmatism, its primary base of support, and critical realism itself.

3.2.1 The Paradigm Wars: Positivism vs. Constructivism

The philosophical position of positivism has, according to Guba and Lincoln (1994: 108) '*dominated the formal discourse in the physical and social sciences for some 400 years*.' It is dependent on the ontological assumption of realism (also known as objectivism), which assumes that reality is '*driven by immutable natural laws and mechanisms*' and is external to social reality (Guba and Lincoln 1994: 109). Researchers who take a positivist position are said to be taking the stance of a natural scientist (Saunders, Lewis and Thornhill 2009: 113), a stance where they believe that the only meaningful phenomena that can be studied scientifically is that which can be directly observed and measured quantitatively (Coolican 2009: 49). Many researchers who adopt this stance lean heavily on the hypothetico-deductive approach, which often involves deducing a hypothesis from theory and subjecting this to a rigorous test using quantitative research methods (Saunders, Lewis and Thornhill 2009: 124-125) such as, closed questionnaires and

controlled experiments, those that are highly structured and traditional to scientific research in psychology (Coolican 2009: 49). Researchers adopting this position are also said to be undertaking research in a '*value-free way*' (Saunders, Lewis and Thornhill 2009: 114-125), that is, the researcher does not affect the research undertaken.

Notwithstanding its dominant position within the social sciences, positivism has been the subject of a wealth of criticism from researchers and theorists (Guba and Lincoln 1994, Kuhn 1970, Popper 1959, Ziman 1991), as well as philosophers such as Hume (1975), which Clark (1998: 1244) refers to as 'inductive sceptics.' Guba and Lincoln (1994) for example have argued that the position is both reductionist and deterministic, assuming there to be only one true objective reality of which is predictable and inevitable. Moreover, theorists (E.g. Kuhn 1970, Popper 1959, Ziman 1991) and philosophers such as Hume (1975) have argued that it is cumulative and law-centred, and view results in limited universal generalisations that may not be verifiable, with reality not always being immediately apprehendable, true, and easily captured. A view that is reflective of that offered by the philosophical position of constructivism that seeks to discredit positivists' philosophical explanations (Parker 1999).

The philosophical position of constructivism is dependent on the ontological assumption of relativism (also known as subjectivism); one that maintains reality is influenced by individuals and groups, and is in the form of multiple, sometimes '*intangible mental constructions*' which are changeable (Guba and Lincoln 1994: 110). It is also reflective of social constructionism, which assumes one's reality to be socially constructed (Burr 1995: 2-3). Researchers whom take an interpretivist position are said to be taking an empathic stance, a stance in which they enter the social world of their research participants and understand their world from their point of view, integrating two intellectual traditions; phenomenology and symbolic interactionism (Saunders, Lewis and Thornhill 2009: 115-116). To do this they often prefer an inductive approach to research, analysing the data first to better understand the nature of a problem and form a theory. An approach commonly associated with, but not limited to, qualitative methods, such as interviews and open-ended questionnaires. Methods which are usually argued to be subjective in nature, providing a more detailed, honest, and realistic view of the individual and their world (Coolican 2009: 52-230).

Despite the benefits associated with constructivism, it has, similar to positivism, been heavily criticised. Anti-constructivists from the philosophies of positivism charge that a

constructivist's notion of the truth is '*purely relativistic,*' rejecting constructivism due to its high level of subjectivity and use of qualitative methods (Proctor 1998: 353). The latter of which has been argued to lack rigour, reliability, and validity, resulting partially from what it commonly known as researcher bias (Morse, Barrett, Mayan, Olson and Spiers 2002). Furthermore, it has also been suggested that due to its emphasis on uniqueness, that is, in-depth personal accounts, constructivism is lacking in generalisability (Viney 1992), a criticism which constructivists have countered, arguing that generalisability is not an aim of constructivism and therefore a lack of such is not a flaw of the position (Cronin, Coughlan and Smith 2015: 60).

The above-mentioned criticisms of constructivism, along with those of positivism, have contributed to an ongoing debate on ontology and epistemology. Commonly known as the 'paradigms wars,' which views positivist and interpretivist views as opposite positions (Patton 1997). A debate that Parker (1999: 4) stated '*neither side can win*,' and critical realists and pragmatists have since tried to move on from, serving, according to Proctor (1998: 354) as '*reconstructive epistemological projects.'*

3.2.2 Pragmatism and Critical Realism

Pragmatism and critical realism are two contemporary philosophical perspectives developed over the last century. They have attempted to combine the ontological assumptions of realism and relativism, acknowledging realism while also maintaining that all knowledge is partial, and therefore to a certain degree, relativism is unavoidable (Proctor 1998). As a result, both perspectives have been of great benefit to the social sciences, allowing for the use of mixed methods in research, which allows for the combining of both qualitative and quantitative methods in a single study, or in a set of studies investigating the same underlying phenomenon (Onwuegbuzie and Leech 2006), as stated by Bisman (2010):

> *'Critical realist research may be initially qualitative and inductive, enabling issues, propositions and models to be developed, clarified and modified, then followed by the hypothetico-deductive approach (most commonly used in quantitative accounting research), to unearth knowledge concerning broader mechanisms and tendencies.'*

This approach of combining mixed methods, also advocated by pragmatists (Tashakkori and Teddlie 2003), allows the researcher to draw on the strengths of both methods and

minimise the weaknesses. For example, it can be both exploratory and confirmatory, allowing the researcher to capture more in-depth data that can be present in words and numbers, minimising researcher bias and increasing generalisability. Furthermore, it offers a more 'workable solution,' providing a result that is 'superior' to mono-method studies (Johnson and Onwuegbuzie 2004). As a result, it has been used by a great number of researchers (Choi, Kuowski, Bond, Baker, Clays, De Bacquer and Punnett 2012, Johnstone 2004, Nielsen, Randall and Christensen 2010, Reich 2010, Sims 2011, Suldo, Friedrich, White, Farmer, Minch and Michalowski 2009), and increasing in business and management to further research, theory and practice (Cameron and Molina-Azorin 2011).

Notwithstanding the usefulness of pragmatism amongst mixed methods researchers, some researchers, including critical realists, have accused the American philosophical movement of strongly embracing relativism. Taking a more sceptical response to the arguments surrounding constructivism, maintaining that the so-called problem of relativism is not as serious as critics would believe (Proctor 1998). Pragmatists, particularly those associated with 'vulgar pragmatism,' characterised by Cherryholmes (1998) as valuing functional efficiency in the absence of criticism, use what Proctor (1998: 364) refers to as a '*good enough criterion of acceptance*,' in which they justify accepting a concept as true without making any theoretically informed judgements on truth and reality. They suggest that the research question itself should be the key determinant of which ontology and epistemology researchers adopt, with different questions suiting different positions. Tashakkori and Teddlie (2003: 713) reflect this in their definition of pragmatism:

> *'[...] a deconstructive paradigm that debunks concepts such as "truth" and "reality" and focuses instead on "what works" as the truth regarding the research questions under investigation.'*

Undeniably, this approach does have its advantages, referred to by Stout (1988: 297) (in a good sense) as, '*never having to say you're certain*.' Its lack of regard for making critical, theoretically informed judgements on reality however has left it open to critics, with researchers such as Proctor (1998: 367) asserting that it is not always clear if it is anything more than a methodology, describing the approach as '*epistemologically tentative*.'

In contrast to pragmatism, critical realism, largely established by the writings of Bhaskar (1975, 1978, 1989, 1998), is a more defined position and less epistemologically tentative, underlying the epistemological position of post-positivism (Proctor 1998). In particular, it is a sophisticated descendant of the philosophy of realism, which believes that although reality does exist it is apprehended '*imperfectly and probabilistically*,' due to unsound human mechanisms and the uncontrollable nature of phenomena (Guba and Lincoln 1994: 110). It embraces both realism and relativism, while rejecting strong forms of relativism, allowing for a more defined approach to conducting mixed methods research. Of course, given the inclusion of two mutually exclusive definitions of ontology Cruickshank (2004) suggests that there is a risk of elision from one to the other, that is, a slippage in meaning from realism to relativism or vice versa. Nonetheless, he argues that we should not reject critical realism as a consequence. Instead, rather than focusing on whether one or other ontology is the definitively correct or incorrect definition of social reality, we should focus on continuously developing ontological approaches through critical dialogue, viewing ontological theories as fallible interpretations of reality (Cruickshank 2004: 568-9).

3.2.3 A Critical Realist Approach to the Current Research

This research adopts the philosophical perspective of critical realism for three reasons. Firstly, in contrast to positivism and/or relativism, it allows the use of both exploratory and confirmatory methods. The combination of such methods across a set of studies enabling the exploration of the sources of and behavioural reactions to frustration in today's organisations, the development and validation of new frustration measures, and the assessment of a new model of work frustration. Secondly, critical realism is a more defined position and less epistemologically tentative than pragmatism (Proctor 1998), supporting a clearly defined methodological approach to investigating the phenomenon of work frustration. Thirdly, the perspective is consistent with the opinion of the researcher, that there are objective realities; however, we cannot rely on positivist reasoning alone to understand the world.

3.3 Research Design

To fulfil the aims of this research a sequential mixed-methods design that involved mixing at multiple levels within the research, particularly those beyond the method level (e.g. the paradigm level), was adopted, and consisted of three phases. Phase one informing phase two, and phase two informing phase three (QUAL → QUAN → QUAN) (see figure 3.1).

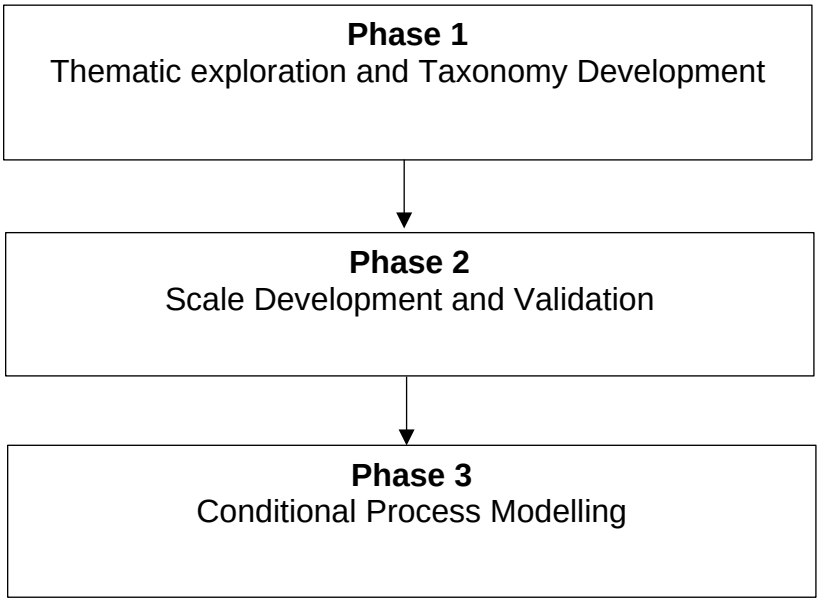

Figure 3.1: The sequential mixed-methods design adopted in this research

3.4 Research Approach - Phase One

Triangulation, an approach that originates from land surveying (Patton 1999), was used in phase one to form a more comprehensive understanding of work frustration. There are four different types of triangulation commonly used within social sciences research to form such understanding of phenomena (Carter, Bryant-Lukosius, DiCenso, Blythe and Neville 2014). Multi-method triangulation, using multiple data collection methods (qualitative or quantitative) in a single study to investigate the same phenomenon; Data source triangulation, gathering multiple perspectives from different types of people and communities to validate data; Investigator/ analyst triangulation, the inclusion of two or more investigators/ analysts in a study, to gain multiple perspectives and review findings, and; Theory triangulation, analysing and interpreting data using different theories (Carter et al. 2014). According to Bisman (2010):

> *'The opportunity to triangulate with research results derived using alternative ontologies and epistemologies is an obvious advantage of the critical realist paradigm, and helps to further current research efforts and future research agendas.'*

As can be seen below in figure 3.2, phase one of this research utilised multi-method triangulation, mixing at the method level only (i.e. mixing data collection tools not

paradigms), specifically three different data collection methods (qual-plus-qual-plus-qual). According to Patton (1999), the use of multi-method triangulation helps to address some of the issues posed by single method research, single method research being more vulnerable to error and criticism due to the limitations of particular methods. For example, open-ended questionnaires, semi-structured interviews, and diaries, used in phase one; have several limitations (see below). When combined however the benefits of one can help account for the limitations of another.

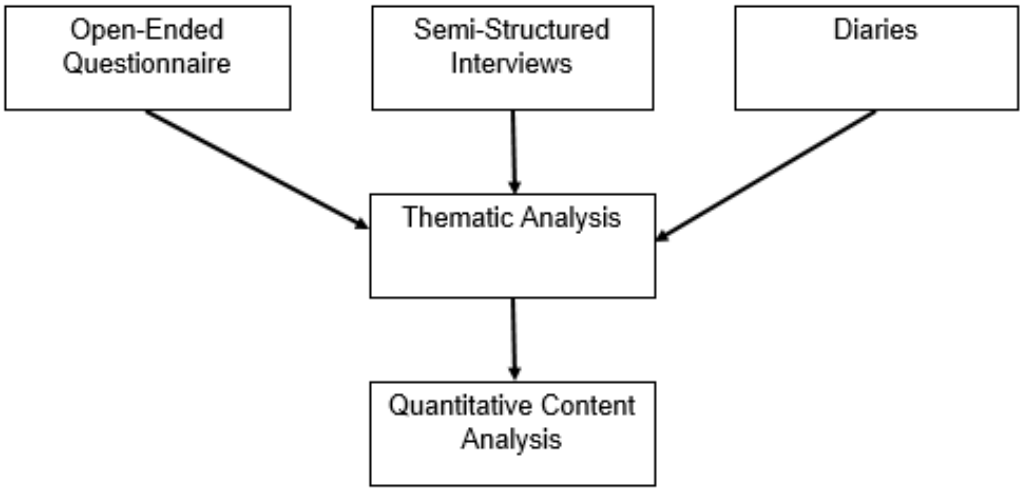

Figure 3.2: Multi-method approach used to explore the sources of and reactions to work frustration analysed using mixed methods

Questionnaires

Questionnaires (open or closed), allow the researcher to gather a larger number of participants from a pre-determined population within a limited time span (Kelly, Clark, Brown and Sitzia 2003). Particularly in contrast to interviews which usually utilise fewer participants (Crowther-Dowey and Fussey 2013: 23). Questionnaires are also often more convenient for the respondents to complete and reduce the effects of social desirability, due to a higher level of anonymity than methods such as interviews (Bryman and Bell 2015: 234-241). They therefore allow the researcher to capture a larger number of individual responses with relevant and varying demographics, and usually work well when the area in question carries the possibility of bias. Work frustration of which, as suggested by Spector (1978) is certainly difficult to study in the field due to its associated bias. Despite their benefits however, questionnaires (Bryman and Bell 2015: 241), as well as other methods such as the diary method (Townsend, Loudoun and Lewin 2016:

196), can result in a less detailed response and a loss of important information due to the absence of the researcher and ability to probe for additional information.

Interviews

Interviews on the other hand, due to the presence of the researcher, enable the researcher to probe for further information (Bryman and Bell 2015: 223-224). They provide a more in-depth understanding of the area in the question that is of high importance when there is a current lack of knowledge and understanding in an area of study. Nevertheless, as with questionnaires, interviews are limited. A key criticism commonly associated with interviews being the issue of retrospective recall (Elsbach and Kramer 2016: 289). Participants may not be able to recall past events accurately and may not report certain events due to social desirability and the fact that they wish to be seen in a positive light (Miller, Cardinal and Glick 1997), an issue that is minimised with diaries, also known as real-time accounts (Elsbach and Kramer 2016: 289).

Diaries

Diaries enable researchers to collect data in a participant's natural environment, such as the workplace (Ohly, Sonnentag, Niessen and Zapf 2010). They therefore provide the researcher with the opportunity of capturing 'life as it is lived' (Bolger, Davis and Rafaeli 2003: 597). In comparison to interviews and surveys, they allow data to be gathered on a daily basis, often several times a day, rather than at one point in time (Ohly et al. 2010). Given that an individual's affective state can fluctuate from day to day (Ilies, Scott and Judge 2006, Zohar, Tzischinski and Epstein 2003), along with their work behaviour (Amabile, Barsade, Mueller and Staw 2005), this flexibility is important for work and organisational research. When utilising diaries consideration must be given to increased level of effort required from participants due to the length of time they take to complete (Hektner, Schmidt and Csikszentmihalyi 2007). This can lead to a reduced uptake of participants and lead to a high dropout rate (Ohly et al. 2010).

Each of these methods were used in parallel in phase one (see chapter four), with each method helping to account for the limitations of another. The data gathered was then combined and analysed using thematic and quantitative content analysis, thus also using a mixed methods approach to data analysis (see figure 9) (i.e. mixing paradigms). The purpose being to gain a more comprehensive understanding of frustration within organisations by combining the data gathered utilising different methods, and analysing

it through exploratory and confirmatory analysis, reducing biases and increasing confidence in the results.

3.4.1 Methodological Considerations

Transparency and Replicability

Similar to any approach, there are limitations associated with adopting a multi-method triangulation approach, particularly that which is qualitative. Its application can be problematic as there can be incompatibility between the data collection methods utilised, the units of analysis and theoretical paradigms, amplifying sources of error and bias in the results (Begley 1996, Sim and Sharp 1998). It is important therefore to adopt a specific approach to analysing the data. Smaling (1987) described three approaches that researchers can apply when analysing of qualitative data using multi-method triangulation. The intuitive approach, in which the researcher intuitively relates data from various methods to each other. The procedural approach, in which the researcher documents each step taken to make it transparent and replicable. The intersubjective approach, in which a group of researchers try to reach agreement about the steps to taken.

Phase one of this research adopted the procedural approach to assess theme convergence across data sources and organisational sectors, allowing for transparency and replicability. Each step was documented using the triangulation protocol developed by Farmer, Robinson, Elliott and Eyles (2006) (see table 3.1).

Table 3.1: Procedural Approach to Multi-method Triangulation

Step	Activity
1. Sorting and Data Management	Sort and label findings from each data collection method including demographic information into individual files within NVivo to enable effective data management and the assessment of theme convergence across each of the methods utilised and the organisational sectors captured.

2.	Identifying and Coding Themes	Follow the process for thematic analysis set out by Braun and Clarke (2006) (chapter 4) for each of the data collection methods in turn.
3.	Convergence Assessment	Following the coding of data and identification of themes for each method of data collection, compare the findings for each method and organisational sector through a matrix (i.e. perform a quantitative content analysis) to determine the degree of theme convergence. Specifically, the prominence of the themes presented.
4.	Team Assessment and Feedback	Assessment of the triangulated results by the research team for review and feedback.

Trustworthiness and Reflexivity

When handling qualitative data and collecting it through interactive means (i.e. interviews), trustworthiness is of high importance (Nowell, Norris, White and Moules 2017), and parallel to the conventional quantitative assessment criteria of validity and reliability (Lincoln and Guba 1985). According to Lincoln and Guba (1985), trustworthiness in qualitative research can be achieved by achieving the following criteria; credibility (i.e. confidence in the 'truth' of findings), transferability (i.e. the applicability of findings in other contexts), dependability (i.e. consistency and replicability of findings), and confirmability (i.e. the degree of neutrality and researcher bias).

To achieve credibility, this research utilised multi-method triangulation (described in detail above in section 3.4), a technique suggested by Lincoln and Guba (1985) to facilitate a deeper, more robust understanding on the phenomenon under investigation.

Transferability, referred to by Lincoln and Guba (1985) as a type of external validity, was established as part of the convergence assessment (see table 3.1 above, step 3). In particular, the initial codes generated during TA were organised into folders reflective of their corresponding themes and sub-themes. Once finalised a Matrix Coding query (MCQ) was requested to enable the calculation of codes and themes

across different methods and organisational sectors, and thus the applicability of the findings across different organisational contexts.

To help meet the criteria of dependability, investigator triangulation, which involves an external audit to assess for consistency and replicability in the findings was also adopted. The researcher and two further investigators, one within the research team and one outside, reviewed the anonymised data independently. It was thus analysed from three different perspectives to help account for individual differences in interpretation of the data. The researcher collated investigator comments to assess any differences in understanding and explored why these may have occurred (i.e. whether they were due to researcher experience). Researcher discussions took place to address any differences in interpretation arose until consensus was achieved.

To achieve confirmability, records of the raw data, transcripts, and a reflexive journal were collated and retained to provide an auditable trail, as well as help systemise, relate, and cross-reference data, easing the reporting process. The reflexive journal detailed the weekly logistics of my research journey, methodological and analytical decisions, as well as my personal reflections about my own philosophical position and relevant experience and how this may or may not influence my interpretation of the data (see figure 3.3 below for an excerpt). Additionally, supervisory meetings enabled me to discuss my experiences in detail and the potential issues that may arise.

As a 25-year-old female researcher and lecturer with experience of frustration working in all four organisational sectors targeted in this research, I am aware that my experiences will influence the way in which I understand and interpret the data. It will shape my reflections and relationship with the data and identified pattern of themes. Moreover, collecting data from individuals working for organisations that I am and/or have been affiliated with may influence what participants tell me about their experiences. Especially given the nature of the topic and its link to socially undesirable behaviours, such as aggression and criminality. Additionally, participants whom are within my close network may also be more or less willing to share specific details about their experiences, which could lead to the disclosure of irrelevant information or the exclusion of important detail. On the other hand, my experiences will allow for a deeper connection with the data, as well as a greater awareness of the concepts referred to by participants.

Figure 3.3: Excerpt from reflexive journal (2016)

Reflexivity is central to the audit trail and a crucial strategy in the process of generating knowledge using qualitative methodologies (Nowell et al. 2017). In fact, few qualitative methods journals do not contain at least one article addressing the issue (Berger 2013). It minimises researcher bias by enabling the researcher to tap into their own intuition while maintaining a reflective understanding of how their prior knowledge is influencing their analysis (Morrow 2005). According to Erlingsson and Brysiewicz (2017) it is:

> *'The difficult balancing task of keeping a firm grip on one's assumptions, opinions, and personal beliefs, and not letting them unconsciously steer your analysis process while simultaneously, and knowingly, utilising one's pre-understanding to facilitate a deeper understanding of the data.'*

The researcher must 'own their perspective,' be open and honest about their approach, what they are doing and why, allowing the readers to interpret for themselves the analysis and consider alternative interpretations (Elliott, Fischer and Rennie 1999).

3.5 Research Approach - Phase Two

Phase two of this research employed a systematic approach to scale development and validation. Six of the seven steps proposed by Hinkin, Tracey and Enz (1997) necessary to produce reliable and valid scales were utilised and split in two key stages (see figure 3.4). As the ultimate aim of this research was to test a model of work frustration, the seventh step, replication, was not undertaken as part of this overall research project but will be undertaken as part of the further validation of the tool.

Step 1: Item Generation

The first step was to generate items to assess each of the key constructs under administration (i.e. the sources of work frustration and coping strategies). As with all research, this process can be undertaken either inductivity or deductively. The inductive approach used when there is a lack of research or theory surrounding the construct, and the deductive approach used when there is pre-existing theory or research to guide item development, ensuring content adequacy (Hinkin, Tracey and Enz 1997). Phase two took a deductive approach, utilising the findings from phase one, along with pre-existing research and theory (E.g. Berkowitz 1980, Dollard et al. 1939, Spector 1978, Storms and Spector 1987) to generate items for both scales. Pre-validated scales (see step 3) were used to support the theoretical basis of each measure, anticipated sub-constructs, and help guide item wording.

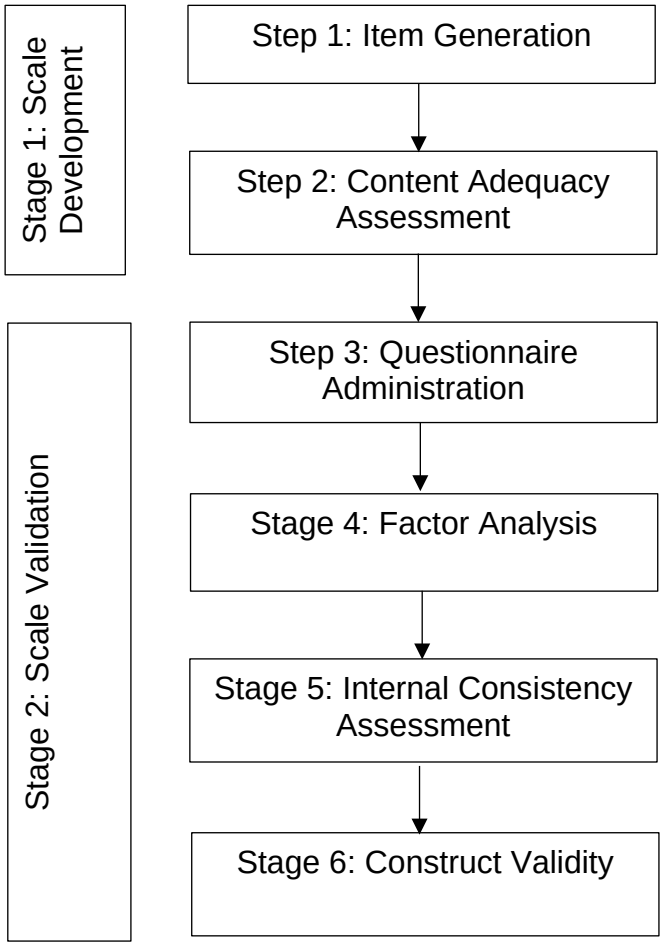

Figure 3.4: The six-step process utilised in phase two split into two stages

Step 2: Content Adequacy Assessment

The next step involved pre-testing items for content adequacy (i.e. content validity), the extent to which a measure's items reflect the theoretical content domain (Kerlinger 1986). This is an essential step during scale development and allowed for the deletion of potentially problematic items (i.e. those which were conceptually inconsistent) during the early stages (Hinkin and Tracey 1999). Although the assessment does not guarantee a scale will be content valid, it does help the developer to confirm whether the items represent a reasonable measure of the construct, reducing the likelihood of problems in the following stages of development (Hinkin, Tracey and Enz 1997).

Step 3: Questionnaire Administration

In step three, the items retained were administered to an appropriate sample along with pre-validated scales. Specifically, The Organisational Constraints Scale (OCS), Quantitative Workload Inventory (QWI), Interpersonal Conflict at Work (ICAW) Scale (Spector and Jex 1998), the frustration scale (FS) (Peters and O'Connor 1980), the

COPE inventory (Carver et al. 1989), and the CWB checklist (Spector, Fox, Penney, Bruursema, Goh and Kessler 2006). The data collected were then analysed in the following steps.

Step 4: Factor Analysis

Two well-known factor analytic techniques were employed in the current research: exploratory factor analysis (EFA) and confirmatory factor analysis (CFA). EFA is a complex, multi-step statistical process (Costello and Osborne 2005), usually selected when the researcher is unable to assume an underlying structure to the relations between variables and must rely on a sample to estimate it. CFA on the other hand, is used when there is already a hypothesised structure (typically identified through EFA) and a researcher wishes to validate the model fit from a sample (Matsunaga 2010). It is a theoretically driven confirmatory technique, driven by theoretical relationships among the variables. Unlike EFA in which the researcher can only pre-specify the number of factors, every aspect of a CFA model is specified in advance, thus making it an appropriate method for the later stages of construct validation and test construction (Brown 2015: 42-43). EFA was first used in the current research to uncover the potential dimensionality of the constructs being assessed, as well as to further refine the new scales by reducing the number of items. CFA was then used to validate model fit and check the appropriateness of the model identified in EFA.

When conducting CFA, a first-order factor solution (i.e. a unidimensional model) (see figure 3.5) was initially requested for both scales to establish a good fit model. The magnitude and pattern of correlations among the factors were then examined to assess whether a second-order factor solution (see figure 3.5) would be more appropriate, where each of the expected first-order factors load onto a second-order factor, allowing for interrelationships among factors. According to Brown (2015: 288) a second-order factor solution should only be requested if there are moderate to strong correlations amongst the factors and the solution can be justified on conceptual and empirical grounds.

As with most initially specified models (Anderson and Gerbing 1988), the models requested in the current research did not always show acceptable fit, which led to a series of re-specifications and re-estimations (i.e. removing parameters to improve fit or changing them from fixed to free or vice versa [Khine 2013: 16]). This process was undertaken using Exploratory Structural Equation Modelling, or ESEM (Aspharouhov

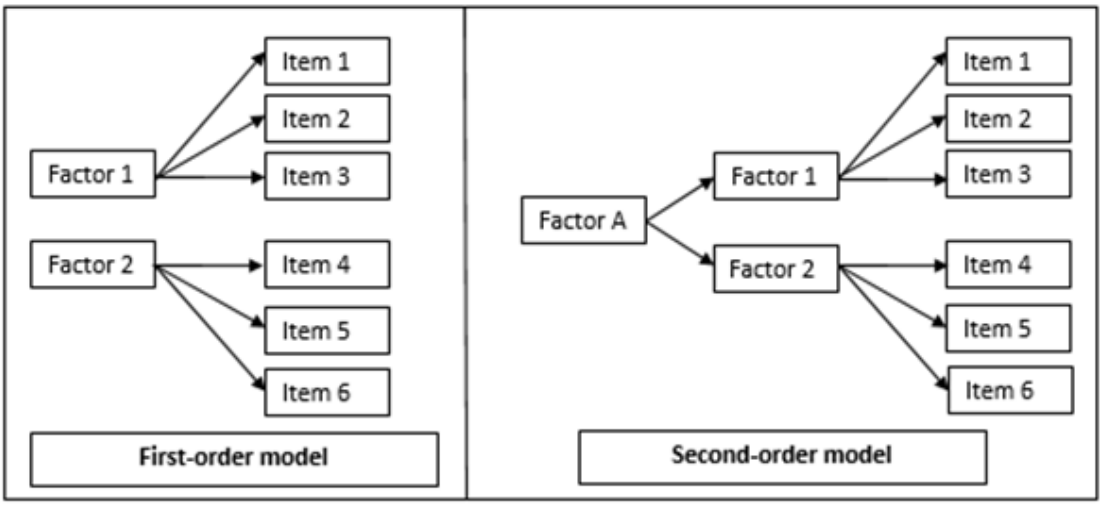

Figure 3.5: Example first and second-order factor models

and Muthen 2009), an approach that is often underutilised and can provide important information to enhance model development. In particular, it allows for the integration of EFA and CFA when analysing a model within the same solution. Some factors can therefore be specified according to CFA conventions (i.e. zero cross-loadings), and other factors using those of EFA (i.e. rotation of a factor loading matrix). Unlike CFA that contains only fixed parameters, ESEM, similar to EFA, allows for a greater number of freely estimated parameters. Thus, it enables items to load on more than one factor, which is important during the exploratory stage of development (Byrne and van de Vijver 2017). It also provides information that is not available in EFA, including modification indices (MIs), expected parameter change (EPC) values, and additional goodness of fit indices, the comparative fit index (CFI) and Tucker-Lewis index (TLI). Typically, ESEM produces better fitting models that are more likely to replicate in CFA.

Step 5: Internal Consistency Assessment

After establishing unidimensionality of both scales, internal consistency was assessed, the extent to which all items on a scale measure the same construct (Revelle 1979). This was assessed by calculating both Cronbach's alpha and the Spearman-Brown Coefficient (i.e. split-half reliability), the latter of which was obtained by splitting the items on both scales into two groups, comparing these groups as if they were two separate administrations of the same survey. Given that the scales being developed were not measuring maximum performance the items were split randomly. Items assessing maximum performance requiring a more stringent approach, such as, splitting by odd

and even numbers (Allen 2017). The cut-off value employed for both coefficients was ≥0.80, which indicates strong internal reliability (Taber 2018).

Step 6: Construct Validity

The final step involved the assessment of convergent and criterion-related validity to examine further the construct validity of both scales. Convergent validity, a fundamental aspect of construct validity (Krabbe 2017), indicated how close both scales related to pre-validated scales, specifically those that measure concepts hypothesised to be strongly related to the constructs being assessed. These included the Organisational Constraints Scale (OCS), Quantitative Workload Inventory (QWI), Interpersonal Conflict at Work (ICAW) Scale, Job Satisfaction Scale (JSS) (Spector and Jex 1998), the COPE inventory (Carver et al. 1989), and the CWB checklist (Spector, Fox, Penney, Bruursema, Goh and Kessler 2006). Criterion-related validity, also known as criterion, predictive or concurrent validity (Salkind 2010), showed how well the scores on the new work frustration measurement scale predicted scores on another measure of interest (Salkind 2010), the frustration scale (FS) (Peter and O'Connor 1980), which assesses a theorised outcome of the focal construct.

3.5.1 Methodological Considerations

Sample Size

The adequate sample size to undertake scale development and validation has been the subject of debate between researchers over many years. Some have proposed item-to-response ratios ranging from 1:4 (i.e. 4 respondents per 1 item) (Rummel 1970) to 1:10 (Schwab 1980) for each scale. Others have suggested that a sample size of 150 is sufficient to obtain accurate factor solutions in EFA, providing that item inter-correlations are quite strong (Guadagnoli and Velicer 1988), and a minimum of 100 for CFA (Bollen 1989). The international test commission (ITC 2017) purpose using at least a modest sample size (e.g. 100) to conduct item analysis at the test development stage, while Hinkin, Tracey and Enz (1997) suggest a conservative approach be adopted, with the number of respondents increasing as the number of items increase. Cohen (1969) also highlights the importance of statistical versus practical significance. For example, although a large sample may result in a high level of statistical significance, it can also lead to distortion in practical meaning. Both statistical and practical significance were therefore taken into consideration when determining sample size for phase two and detailed in the presentation of the results.

Correlation Type

Prior to conducting factor analysis (FA), the type of correlation should first be identified (Maydeu-Olivares and D'Zurilla 1995, Jöreskog 2001). The Pearson correlation matrix is common in research conducting EFA, and assumes the data is on an equal interval scale and that there is a linear relationship between the variables. When using ordinal scales (i.e. Likert-type scales), particularly with fewer than five response options, these assumptions are often violated (Timmerman and Lorenzo-Seva 2011). This can lead to an underestimation of the true relationship between ordinal items (Olsson 1979), as well as give rise to multidimensionality and biased factor loadings (Bernstein and Teng 1989). Unfortunately, criticism has arisen over time due to researchers often treating data arising from ordinal scales as if it were from an interval scale (Gadermann, Guhn and Zumbo 2012, Holgado-Tello, Chacón-Moscoso, Barbero-García, Vila-Abad 2010). When using an ordinal scale, instead of conducting Pearson correlation, researchers should use an alternate measure known as Polychoric correlation, an extension of the tetrachoric correlation. This technique is more appropriate as it estimates the correlation between two bivariate normally distributed continuous variables (Olsson 1979). It has also been found regardless of sample size and population to be the most consistent and robust estimator (Jöreskog and Sörbom 1996) and was therefore requested for the purpose of this research.

The Presence of Outliers

Prior to conducting FA, the researcher should first check the data for both univariate and multivariate outliers, a necessary step prior to any in-depth data analysis (Hair, Black, Babin and Anderson 2010, Tabachnick and Fidell 2007). Throughout the research, univariate outliers were determined using z-scores and conventional criteria (E.g. Tabachnick and Fidell 2013), with cases 3.29 or more standard deviations above or below the mean (i.e. z≥ +/-3.29) being classified as outliers. Multivariate outliers were detected using mahalanobis distance, with cases below the acceptable threshold (.001) proposed by Tabachnick and Fidell (2007) deemed problematic.

Factorability of the Data Set

To assess whether the data is suitable (i.e. factorable) the researcher must also examine the inter-item correlations among the variables, often using statistical methods. Phase two of this research used the Kaiser-MeyerOlkin Test of Sampling Adequacy (KMO) (Kaiser 1974) and Bartlett's (1950) Test of Sphericity (TOS). The KMO test provides a

qualitative index of the strength of relationship between the variables while measuring sampling adequacy for each variable and the overall model. Values on the test range from 0 to 1, with those between .90 and 1.0 viewed as marvellous, .80 and .89 meritorious, .70 to .79 middling, .60 to .69 mediocre, .50 to .59 miserable, and below .50 unacceptable. The data seen as factorable if the KMO value is above .80 (Kaiser 1974). Bartlett's TOS estimates the degree to which the inter-correlation matrix produced is an identity matrix. A matrix arising from a population in which the variables are uncorrelated and therefore unsuitable for factor analysis (Watson 2017). The *P* value should be less than .05 indicating that the matrix is not an identity matrix, that linear combinations do exist, and the variables sufficiently correlated.

Factor Extraction

Factor extraction is the method used to identify which components best represent a set of variables (Costello and Osborne 2005). Principle components analysis (PCA) is the most popular method (Conway and Huffcutt 2003), possibly as it is the default in many statistical software packages. It is however not a true method of FA (Costello and Osborne 2005) with many researchers arguing strongly against its use (Bentler and Kano 1990, Floyd and Widaman 1995; Ford, MacCallum and Tait 1986; Gorsuch 1990, Loehlin 1990, MacCallum and Tucker 1991, Mulaik 1990, Snook and Gorsuch 1989, Widaman 1993).

FA focuses on the identification of an underlying factor structure, helping to explain the common or shared variance between variables. PCA is concerned with reducing a large number of interrelated variables into a smaller set of components, ignoring the underlying factor structure of the data and often making the unrealistic assumption that each variable is without error (Baglin 2014). Undeniably, some researchers assert that there is almost no difference between the methods, or that PCA is actually more appropriate (Arrindell and van der Ende 1985, Guadagnoli and Velicer 1988, Steiger 1990, Velicer and Jackson 1990). Nevertheless, FA was the most appropriate method for this research, theoretically aligned to exploring the dimensionality of a new measurement scale.

Many FA extraction methods exist including, unweighted least squares (ULS), generalized least squares (GLS), maximum likelihood (ML), principal axis factoring (PAF), alpha factoring (Watson 2017), weighted least squares (WLS) and weighted least squares mean-variance adjusted (WLSMV) (Tarka 2017). According to Fabrigar,

Wegener, MacCallum and Strahan (1999: 277) ML is the most appropriate choice if data are normally distributed, allowing for the computation of a broad range of indexes showing model fit, significance testing of factor loadings and correlations, as well as the computation of confidence intervals. If the assumption of multivariate normality is violated, the researchers recommend principal factor methods such as PAF (Fabrigar et al. 1999). When the data is ordinal however, as in phase two of this research, the WLSMV estimation method is the best method. WLSMV yields robust test statistics, parameter estimates and standard errors when analysing ordinal data, and where there are outliers and/or violations of normality (Muthén and Muthén 2007, Tarka 2017), and was thus employed in phase two.

Factor Rotation

Results from EFA can be difficult to interpret and when not rotated can misrepresent the true nature of the emerging factors (Thompson 1984: 31-34). Factor rotation attempts to resolve this misrepresentation by redistributing the common variance across factors to achieve a more interpretable, simple solution (Kieffer 1998). One which is generalizable to other samples from the same population (Tinsley and Tinsley 1987) and more replicable across studies (Kieffer 1998). It is important to realise however that rotation cannot improve the basic aspects of EFA, such as the amount of variance extracted from the items (Costello and Osborne 2005). It merely redistributes the variance previously explained by the extracted factors and does not generate or discover more common variance (Kieffer 1998).

There are two main approaches to factor rotation: orthogonal and oblique. When researchers expect the factors to be independent, they frequently use orthogonal rotation, rotating the factors to achieve the best interpretable solution while maintaining a 90-degree angle between each factor. The factors remain uncorrelated which can lead to a solution that is easier to interpret and replicable, but potentially oversimplified, not accurately representing relationships which may exist (Kieffer 1998). A limitation accounted for in oblique rotation, used when the researcher expects to find a relationship between the factors. During oblique rotation, the factor axes are not held at right angles and are instead allowed to form acute or obtuse angles (Kerlinger and Lee 2000). This allows for correlated factors (Kline 1994) and can better reflect a researcher's view of reality (Kieffer 1998). The solution however is often difficult to interpret, particularly if there is a high level of correlation among the factors (Tabachnick and Fidell 2007).

Two of the most popular orthogonal rotation strategies are varimax rotation and quartimax rotation (Kieffer 1998). Varimax developed by Kaiser (1960) is a technique used to tidy up the factors, ensuring that each variable (item) has a high factor loading on only one of the factors generated. Consequently, each factor typically contains a small number of variables with large coefficients, and a large number of variables with near-zero/ small coefficients. Quartimax rotation on the other hand simplifies the factor structure by forcing variables to correlate highly with one factor and little with the remaining factors (Stevens 1996). This technique can make variables easier to interpret but not factors, as all variables are primarily associated with one single factor (Kieffer 1998). Varimax is often therefore the preferred method of choice for orthogonal rotation.

Common strategies used in oblique rotation are direct oblimin and promax rotation. Direct oblimin is moderated by a delta value chosen by the researcher, positive values producing high correlations between factors and negative values producing small correlations. When using direct oblimin researchers must consider the value of delta as it can have a significant impact on the results. In fact, some researchers have objected to its use due to its high level of subjectivity (Kieffer 1998). Promax rotation contains three distinct steps. The first step involves rotating the factors orthogonally. A target matrix is then contrived which decreases coefficients and increases the absolute distance between them. The final step involves 'procrustean' rotation of the original matrix to a best-fit position with the target matrix. Promax is the most popular oblique rotation strategy due to its ease of use. It also provides good solutions and generates more replicable results than direct oblimin (Kieffer 1998).

Both promax and varimax rotation were employed in phase two (see chapter five). It is important to note however, that while these approaches may provide slightly different results; these differences are not often significant (Kahn 2006, Tabachnick and Fidell 2007). Regardless of the approach, the results explain the same amount of variance (Kieffer 1998).

Determining the Number of Factors

The number of factors to extract can be determined via a range of methods including the Kaiser (1960) 'Greater-Than-One Rule' criterion (i.e. eigenvalues), the scree-test (Cattell 1966), parallel analysis (PA) (e.g. Horn 1965, Timmerman and Lorenzo-Seva 2011) and the minimum average partial test (MAP) (Velicer 1976). PA and the MAP test although

less well-known, are validated procedures recommended widely by statisticians (O'Connor 2000).

PA, introduced by Horn (1965), determines how many factors to retain based on the generation of random variables. It compares the observed eigenvalues from the correlation matrix being analysed with those obtained from uncorrelated normal variables. The MAP test employs the concept of 'common' factors to determine how many components to extract. It seeks to determine what components are common, rather than to find the cut-off point for the number of factors (Ledesma and Valero-Mora 2007). Both methods are superior to other procedures, typically yielding optimal solutions to the number of components problem posed by the two more popular decision rules, using scree-plots and eigenvalues (Wood et al. 1996, Zwick and Velicer 1982, 1986). The latter of which typically overestimates, and sometimes underestimates, the number of components (Zwick and Velicer 1986).

If using PA, consideration of the type of data being analysed (e.g. ordinal or interval) is also important, as it can alter its performance. Whereas Horn's PA (1965) can only perform the analysis using a Pearson correlation matrix suitable for interval level data. Optimal PA, also known as minimum rank factor analysis (PA-MRFA), is able to conduct PA based on the same correlation matrix being utilised (Timmerman and Lorenzo-Seva 2011). That is to say, if you are using interval level data them Optimal PA will perform the analysis on a Pearson correlation matrix. If you are using ordinal data, it will perform based on a Polychoric correlation matrix. Phase two therefore used both Optimal PA and the MAP test to determine the number of factors to retain.

Fit Indices and Item Communalities

To determine the most appropriate factor solution, researchers must also consider fit indices (Brown 2015: 74). Given their satisfactory performance in simulation studies conducted by Hu and Bentler (1999) the standardised root mean square residual (SRMR), root mean square error of approximation (RMSEA), comparative fit index (CFI) and Tucker-Lewis index (TLI) were used in phase two, as well as the classic fit index, modification indices (MIs) and expected parameter change (EPC) values.

The classic fit index is chi-square (χ^2) (Brown 2015: 69), an absolute fit index calculated to assess the fit between the hypothesised model and the set of observed variables (items). A significant χ^2 supporting the alternative hypothesis that the model does not fit

the data well (Tavakol, Dennick and Tavakol 2011). Although frequently reported, χ^2 is rarely used in applied research as a sole measure of model fit due it's very stringent standards and issues relating to sample size and non-normal data (Brown 2015: 69). In small samples (<200) the χ^2 may fail to reject a poor fit model, while in large samples it may falsely reject an adequate model based on a significant value (Gatignon 2010, Singh et al. 2016). Moreover, the underlying distribution is not χ^2-distributed in instances where the data are non-normal (Brown 2015: 69-70). Indeed, the conventional χ^2 test is not appropriate when using the WLSMV and MLWV estimators because the χ^2 difference is not distributed as χ^2. Instead, researchers should use the χ^2 difference test (DIFFTEST) in which a more restrictive H0 factor model is estimated and then compared to an unrestricted correlations model (H1), assessing whether the H0 model fits significantly better or not than the H1 model. A p-value >.05 indicating that the H0 is not a significantly worse fit (Muthén and Muthén 2017: 507-508). Due to the use of nested models, this process is suitable for CFA rather than EFA.

Similar to χ^2 the SRMR is also an absolute fit index but with less stringent standards and no penalty for model complexity (Hooper, Coughlan and Mullen 2008). It is a positive square root average, although conceptually, it is the average difference between the observed correlations in the specified matrix and those predicted. It is typically used during EFA rather than CFA, as it does not appear to perform well when using categorical indicators in CFA models (Yu 2002). The index ranges from 0 to 1, with a value of 0 suggesting perfect fit (Brown 2015: 70), and those close to .08 or below, a reasonably good fit (Hu and Bentler 1999).

RMSEA is a more widely used and recommended index. Unlike χ^2 and SRMR it incorporates a penalty function for poor model parsimony (Brown 2015: 71). It assesses the extent to which a model fits reasonably well in the population and not whether it fits exactly. Relying on the noncentral χ^2 distribution, it includes a noncentrality parameter (NCP) representing the degree of model misspecification. The recommended cut-off value proposed by Browne and Cudeck (1993) showing adequate model fit being 0.08, and 0.05 for good model fit. This value however differs amongst researchers depending on model conditions and the use of additional fit indices (Brown 2015: 74).

The CFI and TLI, also known as comparative fit indices, are available through CFA and ESEM. They evaluate the fit of a user-specified solution in relation to a more restricted, nested baseline model, and are said to be some of the 'best behaved' indices (Brown

2015: 73). The CFI first introduced by Bentler (1990) compares the sample covariance matrix with a null model. Like RMSEA, it is based on the NCP (Brown 2015: 73) and performs well even when the sample size is small (Tabachnick and Fidell 2007). On the other hand, TLI can help compensate for the effects of model complexity. Similar to RMSEA, it includes a penalty function for adding freely estimated parameters that do not improve model fit (Brown 2015: 73). Values for both CFI and TLI in the range of .90 and 95 are suggested to be indicative of acceptable model fit (Bentler 1990), although values close to .95 or greater are favoured (Hu and Bentler 1999). TLI is a non-normed fit index, meaning its values can fall outside the range of 0-1.

While the CFI and TLI are advantageous, as with all fit indices, they can only provide a global descriptive indication of model fit (Brown 2015: 99). They do not provide information on the reasons why the model fits the data poorly, which may be a result of the inclusion of irrelevant relations or the exclusion of relevant ones (MacCallum 1986). This is where ESEM is most beneficial. By allowing for cross-loadings, ESEM enables closer inspection of the items and specified factors. Aiding the identification of those that may be problematic. The researcher can inspect each of the factor loadings, how strong they are (e.g. >.5) and whether they are significant (<0.05) across all factors. Items that load significantly across more than one factor and load highly on said factors are potentially problematic and should thus be reviewed using MIs and EPC values.

MIs help to identify misspecifications and localised areas of strain (Brown 2015: 99). They provide an estimate of the expected decrease in overall $\chi 2$ if specific parameters are adjusted (Khine 2013: 16). Small MIs indicate a good model fit, whereas large indices (i.e. >10) suggest that factor cross-loadings and error covariance are present, thus the overall fit of the model can be significantly improved if the parameter is adjusted (Brown 2015: 99). Research surrounding the use of MIs alone however has indicated that they may not be accurate (Kaplan 1988, MacCallum 1986, Silvia and MacCallum 1988). Instead, researchers should also consider the EPC values for each MI in parallel (Hutchinson 1993). The EPC value indicates the size of a fixed parameter if freely estimated in a revised model, aiding the selection of parameters to add to or remove from the model to improve fit (Saris, Satorra, and Sorbom 1987). The cut-off value for EPC varies, with researchers suggesting values such as .30 (Kline 1994), .316 (Herrmann and Pfister 2013), and .40 (Saris, Satorra and van der Veld 2009).

When assessing MIs and EPC values, the parameter with the highest MI (>10) and an EPC value >.316 should be freed first, followed by those with a combination of large and small values (E.g. Large MI and small EPC) if deemed necessary (Hoyle 1995: 108). It is important to note however, that before revising the model, item communalities should be assessed, along with whether the solution is theoretically coherent. A solution that fits the data statistically and meets the above criteria is not necessarily interpretable (Brown 2015: 74). It is essential therefore to look through each of the items retained and the factors on which they load to determine the final factor solution. This helps to avoid an over-fitted model while maintaining content validity and increasing the likelihood that the model will be replicable during CFA with a different sample.

Item communalities are usually considered 'high' if they are all ≥.8 (Velicer and Fava 1998), although this is rarely achieved, especially in the social sciences where low to moderate communalities (.4 to .7) are common. Tabachnick and Fidell (2001) recommend a minimum factor loading of .32. If there are 'crossloaders' however, items which load at .32 or higher on two or more factors, they suggest a more stringent criterion (.50 or better on each factor). The latter identified by Costello and Osborne (2005) as strong. Each factor must also have at least 3 items with standardised loading coefficients at 0.3 or greater (the acceptable level determined by the researcher). Any factor containing less than 3 items above .3 or greater is not stable and should not be included in the final model (Costello and Osborne 2005). This can help narrow down the number of factors to retain, with larger factor solutions usually containing factors with limited or no factor loadings above .3.

3.6 Research Approach - Phase Three

A path-analytic approach was used in phase three of this research to test a new model of work frustration integrating both mediation and moderation analysis (Hayes 2018: 393). Mediation of which is concerned with how and why an independent variable (X) indirectly effects an outcome variable (Y) through a mediator variable (M), while moderation is concerned with when or for whom certain effects occur between X and Y, the moderator variable influencing the magnitude of the causal effect of X on Y (Hayes 2018: 7-8). Independently, mediation and moderation often reduce complex responses that differ from person to person or situation to situation down to a single number or estimate, which may result in a description of a phenomenon that is incomplete, or possibly wrong. However together, mediation and moderation analyses are able to capture these complex responses, assessing the mechanisms linking X to Y while

simultaneously allowing those effects to be contingent on context, circumstance, or individual differences (Hayes 2018: 394-395).

Researchers typically refer to the combination of mediation and moderation as either mediated moderation, or moderated mediation. Mediated moderation is when an interaction between a moderator variable and X on Y operates through a mediator M (Hayes 2018: 395), whereas moderated mediation is when the indirect effect of X on Y through M is moderated by an additional variable (James and Brett 1984). Phase three focused on moderated mediation, testing a conditional process model in which the direct and indirect effect of the experience of frustrators at work on frustration coping strategies through the emotion of frustration is contingent on social support availability and emotional and social competencies (ESCs) (see chapter six).

To test different configurations of mediation, moderation, and moderated mediation models, a vast number of model templates and code are available (approximately 96). Hayes (2013), to test a range of models using the PROCESS macro in SPSS, first developed many of the templates (1 to 76), which have since been adapted for use in Mplus by Stride and colleagues (2015). Although more labour and skill intensive than PROCESS, Mplus provides a completely flexible modelling environment to test unlimited and complex configurations of moderation and mediation and was therefore seen as more appropriate for use in phase three, examining a complex model with multiple moderators and outcome variables.

The hypothesised direct and indirect effects, as well as the conditional direct and indirect effects were assessed using models 4a (see figure 3.6) and 76 (see figure 3.7) (see appendices 3a and b for the statistical diagrams for each model). Model 4a enabling the assessment of the indirect effect of the emotion of frustration on the direct relationship between the experience of frustrators at work and the coping strategies assessed. Model 76 enabling the assessment of the moderating effect of social support availability and ESC on both the direct and indirect effect of the experience of frustrators at work on the coping strategies assessed through the emotion of frustration.

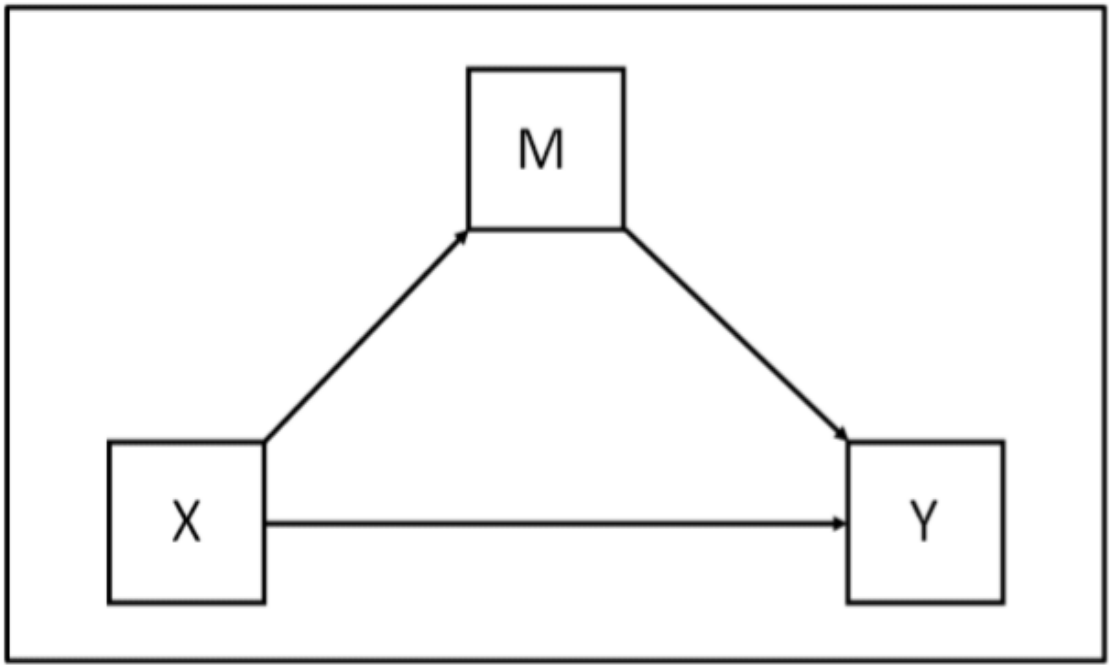

Figure 3.6: Model 4a (1 mediator, mediating the direct X-Y path) (Stride et al. 2015)

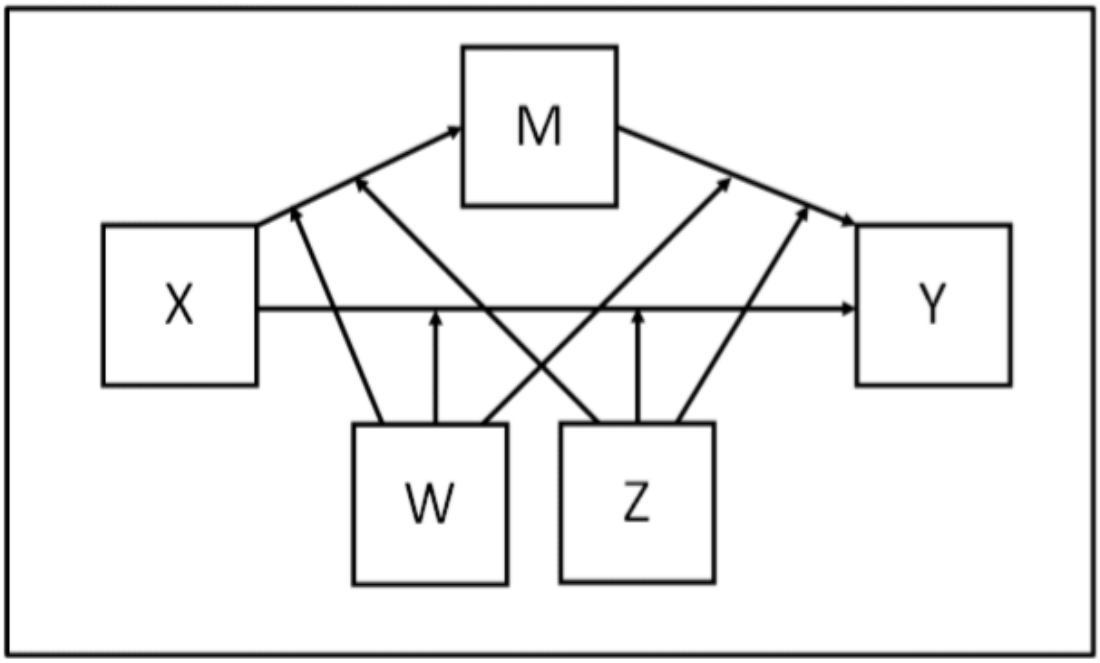

Figure 3.7: Model 76 (1 mediator, 2 moderators, both moderating each of the X-M path, the M-Y path and the direct X-Y path) (Stride et al. 2015)

3.6.1 Methodological Considerations

Sample Size

As with scale development and validation, there are differing recommendations regarding appropriate sample sizes in path-analytic research. Roscoe (1975) for example, proposes that the sample size should be several times (preferably 10 times or more) as large as the number of variables in the study. For phase three, this would mean a minimum of 130 (i.e. 13 × 10) participants. In contrast, Boomsma (1983: as cited in Tanaka 1987) recommended researchers obtain samples of at least 200 or more irrespective of the number of variables. To err on the side of caution, phase three followed the latter more stringent recommendation.

Statistical Assumptions

Before undertaking statistical analyses on a structural model, it is first important to check the relevant assumptions. According to Stride et al. (2015), when conducting moderated mediation, the variables should be continuous, and satisfy the assumptions of standard multiple regression. In particular, the data should be normally distributed and the relationship between the variables linear. There must also be no multi-collinearity or heteroscedasticity, and the residuals should be independent. The following tests were therefore executed in phase three prior to analysing the hypothesised model: checking for outliers in the data, assessing the normality of residuals, explaining the position on homoscedasticity, establishing linearity between variables, testing for the presence of multi-collinearity between variables in the model and the independence of residuals (See chapter 6).

Fit Indices

To determine the appropriateness of model fit, consideration was given to fit indices (Kenny 2015), such as those described earlier in this chapter to determine an appropriate factor solution. For phase three, $\chi 2$, TLI, CFI, and RMSEA were examined, each being a good indicator of whether a model is reasonably consistent with the data (Kenny 2015). Additionally, given that a good-fitting model does not prove that it is correctly specified or valid, each model was then subjected to further examination in line with the hypotheses proposed to identify redundancy and where future re-specification may be required. In phase three of this research, this was undertaken by calculating the coefficient of determination (R^2) for each model, as well as the direct, indirect and conditional direct/indirect relationships between the variables. R^2 being a measure of the

percentage of total variation in Y that is accounted for the X. An R^2 value of 1 indicating that the data is a perfect fit to the model, and a value less than 1 indicating that at least some variability in the data cannot be accounted for by the specified model. However, as with fit indices, it is important to note that there is no guarantee that a high R^2 is indicative of 'goodness of fit' or that a small R^2 indicates a weak relationship, the magnitude of R^2 strongly influenced by variance in the sample population (Harrington 2007). All indicators of model fit were thus interpreted with caution.

3.7 Methodological Considerations - All Phases

3.7.1 Participant recruitment

Participants, for each phase, were recruited through a variety of UK based organisations, and were working within a variety of occupations in the public, private and voluntary sector, or self-employed. Capturing data from all four sectors helping to account for the limitations of past research. The majority of past research not being generalizable across organisational sectors, with numerous studies focusing on a single profession or workplace community (e.g. Jex, Beehr and Roberts 1992, Keenan and Newton 1984, Lazar, Jones and Shneiderman 2006, Mazzola et al. 2011, Peters, O'Connor and Rudolf 1980, Poulston 2009).

Before recruiting participants for each phase of this research ethical approval was obtained from Coventry University (see appendices 3c, d and e). When recruiting participants through organisations approval was sought through the organisation via a gatekeeper letter (see appendix 3f for an example letter). Once approval was gained, an advert that detailed the aims, objectives, and requirements of each phase, along with the researcher contact details, was sent to the appropriate gatekeeper to distribute via email, or an alternative internal communication platform, such as a staff intranet. An URL link was used to direct participants to questionnaires. In addition, the study advert was posted on social media sites, such as Linkedin and Twitter, to increase participation from a variety of professionals in different organisational sectors, as well as independents.

As participants were able to self-select into the research, there was no control in place to ensure an equal gender balance. This was in part due to the time and expense it would have involved to achieve a gender-balanced sample, but also to avoid negatively influencing the representativeness of the sample. Some fields for example are predominantly male or female, such as, the Health and Life Sciences field, whom have

the highest representation of women (Atkinson-Bonasio 2017). Demographic information was however collated for each phase using a demographic question sheet (Appendix 3g), including age, gender, and organisational sector.

3.7.2. Research Ethics

When conducting research in the field of psychology, researchers face a variety of decisions, in sometimes difficult, changing and unclear situations. It is important that they follow a code of ethics and conduct when making decisions, while also considering the needs of persons, peoples and organisations in the circumstances in which the decision is made (BPS 2018). A variety of ethical documents (Appendices 3h to 3y) were therefore utilised in each phase of this research (i.e. phase 1, 2 and 3), and were formed to meet the Coventry University (2016), Health and Care Professions Council (HCPC) (2016) and the British Psychological Society (BPS) (2018) guidelines for ethical practice. Each document was also submitted to the Coventry University Ethics Department as part of the ethics application process (see appendices 3c, d and e for approval certificates).

The first ethics document presented to participants in each phase was a participant information sheet (PIS). This informed them of the details of the research and any potential risks in taking part. Moreover, it explained that their participation was voluntary, and that they had the right to withdraw their data at any time up until a two-week period after data collection by providing the researcher with their participant information number. Participants were then presented with an informed consent form which they agreed to prior to participation, followed by a debrief sheet that was provided following participation to thank them for their time, provide relevant contact details and remind them of their right to withdraw their data.

Confidentiality was always ensured to persons taking part, and where possible, anonymity. Where anonymity could not be guaranteed (e.g. during face-to-face interviews), participants were advised in the PIS of the potential risk that taking part could lead to the disclosure of previous criminal offences. They were informed that the researcher may have a duty to report to the police or other appropriate authority the details of a criminal offence disclosed for which they have not been previously apprehended, charged or convicted, as well as the details of any actual or perceived risk of harm to themselves (e.g. self-harm) or a third person. If participants were to begin disclosing details of a criminal offence, the researcher would stop the interview and

caution them. If they wished to continue discussing such offences, they must only do so if they understand the caution, and only discuss them in general terms.

Given the link between organisational frustration and low levels of job satisfaction, high levels of work anxiety and more physical health symptoms (Spector 1997), participants were also provided with the contact details for an independent charity (Samaritans) that provides emotional support to anyone in emotional distress, struggling to cope, or at risk of suicide. Participants were also advised to contact a member of management or counselling service within their organisation or institution if they felt negatively during or after taking part in the research.

3.8 Summary of Methods Adopted

3.8.1 Phase One

The aim of phase one was to explore the sources of and reactions to work frustration in the UK across a variety of organisational sectors, to form two new taxonomies, 1) of the sources of work frustration, and 2) of the reactions to work frustration. The rationale for undertaking this phase was that due to the rapid changes internal and external to organisations within the UK is it expected that there are now many more sources of work frustration and ways in which individuals can react to frustration than is highlighted within the literature (Chapter One and Two). Exploratory research was therefore required to gain an in-depth understanding of the current sources of, and reactions to work frustration, that could aid the development of two formal systems for classifying such per a set of common conceptual domains. This was undertaken using multi-method triangulation, utilising an open-questionnaire, semi-structured interviews, and diaries. Thematic analysis was conducted to identify the sources of and reactions to work frustration denoted by participants, and quantitative content analysis was used to determine the frequency of the themes and sub-themes generated across data collection methods and organisational sectors.

3.8.2 Phase Two

The aim of phase two was to develop and validate two new measures, 1) of the sources of work frustration, and 2) of the reactions to work frustration. It was expected that the exploratory research would reveal a greater number of sources and coping strategies that would not be captured in prior frustration measures, or those associated with the construct. Thus, to be able to test an up-to-date model of work frustration, new and/or

revised measures would be required. This phase was undertaken using six of the seven steps proposed by Hinkin, Tracey and Enz (1997) necessary to produce reliable and valid scales. The development stage involved both item generation and content adequacy assessment, while the validation stage consisted of questionnaire administration, factor analysis (e.g. EFA, ESEM and CFA), internal consistency assessment, and construct validity.

3.8.3 Phase Three

The aim of phase three was to test a conditional process model in which the direct and indirect effect of the experience of frustrators at work on frustration coping strategies through the emotion of frustration is contingent on social support availability and ESCs. It was expected that the model would contribute to the existing theory and research surrounding work frustration, capturing a wider range of frustrators and coping strategies, as well as factors (e.g. social support availability) which have been suggested based on prior research to have an impact on frustration tolerance and the ways in which people cope with frustrating experiences. It was anticipated that this would in turn help to form future interventions to reduce frustration in organisations and support employees to react in ways that are more positive.

The next three chapters will address the aims and rationale for each of the three phases, and provide a detailed report of the participants, materials and procedures, followed by the findings. Each chapter will also present a summary and discussion of the study findings that will help pave the way for each chapter that follows. The final chapter will then provide an overview of the previous three chapters and discuss both the theoretical and practical applications of this research.

Chapter Four
Phase One - Exploration of the sources of and behavioural reactions to work frustration

4.1 Introduction and Aim

From the review of the literature and recent media reports in chapters one and two, it was evident that there was an increasing need for effective interventions to: a) reduce work frustration in UK organisations and, b) support employees to react to this frustration in ways that are more positive. Work frustration now a significant issue for UK organisations (Hay Group 2013, IDC 2016, Staples 2018), typically associated with aggressive behaviour (Dollard et al. 1939), intention to quit (Spector 1997), low occupational commitment (Radebe and Dhurup 2016), and employee turnover (O'Connor et al. 1984).

It was also clear that to develop such interventions further exploratory research would first be required into the sources of and reactions to frustration at work, as well as the development of two new classification systems. As discussed in chapter two, despite its significant contribution to knowledge, prior research on the topic has often been narrow in focus due to its purposeful and/or deductive approach (E.g. Keenan and Newton 1984, Peters, O'Connor and Rudolf's 1980). In particular, many researchers have focused on the association between frustration and negative outcomes, particularly aggression (e.g. Baillien et al. 2009, Dollard et al. 1939, Duffy et al. 2012, Elias 2013: 204, Gaucher and Chebat 2019, Spector 1997, Spector, Fox and Domagalski 2006, Tepper et al. 2006, Toscano and Windau 1998). This has neglected the notion that frustration may also lead to positive outcomes, enabling change rather than hindering it. With frustrators such as workload and the physical work environment adapting and becoming increasingly complex (Hoefling 2017), prior research has also become outdated, highlighting the need to develop our understanding and identify any additional frustrators, and/or those that may have dissipated over time. Phase one of this research aimed to:

- Provide a greater exploration into the sources of and reactions to work frustration in different organisational sectors;
- Develop two comprehensive taxonomies, classifying the sources of work frustration and frustration coping strategies per a set of common conceptual domains and dimensions;

To achieve these aims three exploratory research questions were developed and formed the basis of phase one, one overarching question (1) and two further sub-questions (a & b):

1. What are the causes and how do UK employees within different organisational sectors experience work frustration?
    a. What do UK employees working within a variety of different organisational sectors highlight as the sources of work frustration?
    b. What different reactions to work frustration do UK employees working, within a variety of different organisational sectors report?

4.2 Data Collection

Participants

182 participants (60 Males, 122 Females) aged between 18 to 64 (Mean=31.55, SD =13.30) took part in phase one, 157 in the online open-questionnaire, 16 in the semi-structured interviews, and 9 in the diary study. It was made clear at the point of recruitment that participants were only able to participate in one aspect of the study to avoid duplication of data. A further breakdown of the demographics for each data collection method is below (table 4.1).

Table 4.1: Participant demographics for each data collection method

Demographics		**Open-questionnaire**	**Semi-structured Interview**	**Diary**
Gender	Male	N= 46	N = 9	N = 5
	Female	N= 111	N = 7	N= 4
Age	Mean	30.88	35.81	35.67
	SD	13.42	12.53	11.6
Marital Status	Single	N= 92	N = 7	N = 5
	Married /Cohabiting	N= 59	N = 9	N = 3
	Other	N = 7	-	N = 1
Organisational Sector	Private	N = 55	N = 3	N = 3
	Public	N = 77	N = 11	N = 5
	Voluntary	N = 18	N = 1	-
	Independent	N = 7	N = 1	N = 1
Work Status	Full-time	N = 82	N = 13	N = 9
	Part-time	N = 56	N = 2	-

	Zero-hour	N = 15	N = 1	-
	Other	N = 4	-	-
Work Location	Office/Company Premises	N = 132	N = 13	N = 7
	Home	N = 7	N = 1	N = 1
	Both of the above	N = 14	N = 1	N = 1
	Other	N = 4	N = 1	-
Management	Yes	N = 52	N = 10	N = 3
	No	N = 105	N = 6	N = 6

Materials

To undertake data collection several different materials were developed, specifically an interview information sheet (appendix 4a), semi-structure interview guide (appendix 4b), questionnaire (appendix 4c), and a diary template (appendix 4d). Each of these materials were developed by the researcher based on the review of the literature (chapter two) and research aims and checked by two experienced researchers. The interviews were recorded using two audio recorders in case of a technical error.

Prior to each interview participants were provided with an interview information sheet (appendix 4a), which contained information on what the interview was about and in particular, what the participants would be asked to think about and discuss during the interview. This allowed participants to gain an understanding of each question prior to the interview and helped to reduce any potential anxiety.

The questions and statements presented in the interview guide (appendix 4b) assessed participant's retrospective experiences of work frustration. In line with the recommendations of Gill, Stewart, Treasure and Chadwick (2008), open-ended, neutral, sensitive and understandable questions were utilised throughout the guide to yield as much information as possible about the topic area and address the aims of the research. The interview began with questions that were easy to answer, such as, '*What does work frustration mean to you?*' Before moving on to more difficult and sensitive topics. The purpose being to put respondents at ease and build a rapport, which is essential to generating rich data (Gill et al. 2008). The researcher then provided participants with a definition of work frustration, specifically that put forward by Spector (1978: 816) (i.e. work frustration is frustration that is caused by some stimulus condition within the organisation which may result in interference with goal attainment or maintenance) to ensure all participants adopted the same definition when answering subsequent questions.

The questions encompassed participants current work role and any work frustration that they had experienced, including the sources of and their reactions to this frustration in the last 15 years. For example, '*Can you please tell me about what has caused you to become frustrated at different points in time during your current role*,' and '*Thinking about the different times in which you have become frustrated in your current role. What actions, if any, have you undertaken when you have become frustrated*?' The initial questions elicited relatively straightforward descriptions of the participant's experiences and behaviours. The researcher then probed participants further to gather more in-depth opinions, as well as increase reliability of the data. For example, *'please can you tell me more about that?*' Such probes provide further opportunities for interaction and rapport building, enabling the interviewer to explore more sensitive issues (Nay-Brock 1984, Treece and Treece 1986), gain clarification (Hutchinson and Skodal Wilson 1992), and reduce the risk of socially desirable answers (Patton 1990). Prompts were also given to interviewees when required to ensure they were able to answer the questions effectively.

Due to prior research highlighting an element of underreporting in regard to counter-productive work behaviours, particularly those which are more serious (Storms and Spector 1987, Fox and Spector 1999), participants were also asked about their observation of other colleagues and how they have reacted to work frustration. For example, '*Within your current role have you seen other employees within your workplace become frustrated and how they reacted to this frustration?*' It was expected that this would reduce issues surrounding social desirability, fear of discovery and reprisals, and that participants would be more willing to discuss the negative behaviour of others. Participants were also asked questions about previous work roles in the last 15 years and whether they had ever left a position/organisation as a result of frustration and why. This enabled the researcher to capture those individuals who had left an organisation because of frustration, as well as any other sources of or reactions to work frustration they had experienced in their previous job roles. Probes were particularly important when asking about such roles as they help respondents to recall information for questions involving memory (Smith 1992).

At the end of the interview, the researcher thanked participants for their time and asked if they had anything to add or ask the researcher. This gave participants an opportunity to address any issues not dealt with previously in the interview, and often led to the discovery of unanticipated information.

The questions presented in the questionnaire (appendix 4c) were highly reflective of those provided in the semi-structured interview guide. In contrast, the interview however provided solely open questions; the questionnaire also contained a set of closed questions to help direct participants in the absence of the researcher. For example, '*have you experienced a frustrating event within your current role within your organisation?'* (Yes/No). Those who responded yes to these questions answered several open questions to gather more in-depth information in relation to the source/s of their frustration, and their behavioural reaction/s. For example, *'thinking about a specific frustrating event that you have experienced within your current role within your organisation, what/ whom was the source (cause) of the frustration that you experienced on this occasion and why?'* Those who answered no automatically moved on to the next set of questions. This combination of closed and open questions is beneficial as it provides both quick-look summaries, as well as detailed comments that add depth and meaning (Bird 2009).

The diary template (appendix 4d) contained instructions rather than questions, designed specifically to gather a participant's experiences of work frustration as they occurred over 5 working days, rather than retrospectively. As there was no suitable template already in existence, a new template was formed that was reviewed by two experienced researchers. Participants noted down their own experiences only, specifically the date and time of each frustrating event, how many hours they had worked during each of the 5 working days, and what the sources of work frustration were and how they reacted to the frustration. Thus, they responded to fewer questions than those taking part in the questionnaire and interview. This was seen as appropriate due to participants being asked to respond to the same questions over a prolonged period of time, which, as stated by Ohly et al. (2010) '*may challenge the willingness of even good-natured participants.*' Participants were advised to spend no more than 30 minutes a day on their diary entry to reduce participant fatigue.

Procedure

For the open-questionnaire participants were directed to click on the URL link provided in the study advert which took them directly to the participant information sheet (appendix 3h), as well as the informed consent checklist (appendix 3n) which they agreed to prior to completing the questionnaire. To protect their anonymity, participants created and

wrote down a participant information number prior to taking part. After the questionnaire was completed participants were presented with a debrief form (appendix 3t).

For the interview and diary, participants contacted the researcher directly using the contact details provided in the study advert for more information. Participants contacting the researcher were sent the relevant participant information sheet (appendix 3i or 3j) regarding the study, as well as an informed consent form (appendix 3o or 3p) which they signed prior to completing the questionnaire. As the researcher was aware of the identity of the participants for both aspects, participant information numbers were provided to participants and pseudonyms used to protect their identity at the reporting stage of the research. The interviews took place in locations suitable for the participants (mostly at their place of work) and lasted between 20 and 50 minutes. Participants completed the diary on a secure IT device, again at a location suitable for the participants (generally at their place of work). After the interview was completed participants were presented with a debrief form (appendix 3u) and the audio recording was transcribed verbatim. Diary participants were requested to return their completed diary directly to the researcher via email after five workings of commencing the study and they were then sent the relevant debrief form (Appendix 3v).

Following the completion of data collection for all aspects of the study and verbatim transcription of the interviews, all qualitative data was imported into NVivo, a popular tool utilised to analyse qualitative data (QSR International 2016). Quantitative data (e.g. the number of participants whom indicated that they had experienced frustration in their current role) was input into the statistical package from social sciences (SPSS) version 25 to gain a clear indication of the current prevalence of work frustration and the impact on turnover.

4.3 Data Analysis

Thematic Analysis

Thematic analysis (TA), described by Braun and Clarke (2006: 4) as a '*foundational method for qualitative analysis*,' is one of the most widely-used analytic methods within psychology research and beyond to identify, analyse, and report patterns (themes) within data. It was therefore ideal for the current research to identify patterns in regards the sources of work frustration, as well as the way in which individuals react or cope with their frustrating experience. Moreover, in contrast to other analytic methods which also

seek to describe patterns across the data, such as Interpretative phenomenological analysis (IPA) or grounded theory, TA is not attached to any pre-existing theoretical framework, and so can be used within different theoretical frameworks (Braun and Clarke 2006), such as, the critical realistic framework adopted. A flexible tool enables the researcher to organise and describe data in detail, as well as interpret various aspects of a research topic (Boyatzis 1998).

When using TA, themes or patterns within data can be identified in one of two ways: an inductive way, in which themes are strongly linked to the data rather than the researcher's theoretical interest in the topic, or a deductive way, with analysis driven by the researcher's theoretical interest (Braun and Clarke 2006). The researcher must make their approach clear to the reader, as well as the 'level' at which themes are to be identified before proceeding to collect and thematically analyse the data. Phase one employed an inductive approach to help identify new and existing sources of, and reactions to, work frustration and form two new up-to-date taxonomies, the themes were identified at a semantic level (i.e. within the surface meanings of the data). Although there are no rules in regard to how one conducts TA, the guidelines provided by Braun and Clarke (2006) (see table 4.2) were utilised to provide an element of transparency in the research process, which can increase the robustness and validity of the results (Caulfield and Hill 2014: 187).

Table 4.2: Phases of TA

Phase	**Description of the process**
1. Familiarising yourself with your data:	Transcribing data (if necessary), reading and re-reading the data, noting down initial ideas.
2. Generating initial codes:	Coding interesting features of the data in a systematic fashion across the entire data set, collating data relevant to each code.
3. Searching for themes:	Collating codes into potential themes, gathering all data relevant to each potential theme.
4. Reviewing themes:	Checking in the themes work in relation to the coded extracts (Level 1) and the entire data set (Level 2), generating a thematic 'map' of the analysis.

5. Defining and naming themes:	Ongoing analysis to refine the specifics of each theme, and the overall story the analysis tells; generating clear definitions and names for each theme.
6. Producing the report:	The final opportunity for analysis. Selection of vivid, compelling extract examples, final analysis of selected extracts, relating back of the analysis to the research question and literature, producing a scholarly report of the analysis.

Braun and Clarke (2006: 35)

As recommended by the developers, the guidelines were applied flexibility to fit the research questions and data, and not counteract the benefit of flexibility provided by TA. The process was recursive and involved the repeated application of different phases over time, moving back and forth as needed from one phase to the next. The writing up of the themes and sub-themes therefore was an integral part of the analysis and began at phase one. In parallel, the data was also analysed using quantitative content analysis.

Quantitative Content Analysis

Quantitative content analysis is similar to TA in that it also involves codes and coding (Ahuvia 2001). However, rather than reporting detailed interpretations of the data, it focuses on the frequency of key themes within a data set. Its purpose is to identify how often a particular theme occurs, expressed typically as a percentage or number (Berelson 1952, Krippendorff 2004, Neuendorf 2002). In the current research, NVivo was utilised to capture this numerical information. Participant responses were first organised into method folders (i.e. interviews, questionnaires and diaries) and coded according to their demographics (e.g. organisational sector). The initial codes generated during TA in response to the research questions were then further organised into folders reflective of their corresponding themes and sub-themes. Once finalised a Matrix Coding query (MCQ) was requested to enable cross-tabulation of data and the calculation of codes and themes across different methods and organisational sectors. This enabled the degree of theme convergence to be determined, which was important given the need to test convergent validation when using a multi-method approach (Fielding 2012). It also supported the development of two comprehensive taxonomies, classifying the sources of work frustration and frustration coping strategies.

Taxonomies (e.g. Kim and Lee 1996) along with typologies (e.g. Barczak, Ellen and Pilling 1997) are formal systems for classifying a multifaceted, complex phenomenon (e.g. work frustration) per a set of common conceptual domains and dimensions to increase clarity (Patton 2002). In contrast to typologies which are conceptually derived schemes, taxonomies are empirically derived (McKelvey 1982). They reflect an empirical understanding of a phenomenon, rather than scholarly agendas based on theory building and a strong literature base. Taxonomies were therefore more appropriate for the current research given the somewhat limited and outdated literature currently surrounding work frustration, the development of typologies likely resulting in artificial stretching of the construct.

4.4 Results and Discussion

The following section presents and discusses the results from phase one in relation to prior research and theory. Firstly, it will provide the descriptive statistics on the prevalence of work frustration, as well as the level of subsequent turnover generated from the closed-questions within the questionnaire. It will then detail the results of the thematic and quantitative content analysis in two stages. Stage one outlines the set of themes drawn from the data in response to sub-question 1a: what do UK employees working within a variety of different organisational sectors highlight as the sources of work frustration? Stage two details the set of themes in response to sub-question 1b: what different reactions to work frustration do UK employees working within a variety of different organisational sectors report? At the end of each stage is a comprehensive taxonomy, combining the themes and sub-themes into a coherent whole.

4.4.1 Descriptive Statistics: Prevalence and Turnover

Closed responses to the questionnaire provided a noteworthy insight into the high prevalence of work frustration in the UK across a variety of organisational sectors, supporting recent media (Huffington Post 2016, Personnel Today 2019, The Guardian 2019, The Telegraph 2016) and research reports (Process Bliss 2019, Staples 2018). 82.2% of participants indicated that they had experienced a frustrating event within their current job role, and a further 79% had seen other employee's/colleagues become frustrated while in this role. Moreover, 63.7% indicated that in addition to the above they have experienced frustration in other job roles since the year 2000, and 36.3% indicated that they have left an organisation or job role since 2000 because of frustration at work. Although some participants did indicate that it was not the only contributing factor to their exit, these findings were concerning and further highlighted the importance of answering

the research question posed: What are the sources of and how do UK employees within different organisational sectors experience work frustration?

4.4.2 Thematic and Content Analysis

***4.4.2.1 Stage one** – What do UK employees working within a variety of different organisational sectors highlight as the sources of work frustration?*

To understand what sources of frustration employees reported, data was categorised into four overarching themes: 'human factors and work design,' 'workplace behaviour and ethics,' 'workplace performance and productivity,' and 'organisational processes and change.' As can be seen in table 4.3, each of the overarching themes were evident in the interview, diary and questionnaire, and were representative of the sources of frustration within all four organisational sectors (public, private, voluntary, independent). In general, however, those working in public sector did appear more frustrated than others did. A finding closely linked to that reported by the HSE (2019), that stress, depression and anxiety is more prevalent in public service industries.

Table 4.3: Number of participants reporting each theme overall, and per organisational sector and data source

Themes	**Number of Participants**							
	Organisational Sector				**Data Source**			**Total Data Sources/ References**
	PUB	**PRI**	**VOL**	**IND**	**INT**	**DIA**	**QUE**	
Human Factors and Work Design	67	42	13	7	16	9	104	129/ 464
Workplace Behaviour and Ethics	76	42	9	7	16	8	110	134/ 422
Workplace Performance and Productivity	56	26	3	1	15	8	63	86/ 212
Organisational Processes and Change	45	27	7	6	15	5	65	85/ 185

Key: PUB = Public (94), PRI = Private (60), VOL = Voluntary (19), IND = Independent (9), INT = Interview (16), DIA = Diary (9), QUE = Questionnaire (157)

To aid the formation of a new taxonomy of the sources of work frustration each of these themes were also split into sub-themes based on the original data coding as shown in the schematic diagram below (figure 4.1 below). Similar to an accumulation of daily hassles (Kanner, Coyne, Schaefer and Lazarus 1981) and major life events (Holmes and Rahe 1967), work frustration was typically due to a combination of these sub-themes (i.e. factors) that were all relative to each other, rather than the result of a single sub-theme (factor). In other words, frustration often resulted from a multitude of factors. Furthermore, in line with the general strain theory (GST) (Agnew 1992), frustration was frequently reported when one or more of these factors led to the blockage of goal-seeking behaviour. The experience of goal-blockage leading to strain, failed outcomes, and negative emotion (i.e. frustration and anger), supporting the consensus, that frustration occurs because of one's inability to achieve or maintain their goal (Berkowitz 1980, Cicchetti 2016: 543, Dollard et al. 1939: 7, Spector 1978: 816, Storms and Spector 1987: 227).

Theme 1: Human Factors and Work Design

The first overarching theme identified captured the design of an employee's job and work environment, the resources employees need to undertake their job successfully, and the rewards provided to employees for undertaking their job effectively.

As can be seen in figure 4.1, the theme was split into 11 interconnected sub-themes to aid reader understanding. High pressure and overload (1.1), inadequate material (1.2), insufficient training, support and guidance (1.3), poor and unsuitable workspace (1.4), poor staffing levels (1.5), lack of reward and recognition (1.6), lack of development opportunity (1.7), unsociable working hours (1.8), lack of control and job autonomy (1.9), insufficient pay (1.10), and lack of skill and task variety (1.11). Each is discussed in more detail below.

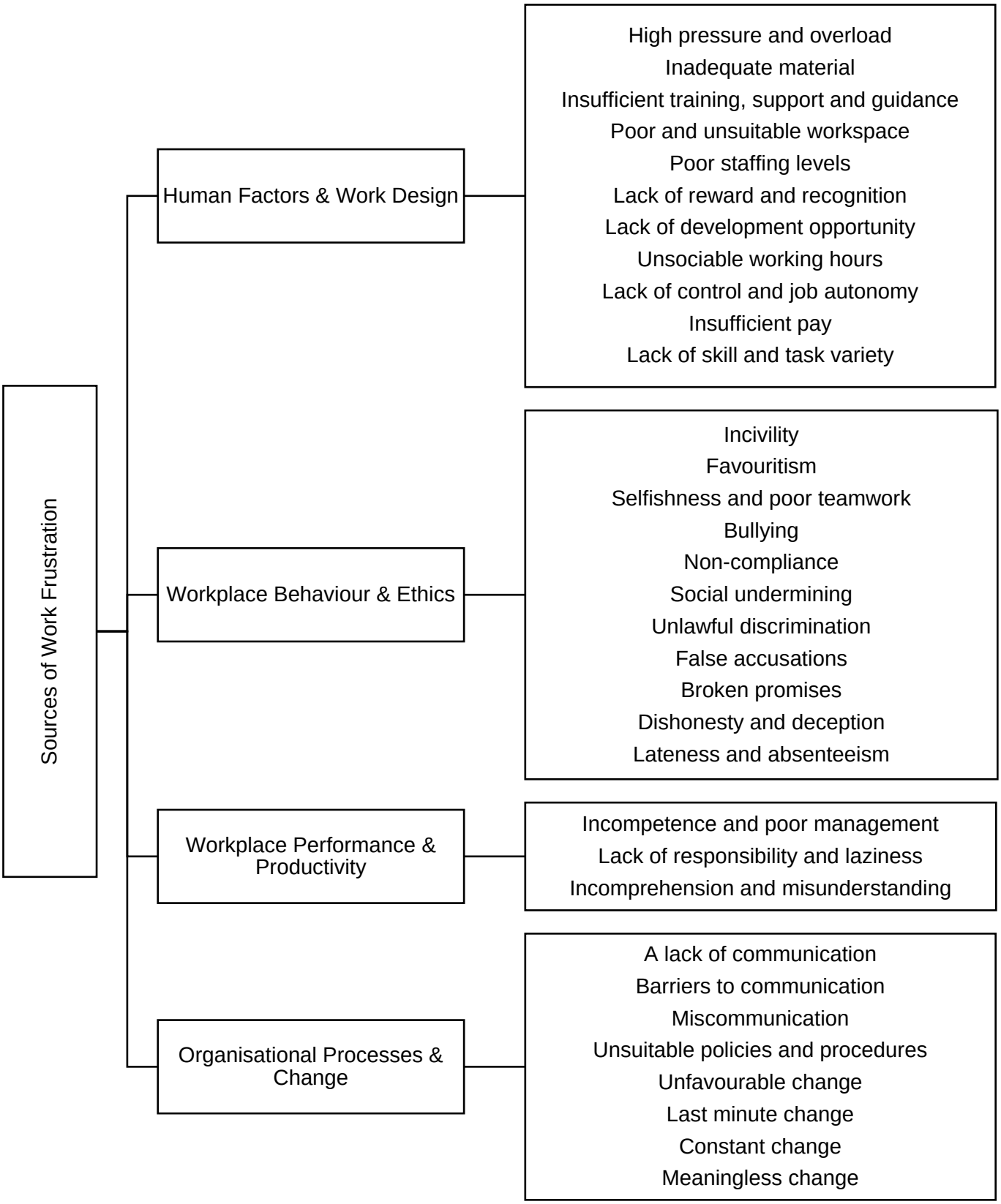

Figure 4.1: Schematic Diagram showing the sources of work frustration

1.1 High Pressure and Overload

When discussing frustration at work participants often described high pressure and overload as a causal factor. For example, a *heavy workload*' [PUB INT P110 L327], '*excessive demands on time*' [PUB QUE P3], and a '*pressured job'* [PUB INT P112 L141]. Participants explained how they were frustrated by excessive demands and unrealistic timeframes, which led to increasing stress levels and goals that were arguably unachievable:

> *'You had to do everything for those six patients, [INT: Mmm]. You had to take, take them to the ward, when they were like called for, you had to sit with them for like twenty minutes in x-ray, you had to take them to the toilet, you had to check every inch of their skin for pressure sores, erm, you just don't have the time, and when their admitted that takes about ten minutes, [INT: Mmm] so how an earth do you do that for six people, in an hour, and then start everything again. It was just awful...' [PUB P109 INT L187-193]*

For many, the high pressure and overload also led to unwelcome but inevitable consequences. For example, working '*long hours'* [PRI QUE P105], not getting ones *'entitled break'* [PUB DIA P204], as well as working '*out of office hours*' to get work done [IND INT P101 L211], each of which led to further frustration for participants, heeding their ability to achieve a good work-life balance and lead a healthy lifestyle with sufficient respite. This was consistent with the idea presented by Bakker and Demerouti (2007) that excessive demands can result in issues such as job strain and a depletion of resources, having a negative impact on an individual's work and personal goals.

It is also worth noting here that while the issue of qualitative workload (i.e. the difficulty of one's work) was present within this sub-theme, with participants expressing frustration due to '*demanding tasks'* [PUB QUE P140], as well as those that are '*not always easy'* and *'sometimes impossible'* [PRI QUE P149]. The type of workload most frequently cited by participants appeared to be quantitative (i.e. the amount of work); supporting the view held by numerous researchers, that quantitative workload is a significant source of frustration (e.g. Jex, Beehr and Roberts 1992, Spector 1997, Spector and Jex 1998).

Whether the type of workload was quantitative or qualitative, much of the demand was evidently mental (i.e. affecting one's mental ability) rather than physical (i.e. affecting

one's physical ability). Participants reported greater mental strain and psychological illness, such as *'depression*' [PUB INT P111 L101], issues closely linked to mental workload (Houdmont, Leka and Sinclair 2012), confirming the notion that people are now subjected to greater mental demands, while physical demands are diminishing (Young, Brookhuis, Wickens and Hancock 2015).

1.2 Inadequate Material

Similar to prior research (Bessiere et al. 2006, Lazar et al. 2004, Lazar, Feng and Allen 2006, Lazar, Jones and Shneiderman 2006, Lazar et al. 2006) participants also highlighted frustration at work due to inadequate material that is absent, unsuitable, and/or of poor-quality. Whereas in previous research the focus was predominantly on issues surrounding computer equipment, participants reported a range of materials, including work-related *'information'* [PUB QUE P12] and non-technical *'equipment'* [PUB INT P109 L31]. The latter most often raised by those in the public sector, perhaps due to a rise in budget cuts in government funded organisations, including schools, with one in five teachers now using their own money to buy classroom resources (BBC 2019).

For some participants, the issue of inadequate material heeded their ability to undertake their work professionally, interfering with their professional self-image:

> *'I'd have to go off to get swabs or to get a needle and little things like that. I just felt it was a bit unprofessional...' [PUB INT P109 L36-37]*

In the majority of cases, it resulted in an increase in time pressure and workload, enhancing the level of frustration experienced. High pressure and overload (see sub-theme 1.1.) acting as mediators in the relationship between inadequate material and frustration. P205 for example, described a faulty photocopier as the source of their frustration, and explained how they had had to expend extra effort to try to alleviate the issue:

> *'Defective photocopier. A recurring fault with the photocopier causes paper to become stuck. Extra time is taken freeing up the machine and establishing that this photocopier cannot be used.' [PUB DIA P205]*

At the same time, participants also experienced a reduction in resources such as time. In the case of P205, they had to spend extra time trying to fix what was later deemed

unusable equipment. Time that they could have spent on other more productive tasks. As highlighted in chapter two, job resources are important in combination with job demands. Similar to the buffering effect, in which psychosocial resources reduce the impact of life stress on psychological well-being (Wills and Isasi 2007), job resources can aid the achievement of work goals; help reduce job demands and the associated physiological and psychological costs (Bakker & Demerouti, 2007; Bakker et al. 2003a; Bakker et al. 2003b; Demerouti et al. 2001). With this in mind, it is easy to understand why inadequate material may lead to frustration at work.

1.3 Insufficient Training, Support and Guidance

Frustration due to insufficient training, support and guidance at work was also evident among participants, hindering their work performance. P111 for example expressed frustration due to having '*no directions set*' [PUB INT P111 L58] for them at work, meaning they often felt lost, having no specific targets to work towards. They had '*no guidance, no targets, no support, as such*' [PUB INT P111 L53]. P59 on the other hand explained how he or she were set high expectations, but had little support or guidance to help reach them:

> *'I felt that I was not being supported adequately, expectations were too high...' [VOL QUE P59]*

Likewise, P143 noted frustration due to a '*lack of training*' [PUB QUE P143], and P79, training which was present, albeit inadequate [PUB QUE P79]. For some participants, their frustration was heightened when the consequences of not achieving their goals were significantly high, meaning they were under greater pressure to perform:

> *'I honestly thought, that I would just pull back the curtain one day and one of my patients would be dead, and it would be something that I should have known, but I was never taught, but I'd still get done for because I was responsible.' [IND INT P109 L142-144]*

For P109, the thought that their lack of training could lead to loss of life resulted in intense fear and frustration, exacerbated also by their sense of personal responsibility.

While previous research has found a link between a lack of formal training and frustration at work (Clark 2014, Shenge 2014, Sheptak and Menaker 2015, Zhao and Bryant 2006), the current study found greater emphasis on informal training (i.e.

support and guidance from colleagues, mentoring and/or coaching). One possible reason for this being the rapid technological and organisational changes, resulting in a constant need to learn at work and stay ahead of the competition (de Grip 2015). Moreover, given the generational diversity in today's workforce (Legas and Sims 2011), informal training is now of high importance, helping to bridge the training gap between generations (Yamamura and Stedham 2007).

1.4 Poor and Unsuitable Workspace

Issues within the physical environment in which an individual completes their work were also sources of frustration. For example, '*hot desking'* [PUB QUE P154], having *'no staff room*' [PUB QUE P95], and the office being '*too hot or too cold'* [PUB QUE P119]. Like inadequate materials, these issues resulted in an increase in demands such as noise and distractions that acted as barriers to successful work completion, leading ultimately to frustration. A finding similar to that of Morrison and Macky (2017) who found the now commonly utilised shared work environments, including hot-desking, to be associated with an increase in demands such as, distractions, uncooperative behaviours, distrust, and negative relationships.

Although not explicitly stated by participants in the current research, it is also probable that such issues led to a reduction in resources, for example, a breakdown in work relationships that would have further exacerbated the frustration experienced. As previously stated, excessive demands can result in issues such as job strain and a depletion of resources, having a negative impact on an individual's work and personal goals (Bakker and Demerouti 2007). In fact, Morrison and Macky (2017) also reported a reduction in resources, with a lack of improvement in co-worker friendships and the perceptions of supervisory support decreased.

The issues identified in the current research varied dependent on an individual's job role and work location. P207 for example, noted '*traffic problems travelling between two meetings'* [IND DIA P207] as the source of their frustration. Their car being their work base, and the traffic in the surrounding environment heeding their ability to get to meetings on time. For P104, a barmaid in the private sector, their frustration within their work environment was '*loud'* music, which impeded their ability to communicate with customers successfully [PRI INT P104 L66]. Communication barriers discussed later in this chapter as additional sources of frustration (see sub-theme 4.1). Given the increase in remote and blended working (Hoefling 2017) these differences were to be expected.

1.5 Poor staffing levels

Closely related to a lack of social support, reported in earlier research (e.g. Heacox 2004, Keenan and Newton 1985, O'Connor, Peter, Rudolf and Pooyan 1982) participants explained how a lack of personnel in the workplace led to their frustration. This was in part due to the resulting overload, lack of support, and poor management, different albeit interconnected frustrators (sub-theme 1.1, sub-theme 1.3 and sub-theme 3.1 respectively) acting as mediators in the relationship between poor staffing and frustration. Participants were unable to reach their own work-related goals due to additional demands on their time, *'having to try and do the job of numerous individuals'* [PRI QUE P62], as well as a lack of support and poor management:

> '*…no organisation, nobody to support you, the managers didn't have time. I think cause it was so busy, they were like firefighting. They were having to come out on the floor because there wasn't enough staff, [INT: Mmm] so then they never recruited any staff, they never kept their staff. I think about six people left while I was there. It's just crazy…' [PUB INT P109 L176-180]*

In the case of P109, management had limited time to support employees and engage in recruitment activities due to a lack of staff, thus no more staff were recruited. This led to a vicious cycle of continued overload, staff turnover and frustration, comparable to the 'negative loss spiral' proposed in the COR theory (Hobfoll 1989). According to the COR theory, resource loss is spiralling in nature. When resources are lost it leads to stress for the individual/s concerned, which in turn results in further resource loss due to a lack of resource to help counteract the opposing stresses. This creates negative loss spirals in which losses gain in momentum (Hobfoll, Halbesleben, Neveu and Westman 2018).

1.6 Lack of Reward and Recognition

Participants also highlighted a lack of reward and recognition as a source of frustration, specifically that which is not part of an individual's contractual agreement, such as a '*bonus*' [PUB QUE P140], and basic '*appreciation'* [PUB QUE P104]. They explained how, despite putting in the required effort for their role, and in some cases going 'above and beyond,' showing a high level of commitment, they were not recognised for their performance:

'My boss […], failing to acknowledge and recognise my efforts and commitment.' [IND QUE P1]

This lack of recognition resulted in an effort-reward imbalance. The participant was putting in what they perceived as a high amount of effort for low reward, which, in line with the effort-imbalance model (EIM) introduced by Siegrist, Siegrist and Weber (1986) would have resulted in a reciprocity deficit between 'costs and 'gains.' This stressful imbalance resulting in an increase in strain for the individual and the emotional reaction of frustration. This was also evident when some participants received recognition, however no subsequent reward:

'I was also never given an increment raise or bonus despite getting excellent on my [performance review] and doing an outstanding job at work!!' [PUB QUE P140]

For some participants, recognition alone was not enough to prevent frustration. They instead held out for monetary incentives, which they expected following a positive performance appraisal. Unlike an individual's salary however, found previously to lead to frustration (e.g. Clark 2014, Seok-Eun and Jung-Wook 2007, Poulston 2009), such incentives were seen as additional rewards (e.g. a monetary bonus), and not part of an individual's contractual agreement.

1.7 Lack of Development Opportunity

Consistent with the findings of previous research (e.g. Clark 2014, Field and Harris 1991, Wheeler, Cross and Anthony 2000), development opportunities that were limited and/or non-existent were also identified. When discussing their frustrations at work participants detailed issues such as a '*lack of career advancement opportunities'* [PUB QUE P130], as well as a *'lack of personal development and progression within the company'* [PRI QUE P151]. The lack of development opportunity heeding their personal progression and limiting career prospects, resulting ultimately in frustration. This was particularly prominent when participants perceived their development to be blocked either intentionally, and/or by an identifiable person (e.g. one's manager):

'They're like, ''oh, you can't jump up them many grades,'' it's like, you know, cause they just—you come in at a low grade, [INT: Yeah] they, they believe that's all you've got to offer is a low grade.' [PUB INT P108 L132-135]

In the case of P108, a specific person within their organisation did not enable them the opportunity to develop in their role, believing they were not capable based on their current grade, irrespective of prior experience and qualifications. This supported the notion that situations readily attributable to the actions of an identifiable person can lead to greater frustration than those that are not clearly attributable to a specific person (Keenan and Newton 1984).

1.8 Unsociable Working Hours

Working unsociable hours (i.e. outside of normal working hours, 9am-5pm) was a further source of frustration for participants. They explained how they had to work '*many weekend night shifts'* and were often faced with constant changes in their shift patterns leading to confusion about what they were doing:

> *'I work on shifts, so, we do either erm, a morning, so half six, what was three, erm, ten till six, or two till ten, [INT: Mmm] so I even find that quite frustratin, just because you never know what you're doing…' [PUB INT P102 L199-201]*

These changes also impeded their ability to plan and engage in non-work activities, something they acknowledged was part of the job, but was still a source of frustration:

> *'There's, like tennis lessons that I've signed up to, but I can't go next week because I'm, you know, I'm working in the evening [INT: Right] and I can't do this and I can't do that, but an, obviously that does come with the job, erm, but that, but that in itself is quite frustrating.' [PUB INT P102 L202-205]*

Some participants such as those in the military noted having to work and live on the same base meaning that they were working all the time:

> *'…You are, in that environment where you erm, you know you, you live, you know, eat, sleep in the same, you know in the same—on the same base, [INT: Mmm] er, and it, it's er, it's—you—there's no let up, so it's not like I finish work here at six and then I can go home, [INT: Yeah] it's all consuming, so, people, you know it's—there's no let up, there's no erm, reprieve, you're at work all the time.' [PUB INT P115 L342-347]*

Similar to shift work this impeded their ability to achieve their personal non-work goals, while also limiting respite and the amount of time they had with friends and family. This lends support to the findings discussed in chapter two, suggesting that different types of work (i.e. remote or blended working), may lead to frustration as a result of aspects not directly related to the work environment, such as work-life conflict (Felstead and Henseke 2017). Work-life conflict being a concept commonly associated with increasing demands and limited resources (Henz and Mills 2015).

1.9 Lack of Control and Job Autonomy

Participants described feeling frustrated due to having limited or no control over certain situations they were faced with at work, as well as a lack of freedom over their job role. P114, for example, reported frustration in their current role due to the lack of control they have over access routes to incidents, which negatively influences their time of arrival at major incidents:

> *'Motorways are a lot harder to get access to for crews er, because of the access physically on the motorway so you know the time for people to get there is more so there's just a—yeah, and it's out of your hands, that's the frustration then that you can't do anything about it.' [PUB INT P114 L111-113]*

On occasion, they also experience equipment failure, which is out of their control and frustrating for crews whom depend on it to save lives and reach their end goals:

> *Er, we test equipment, er to death, we do it day in day out so, the occurrences of failure is rare, but when it does happen it is obviously extremely frustrating because it is always going to be when you need it' [PUB INT P114 L115-117]*

Another participant explained how having a lack of autonomy over his or her job previous role led to frustration as limited their independence and decision-making power, heeding their ability to manage a whole case by themselves:

> *'My previous role was much more broad as I was the only HR Advisor for the business. My new role however, sees me working within a much larger HR team and I have found frustrations in the aspect of control. I don't feel*

that I am able to manage a case from start to finish as there are naturally more people involved...' *[PRI QUE P114]*

These findings can be explained using Hackman and Oldham's (1976) job characteristics model detailed in chapter two, which emphasises the motivational potential of job resources at the task level, including autonomy. According to the model, gaining and maintaining sufficient resources alone can aid the achievement and/or maintenance of an individual's goals, reducing the likelihood of experienced frustration. It can be argued therefore that the lack of control and autonomy experienced by participants interfered with their ability to attain and/or maintain their goals, increasing the likelihood of frustration.

1.10 Inadequate Pay

Poor and unfair pay, typically stipulated in an individual's job contract was a further source of frustration, as found in previous research (Clark 2014, Seok-Eun and Jung-Wook 2007, Krech and Crutchfield 1948, Nursing Standard 2012, Poulston 2009). Participants reported '*really rubbish pay that wasn't fair for the work and hours'* [PRI QUE P56], as well as *'the pay scale not being equal to the level of work*' [IND QUE P93]. In the main, they were frustrated due to what they perceived as low pay, particularly given the tasks and hours they were undertaking:

'Really, really low pay, three pounds an hour training, ten days, and how—what shall I say, I needed the money…' [PRI INT P104 L295-296]

They were putting in what they perceived as a high amount of effort for low reward, which, in line with the effort-imbalance model (EIM) introduced by Siegrist et al. (1986) resulted in a reciprocity deficit between 'costs and 'gains.' This stressful imbalance leading to an increase in strain for the individual and ultimately frustration.

1.11 Lack of Skill and Task Variety

Aspects of an individual's job that contribute to job boredom and/or dissatisfaction, such as, *'repetitive'* tasks [VOL INT P113 L138] and those which involve minimal skill or input, were also reported. One participant for example, noted that they were frustrated because they wanted to *'do more'* in their job [PRI QUE P115]. The lack of variety in their role leading to job boredom and limited development. Another explained how they were frustrated in their job because they '*wanted to do something more technical'* instead of just *'standing there and printing papers for people' [PUB INT P112*

L142-145]. The lack of skill in their role meaning they were unable to use their knowledge, skills and abilities to their full potential. In line with Hackman and Oldham's (1976) job characteristics model, the lack of skill and task variety experienced by participants interfered with their ability to attain and/or maintain their goals, increasing the likelihood of frustration.

Theme 2: Workplace Behaviour and Ethics

Consistent with the GST (Agnew 1992), which suggests an individual will likely experience typically negative emotions (e.g. frustration, anger, dissatisfaction) when exposed to negative treatment by others (e.g. incivility, harassment and bullying), unethical behaviour in the workplace was widely endorsed as a precursor to frustration. Behaviour perceived as immoral and displayed by one or more individuals in the workplace (Inc. colleagues, management, subordinates and customers) towards another individual/group of individuals, as well as the organisation.

A variety of unethical behaviours were described by participants and are presented here as 11 interconnected sub-themes to aid reader understanding. Incivility (2.1), favouritism (2.2), selfishness and poor teamwork (2.3), bullying (2.4), non-compliance (2.5), social undermining (2.6), unlawful discrimination (2.7), false accusations (2.8), broken promises (2.9), dishonesty and deception (2.10), and lateness and absenteeism (2.11). Behaviours that in prior research have been typically associated with the consequences of frustration, rather than the antecedents.

Each of the behaviours varied in intensity, with bullying and unlawful discrimination being of higher intensity in comparison to others. It was evident that many of these behaviours were also undertaken with an unambiguous intent to harm, with the exception of incivility; where in most cases intent to harm appeared ambiguous and are discussed further below.

2.1 Incivility

Social behaviour lacking in civility and/or good manners, such as, people '*not listening*' [PUB QUE P12], being *'rude*' [PRI QUE P33], *'impatient*' [VOL QUE P39], and '*difficult*' [PRI QUE P45], was a common source of frustration reported by participants, including that displayed by management:

> '*…he laughed and said ooh it took myself and my head of service colleagues a few months to settle to hot desking, you'll get used to it in the*

end, and he walked off. He didn't listen or hear or care about what I shared, my concerns. In spite of him asking me a direct question to how I was settling in were utterly irrelevant to him. Beyond frustrating!!' [PUB QUE P154]

P154 explained how, after asking them how they were settling in at work, their head of service simply disregarded their concerns, showing a lack of care and consideration. This led to frustration for P154 whom consequently felt undervalued and was unable to reach their goal of improving staff comfort and productivity.

Participants also expressed frustration when people displayed incivility towards, not only themselves, but towards other people at work:

'…A patient had asked a staff member for a cup of tea, they'd said no and closed the door on their face which was the beginning of a completely unavoidable incident. The lack of compassion from that staff member and the fact the incident was so easily avoided was frustrating.' [PUB QUE P150]

Although not directly harmed by their colleague's incivility (which was directed towards a third party), P150 did experience frustration upon witnessing the behaviour. Incivility therefore being an issue for not only the target individual, but also those in close proximity.

The finding that workplace incivility was a source of frustration was an interesting one, given that research has often shown such behaviour to be a consequence rather than a pre-instigating condition (Dollard et al. 1939, Elias 2013, Spector 1978, 1997). One explanation for this relationship may be that this behaviour violates conventional norms for civility and respect. This is assuming however, that norms of civility are based on societal ideas regarding civility (i.e. polite behaviour) that are invariant. Miner, Diaz, Wooderson, McDonald, Smittick and Lomeli (2018) argue that these norms can vary, and that incivility may not always be perceived as norm violating. They purport that organisational norms regarding interpersonal behaviour may not necessarily reflect societal norms and that they may vary across departments and between individuals. This was acknowledged to some extent by P114 when describing their reaction to frustration, verbal aggression (see part 2, section 4.1). The participant explained how the extent to which such behaviour is seen as unacceptable could be dependent on

context, and predominantly on its intended meaning. Within their own profession, there was a degree of acceptability regarding some forms of verbal aggression. Despite this however, this sub-theme was consistent across different organisational sectors suggesting that incivility itself is a frustrator in many contexts, although the explanation for this relationship may differ.

2.2 Favouritism

The preferential treatment of one or more individuals at the expense of another individual or group of individuals was another prominent source of frustration. An act most often displayed by management due to their high-level decision-making power:

> '*Managers treating employees differently dependent on favouritism*' [PRI QUE P117]

Typically, participants highlighted this act during the application of organisational policies and procedures. For example, unfair bias during the promotion process in favour of known individuals (e.g. family or friends):

> *'People being promoted, or being given temporary development opportunities, because of who they know. Rather than though a fair competitive process.' [PUB QUE P80]*

And reward and recognition based on popularity rather than job performance:

> *'If you are popular you get voted, you vote for your manager and you can be assured of getting preferential treatment.' [PUB QUE P134]*

The act of favouritism resulting in frustration for the individual/s concerned due to inequitable outcomes across the workforce, as well as an imbalance between input (e.g. hard work) and output (e.g. monetary reward) for those not favoured. The lack of equity heeding goal attainment and maintenance, and against moral standards. Findings that can be explained by Adam's (1963) Equity Theory, which purports that employees will become de-motivated and experience negative affective reactions (e.g. frustration) if they perceive their inputs (e.g. time spent on work-related tasks) to be greater than their outputs (e.g. salary), and/or different as compared to others (Adams 1963).

2.3 Selfishness and Poor Teamwork

Participants expressed frustration due to '*staff not engaging'* with certain individuals or a particular team, '*avoiding helping'* them [PUB QUE P85]. Behaviour that often put participants and other individuals in difficult situations, heeding their goal attainment:

> *'…If I said to them will you help me take 'so an so' to the toilet, they'd just look at me like, ''who are you to talk to me like that,'' and they'd just refuse, [INT: Right]. All they wanted to do was just the advanced things, or they just wanted to work with the poorly patients who were more interesting. Erm, so you were put in quite a lot of difficult situations…' [PUB INT P109 L159-162]*

P109 explained how their colleagues were not working as a team, being selfish towards not only them, but also their patients who needed help. This behaviour impeded the successful completion of their work causing them frustration, while also delaying patient care. The resulting frustration leading them to leave the organisation:

> *'…I just left, I just did a night shift on the Friday, I thought I can't do this, and just never went back.' [PUB INT P109 L168-169]*

Similar to incivility, participants also noted becoming frustrated due to colleagues being selfish and showing a lack of teamwork, not towards themselves, but other colleagues:

> *'…the other colleague basically wouldn't respond, and he wouldn't really give him any information, and my mate was just there, like absolutely—he had no idea what was going on until they went to like one of the last few meetings we had before the visits, and, er, basically the colleague realised that he'd missed off a piece paperwork, and basically dropped it in on, er—in a meeting with our boss that it was supposed to be something that my mate was meant to have done, but obviously he had no idea what he was doing, so you know, just, it was really selfish at the time, and I, I, I wasn't very pleased, I was quite frustrated.' [VOL INT P113 L59-67]*

Although not directly harmed by their colleague's lack of teamwork, P113 experienced frustration upon witnessing the behaviour. Supporting the notion that frustration can occur if a situation or event violates conventional norms for civility and respect.

2.4 Bullying

Bullying, characterised by ACAS (2013: 1) as 'offensive, intimidating, malicious or insulting behaviour, an abuse or misuse of power through means that undermine, humiliate, denigrate or injure the recipient,' was another source of frustration described. Given the links between workplace bullying and social stress (Nielsen and Einarsen 2012), as well as anxiety and depression (Hauge, Skogstad and Einarsen 2010), this finding was unsurprising. Harmful reactions that have increased over recent years, the total number of cases of work-related stress, depression or anxiety in 2017/18 being 595,000. An issue that has led to 15.4 million working days being lost in 2017/18 (HSE 2018). It is important therefore that organisations work to reduce such behaviour to alleviate frustration amongst employees, and in turn, improve employee mental health and reduce absenteeism.

Individuals at the management level appeared to be some of the main perpetrators of such behaviour, using their position of power in an abusive way to achieve their own personal and/or organisational goals, such as ensuring compliance:

> '*Bullying tactics by management to comply with workplace 'norm' and when that doesn't work bullying to get rid of people*.' [PRI QUE P153]

Tactics that, although beneficial to the perpetrator, negatively affected the target individual, leading to a deterioration in their well-being, and making it harder for them to cope with the situation due to a lack of resource. An issue which, similar to poor staffing levels, can be understood from the perspective of the COR theory (Hobfoll 1989) and referred to as a negative loss spiral.

Customers communicating their own frustrations instigated the majority of verbal and physically aggressive forms of bullying behaviour that led to frustration for participants:

> *'…I also dealt with complaints in which some members of the public would approach me very angrily and be extremely rude/vile to me (e.g. purposefully try to undermine me, try to make me feel guilty, swear at me, I even had someone throw vouchers at me!) about problems that were unfortunate but not my fault!' [VOL QUE P10]*

In fact, bullying behaviour often appeared as a mediator in relationship between perpetrator frustration and victim frustration. A mediated relationship that could lead to

a cycle of abuse similar to that identified by Fida, Tramontano, Paciello, Guglielmetti, Gilardi, Probst and Barbaranelli (2016) in which bullying behaviour has a negative impact on the victim and results in the victim behaving badly towards others. Certainly, consistent with the findings of Baillien et al. (2009) bullying was identified as a reaction to frustration (see step 2 theme 4).

2.5 False Accusations

Frustration was also expressed by participants due to false accusations that were made against themselves or another individual/group of individuals. For example, customers making '*false allegations*' [PUB QUE P152] or *'false claims'* [PUB QUE P15], as well as displacing all their irritation and frustration on front line staff, *'blaming'* them for something which is not their fault:

> *'When you get told that you are fixing the gaming machines when they used to play like, on like sort of roulette and things like that, customers used to think that you were fixing it so they would lose. Erm, some people would say that we had a button behind the counter, which made them lose, so if we pressed it, then they'd lose all their money. Just ridiculous things like that, that aren't true...' [INT IND P101 L371-375]*

For some participants, these accusations resulted in poor career progress due to the inaccurate judgements, hindering personal and professional goal attainment, leading subsequently to frustration. In all cases, they interfered with the participant's ability to maintain their self-integrity, one's concept of themselves as a good, virtuous, ethical person. Such issues were evident in the findings of Burnett, Hoyle and Speechley (2017) who studied individuals wrongly accused of abuse in Occupations of Trust. They found that individuals subjected to false accusations experienced a range of negative emotions including depression, anxiety and frustration. The relationship between false accusations and negative emotions seemingly mediated by limited employment prospects, poor psychological and physical health, and an adverse effect on their self-concept and reputation.

2.6 Non-compliance

Failure or refusal to comply with organisational requirements, for example, showing *'resistance to change'* [VOL QUE P148] or *'disregarding the workplace policy on drugs and alcohol*' [PUB QUE P144], was a further source of frustration for participants.

Particularly those in management positions whom were frustrated by subordinates and their refusal to comply with job requirements:

> *'…They've refused to do certain things because they've believed it's not been part of their, erm, job description, [INT: Right] erm, so, they've refused to do things, er, and, when, as a manger I've had ter justify why they've got to do these certain things, erm, when really, it's, you know, I shouldn't have to spend an hour justifying why we're doing something…' [PUB INT P115 L279-283]*

For P115 the lack of compliance displayed by their subordinates meant that they had to take extra time out of their day to talk them through their job requirements. This placed increasing demands on the participant and consistent with the JDR (Bakker and Demerouti 2007), limited their resources, heeding goal achievement and resulting consequently in frustration.

2.7 Social Undermining

Behaviour displayed by an individual or group of individuals, to weaken the efforts of another individual in the presence of others (Duffy, Ganster and Pagon 2002), was another source of frustration identified. Typically displayed by customers as a means to express their own frustration, undermining the efforts of the target individual in a bid to attain their own goal:

> *'You do have occasions of, sort of, cause were refereeing the games, erm, of one of them [a parent coach] being like, ''oh you shouldn't of given that decision and so that wouldn't of been a try,'' or at the end of the game going, ''oh when you gave that try, why did you give that because of this this and this happened,'' [INT: Mmm] and you have to be like, ''well, I'm not gonna take that back now, I don't know exactly what occasion you're talking about but this is the result of the game I've given, I'm not gonna change it, so is there any point in us having this conversation,'' [INT: Yeah] so they get quite frustrated and they can actually, get a bit verbal at you, like not massively aggressively because there's obviously loads of kids around and everything, erm, but sometimes it can make you feel a little undermined.' [PUB P105 INT L258-268]*

As with false accusations, social undermining can interfere with a participant's ability to maintain their self-integrity. It may also result in limited career progress due to inaccurate judgements made by those around them, as well as a reduction in their own self-worth, self-esteem, and perceived capabilities, leading to frustration.

2.8 Unlawful Discrimination

Behaviour that is unlawful under the Equality Act (Legislation.gov.uk 2010) and centred on protected characteristics was another source of frustration identified. For example, gender discrimination, *'sexist 'jokes' and unfair treatment of women…' [PUB QUE P41],* age discrimination, *''being treated differently for being young.' [PUB QUE P85],* and racism:

> *'Yeah, erm, racism, cause I'm [Ethnicity], and the place that I used to work she was from [Country], so, she didn't like me, not because I was doing my job really good, cause like I was—I knew how to work as a Waitress, and and it wasn't a big place that I can't manage the staff, but she, she never called me with my name, she was always saying, ''Ayy, you, [Ethnicity] girl, do that and do that,'' she was bossing me around, for no reason, or when I—when we had no customers for example it was so less, like ''OK, you're gonna do stuff, making cutlery's, cleaning, washing, and everything,'' but after a moment like, you can't, you don't know what to do, [INT: Mmm] and you are staying and waiting for people and stuff, and she was always telling me what to do, ''go in an clean the toilets,'' for example, it wasn't my job neither, .' [PRI P104 INT L268-283]*

For P104, this act of discrimination displayed by their manager impeded their ability to fulfil their normal work duties due to additional demands, as well as limited their self-worth, resulting ultimately in frustration. This finding was consistent with the theory of inequity (Adams 1965) which suggests that injustice in social exchanges will lead to negative affective reactions, such as, dissatisfaction and low morale.

2.9 Dishonesty and Deception

Behaviour classed as deceitful and untrustworthy which also has a detrimental impact on the organisation, was a further source of frustration. This was highlighted in relation to a variety of matters, such as, union representatives not working *'in the interest of the employee or organisation*' [PUB QUE P3], colleagues lying on application forms [PUB INT P111 L222-223], as well as issues surrounding workplace attendance:

'When another colleague, erm, he was due to work, erm, on one of the days, I think it was a Sunday which we are not normally open, erm, and he'd actually been out the night before on a Saturday, erm, and, he emailed his customer on the Sunday morning to say he had to cancel, because of something else that had happened. Erm, and it turns out that he, he'd just actually had too much to drink…' [IND INT P101 L49-53]

P101 for example, explained how their colleague's dishonesty in relation to their absence from work led to their frustration. Their colleague's behaviour being inconsistent with their moral values and goals regarding honesty and work commitment, leading to a lack of trust. A lack of trust in co-workers being significantly related to CWB (Ong and Tay 2015). Behaviour commonly associated with the emotion of frustration (Elias 2013: 204).

2.10 Broken Promises

Consistent with the findings of Kickul (2001), individuals being '*very dishonest*' [IND QUE P35], particularly management *'not delivering what they promised*' [IND QUE P113], paying '*lip service*' [PUB INT P111 L323], were also a source of frustration. Behaviour that one would likely perceive as being deviant and morally wrong and often hindered an individual's personal and career development goals:

'Erm, recently here I've had frustrations around promises that are made and then not kept, erm, where, erm, I was put into a, temporary promotion for six months, a colleague took it for the following six months, and then I was supposed to have the six months after that, [INT: Right] it didn't happen, my colleague was left in that position, and that was really frustrating.' [PUB INT P110 L289-294]

For P110, the broken promise affected their ability to attain their career goal, as well as an increase in salary. The latter of which, although '*not a big motivator'* for them, may have influenced their personal goals outside of work. Goals that were seemingly important to the participant and would, in line with the appraisal model for motivation relevance (Smith and Pope 1992), lead them to appraise the situation as intensely frustrating. Furthermore, the individual felt that it reflected on them in the workplace, especially their *'capability,'* lowering their self-esteem and personal development goals, while increasing frustration levels. A finding that supports those of Harrington

(2005) who reported a significant correlation between low self-esteem and frustration intolerance.

For some participants, the issue of broken promises also gave them false hope, leading them to set important goals for themselves and form expected outcomes. Goals and outcomes that inevitably, could not be achieved, resulting consequently in frustration. This finding can be understood from the perspective of Vroom's (1964) expectancy theory, which purports that for an individual to perceive a situation as frustrating, it needs to be within their field of aspiration. In other words, they will only become frustrated if the frustrator interferes with an important and expected outcome.

2.11 Lateness and absenteeism

Lateness and absenteeism were a further source of frustration. For example, *'people not being on time*' for meetings [PUB QUE P89], being '*constantly late'* or '*absent*' [PUB QUE P144], managers taking *'more breaks'* than they should [PUB QUE P132], and customers just not turning up:

> *'Person who I had a meeting with did not turn up. Felt frustrated because I had made the effort and also because it was for their benefit not mine.' [PRI DIA P211]*

P211 was frustrated by a customer who had not turned up to a scheduled meeting and given no notice. P211 had made the effort to attend and fulfil their duties, however they were then left waiting for the individual to '*turn up*,' wasting their time that they could be spending on other tasks, resulting in frustration.

When considering Adam's (1963) Equity Theory, it is logical that such behaviour on behalf of managers, colleagues and/or customer would lead to frustration for the participants concerned. Especially as they perceive themselves to be putting in more effort than others, while still receiving the same outcomes (e.g. salary, recognition etc.).

Theme 3: Workplace Performance and Productivity

Issues with the performance and productivity levels of individuals within the workplace, including colleagues, management, and oneself, was another overarching theme identified from the data.

Similar to the previous two themes, this theme was split into three interconnected sub-themes. Incompetence and Poor Management (3.1), Lack of Responsibility and Laziness (3.2), and Incomprehension and Misunderstanding (3.3). These are exemplified below.

3.1 Incompetence and Poor Management

When discussing the sources of their frustration, participants often described Individuals in the workplace not having or showing the necessary skills and/or abilities to perform their job successfully, for example, '*making mistakes*' [PRI QUE P37] and '*not being able to fulfil responsibilities and hence reducing productivity*' [PRI QUE P13]. Some participants explained how the incompetence of colleagues led to their frustration, typically, as it placed additional demands on them to resolve the situation/s:

> *'…that is frustrating because especially in the evening you are just picking up everyone's mess from the day, you know trying to cash up tills and it's like twenty pound down…' [PUB INT P102 L207-209]*

The increase in demands also resulting in a reduction in resources such as time, consistent with the JDR model (Bakker and Demerouti 2007). Pressure and overload (see sub-theme 1.1) mediating the relationship between incompetence and frustration.

Others expressed frustration at poor management or leadership. P86 for example was frustrated at the inability of managers to manage the incompetence of other people at work, giving more work to those who are good at their job and less to those who are not:

> *'There is a tendency within my organisation to "flog the willing horse", if you are good at your job then you simply get loaded with more and more until you break. The only way to stop this is by pushing back and refusing, which can be detrimental to your career, well-being and indeed mental health. Those that are highly motivated can be driven to the brink, whereas those that simply don't care are left alone. This is really counter-productive and symptomatic of poor leadership.'* [PRI QUE P86]

This finding was consistent with that of Dasborough (2006), that when leaders do not perform as expected, showing a good level of skill and ability, their employees will experience negative emotions (e.g. frustration). Moreover, in the case of P86

additional factors such as workload and perceived inequity would have exacerbated the frustration, particularly when considering the JDR model (Bakker and Demerouti 2007) and Adam's (1963) Equity Theory. Poor management resulting in additional workload and perceived inequity, the input of the participant being greater than that of others.

Interestingly, participants also noted becoming frustrated due to their own perceived incompetence:

> *'I was completing an inventory at a property which was quite hot. I made a typo in the report, went to correct it and made the same typo another two times as I was rushing.' [PRI DIA P210]*

For P210, this resulted in them being unable to complete their task quickly and effectively. This was also evident in a quotation provided by P202 whom noted '*lingering frustration'* due to the fact that they had made a mistake on something when they '*should have got it right first time*' [PUB DIA P202]. In accord with the findings of Harrington (2005) it can be suggested that some participants experienced frustration in such situations due to low self-esteem.

3.2 Lack of Responsibility and Laziness

A further frustrator identified from the data was individuals in the workplace who, although may have the necessary knowledge, skills and ability to perform their job, do not take responsibility for their job role and display a lack of effort. P103 for example, highlighted frustration due colleagues displaying a lack of responsibility, not replying to emails and passing the blame onto others whom are not present:

> *'One person in particular in finance is brilliant, er, extremely helpful, erm, others they are just very difficult to contact, they don't reply to emails, erm, someone's all—someone else's—it's always someone else's job, their never here…' [PUB P103 INT L89-91]*

This meant that P103 was unable to meet their own needs due to their colleagues within the organisation, their lack of responsibility resulting in the interference of goal attainment and maintenance, consistent with the definition of frustration provided by Keenan and Newton (1984). P106 explained how they were frustrated by laziness:

'The frustrations sitting there thinking well I've done X amount of work and you haven't done anything, [INT: Yeah] why am I doing it and you're not.' [PUB INT P106 L215-217]

In line with Adam's (1963) Equity Theory, the laziness displayed resulted in a perceived imbalance in the amount of energy being utilised by P106, and the individual being lazy. The lazy individual exerting less energy than P106 who was undertaking their work and showing a high level of effort. In most cases this frustration was also amplified when those who were not producing the outcomes required, were not doing so even though they knew how to do their job:

''There are some people who erm, who don't do their job properly because they don't want to, there's some people who don't do their job because they can't or don't know how to do it, and, which, you know, it's completely different things, [INT: Mmm] er, it's definitely more frustrating when you know someone can do something, erm, but they don't do it, or they don't do it to the standard that, you would like them to…' [PUB INT P115 L149-153]

The participant's appraisal or interpretation of the situation appeared to mediate the relationship between observed laziness and frustration. A finding consistent with that of Spector's (1997) who indicated that for an individual to experience frustration they must perceive the frustrator to interfere in some way with their goal. Moreover, once frustrated an individual will only become aggressive if the frustrator is viewed as arbitrary (i.e. caused by someone for no apparent good reason or to be mean) and not if they believe the goal interference is justified (Spector 1997). In the case of P115, the frustrator was seemingly arbitrary, caused by people for no good reason, thus increasing the frustration experienced and leading potentially to aggression.

3.3 Incomprehension and Misunderstanding

Individuals displaying a lack of awareness and understanding in the workplace was another source of frustration. For example, colleagues being unaware of the pressures of another individual's job role, leading the individual to feel low-grade and underappreciated, which in line with the findings of Harrington (2005) would have led to low frustration tolerance:

'The fact that it is seen as an easy job, by others, [INT: Right] in other departments, but, it's quite taxing and quite er, a pressured job, [INT: Mmm] and it never gets quiet, even if people do think it gets quiet at times.' [PUB INT P112 L140-142]

Another example was management having a lack of understanding regarding the work undertaken at the lower level of the organisation resulting in '*regulations and procedures'* which are not fit for purpose, heeding successful work completion:

'I mean I worked for so many different places, and I've always come across it, that within the hierarchy, you get to a certain point up that tree, [INT: Mmm] and that knowledge base dwindles, and really, it's almost like that millionaire programme, where really you wanna grab the top guy and say, [INT: Yeah] you know, ''just come and sit with me for a week and see what we do, so you can understand it,'' but that's never gonna happen.' [PUB P106 INT L150-155]

In addition, subordinates showing a complete lack of understanding regarding the tasks that have been set out for them by management, leading to frustration for all concerned due to a waste of time and resources, and an increase in demands to try to resolve the issue:

'Most of the things that cause frustration, are probably about interpretations of what needs doing, or, people maybe, you know very often, read—I don't know whether it's reading, adding, you know, building things on it…' [PUB P116 INT L325-327]

The increase in demands and reduction in resources is consistent with previous sub-themes and the JDR model (Bakker and Demerouti 2007).

As with sub-theme 3.1 (incompetence and poor management), participants also reported frustration because one's own lack of understanding in the workplace:

'…maybe there's a lack of understanding for me as well sometimes and that frustrates me…' [PUB P116 INT L389-390]

Their own lack of knowledge hindering their goal achievement at work, including both work and personal goals. This finding was consistent with that of Levinson, Stiles, Inui and Engle (1993) who explored physician frustration and found a lack of understanding, especially from primary care physicians in relation to specific specialised problems, a prominent source of frustration. Of course, this issue also relates back to the issue of a lack of training highlighted in sub-theme 1.3 and suggests that incomprehension and misunderstanding may mediate the relationship between a lack of training and frustration at work.

Theme 4: Organisational Processes and Change

The final overarching theme that emerged from the data as a source of frustration focused on factors at the broader level of the organisation that can cause frustration for individuals, including issues surrounding communication, policies, procedures, and workplace change.

This theme was split into eight interconnected sub-themes. A lack of communication (4.1), barriers to communication (4.2), miscommunication (4.3), unsuitable policies and procedures (4.4), unfavourable change (4.5), last minute change (4.6), constant change (4.7), and meaningless change (4.8). These are discussed below.

4.1 A Lack of Communication

Participants reported frustration due to a '*lack of communication between departments*' [PUB QUE P51] and '*team members*' [VOL QUE P50], as well as from clients and *'senior managers*' [PRI QUE P62] regarding a range of work-related matters, such as, expense claims:

> *'Because when I was trying to get my money back from them, I would sa— I probably sent them ten emails, I didn't get a single reply, not one, that is just, I'll put it bluntly in [National] language, they're basically saying ''fuck off…''' [PUB INT P103 L266-268]*

Job requirements and responsibilities:

> *'… I hadn't been fully informed of the responsibility when I took it on.' [VOL QUE P59]*

And, procedural change:

'Rules and Regulations seem to change procedures come into place and no one updates you on them, again lack of communication.' [PRI QUE P9]

A finding congruous with research conducted by Brewer (2010), and Sheptak and Menaker (2016) who found a link between a lack of communication and frustration at work. A lack of communication leading to errors in task completion and/or heeding goal achievement (Brewer 2010).

For some participants communication was entirely absent. For example, P103 reported that they '*didn't get a single reply*,' and P9 that '*no one updates you*.' For others, this communication was present, but lacking in terms of the level of detail. They explained how *'information not being fully conveyed'* [PUB QUE P12], particularly regarding a given *'task'* [PUB QUE P12], the *'procedures'* involved [PUB QUE P95], or the *'rules and regulations'* to be adhered to [PRI QUE P9], *c*aused them frustration. One participant was *'being tasked to complete a task without any support, guidance or real explanation of the task at hand'* [PRI QUE P114], resulting not only in frustration, but also in task uncertainty. An issue closely related to the issue of role ambiguity.

Interestingly, role ambiguity, as well as role conflict, were rarely mentioned in the current research. Role ambiguity was captured sporadically within the current sub-theme, along with sub-theme 4.3 (miscommunication). This was reflective of the findings of Narayanan, Menon and Spector (1999) who found that role ambiguity and role conflict were very rarely mentioned across different occupational backgrounds, suggesting that role ambiguity and role conflict may no longer act as prominent frustrators at work, or that perhaps they are less impactful in comparison to others.

4.2 Barriers to Communication

Barriers to communication were a further source of frustration identified. Aspects or conditions of an individual's working environment which interfere with their ability to effectively exchange information. For example, language differences, music and customers being drunk:

'…for example me cause I'm not [Ethnicity], [INT: Uh huh] for example maybe they gonna yell for the accent or maybe you don't understand what they talking about, cause it's like when the music is so loud and like you're so anxious about—you need to do everything, [INT: Mmm] like, you need to serve everyone, or like ''oh it's me me me, serve me blah blah blah,''

and they are coming to you an you are tryin to understand what they are talking about, like and you can't, [INT: Mmm] cause of the music or because they are drunk…' [PRI INT P104 L64-70]

The barriers to communication faced by P104 had an impact on their ability to successfully obtain or convey work-related information. A consequence evident in most cases. P205 for example explained how they were frustrated due to '*a series of "management speak" phrases'* that interfered with their ability to obtain information, finding it '*difficult to concentrate on what is said'* [PUB DIA P205]. Similarly, P131 noted frustration due to ambiguous communication channels within their organisation that made it difficult for them to convey information:

'Not easy to manoeuvre my way to the right person to hear me out as it's a huge organisation.' [PRI QUE P131]

These findings were comparable to previous research within the health care profession, identifying issues such as a lack of time (Hemsley, Balandin and Worrall 2011), complex medical terms (Freeman and Loewe 2000), and a poor therapeutic bond (Quill 1989), as barriers to communication, blocking goal attainment and leading to frustration for the care provider and patient.

4.3 Miscommunication

Participants also highlighted present but ineffective communication as a source of frustration, particularly at the managerial level. Across the data sets, participants reported issues such as, '*errors in communication across higher management,'* as well as *'no lateral communication across function/managerial levels*' [PUB QUE P20]. This finding was unsurprising given the increasing use of email within organisations (Bryon 2008) and globalisation (Beyene, Hinds and Cramton 2009). People often miscommunicate their emotions through email, which can lead to misinterpretation (Byron 2008). Likewise, when attempting to communicate across international borders, disparities in language proficiency can disrupt information sharing and thus, goal achievement (Beyene, Hinds and Cramton 2009). For P88, this miscommunication resulted in them having to deal with *'overlapping deadlines and competing priorities across functions,'* leading to *'high levels of frustration and long hours'* [VOL QUE P88]. For P118, it led to unfair treatment (see theme two) and role ambiguity:

'As a [organisation] representative senior management expect me to attend meetings to represent members, then local management threaten me for being away from my desk. When I try and cancel meetings with senior management they chastise me. But insist that I also have local management approval. I go round in circles because the two tiers of management do not have a joined up approach.' [PUB QUE P118]

P118 had to spend extra time trying to understand what was expected of them from two different areas of management, heeding task completion and leading ultimately to frustration.

4.4 Unsuitable Policies and Procedures

Policies and procedures formulated or adopted by the organisation that are deemed by participants as not fit for purpose, were also identified. Those which are '*kind of defined by people that, don't do the job day in day out'* [PUB INT P106 L186-187], including management within the organisation and external governing bodies. For example, those that are seen as rigid and long winded:

'… I'm working on a day-to-day basis, following procedures and processes, and coming with outcomes which I know, are long winded, [INT: Yeah] an most of time inaccurate, and I'm only doing it that way and I've received them results because I have to, [INT: Mmm] I don't have any other option, [INT: Mmm] so to me that is a massive frustration…' [PUB INT P106 L178-180]

and repetitive and unnecessary:

'having to do repetitive and—I thinks it's more when it's pointless paperwork, when it feels like it's not useful in anyway...' [VOL INT P113 L140-141]

For P106, they acted as a barrier to their goal attainment, causing '*massive frustration.'* This was further exacerbated because they could not do anything about it, partially due to a lack of autonomy (see sub-theme 1.9). Although the individual knew a better way of obtaining successful outcomes, due to the long rigid policies and procedures, they were unable to follow what they perceived as a better process. As with P113 who indicated *'having to do repetitive'* and *'pointless paperwork,'* this reduced the amount

of time they had to complete additional and more meaningful tasks. Unsuitable policies and procedures therefore interfering with an individual's ability to maintain and accumulate resources such as time, as well as fulfil additional goals. Consequences consistent with previous sub-themes and the JDR model (Bakker and Demerouti 2007).

4.5 Unfavourable Change

Participants also expressed frustration due to changes that are made within the organisation, which they perceive to be negative. A finding that can be explained using Smollan's (2006) model of responses to organisational change. According to the model, change within organisations leads to a range of cognitive responses amongst employees. These can be positive or negative, and are mediated by employee perceptions of justice, scale, pace, timing and favourability of the outcomes. Cognitive responses then influence affective responses, with negative cognitions leading to negative emotions such as frustration. It is logical therefore that participants who became frustrated by change, perceived the change to be negative, either for themselves and/or others.

The changes perceived by participants as negative were varied, and included changes to *'work locations*' [PUB QUE P64], *'senior leadership*' [PRI QUE P38], and '*job roles*' [PUB QUE P118], as well as having to embrace new technology:

> *'There is an expectation of me to embrace i-phone technology. This is not something I am comfortable with in general and particularly as the phone allocated to me cannot facilitate it; I am expected to use my personal phone.' [PUB DIA P205]*

P205 expressed frustration due to a change in their working practices that were unfavourable to them. They were now being expected to '*embrace i-phone technology*,' something which they were not '*comfortable*' with, as well as use a device that was not fit for purpose (see sub-theme 1.2). This resulted in an increase in fear and uncertainty for the participant, as well as frustration.

4.6 Last Minute Change

A further source of frustration identified was last minute change. For example, '*having candidates pull out of a job application half way though process*' [PRI QUE P105], meetings being '*cancelled quite last minute*' [PUB DIA P202], and senior staff

requesting work to be done '*with little or no notice*' [VOL QUE P6]. In particular, P105 expressed how they became regularly frustrated as a result of having to make last minute changes at work:

> *'…so often you'll have schools that haven't contacted you at all, you've set up this whole tournament, you've sorted out the leagues, erm its about to get going and three schools haven't turned up, and you're like OK I'll just rejig everything now then, [INT: Mmm] in about five minutes notice, so that's, frustrating but it's also one of those things that you just get used to and you're like yeah, OK, done…' [PUB P105 INT L69-74]*

In the majority of cases, such changes resulted in an increase in time pressure and workload, enhancing the level of frustration experienced. High pressure and overload (see sub-theme 1.1.) acting as mediators in the relationship between last minute change and frustration. Interestingly however, although a source of frustration for the individuals, last minute change, as seen in the above quotation, was often seen as the workplace norm, '*one of those things that you just get used to*.' Thus, highlighting that although a source of frustration, last minute change in relation to work is inevitable, and something that an individual is required to handle often on a daily basis.

4.7 Constant Change

Another issue highlighted as a source of work frustration was constant change, such as, '*constant changes of government priority*' [PUB QUE P156], and *'constant'* technological change. An anticipated finding given the constant need for change within today's organisations. As stated by Hammer and Champy (1993: 17) in their book Reengineering the Corporation, '*in today's environment, nothing is constant or predictable – not market growth, customer demand, product life cycles, the rate of technological change, or the nature of competition*.'

P116 for example was under significant pressure to keep up-to-date with the continuously changing technology that was overtaking them. They were placed under increasing demand to develop their knowledge, skills and abilities (KSAs) in relation to technology, and thus, were unable to deliver what they needed to deliver to achieve their work goals.

> *'I do get frustrated about, the ability for, sometimes technology to, you know—the technology goes faster than our ability to deliver, so, if we're*

putting a new techno—technological solution into something, we—by the time we've put it in, the ability and the capability of the technology can often out run us, [INT: Right] so we get to a point where, you know, we are gonna put it in, but actually there's a better product now, and we've not actually delivered what we wanted to deliver, and all of sudden they say, ''oh we don't need that now, well put the better product in.'' So then we start trying to put the better product in, and technology overtakes us again.' [PUB P116 INT L343-351]

This was also evident from a quotation provided by an independent who expressed frustration at customers who '*constantly change what they want.'* This ultimately resulted in them *'having to draw up multiple designs for people,'* placing increasing demands on their time, and taking time out of their day which they could be spent on completing other tasks required to achieve their goals [IND INT P101 L205-207].

4.8 Meaningless Change

The last but by no means least source of frustration identified by participants, was centred very much on change that is perceived by the individuals to be of no benefit. For example, one participant expressed that although they '*quite like change*,' they often feel that '*people make changes just for the shear hell of it*.' Specifically, management '*wanting to make an instant impression,*' as well as *'stamp their authority or put their mark on something*' [PUB INT P106 L…]. This results in frustration, not only because the changes have an impact on the individual concerned, often increasing their work demands, but also because they are seen as unnecessary.

The perception of change as meaningless often appeared to come from a lack of understanding of what is actually happening. This was evident from an employee perspective:

'We know there's stuff happening, we don't know what it is, we don't know when it's happening, […] we don't know who it's happening to…' [PUB INT P110 L223-224]

And a managerial perspective:

'…You know, taking my sceptical head off, there's a reason why things have been done, and it's normally a, a fair and a good reason, it's just, it

may not – that might of not been communicated ter, ter the people that it's effecting.' [PUB INT P115 L112-114]

This relates back to sub-theme 4.1 and suggests that other factors may also be involved in the relationship between meaningless change and frustration, such as a lack of communication, control and uncertainty. As stated by P115, some individuals just '*don't like a change*,' and therefore '*you can't tell them, you know, the reasons behind it, cause they don't wanna hear it*' [PUB INT P115 L203-222]. However, by not communicating to individuals the rationale for change, this leads to a lack of understanding on behalf of the individual, and can result in the individual feeling anxious, isolated, and perhaps even deceived, due to what is seen as a *'disconnect'* between management and themselves. The lack of communication resulting in issues such as a lack of trust, social interaction and self-confidence. Issues that may impact on work performance and an individual's ability to attain or maintain their goals.

Research into procedural justice has shown that perceptions of fair treatment and decision outcomes, including those in relation to change, depend highly on the explanations given for those outcomes (Folger and Bies 1989). Researchers have found that decision outcomes and procedures are more readily accepted when those influenced perceive the decision has been made without bias (Lind and Lissak 1985), communicated honestly (Bies 1986), applied consistently (Greenberg 1986), and has been carefully justified based on adequate information (Shapiro and Buttner 1988). They must also be treated in a courteous and civil manner (Bies and Moag 1986), suggesting that interpersonal treatment may be an important determinant of reactions (e.g. frustration) to potentially unfair situations (Tyler and Bies 1990).

4.4.2.2 Taxonomy of the Sources of Work Frustration

The following taxonomy has been developed based on the coherent review of the themes and sub-themes discussed above.

Taxonomy of the Sources of Work Frustration in the UK

1. **Human Factors and Work Design** - the design of an employee's job and work environment, the resources employees need to undertake their job successfully, and the rewards provided to employees for undertaking their job effectively.

   A. Unsuitable Workload and Job Design
   Ex. Having too much work to do
   Being under time pressure at work

Being subject to unreasonable expectations at work
Having to work long hours
Having to work unsociable hours
Having a lack of breaks at work
Having a lack of control over situations at work
Having a lack of freedom over ones job role
Being required to undertake repetitive tasks
The job role being boring

B. Environment, Material and Personnel Issues

Ex. Having to work in poor conditions
The allocated workspace being unsuitable
Being provided with inadequate materials
Having a lack of materials at work
Poor staffing levels

C. Insufficient Pay, Progression and Reward

Ex. A lack of reward and recognition in the role
Having a lack of training at work
Being provided with inadequate training at work
Having a lack of development opportunities
Being provided with inadequate pay

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2. **Workplace Behaviour and Ethics** - Deviant and/or unethical behaviour shown by customers, colleagues and/or management towards oneself, others and the organisation as a whole.

*A. Political Deviance **

Ex. Colleagues not engaging in teamwork

People at work being selfish
People at work showing favouritism and unjust

People blaming oneself/others at work for things that are not their fault
People at work making false accusations
People socially undermining oneself/others at work
People at work questioning decisions
People breaking promises
People providing false hope

*B. Workplace Incivility **

Ex. People being difficult/ disrespectful towards oneself/others at work
People showing a lack of care and consideration for oneself/others at work
People at work not listening
People at work being impatient

*C. Personal Aggression ***

Ex. Managers abusing their power at work
People being verbally abusive at work
People displaying physical aggression at work
People displaying acts of unlawful discrimination at work

*D. Organisational Deviance ***

Ex. People at work being non-compliant
People at work being dishonest
People at work being deceptive
People being late for work
People being absent from work

---

3. **Workplace Performance and Productivity** – The performance and productivity levels of individuals in the workplace, including colleagues, management, and oneself.

   A. *Incompetence and Poor Management* **
      Ex. People making mistakes at work, including oneself
      People at work not having the skills/abilities to perform their job successfully, including oneself

   B. *Lack of Responsibility and Laziness* **
      Ex. People at work who do not take responsibility for their job role
      People at work who display a lack of effort in their job role

   C. *Incomprehension and Misunderstanding* **
      Ex. People at work displaying a lack of understanding, including oneself (E.g. In relation to another's job role)
      People at work displaying a lack of awareness

---

4. **Organisational Processes and Change** - factors at the broader level of the organisation, including communication, policies, procedures, and workplace change.

   A. *Inadequate Communication* *
      Ex. A lack of communication at work (E.g. Regarding workplace change, job requirements, and expense requests etc.)
      Facing barriers to communication at work, such as, language barriers, noise, and management speak phrases etc.
      Miscommunication at work, Inc. conflicting communication

   B. *Unsuitable Policies and Procedures*
      Ex. Policies and procedures at work being insufficient
      Policies and procedures at work being long and rigid
      Policies and procedures at work being repetitive
      Policies and procedures at work being unnecessary

   C. *Problematic Workplace Change* *
      Ex. Unfavourable changes at work
      Last minute changes at work
      Constant change at work
      Meaningless change at work

** Source not identified in previous research

* Source identified in previous research albeit to a lesser extent

4.4.2.3 Stage Two *– What different reactions to work frustration do UK employees working within a variety of different organisational sectors report?*

To understand what behavioural reactions employees, display due to frustration at work, data was categorised into four overarching themes: 'social coping,' 'avoidant coping,' 'self-sufficient coping,' and 'aggressive coping.' As can be seen in table 4 below, each of these themes were identified in the interview, diary and questionnaire, and were representative of the reactions within all four organisational sectors.

Table 4.4: Number of participants reporting each theme overall, and per organisational sector and data source

Themes	**Number of Participants**							
	Organisational Sector				**Data Source**			**Total Data**
	PUB	**PRI**	**VOL**	**IND**	**INT**	**DIA**	**QUE**	**Sources/ References**
Social Coping	72	48	9	4	15	9	109	133/426
Avoidant Coping	59	41	4	5	13	6	90	109/257
Self-Sufficient Coping	49	31	10	5	15	9	71	95/204
Aggressive Coping	42	25	3	3	14	4	55	73/129

Key: PUB = Public (94), PRI = Private (60), VOL = Voluntary (19), IND = Independent (9), INT = Interview (16), DIA = Diary (9), QUE = Questionnaire (157)

To aid the formation of a new taxonomy of the reactions to work frustration each of these themes were split into several sub-themes based on the original data coding as shown in the schematic diagram below (figure 4.2).

Theme 1: Social Coping

The first overarching theme involved social support seeking, and/or providing social support to others. There were a variety of reasons why individuals sought or offered support socially, including to gain or provide information, to seek or offer emotional support, as well as receive and give instrumental support. As a result, this theme was

split into three sub-themes (see figure 4.2). Informational support (1.1), emotional support (1.2), and instrumental support (1.3). Each will be explained in more detail below along with excerpts from the data set.

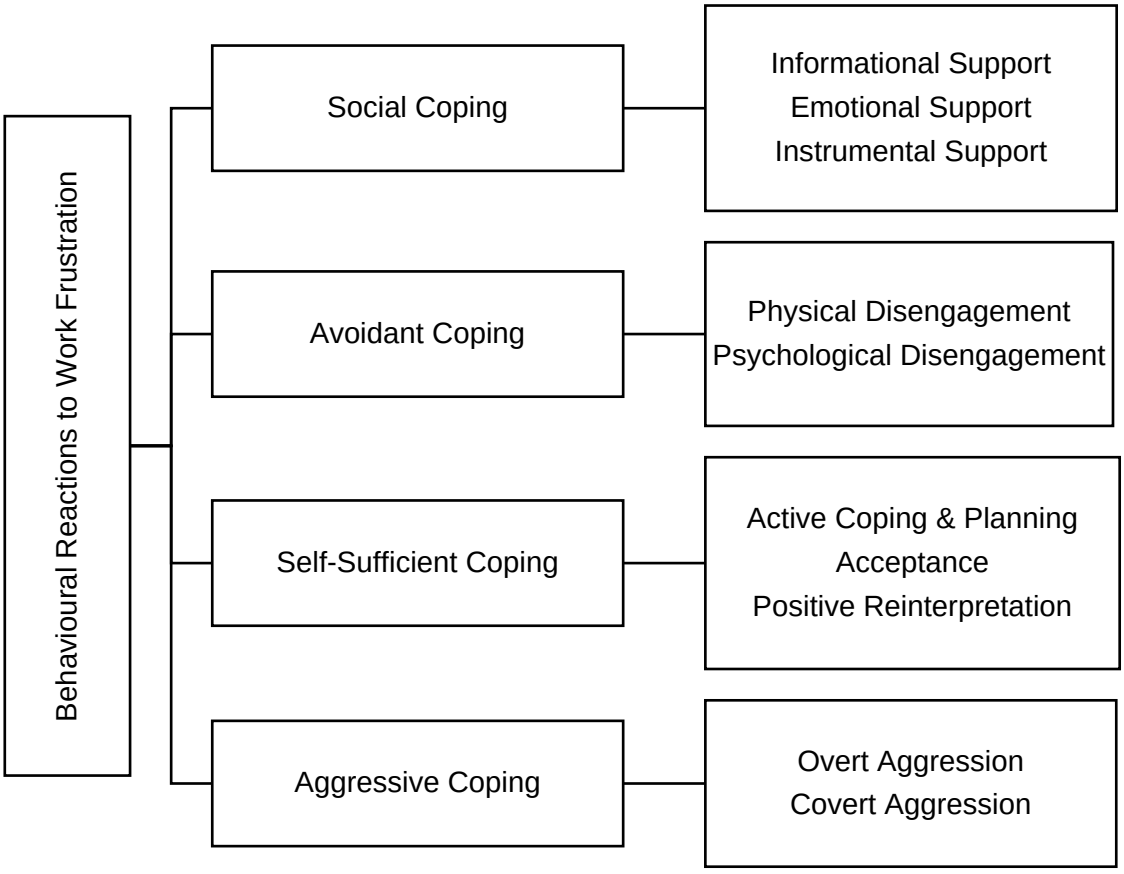

Figure 4.2: Schematic Diagram showing the Behavioural Reactions to Work Frustration

Although for the purpose of analysis these support functions were distinguished conceptually. They were not usually independent, and instead overlapped somewhat. This is often the case in naturalistic settings such as the workplace (Cohen and Wills 1985). For example, an individual whom seeks advice from a colleague will also likely receive an element of emotional support, and perhaps even practical support. Moreover, an individual whom seeks instrumental support from management will also provide information, and in some cases, offer solutions to support others.

1.1 Informational Support

When discussing their reactions to frustration, many participants described seeking information, advice or guidance, usually from their '*line manager'* [PRI QUE P2], '*the*

person in charge' [PRI QUE P9], or their '*union representative*' [PUB QUE P136], '*HR*' [PUB QUE P75], or a '*colleague*' who has had a similar experience [PUB INT P103 L155]. In some cases, the function of this coping strategy appeared to be problem-focused. In other words, directed at removing or reducing the frustrator (Folkman and Lazarus 1980). It allowed participants to find out the information they needed to continue with their job role effectively, through either resolving or finding an alternative way around the issue that was causing them frustration. In other cases, the strategy served both problem and emotion-focused functions, supporting the notion that any coping thought or act can serve both or perhaps many other functions (Folkman and Lazarus 1980). P103 for example, as well as gaining information to help remove or reduce their frustrator, also gained emotional support, leading them to feel safe and understood:

> *'…you're obviously doing it with people who, you feel comfortable with doing it, so, [INT: Mmm], it's a safe environment, and because they've gone through similar, sort of, scenarios, they have a bit more empathy…' [PUB INT P103 L181-183]*

Participants also explained how they provided information to '*management'* [PUB QUE P49], or *'fellow team members'* [PRI QUE P125] when frustrated, typically during '*supervision*' or a '*feedback session'* [PRI QUE P4]. To put it differently, they engaged in employee voice behaviour, a type of organisational citizenship behaviour (OCB) (Van Dyne and LePine 1998) also referred to by Organ (1988) as 'good soldier syndrome.' OCB defined as the 'discretionary communication of ideas, suggestions, concerns, or opinions about work-related issues' (Morrison 2011: 375). This enabled them to highlight their frustrations, as well as help other individuals to better understand something, and provide possible solutions. The aim often being to improve the current situation, reduce potential threats to the organisation, as well as identify opportunities to alleviate the frustration in the future:

> *'Had meetings with management to discuss potential alterations in the workplace.' [PRI QUE P13]*

Noticeably, some discussions did involve what could be argued to be an element of confrontation, with participants reporting having '*challenged line management*' [PUB QUE P54] about issues that were causing them frustration. This confrontation however appeared to reflect that of positive confrontation, with participants being powerful but

also polite, rather than rude and aggressive. As stated by P86 they were *'careful to do this in a firm but respectful way'* [PRI QUE P86]. Unlike aggressive confrontation, positive confrontation is typically associated with positive resolution instead of further conflict (Monteith, Burns and Hildebrand 2019, Pachter 2014), helping to distinguish such behaviour from that classed as counterproductive.

What appeared to be highly evident from the data was that although participants were engaging in potentially constructive behaviour, providing important information, voicing concerns and offering solutions to '*raise awareness'* [PRI QUE P126] and improve the organisation, they were often ignored by management:

> *'I told our head of service when he introduced himself to me that the IT /hot desking was causing productivity issues. He told me I'd get used to hot desking. I said I could cope with hot desking, but not the poor IT set up, that it's not the moving around I dislike (…) but there is an issue about productivity and staff comfort that needs to be resolved, he laughed and said ooh it took myself and my head of service colleagues a few months to settle to hot desking, you'll get used to it in the end, and he walked off. He didn't listen or hear or care about what I shared, my concerns.' [PUB QUE P154]*

For P154 this appeared to cause further frustration, as their manager was not listening to their concerns and showing a lack of care and consideration. A source of frustration highlighted earlier in this chapter (see theme 2). For P66 this led to them leaving the organisation. A further reaction to frustration detailed in sub-theme 2.1.

> *'I reported it to my apprenticeship manager, nothing changed, so I left.' [PRI QUE P66]*

Some participants therefore experienced a build-up of frustration, with their initial reaction to frustration being thwarted by additional frustrators, leading them to leave the organisation. This finding reflects the general adaption syndrome (GAS) (Selye 1950), which details how individuals cope with stress. According to Selye (1950) when faced with a stressor, individuals tend to adapt to and cope with a stressor to achieve a stable physiological state. However, if the individual is unable to eliminate the stressor, or they are repeatedly exposed to stressful situations, then they will be unable

to continue coping. As a result, they will likely withdraw from the situation to avoid exhaustion and burnout.

1.2 Emotional Support

A further reaction to work frustration identified within the data was seeking emotional support from others, a response typically associated with the need for affiliation, on of the fundamental motivations behind human behaviour (Baumeister and Leary 1995). Participants described '*talking*' [PUB INT P111 L457], '*whinging*' [PUB INT P103 L154], '*moaning*' [PUB QUE P80], or *'crying*' [PUB INT P110 L272] to other individuals within and outside of the organisation to vent their frustration. Particularly '*friends and family*' [PUB QUE P152], *'colleagues'* [PUB QUE P80], a '*GP*' [PUB INT P111 L101] or occupational health provider:

> *'I seek help and assistance through occupational health.' [PUB QUE P138]*

Participants who spoke to an external professional appeared to find this particularly useful. It enabled them to talk more openly and work through their frustrations, providing them with emotional support while also gaining a better understanding of themselves and their own coping strategies:

> *'It's good to have someone that's external to you that's not related or works with you, [INT: Mmm] to actually, help you an, you know work through stuff.' [PUB INT P102 L378-379]*

Participants who expressed their frustration to colleagues however, did not always gain positive and constructive feedback:

> *'I did get upset a couple of times, I think two or three times, I did like cry and have a panic attack, erm, and that act—people there were nice to me, but they also said, ''everyone does it you know, it's gonna happen, it's to be expected,'' and they were all like, ''oh well I cried because of this, and when I did this I cried every day,'' so it was almost expected of you, erm.' [PUB INT P109 L246-250]*

While P109 gained some comfort and reassurance that they were not alone in their distress, they were also faced with employee perceptions of this distress as normal and/or to be expected. An attitude, which, although showed a level of understanding

towards the participant and their frustration, downgraded the seriousness of the issue, and may have made the individual feel insignificant.

In addition to seeking empathy, some participants explained how they also offered sympathy when experiencing frustration, particularly to those who were the source of their frustration:

> *'I tend to act in a way which sympathises with individuals but also in a direct and honest way.'* […]

Participants who offered sympathy did so, not only to provide emotional support, but also to move forward with their own job and tackle the source of their frustration. They also therefore engaged in an element of problem-focused coping, further supporting the notion that any coping thought or act can serve both emotion and problem-focused functions (Folkman and Lazarus 1980).

1.3 Instrumental Support

Seeking or providing practical support to/from others, because of frustration at work, was another behaviour identified. P101 for example, explained how they sought instrumental support from colleagues by phoning them when they had problems, which were causing them frustration:

> *'It'd just be a case of getting on the phone to somebody, erm, to try an get them to sort it out. There was always somebody at the other end of the link that's linked up with all the, the computers and that, that can try and sort it.' [IND INT P101 L454-456]*

P110 described how their colleague would seek practical support from others, including management, by vocalising their frustrations in team meetings:

> *'…they want to kind of flag up in the team that, they are having these issues, [INT: Mmm] and so either the manager can say, ''well I can help you there,'' [INT: Mmm] or somebody else can say, ''do you need anything.'''' [PUB INT P110 L255-258]*

The function of this coping strategy appeared to be problem-focused, directed at removing or reducing the frustrator (Folkman and Lazarus 1980). Unfortunately, similar

to informational support seeking, although participants were engaging in potentially constructive behaviour, seeking *'help*' [PRI QUE P17], either from a *'manager'* [PRI QUE P45], or '*someone else working there*' [IND QUE P35], some individuals, particularly management, were reluctant to provide the help:

> *'I know that person has now raised it with their line manager, [INT: Right OK] almost you know, so that higher level can come in, [INT: Mmm] and address it, but I think again there's a frustration there that they are not quite happy to get involved [INT: Right], so there's certainly a frustration there, their almost left on their own, to sort it, and at the end of their tether, so.' [PUB INT P106 L95-100]*

This appeared to cause further frustration for participants as they felt unsupported, their manager showing a lack of care and consideration for their needs. The additional frustrators leading to an accumulation of fight or flight responses, that may in line with the GAS (Selye 1950), result in withdraw from the job and/or organisation to avoid exhaustion.

Participants who provided practical support to another individual/ group of individuals in the workplace, such as additional training, did so to manage their own frustration, as well as alleviate the issue that was causing them frustration. Thus, supporting the notion that people may only help others if there is some self-benefit (Batson and Shaw 1991). This behaviour was often reported by those with management responsibility whom had become frustrated due to the poor performance of subordinates:

> *'Your reaction to it, erm, you have to be very careful how you react to it, cause you can, at the end of the day, even though you're frustrated about something, you've still got to, make sure that, you know, you approach that in a, in a constructive way to make sure you, you can resolve whatever's going on, you know and er, [INT: Mmm] that has to be through sort of coaching and support, an some mentoring an, erm, you know trying to steer people in the right direction but still allow them to, [INT: Mmm] ter, ter do the work…' [PUB INT P116 L279-285]*

Despite being the source of their frustration, P116 showed a high level of interest in their subordinates and their development, as well as the organisation as a whole. They provided support, coaching and mentoring to try resolving the issue, displaying OCB

rather than reacting in a counter-productive manner. In particular, they used helping behaviours, a type of OCB (Van Dyne and LePine 1998) defined as 'proactive interpersonal behaviour directed towards others that strengthens existing relationships' (Fischer et al. 2019: 126).

It is important to note however that this behaviour was not always displayed in a way in which the recipient may see as being supportive. Some participants, including P116, did report how this helping behaviour did at times '*become autocratic*,' [PUB INT P116 L721], with one participant explaining how they '*had to do a lot of hand holding'* [PUB INT P110 L366-367], and another participant that they sometimes felt they had a *'teacher-pupil relationship'* [PUB INT P115 L289]. This behaviour is characteristic of autocratic leadership. A style of leadership commonly associated with feelings of hostility (Daft 2008: 44). It could be argued therefore that in order for such helping behaviour to be effective, an empowering style of leadership should be utilised, encouraging employees to want to influence their work roles and context (Butts et al. 2009, Spreitzer 1995).

Theme 2: Avoidant Coping

The second overarching theme focused on withdrawal behaviour, a form of work disengagement displayed by an individual often exhibited to reduce or manage emotional distress. As can be seen from figure 4.2, this theme was split into two sub-themes. Physical disengagement (2.1) and psychological disengagement (2.2). Although different in some respects, both forms of withdrawal behaviour appeared to overlap. Individuals who tended to physically disengage, also appeared to disengage to some extent psychologically. Both forms will now be explained in more detail.

2.1 Physical Disengagement

When discussing their reactions to frustration at work, participants described withdrawing from their work physically, sometimes momentary, as they created an element of physical distance between themselves and either, the individuals around them (E.g. colleagues, management, friends or family), or the immediate situation causing them frustration:

> *'Erm, I generally just take—if I'm getting particularly frustrated I'll just take myself out of my office, I think a break from your computers, a big thing as well, [INT: Mmm] erm, [Name] coffee's a fantastic place to flee to, just to take that time out, [INT: Mmm] cool down.' [PUB INT P106 L476-479]*

Some participants withdrew from the situation calmly, as they simply '*walked away*' [PUB QUE P87], had a '*break*' [PUB QUE P30], and returned to the situation later, '*going back to the problem'* to resolve it [PUB QUE P101]. They maintained a strong level of mental assertiveness that enabled them to deal with the situation at a later point in time. Other participants engaged in a more aggressive form of withdrawal behaviour. For example, P138 explained how they would '*leave the room and slam the door in a really aggressive manner*' [PUB QUE P138]. This difference in expression could be attributed to differences in dispositional affectivity and emotional intelligence (EI). Individuals with higher EI and high positive affect are more likely to react to perceived injustices with adaptive/constructive behaviours, whereas those with low EI and high negative affect are more inclined to react with aggressive behaviours (Quebbeman and Rozell 2002).

Participants also reported withdrawing physically from work for a more prolonged period, being absent, while still maintaining a relationship with the organisation. In most cases, this appeared to be involuntary, with participants describing how they '*ended up off sick for 2 weeks with stress'* [PUB QUE P152] as a result of the frustration they experienced, as well as getting *'depressed'* [PUB INT P111 L98] and suffering with *'anxiety'* leading to *'time off'* work [PUB QUE P27]. Consequences that closely reflect stage three of Selye's (1950) GAS, exhaustion. For some participants however, this absence was voluntary. One participant for example, '*took a holiday, for a week'* as a result of frustration, even though they were not planning on taking one [PUB INT P106 L515]. They chose to physically and psychologically (see sub-theme 2.2) disengage from work for an extended period to recuperate, perhaps to avoid reaching the stage of exhaustion. Another commented on how their colleagues often called in *'sick'* as a result of frustration, even when they were not [PUB INT P102 L525], showing a low level of commitment towards their job and the organisation. Behaviour viewed as counterproductive and found in previous research to be linked to frustration at work (Elias 2013: 204).

For some participants the disengagement did become permanent, as they decided to resign, severing all ties with the organisation. A finding consistent with the research of O'Connor et al. (1984), who reported a relationship between frustration at work and employee turnover. P26 for example resigned due to a continuous excessive workload and low staffing levels:

> *'I have left a position due to frustration with the amount of pressure and the workload due to staff leaving and not being replaced meaning I had to cover 3 ward clerks jobs.' [PUB QUE P26]*

Although detrimental to the organisation, leading to further staffing issues and an increase in costs for recruitment and training purposes, this behaviour helped the individual to reduce their stress levels and enhance their well-being, putting a more permanent barrier between themselves and the source of their frustration.

Notably, the increase in the duration of physical disengagement was seemingly linked to an increase in the frequency and duration of frustration experienced. Suggesting therefore that a few short periods of frustration may not necessarily lead to negative outcomes for those who engage in avoidant coping, however if left unresolved and/or frequently occurring, this can lead to outcomes such as, absenteeism (Spector, Fox and Domagalski 2006), low occupational commitment (Radebe and Dhurup 2016), and turnover (O'Connor et al. 1984)

It is important to note however that some participants did only express an intention to leave, stating that they were '*looking for other jobs'* [PRI QUE P126] as a result of frustration at work, engaging only in psychological disengagement (sub-theme 2.2):

> *'I nearly did, I mean my wife got erm, made redundant when we had erm, [Name], the middle child, so seven years ago, and then [Name] came along so it, it just sort of, erm, ended up that she—it was more convenient to sort of stop an look after the girls while they're young, erm, so it's only my income, so, I've gotta be careful about erm, only sort of jump when I'm close to land so to speak, [INT: Mmm] erm, because er, er, the mortgage an looking after the kids an what have you.' [PUB INT P111 L451-456]*

Due to personal circumstances and concerns surrounding finance, P111 showed only an intention to resign which was later abandoned. Their goal to maintain their family's well-being and financial situation appearing to be of greater importance to them than the frustrations they were facing at work, possibly because their goal involved promises or engagements with others (e.g. their wife and children), highlighted by Locke and Latham (1990) to increase goal commitment.

Although resignation behaviour can be helpful to an individual, it can also result in goal failure and further stress for the individual concerned and those around them, especially regarding basic needs such as finance and security, with the individual then having to find a new position elsewhere. Nonetheless, for one participant, the issue of basic living appeared to be of less importance to them when faced with frustration at work:

> '*I leave because of this one, and I was like even if I don't have any piece of food to eat I'm not going back there anymore.' [PRI INT P104 L331-332]*

The participant was clearly frustrated by the way in which they were being treated in the workplace and therefore chose to leave, preferring to go without basic needs such as food. A concerning finding given the negative consequences for the individual, and more specifically, their well-being.

2.2 Psychological Disengagement

While some participants remained at work physically when becoming frustrated, they did report being disengaged psychologically and mentally. They displayed behaviours that may be considered 'lazy' or 'non-compliant,' *'downing tools'* [PUB INT P115 L258] becoming *'very disengaged'* [PUB INT P108 L201-202] and doing the *'bare minimum'* [PUB QUE P124]. Similar to those who disengaged physically, they showed a lack of job involvement and organisational commitment, supporting the findings of Radebe and Dhurup (2016). P109 for example, expressed how they '*stopped caring as much:'*

> *'Towards the end what scared me the most was that, I would think, 'I just haven't got time,' and it got to the point where I would—I stopped caring as much as I wanted to, and I'd just put it to the back of my mind. Like if someone needed the toilet, I'd just be like, ''I just don't have time,'' and, I knew in my head that that was awful like, and I'd never think like that, but I was just so exhausted, you'd be like, five a clock in the morning. So it was—it did upset me the way that I, changed, so that was why—one of the reasons I left as well, because I didn't want to lose that.' [PUB INT P109 L251-257]*

P109 started to reduce their efforts at work because of their frustration. They began putting patients to the back of their mind. A reaction that may have influenced their level of patient care and their organisations reputation, resulting also in an increase in

workload for their co-workers. This type of behaviour therefore had a 'ripple effect' across an organisation. An effect also evident in the below quotation provided by P111:

> *'Erm, other people as well, go sick, erm, they'll get frustrated, they, they won't bother trying an—but not only will they not bother trying with—for a promotion, they sort of think 'well what's the point of my trying in my current role, I don't get any thanks for it, I don't get any, any—it's not getting anything out of it.' So their performance suffers an if their already managers then the team that their managing is gonna suffer, [INT: Mmm] erm, an, an the whole efficient running of the organisation is gonna suffer.' [PUB INT P111 L308-312]*

Some of the participants, who became psychologically disengaged, also became disengaged physically (sub-theme 2.1). For example, in the case of P109, they became '*upset'* and ultimately left the organisation, in part, because their own behaviour became inconsistent with their own personal goals surrounding effective patient care. In line with the appraisal model for motivation relevance (Smith and Pope 1992), this would have led them to appraise the situation as intensely frustrating.

Additional forms of psychological withdrawal noted by participants included, '*smoking*' [PUB QUE P155], drinking '*alcohol*' [PUB QUE P154], and *'eating chocolate''* [PUB QUE P80], often to distance themselves mentally from the feeling of frustration. Although not typically highlighted in previous frustration research, this finding is consistent with stress research, which shows a strong link between chronic or prolonged stress and behaviours such as smoking, drinking alcohol, and eating comfort foods (McEwen 2008). Interestingly, some participants also explained how they had engaged in health promoting behaviours, undertaking '*breathing exercise's'* when they get *'extremely frustrated'* [IND QUE P93], as well as channelling their frustration *'through sport and working out'* [PRI QUE P18]. This may be linked to the increasing popularity of workplace health promotion programs (WHPPs) promoting positive health behaviours in employees (Street and Lacey 2018). For example, mindfulness training, which has been found to act as a protective factor in work environments (Schultz, Ryan, Niemiec, Legate and Williams 2015).

Theme 3: Self-Sufficient Coping

The third overarching theme captured individuals who show independence and self-reliance to reduce or manage their emotional distress, as well as remove or circumvent

the source of their frustration. As can be seen from figure 4.2, this theme was split into three sub-themes explained in more detail below. Active coping and planning (3.1), acceptance (3.2), and positive reinterpretation (3.3).

3.1 Active Coping and Planning

Independent and constructive efforts to remove or circumvent the source of frustration were also reported. Some participants, for example, explained how when frustrated at work they engaged in active coping strategies, taking direct action such as, '*implementing some training'* [IND QUE P113], '*stream lining'* work systems [PUB QUE P156], ensuring certain tasks are '*prioritised*' [PUB DIA P202] or '*delegated*' [PRI QUE P62], and using '*a different photocopier in another part of the building'* [PUB DIA P205]. Others noted how they began planning their active coping strategy, thinking about how to tackle the source of frustration, actively trying to '*find a solution'* [VOL QUE P10] to the problem, or a way of '*manoeuvring around the problem*' [IND QUE P5].

Similar to some forms of social coping, this behaviour was change-oriented (i.e. problem-focused); however, it usually involved much more effort on behalf of the participant as they would often *'approach the situation head on*' [VOL QUE P63]. The efforts taken by those who engaged in active coping were varied depending on the source of their frustration and job role. One participant for example, a Physical Exercise Coach in the public sector responded to their frustration surrounding conflicting student needs by separating them into groups of similar interest:

> *'Erm, well, I tend to keep them together to start with, and then after a few lessons, erm, just, I mean, especially with the year nine tens, their old enough for you to be able to have a chat with them and say, ''look I know that you guys want to do contact, I know that you guys don't,'' [INT: Mmm], ''If I can trust you guys that don't want to do contact, erm, ter,''—and I'll like just give them a game, erm, to do, like a rugby, netball game or something like that, and I'll say, ''you do that,'' erm, and I like—one of them that's not joining in then, there normally is one, erm, can referee that, [INT: Right] and I'll say, ''if this person makes a decision, you go with that,'' and then I can—I keep—and then I can start introducing the contact thing…' [PUB INT P105 L350-358]*

This behaviour was different to that displayed by a Psychologist in the public sector who changed their '*working hours*,' and made an extra effort to *'have breaks and relax*

at work' as a result of their frustration [PUB QUE P156]. Frustration of which was caused by their working hours and high workload. For both participants however, their active efforts enabled them to reduce their emotional distress, as well as remove or circumvent the source of their frustration.

Some participants also noted having *'worked late every night'* [VOL QUE P6] and '*over the weekend'* [PUB QUE P8], making active efforts to successfully complete their work requirements, especially before the required deadline. Although beneficial in the short term however, in the long term this would likely have negative consequences for the individual regarding their well-being, and the organisation in relation to employee absence. Long working hours being associated with poor employee mental health and sleep disturbances (Afonso, Fonseca and Pires 2017).

3.2 Acceptance

Participants also displayed a level of acceptance regarding the situations that are causing them frustration. Rather than voicing concerns and trying to initiate change, they took '*no action'* [PRI DIA P210]. Instead they *'put up with it'* [PUB QUE P104] and continued working, accepting that the issue has occurred and that it cannot be changed. Behaviour that was reported by participants when discussing both their own reactions to frustration, as well as when discussing the behavioural reactions of others. P149 for example, when discussing their own reactions to frustration stated, *'mostly I just let it happen and do things as quick as possible and as accurate as possible'* [PRI QUE P149]. A reaction similar to that observed by P103 when discussing the behavioural reactions of others in the workplace:

> *'Most people, just sort of get on with things, an, deal with it as, as much as they, as quickly as they can.' [PUB INT P103 L219-220]*

Participants who displayed such acceptance behaviour usually continued to *'work in a professional and ethical manor'* [PRI QUE P67]. Their behaviour therefore, in some respects, being of benefit to other people and the organisation as a whole.

Despite the potential benefits of this behaviour however, it is important to note that not all forms of acceptance behaviour appeared to be beneficial to the individual or the organisation as a whole. It was suggested by P116 that acceptance behaviour can be detrimental to an organisation as it can heed positive change:

'…If you're, a manager, you know in a department or on a [location] and you need something to do your job, and you can't get it, then, you shouldn't just say, accept that there's a delay, you know, you say well actually I'm gonna do something about this, I'm gonna address it, I'm gonna see what's happened, and I'm gonna ask some questions, you know, I'm gonna raise the, the issue an, an people don't do that, there's almost a—well some do, but very often people just say, ''well it's just the way things are isn't it''' [PUB INT P116 L559-565]

P116 expressed frustration due to people not taking charge of certain situations, just accepting them, leading to problems or issues being left as nothing is done about them. Perhaps due to individuals being '*reluctant to raise it officially, […], because they don't think anything will change'* [PUB INT P116 L573-574].

3.3 Positive Reinterpretation

When explaining their reactions to frustration at work, participants also noted how they had tried to reframe the way in which they think about the situation, often by reflecting on the situation, trying to put things into perspective:

'A big thing for me is ter, put things into perspective, you know when you do look at the bigger picture, really the problems that I can go through—I go through and I, er, you know, and the, the problems or the issues that frustrate me, in the grander scheme of things, are not—there not very important, [INT: Mmm] and I try to just keep myself grounded and think, it doesn't matter, no one's gonna die, it's you know, [INT: Yeah] there's—if you keep perspective one things, then, you're a much happier person.' [PUB INT P115 L378-384]

For some participants this reinterpretation of the situation was achieved with faint whispers to oneself, or even silent thoughts that enabled them to reflect on the situation or issue that had caused them frustration and adjust their thinking. P115 for example would often '*mull things over a bit more'* to rationalise them, as well as *'sort of, play devil's advocate'* with themselves to identify the reason why things have been done [PUB INT P115 L396-397]. For others, this involved talking aloud to themselves. Allowing them, in some respects, to let their frustration out. P101 for example, would almost scream to themselves, and ask themselves questions in an attempt to understand the reason behind other people's behaviour:

'I do kinda just go ''ahhhhhhh'' [laughs]. Yeah, and I will, kinda have a little, you know, chat with myself like, ''why do people have to be like this?''' [IND INT P101 L234-236]

Reflecting the notion that humour allows people to distance themselves from the unpleasant aspects of work (Cohen and Taylor 1976: 34), a few participants also explained how they attempt to reinterpret the situation using humour so that it is less threatening, suggesting a positive reinterpretation of the situation. They attempted to '*defuse the moment and lighten things*' [PUB INT P110 L281]:

'There's also, you know the tempt—I suppose an attempt to, to deal with it, there's a lot of humour, there's a lot of laughter in this workplace. Erm, you might be frustrated with something but you'll you know, vent it in a way that everybody else finds funny, [INT: Mmm] and it's intended to be funny….' [PUB INT P110 L273-276]

Theme 4: Aggressive Coping

The final overarching theme focused on both verbal and physical aggression displayed by an individual, including that which is direct or indirect, and exhibited typically to reduce or manage one's own emotional distress, rather than remove or circumvent the source of frustration. As can be seen from figure 4.2, this theme was split into two sub-themes described in more detail below. Overt aggression (4.1) and covert aggression (4.2).

4.1 Overt Aggression

Participants described using both verbal and physical aggression openly towards the source of their frustration (I.e. towards a particular individual or the organisation), usually to reduce or manage their own emotional distress. In contrast to covert aggression (sub-theme 4.2), this behaviour was often quite serious, involving forms of personal aggression and/or property deviance. For example, *swearing*' [PUB INT P102 L511], '*shouting*' [PUB INT P106 L400], '*bullying*' [PUB QUE P155], '*members of staff slamming their hands down on the table'* [PUB INT P102 L509-510], and becoming overtly '*aggressive'* towards others [PUB QUE P108], as well as taking '*money out the till*.' This was consistent with the findings of previous research that has shown a strong link between frustration and behavioural reactions such as, antisocial behaviour

(Spector 1997), CWB (Elias 2013: 204), bullying behaviour (Baillien et al. 2009), and theft (Spector, Fox and Domagalski 2006).

Participants reported verbal aggressiveness towards another individual / groups of individuals within the workplace when discussing both their own reactions to frustration, as well as when discussing the behavioural reactions of others. P12 for example, stated that because of frustration *'I have lost my temper and shouted at a senior member of staff*' [PUB QUE P12]. A reaction similar to that observed by P79 who described the behavioural reactions of other people who had become frustrated:

> *'I have seen loads of frustrated people. Shouting, cussing etc. Mainly when people do not pull their weight, or mess up an order or if the kitchen is stressful. Swearing also from stressed managers. I have experienced chefs shouting at waiting staff for talking amongst themselves.' [PUB QUE P79]*

The verbally aggressive act served as an emotional release for the individual, one that many would describe as unacceptable, causing potential harm to the recipient and those in close proximity. Interestingly however, one participant did suggest that there could be a degree of acceptability regarding some forms of verbal aggression. They explained how the extent to which such behaviour is seen as unacceptable might be dependent on context, and predominantly on its intended meaning:

> *'…When you're at operational incidents […] you can speak in er, in er slightly different way because there's a degree of urgency in what you're trying to do, erm, and so I think you—it might come across, er, maybe a little bit harsh if you are looking at it from an outsiders point of view, but you are dealing with a, a potentially life threatening incident, erm… There noisy as well, the trucks are loud, there's things going on so you need to speak, quickly, loudly, [INT: Mmm] and you need to get your point across, erm, so again I think we'll of all had frustrations of certain things then, but that's maybe—it's just down ter, try na emphasise a point and try na deal with what's in front of ya.' [PUB INT P114 L284-294]*

This finding suggests that aggressive behaviour may not always be negative and/or counterproductive and supports the notion that organisational norms regarding

interpersonal behaviour may not necessarily reflect societal norms and may vary across departments and between individuals (Miner et al. 2018).

Important to note was that verbal aggression was not only confined to the workplace. P111 for example displayed verbal aggression towards their partner and children when returning home from work. Something that caused distress for both their family and themselves.

> *'…I've got two daughters, erm, [age], and the eldest said to mum, she said, ''mum, before you had us did daddy used to shout at you?'' An, and that's er, its heart breaking. I've got a lad twelve as well, an it's not nice to sort of come home frustrated an, an angry an what have you, and they do something, the tiniest bit wrong an then shout at them…' [PUB INT P111 L372-377]*

The above can be explained by spillover theory, which suggests attitudes and behaviour carry over from one role (e.g. work) to another (e.g. home) for the same individual (Crouter 1984, Piotrokovski 1979).

Participants also described the use of open physical aggression because of frustration at work, primarily towards the organisation itself. Only participants discussing the behavioural reactions of other colleagues reported this reaction, perhaps due to social desirably. P7 for example stated how they had seen a colleague throwing company property:

> *'Colleague 1 threw his VDU across the room because his holiday was not allocated.' [PRI QUE P7]*

While P101 had watched a colleague punch company property:

> *'…he went flying, erm, and just completely lashed out, unnecessarily he got really frustrated, screamed, shouted and then went and punched, erm, we've got like a drawing board in one of the back rooms, erm, it's just a big wooden thing that lifts up, erm, and he punched a hole right through the middle of it…' [IND INT P101 L281-284]*

Both participants observed physical aggression because of frustration that lead to the damage of physical items belonging to the organisation. A reaction that could be argued to be a form of property deviance, a CWB reported by Elias (2013:204).

4.2 Covert Aggression

Participants when discussing their reactions to frustration also described aggressive behaviour that is more subtle or hidden in comparison to overt aggression, often reflecting political deviance and/or manipulation. For example, trying to '*contain work and not let others help'* [PUB QUE P3], '*stealing other people's ideas'* [PRI QUE P7], trying to find things that are '*massively wrong'* with the organisation *[PUB INT P106 L379]*, '*gossiping,'* and '*picking out others shortcomings in a group setting'* [PRI QUE P153]. Behaviours comparable to those reported in previous research such as, bullying (Baillien et al. 2009), social undermining (Duffy et al. 2012), and CWBs (Elias 2013:204).

P108 expressed how they would often end up '*bad mouthing'* a certain department because of their frustration:

> *'…you end up bad mouthing the department really, almost it's like, ''Ah, their useless,'' [INT: Mmm] you know, ''they can't do this for us, they can't do that for us, what's the point in having them''…' [PUB INT P108 L84-86]*

Their aggressive behaviour being quite subtle, yet deliberate, with a clear intention to put the department at a political disadvantage. Behaviour similar to that shown by P113, who would talk to others about a particular individual who was causing them frustration:

> *'I don't tend to respond to him, but erm, it tends to be afterwards when you talk to other colleagues who, who find exactly the same frustrations, [INT: Mmm] you, you compare notes kind of thing, and you inforce just how annoying he is, just to make sure everybody agrees, but yeah.' [VOL INT P113 L110-113]*

Although still putting the individual at a political disadvantage however, the above individual appeared, at least in part, to be displaying such behaviour, not with a direct intent to harm the individual, but instead, to justify his or her own beliefs through selective exposure to confirmatory information. According to cognitive dissonance

theory (Festinger 1957), when faced with potentially conflicting information individuals will often seek evidence that is consistent with their cognitions to avoid cognitive dissonance.

Interestingly, some participants expressed such behaviours after engaging in those that may be classified as productive and beneficial to the organisation and its employees. P108 for example, prior to *'bad mouthing the department'* actually attempted to voice their concerns and bring about positive change, engaging in a form of problem-focused coping:

> *'Erm, I pretty much just keep on, and on, and on, and have fazes where I get very disillusioned with it, and I might not, raise it again for a couple of years, [INT: Mmm] and then, then I'll think, do you know what, it's unacceptable, I really need to try an see if I can't move it forward. Per—er, personel might have changed, you know, they might have a different approach, so you get back to them, try again, and then it doesn't happen, and then you know, you end up bad mouthing the department really...' [PUB INT P108 L79-84]*

Nevertheless, as highlighted in sub-theme 1.1, participants who voiced their concerns regarding frustration often felt that nothing was done in response. This was also the case for P108, who after voicing their concerns became more frustrated due to a lack of response, leading them to engage in a mild form of aggressive behaviour.

4.4.2.4 Taxonomy of the Reactions to Work Frustration

The following taxonomy has been developed based on the coherent review of the themes and sub-themes discussed above.

Taxonomy of the Reactions to Work Frustration in the UK

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1. **Social Coping** - Seeking or providing social support from/to others, to reduce or manage the emotional distress experienced, or to do something about the source of frustration itself.

    E. Informational Support **
    Ex. Speaking to someone to gain further information
    Asking people who have had similar experiences what they did
    Conveying information to others to alleviate the issue
    Providing information to someone to highlight the issue

Offering solutions/feedback to try to overcome the problem

*F. Emotional Support **

Ex. Discussing one's feelings with someone
Talking about how one feels to colleagues
Speaking to a friend, partner or family member about how one feels
Seeking emotional support from a professional (E.g. GP or counsellor)
Getting upset and letting one's emotions out (E.g. crying)
Showing sympathy and understanding towards other people *

*G. Instrumental Support ***

Ex. Asking for practical help from others to resolve or circumvent the issue
Talking to someone who could do something concrete about the problem (e.g. management, human resources, union representative)
Actively providing help and support to others to resolve or circumvent the issue

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2. Avoidance Coping – Withdrawal behaviour displayed by an individual, temporarily or permanently, to reduce or manage one's emotional distress.

A. Physical Disengagement

Ex. Resigning from one's job role
Walking away from the situation
Taking a break from the situation to cool down/reflect
Taking involuntary (e.g. going off work sick) or voluntary absence (e.g. taking a holiday, calling in sick even though one is not)
Isolating oneself from others
Avoiding the situation or person that is causing the frustration
Arriving late or leaving early (E.g. to work or work-related meetings)

B. *Psychological Disengagement **

Ex. Reducing the amount of effort one puts into the role
Thinking about leaving one's job/ looking for other jobs
Refusing to do certain things
Engaging in unhealthy eating or drinking habits (E.g. over/restrictive eating, excessive consumption of alcohol/caffeine)
Wasting company time and resources
Starting to smoke or take extra cigarette breaks
Turning to other work-related tasks
Engaging in physical/mental exercise
Trying to switch off one's emotions

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3. Self-Sufficient Coping – Showing independence and self-reliance to reduce or manage one's emotional distress, as well as remove or circumvent the source of frustration.

*A. Active Coping and Planning **

Ex. Taking direct action to try to get rid of the problem (E.g. Implementing training, taking part of in a working group, filing a complaint/grievance, turning off work emails)
Taking direct action to get around the problem (E.g. Using an alternative work location/piece of equipment, referring the matter on)

Doing what had to be done, one step at a time (Reprioritising, working extra hours/staying late)
Trying to come up with a way to handle the problem (E.g. Researching an alternative route)

B. Acceptance Behaviour **
Ex. Learning to live with it
Accepting that it's happened and cannot be changed
Continued working in a polite and professional manner

C. Positive Reinterpretation **
Ex. Looking for something good in the situation
Trying to put things into perspective
Trying to see the situation in a positive light
Making a joke to lighten things up

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4. Aggressive Coping - Verbal and/or physical aggression, including that which is direct or indirect, displayed to reduce or manage one's own emotional distress, rather than remove or circumvent the source of frustration.

A. Overt Aggression
Ex. Becoming verbally aggressive towards others (E.g. Screaming, shouting, swearing)
Becoming physically aggressive towards things (E.g. slamming the phone down, throwing the computer or punching the desk)

B. Covert Aggression
Ex. Engaging in negative gossip or social undermining
Trying to sabotage one's employer
Manipulating the situation
Bypassing others
Containing work and not letting others help
Stealing the ideas of others
Stealing money from one's employer

** Reaction not identified in previous research

* Reaction identified in previous research albeit to a lesser extent

4.5 Conclusions, Implications and Recommendations

Phase one of the current research has provided further insight into the high prevalence of work frustration in the UK across a variety of organisational sectors, supporting recent media (Huffington Post 2016, Personnel Today 2019, The Guardian 2019, The Telegraph 2016) and research reports (Process Bliss 2019, Staples 2018). Moreover, it has allowed for a more in-depth exploration of the sources of frustration and frustration coping strategies, leading to the identification of additional frustrators (e.g. bullying behaviour), constructive coping strategies (e.g. active coping), and frustrators that have dissipated over time (e.g. role conflict). Findings that also contributed to the

development of two new comprehensive taxonomies, classifying the sources of work frustration and frustration coping strategies per a set of common conceptual domains and dimensions.

Sources of Work Frustration

Using the process for TA set out by Braun and Clarke (2006), four overarching themes were highlighted concerning the sources of work frustration. Namely, human factors and work design, workplace behaviour and ethics, workplace performance and productivity, and organisational processes and change (see figure 4.1). Particularly evident across these themes was the issue of high demands and insufficient resources. When discussing the sources of their frustration, participants often reported high demands linked to frustrators such as, excessive workload, non-compliance, incompetence, and constant organisational change. Moreover, they also identified inadequate resources at the organisational (e.g. insufficient pay), interpersonal (e.g. poor staffing levels), job (e.g. inadequate material) and task level (e.g. lack of control and job autonomy).

Consistent with the research of Bakker and Demerouti (2007) high demands often led to further frustration for participants due to an increase in job strain and a reduction in resources. For example, those who identified high pressure and overload as the source of their frustration, typically experienced unwelcome but inevitable consequences such as, long working hours, limited breaks and work-life conflict. This led to an increase in frustration for participants. Long working hours, limited breaks and work-life conflict, acting as potential mediators in the relationship between high pressure and overload and frustration. Inadequate resources on the other hand led to further frustration for participants due to increased job strain and a subsequent increase in work demands. For example, those who identified faulty equipment as the source of their frustration often had to undertake additional tasks to achieve their goal. The increase in mental and/or physical demand, acting as a potential mediator in the relationship between faulty equipment and frustration.

Notably, high demands and insufficient resources were also identified across all four themes as potential mediators, highlighting the importance of demands and resources when considering the sources of frustration and its prevalence. Some participants for example, described how they had become frustrated by incomprehension and misunderstanding shown by other people in relation to their own work. An issue further exacerbated by a depletion in resources and an increase in demand for the participant.

The participant often using additional resource and mental demand to go through the task again with the individual concerned.

In essence, participants frequently experienced an imbalance between job demands and resources, which in line with the JD-R Model (Bakker and Demerouti 2007, Demerouti et al. 2001) gave them little time to adequately recover and achieve or maintain their work goals. This finding has important implications for organisations in terms of work design, with organisations needing to ensure a reasonable balance between employee demands and resources to reduce frustration. This may be possible through the process of job crafting, a proactive process in which employees make changes to the level of demands and resources in their jobs to make them more meaningful, engaging, and satisfying (Demerouti 2014). Research has shown that employees who are able to craft their job resources and challenging demands experience higher levels of well-being, including increased engagement and job satisfaction, and decreased burnout (Tims, Bakker and Derks 2013).

Reactions to Frustration

Four overarching themes were highlighted regarding the reactions to work frustration, specifically, social, avoidant, self-sufficient, and aggressive coping (figure 4.2). Social and self-sufficient coping were of particular interest, consisting of behaviours that were more constructive, and associated with positive outcomes, in contrast to those cited in previous research such as, bullying and aggression (Baillien et al. 2009), social undermining (Duffy et al. 2012), theft and fraud (Spector, Fox and Domagalski 2006). For example, participants who engaged in social coping often did so constructively, providing important information, voicing concerns and offering solutions in an attempt to raise awareness and improve the organisation. For some, this appeared to reduce the frustration experienced, and provided them and others with greater understanding and situational awareness, reassurance and empathy, as well as training, coaching and mentoring. A finding that might be explained by the buffering hypothesis (Cohen and Wills 1985) with social support acting as a buffer against stress.

Although seemingly absent in prior research, the finding of more constructive behaviours in the current research supported the notion of Ayoko, Konrad and Boyle (2012), that the initial expression of frustration does not always lead to negative outcomes. Instead, it may help to prompt change and identify potential issues that require attention. Of course, such positive outcomes may not always occur depending on the duration and frequency of frustration. What appeared to be highly evident from

the data was that if the frustration became frequent or pro-longed, participants would eventually begin to engage in destructive rather than constructive behaviours. That is to say, although a few short periods of frustration may lead to positive outcomes, when left unresolved and/or the frustration occurs frequently, it can lead to outcomes such as, absenteeism (Grandey et al. 2004), low occupational commitment (Radebe and Dhurup 2016), and turnover (O'Connor et al. 1984). A finding that supports the notion that when faced with continual or severe frustration, an individual is more likely to engage in destructive coping strategies (e.g. aggression, absenteeism and turnover) (Spector 1978).

A further factor that may result in a change in coping strategy from constructive to destructive is the level of social support available. Participants often described how they would engage in potentially constructive behaviour during the initial stages of frustration, such as, voicing their concerns to management, using positive confrontation to bring about positive change. Nevertheless, either line management or those in higher authority typically ignored them. This appeared to cause further frustration for the participant, as management were not listening to their concerns. This showed a lack of care and consideration that can result in increased turnover (see theme 2). This behaviour has a huge financial impact on organisations, the cost of replacing one employee being on average more than £30,000 (Oxford Ergonomics 2014). An implication of these findings is that attention needs to be given to the availability of effective interpersonal support from management and colleagues, as well as independent practices, support that seeks to enable change rather than hindering it. Having such support readily available may encourage the continuation of constructive coping strategies, as well as reduce the frequency and duration of frustration.

It is important however to remember that some individuals use solely destructive strategies irrespective of the frequency and duration of frustration, and the social support available. In fact, an individual's choice of coping strategy may also depend on whether the frustrator is arbitrary or not. For example, participants in phase one tended to report more destructive rather than constructive strategies when the frustrator was perceived as personal and/or purposeful. A finding reflective of Cohen (1955) and Pastore (1952) who proposed that people only become frustrated and/or aggressive when frustrations are arbitrary, not if they believe the goal interference is justified.

Moreover, although not captured in phase one of this research; individual differences in personality and emotional and social competence (ESC), the latter based on emotional intelligence (EI), may have a significant impact on an individual's choice of coping strategy. Individuals high in ESC for example are usually more self-aware and able to regulate their emotions. They are also more likely to engage in social support seeking in comparison to those low in ESC due to their ever-increasing network of social relationships and emotional support structures (kunnanatt 2004). There is, therefore, a definite need to develop interventions that take account of these differences. Future research should concentrate on the investigation of the sources of frustration and frustration coping strategies, as well as the mediating factors involved. A focus on social support availability and ESC could produce interesting findings that account for a significant amount of the variance in the relationship between the sources of frustration, frustration as an emotion, and frustration coping strategies. Firstly, work should be undertaken to adapt traditional measures of frustration that currently place emphasis on job-related conflicts and aggressive behaviours, particularly given the advancement of knowledge presented in phase one.

Limitations

As with all research, there were limitations to phase one, including issues surrounding transparency and replicability, as well as trustworthiness and reflexivity covered earlier in chapter 3. A further limitation is the use of self-report, which may have been the reason for the low level of reporting concerning aggressive coping strategies. Lee (1993) purports that individuals often tend to underreport on questions about sensitive topics such as deviant behaviour, for fear of being caught and punished. The current research did however attempt to minimise this issue with anonymous questionnaires and by asking participants about their observations of others. It was expected that this would reduce issues surrounding social desirability, fear of discovery and reprisals, and that participants would be more willing to discuss the negative behaviour of others.

While the response rate from individuals was satisfactory, the number of organisations that allowed distribution of the study through internal communication channels was also limited (3). A vast number of organisations declined to participate, primary as they were undergoing substantial change, government cuts, or restructuring. They did not want to unsettle their employees any further or elicit an undesirable response. In addition to the issue of social desirably, this could explain the low levels of reporting regarding aggressive coping strategies, with employees working in such organisations

being the most likely to provide rich information on the topic. An issue also reported by Fox and Spector (1999).

Moreover, the findings of the current research may not be generalizable outside of the UK, especially to non-western cultures. Different cultures possess various cultural dimensions and values, such as individualism-collectivism, masculinity-femininity, uncertainty avoidance and power distance (Hofstede 1994). Differences that are likely to influence the prevalence of work frustration, the sources of frustration, and subsequent outcomes. Spector et al. (2004) for example in a 15-country study found that working hours, a common source of frustration, had a strong relation to work-family conflict in individualist Anglo countries but not in collectivist countries. Collectivist countries (e.g. China) seemingly less frustrated by the spill over of work into family life, perhaps because they perceive both work and family domains as integrated. This is in contrast to individualist cultures (e.g. UK and USA) who tend to view them as separate entities (Yang 2005).

Although not a limitation of the current research, it is also important to note that the current analysis does not provide a definitive account of the sources of work frustration and frustration coping strategies. Rather, the themes and taxonomies presented represent the researcher's interpretation of the data and, given the complexity of organisations that are ever evolving, it is likely new frustrators and methods of coping will emerge in the future. As a result, researchers may need to explore these concepts further over time, refining and extending our knowledge of frustration at work.

4.6 Chapter Overview

This chapter has outlined the multi-method approach taken to identify the sources of and reactions to work frustration in different organisational sectors in the UK, as well as gain a more comprehensive understanding of the phenomena, combining the data gathered utilising three different methodologies (semi-structured interviews, diaries and an online questionnaire), reducing biases and increasing confidence in the results. It has also detailed the analytical methods undertaken (thematic and quantitative content analysis) to identify the themes denoted by participants and determine their frequency across data collection methods and organisational sectors. The four overarching themes highlighted as the sources of frustration being: 'workplace behaviour and ethics,' 'human factors and work design,' 'workplace performance and productivity,' and 'organisational processes and change.' The four overarching themes identified as reactions to frustration being: 'social coping,' 'avoidant coping,' 'self-

sufficient coping,' and 'aggressive coping.' Finally, it provided two new comprehensive taxonomies, classifying the sources of frustration and frustration coping strategies per a set of common conceptual domains and dimensions. The next chapter will outline the development and validation of two new measurement tools informed by each of these taxonomies: The Work Frustration Measurement Scale (WFMS) and the Coping Inventory for Frustrating Situations (CIFS).

Chapter Five
Phase 2 – Measurement Development and Validation

5.1 Introduction and Aim

In light of the additional frustrators (e.g. unlawful discrimination and personal incompetence) and more constructive frustration coping strategies (e.g. social and active coping) identified in phase one (chapter four), as well as the fact that previous frustration measures have placed emphasis on job-related conflicts (e.g. Keenan and Newton 1984, Rizzo et al. 1970, and Spector and Jex 1998) and aggressive behaviour (e.g. Spector et al. 2006, Keenan and Newton 1984) (chapter two), the second phase of the current research involved the initial development and validation of two new up-to-date self-report measures of work frustration: The Work Frustration Measurement Scale (WFMS) and the Coping Inventory for Frustrating Situations (CIFS). The development of both measures was informed by the findings from phase one (chapter four) and contributed to the following research aims:

- To develop and validate a new measure of the sources of work frustration;
- To develop and validate a measure of the reactions to work frustration.

As detailed in chapter three (general methodology), initial development and validation were undertaken in two stages, capturing six steps proposed by Hinkin, Tracey and Enz (1997) to produce valid and reliable scales. Stage one involved both item generation and content adequacy assessment, while Stage two consisted of questionnaire administration, factor analysis, internal consistency assessment, and construct validity. Both stages will now be discussed in detailed followed by an overview of the results.

5.2 Stage One

5.2.1 Step One: Item Generation

As detailed in chapter three, a deductive approach was taken in step one to generate the initial sets of items. The findings from phase one of the current research, along with pre-existing research and theory (E.g. Berkowitz 1980, Dollard et al. 1939, Spector 1978, Storms and Spector 1987) were revisited on several occasions. Doing so allowed the researcher to capture a wide range of work frustrators and frustration coping strategies, as well as anticipate sub-constructs for both the WFMS (e.g. human factors and work design, workplace behaviour and ethics, individual performance levels, and organisational processes and change) and CIFS (social coping, avoidant coping, self-sufficient coping, and aggressive coping). A series

of pre-validated scales (see stage two step three) were also used to support the theoretical basis of each measure and help guide item wording.

To increase the probability of each construct being adequately represented, thrice as many items as desired for the final measurement scales were developed. 62 items for the WFMS and 50 items for the CIFS (see appendix 5a and 5b). Netemeyer et al. (2003: 96) suggest that at this stage in the development process 'it is better to be over inclusive of the construct domain rather than inclusive in generating an item pool.' Moreover, Devellis (2003: 66) recommend that an item pool three or four times the size of the final scale is desirable, and 'the larger the item pool, the better.' This helps to ensure that after item analysis there are a robust number of items to represent the construct. For a measure to be internally consistent and valid there must be a sufficient number of items to assess each construct and/or sub-construct (Thurstone 1947). Approximately 4 or 5 items per sub-scale (Harvey, Billings and Nilan 1985, Hinkin and Schriesheim 1989).

To increase content validity of the items, the wording of items was also considered. The wording of items in a Likert scale differ from one scale to the next. There can be several reversed items (Gliner, Morgan and Leech 2017, Hartley 2013), or an equal number of reversed and non-reversed items (Baumgartner and Steenkamp 2001). Reversed items helping to protect against response bias in the form of acquiescence, affirmation or agreement bias, as well as reduce ceiling and floor effects (Netemeyer et al. 2003: 99). Some researchers argue against the use of reversed items altogether (E.g. DeVellis 2003) as they can lead to participant confusion, lowering the validity and internal consistency of the scale (Salazar 2015). They can also lead to the emergence of a method factor, which can potentially contaminate the factor structure (Zhang, Noor and Savalei 2016). It is important therefore when generating an item pool to consider the advantages and disadvantages of using reversed items, and whether the benefits outweigh the risks.

For the CIFS most coping strategies identified were seen as desirable (E.g. social coping, active coping and positive re-interpretation), with the exception of aggressive coping. It was, decided that the item pool would contain no reversed items as the probability of response bias appeared low. The WFMS however was seen to reflect a wide variety of attitudes and behaviours displayed by the individual themselves or others, which could be deemed socially inappropriate (E.g. favouritism, dishonesty, poor job knowledge, and aggression). Several reversed items were therefore included in the scale to help avoid response bias. As detailed below, the need to minimise potential confusion was acknowledged, and considered during

response scale development. The potential impact on factor structure was also carefully assessed during factor analysis.

Items were checked throughout the development process by the research team to ensure they were short, meaningful and not too complex, as well as free from specialist jargon or ambiguous wording. Clarity is of high importance when writing items. They should be relevantly short to reduce the chances of respondent boredom and fatigue (Schmitt and Stults 1985), but without losing item meaning, as well as use of language that can be recognised by the target population (Netemeyer et al. 2003: 97). There must also be consistency among items, with all items assessing the phenomena from the same perspective. For example, there should not be a mix of items assessing both attitude and behaviour outcomes (Harrison and McLaughlin 1993). Each item should address one issue only. Trying to address multiple issues in one item by using 'double-barrelled' items (e.g. my work is difficult and time pressured) can lead to confusion and/or be subject to different interpretations (Devellis 2003, Netemeyer et al. 2003).

5.2.2 Step Two: Content Adequacy Assessment

In the second step, the items were tested for content adequacy to provide support for construct and face validity. Content adequacy assessment is typically straightforward, requiring only small samples and simple analytic techniques (Hinkin and Tracey 1999). This research followed an approach similar to that undertaken by Fida et al. (2016). Specifically, three subject matter experts (SMEs) recruited to read the items developed in the previous step, including one of the most cited researchers/Professors within the frustration literature, an Assistant Professor with more than 30 years' experience in human resource management, and a Chartered Occupational Psychologist with strong expertise in the development, validation and administration of workplace assessments. When reading the items, the SMEs rated independently on a scale from 1 (not relevant at all) to 5 (fully relevant) the degree to which each of the items were relevant to the construct being assessed, as well as provided comment on the appropriateness of wording, adequacy, plausibility, and redundancy.

The intra-class correlation coefficient (ICC) was calculated to examine inter-rater agreement using SPSS 24, with an ICC of 1 indicating perfect agreement and 0 indicating random agreement. In line with the recommendations of Cicchetti (1994) ICC values lower than .40 were seen to indicate poor inter-rater agreement, values between .40 and .59 a fair agreement, .60 and .74 a good agreement, and.75 and 1.0 an excellent agreement. Results for the WFMS and CIFS yielded an intra-class correlation coefficient of .97 and .93, respectively, showing excellent agreement.

The relevance of each item was computed by averaging the scores given by SMEs. Items with a relevance score lower than 2.5 (scale central score) seen as irrelevant and thus excluded. Items' relevance scores for the WFMS ranged from 2.7 to 4.7 with none of the 62 items scoring less than 2.5 (see appendix 5c), and for the CIFS, 1.3 to 4.7, with 2 of the 50 items scoring less than 2.5 (items 49 and 50) (see appendix 5d). Consequently, both items were removed from the CIFS leaving 48 items. One item (item 21) was also removed from the WFMS in response to SMEs comments pointing to the item being too broad and highly reflective of item 9. This resulted in the WFMS reduced to 61 items.

5.3 Stage Two

5.3.1 Step Three: Questionnaire Administration

Participants

The retained items were administered to 411 participants (76.9% female/ 23.1% male). Participants ranged from age 16 to 66 with a mean age of 25.88 (SD = 9.35) and were working within a variety of occupations in the public (43.3%), private (39.4%) and voluntary (11.4%) sector, or self-employed (5.8%). 17.8% reported having management responsibilities.

Measures

Several pre-validated scales were administered alongside the WFMS and CIFS to assess the distinction and overlap among the proposed and existing scales, and therefore assess both convergent and divergent validity. These measures were hypothesised to be strongly related/unrelated to the new scales and included; The Organisational Constraints Scale (OCS), Quantitative Workload Inventory (QWI), Interpersonal Conflict at Work (ICAW) Scale, Job Satisfaction Scale (JSS), Frustration Scale (FS), COPE Inventory, and the Counterproductive-Work Behaviour (CWB) Scale.

The OCS (see appendix 5e) was developed by Spector and Jex (1998) using the 11 situational constraints identified by Peters and O'Connor (1980). It consists of 11 items, each of which assess one of the 11 constraints. For example, ‘poor equipment or supplies,’ and ‘incorrect instructions.’ Participants are asked to indicate how often they find it difficult or impossible to do their job because of such constraints, with responses ranging from less than once per month or never (1), to several times per day (5). Scores are totalled, with a high total score representing high levels of constraints (possible range 11 to 55). Coefficient alpha has not been reported as it is not seen as an appropriate indication of reliability for the OCS. Although

the scale yields a total score, the items are not considered parallel forms of the same underlying construct. Spector and Jex (1998) propose that the scale is a causal indicator scale (Bollen and Lennox 1991), different from the traditional effect indicator scale. Whereas items in the latter are viewed as replicates of one another with responses reflecting the effects of the underlying construct. Items in a causal indicator scale are not seen as manifestations of the same underlying construct. Instead once combined they constitute or cause the construct. As an example, being frequently interrupted by others would not be classed as equivalent to having a lack of equipment. Experiencing both however represents a higher level of constraints.

The 5-item QWI (Spector and Jex's 1998) (see appendix 5f) assesses the amount or quantity of work in a job. Participants are asked to indicate how often each statement occurs, for example, 'how often does your job require you to work very fast?' Response choices range from less than once per month or never (1) to several times per day (5) (possible total score 5-25), with high scores representing a high level of workload. The data has shown strong internal consistency (.82) across 15 studies (Spector and Jex 1998).

The ICAW Scale (Spector and Jex 1998) (see appendix 5g) is a 4-item summated rating scale designed to assess interpersonal conflict in the workplace. It has been shown to have a fairly good level of internal consistency reliability (.74) across 13 studies (Spector and Jex 1998). Items include questions such as, 'How often do you get into arguments with others at work?' and 'How often do other people do nasty things to you at work?' Five response options are provided ranging from never (1) to very often (5) (Total possible score 4-20), with high scores representing frequent conflict with others.

The 36-item JSS (Spector 1994) (see appendix 5h) is a 9-facet scale, which assesses an individual's attitudes towards aspects of their job. Each facet (Pay, Promotion, Supervision, Fringe Benefits, Contingent Rewards, Operating Procedures, Co-workers, Nature of Work, and Communication) is assessed with 4 items and a 6-point rating scale ranging from disagree very much (1) to agree very much (6). A total score is calculated for all items combined, taking into consideration that about half of the items are reversed scored. The internal consistency for each facet ranges from .60-.82, with an alpha of .91 across all facets.

An adapted version of Peters and O'Connor's (1980) 3-item FS (see appendix 5i) was used to assess participant levels of frustration at work. The original scale displaying strong internal consistency (0.81). The second and third statement from the original measure were retained ('being frustrated comes with this job,' and 'overall, I experience very little frustration on this

job (R)'). The first statement however was reworded from 'trying to get this job done was a very frustrating experience,' to 'trying to get my job done is very frustrating.' The revised statement was seen as more appropriate for assessing an individual's current job role. Respondents were asked to indicate on a scale of 1 (strongly disagree) to 7 (strongly agree) how much they agreed with the statements. Prior to calculating the total score, reverse coding was undertaken on item 3. High scores represent high levels of frustration.

Carver et al.'s (1989) COPE Inventory (see appendix 5j) was used to assess a range of respondent coping strategies. The COPE is multidimensional with an average alpha of .79. It measures five distinct aspects of problem-focused coping, five aspects of emotion-focused coping, and three additional coping responses, which are argued to be less useful. Each are assessed using separate subscales containing 4-items. Only items from sub-scales that were seen as relevant to the current research based on the findings of phase 1 were included in the current research (i.e. positive reinterpretation and growth, mental disengagement, focus on and venting of emotions, use of instrumental social support, active coping, humour, behavioural disengagement, restraint, use of emotional social support, substance use, acceptance and planning). Items reflecting suppression of competing activities, denial and religious coping were removed, as they were not seen as prominent frustration coping strategies based on the findings of phase 1.

The 45-item CWB scale (Spector et al. 2006) (see appendix 5k) consists of acts that harm or are intended to harm organisations. It is designed to be scored as either overall CWB (all items), or as two subscales (43 items) that are classified into CWB directed toward the organisation versus people. For the purpose of the current research, the total score for all items was utilised. Participants are asked to indicate how often they have done each of the things described on their present job. For example, 'purposely damaged a piece of equipment or property,' or 'started or continued a damaging or harmful rumour at work.' Responses are provided on a rating scale from 1 (never) to 5 (every day). The internal consistency for the overall scale is excellent (.90).

Responses to the WFMS and CIFS were measured on a four-point Likert-type scale. There any many different types of item scaling (e.g. Thurstone, Likert, Guttman and Semantic Differential Scales (Frey 2018)), the Likert-type format being one of the most common across scales in the field of social sciences (Lozano, Garcia-Cueto and Muniz 2008). According to Lozano et al. (2008: 73) 'the optimum number of alternatives is between four and seven. With fewer than four alternatives the reliability and validity decrease, and from seven alternatives onwards psychometric properties of the scale scarcely increase further.' Due to the high risk

of social desirability bias associated with frustration and aggression research (E.g. Pastore 1952, Vigil-Colet, Ruiz-Pamies, Anguiano-Carrasco and Lorenzo-Seva 2012), as well as the need to ensure clarity, reduce potential confusion and respondent fatigue, a four-point scale with no mid-point (i.e. neutral category) was seen as the most appropriate choice.

Research has shown that social desirability bias arising from a respondent's desire to 'look good,' or not be seen to give a socially unacceptable answer, can be reduced by omitting the mid-point (E.g. 'neither agree or disagree') (Garland 1991). The mid-point typical used as 'a kind of dustbin' for 'don't know' or 'no answer' (Galtung 1967), or as a self-contradictory solution (Shaw and Wright 1967). Respondents were therefore required to make a clear choice rather than provide an ambiguous answer. Given that verbal scale point labels should be sufficiently familiar (Rohrmann 2007), the WFMS ranged from totally disagree (1) to totally agree (4), using anchor points comparable to those used in the JSS (Spector 1994). Similar to the CWB Scale (Spector et al. 2006), CIFS ranged from 'never' to 'always.'

Procedure

Following ethical approval from Coventry University Ethics (see appendix 3d) an URL link to the web-based questionnaire was disseminated to participants via internal communication channels (i.e. email, noticeboards) and social media (please see chapter 3 section 3.7.1 for further information on participant recruitment). Participants were directed to click on the link that took them to the participant information sheet (see appendix 3l), as well as the informed consent checklist (see appendix 3r) which they agreed to prior to completing the questionnaire. To protect anonymity of the research participants were requested to create and note down a participant information number prior to taking part. After the questionnaire was completed participants were presented with a debrief form (see appendix 3x).

Following the completion of data collection all data was uploaded to SPSS version 25. A copy of file was made in Microsoft Excel to enable conversion into a Comma Separated Values File and ANSI encoding, for use with MPlus 8.1 (Muthén and Muthén 2018) and FACTOR 10.8.03 (Lorenzo-Seva and Ferrando 2006).

5.3.2 Step Four: Factor Analysis

Prior to conducting factor analysis, the data collected was first examined to check for incomplete or missing data, as well as outliers, a necessary step prior to any in-depth data analysis (Hair et al. 2010, Tabachnick and Fidell 2007). The suitability of the data set for factor analysis was analysed and the number of factors to be extracted were determined.

Incomplete or Missing Data

As the data was collected using an online survey tool where responses to items were forced, with respondents unable to continue until all responses were entered, the likelihood of incomplete or missing responses was non-existent. Nevertheless, the data was eyeballed on several occasions prior to analysis, and checks were also undertaken on the frequency of responses to items using SPSS to ensure there had been no errors during data inputting. No errors were found.

Outliers

Univariate outliers were determined using z-scores and conventional criteria (E.g. Tabachnick and Fidell 2013), with cases 3.29 or more standard deviations above or below the mean (i.e. z≥ +/-3.29), being classified as outliers. Mahalanobis distance was employed to detect multivariate outliers with cases below the acceptable threshold (.001) proposed by Tabachnick and Fidell (2007) deemed problematic. There were several extreme univariate outliers (see Table 5.1), and 11 multivariate outliers, although some outliers were expected due to the large sample size (Seo 2006).

Table 5.1: Number of univariate outliers per scale prior to and following participant removal

Variable	Z-scores (range)	Number of Z-scores >3.29	
		N=411	N=410
TOTAL WFMS	-3.051, 2.441	0	0
TOTAL CIFS	**-3.377, 4.338**	3	2
TOTAL OCS	-1.364, 3.171	0	0
TOTAL QWI	-1.997, 1.388	0	0
TOTAL ICAW	-0.972, **3.757**	2	1
TOTAL JSS	-2.506, 2.698	0	0
TOTAL FS	-1.829, 1.817	0	0
TOTAL COPE	**-3.509, 3.970**	3	2
TOTAL CWB	-0.711, **4.906**	7	6

Note: Outliers are highlighted in bold. N=number of participants

When examining the participants whom were identified as outlier's, one participant was suspected of intentional misreporting due to consistently extreme responses (E.g. all 4's or 1's) across all measures. This participant was classed as an illegitimate outlier and removed from the dataset leaving 410 participants. The remaining outliers appeared to be genuine respondents with no incorrect entry or improper sampling. They were deemed natural due to

the nature of the data; with several of the variables (CIFS, COPE, and CWB) containing serious offences and/or socially undesirable behaviours which few people would report. Deleting these cases would result in the loss of participants who did admit to such offences/ behaviours. Moreover, it would result in a decrease in sample size and the removal of valuable data points. The remaining outliers were therefore left in for the statistical analysis and a decision made to use robust estimation methods (e.g. WLSMV) which can be used in various situations, including the presence of outliers and non-normality (Flora and Curran 2004, Schumacker and Lomax 2016: 58). Non-normality being highly likely given the presence of extreme outliers in the data set, as well as the fact that a great majority of data in behaviour research does not follow univariate or multivariate normal distribution (Micceri 1989). Given the decision to use robust estimation methods, the normality of the data set was not conducted in this research.

Factorability of the Data Set

To assess whether the data was suitable for factor analysis, FACTOR 10.8.03 was used to examine the inter-item correlations among the variables using the KMO test (Kaiser 1974) and Bartlett's (1950) TOS. The software's ability to calculate polychoric correlations seen as advantageous. As detailed in chapter three, data is seen as factorable if the KMO test value is above .80 (Kaiser 1974), and the *P* value calculated using Bartlett's TOS is less than .05 (Watson 2017). The KMO statistic for the WFMS and CIFS was .88 and .85 respectively, and Bartlett's statistic was significant for both the WFMS ($p < .001$) and CIFS ($p < .001$), suggesting the items shared an excellent degree of common variance and the data was factorable.

Determining the Number of Factors

Before determining the number of factors to be obtained, the data set was split randomly using SPSS with a minimum of 200 participants in each half. A sample of 200+ being classed by Gorsuch (1978) as large and is the minimum sample size recommended for consistent factor recovery (Guilford 1954). This resulted in a 200/210 split and allowed for cross-validation, applying EFA to one half of the sample (200) and confirming the structure using CFA on the other half (210). A standard process when the sample size allows it (Brown 2006: 301).

The number of factors to extract was determined by optimal parallel analysis (PA) (Timmerman and Lorenzo-Seva 2011) and minimum average partial test (MAP) (Velicer 1976) (See table 5.2). Optimal PA, also known as minimum rank factor analysis (PA-MRFA) was utilised instead of Horn's PA (1965) as it conducts PA based on the same type of correlation matrix (Timmerman and Lorenzo-Seva 2011). For the purpose of this study, a Polychoric correlation matrix.

The Polychoric correlation could not converge when analysing the CIFS and therefore Pearson correlation was computed for this measure. Researchers have found that polychoric correlations often fail to converge (Babakus, Ferguson and Jöreskog 1987, Timmerman and Lorenzo-Seva 2011). In an experiment, Timmerman and Lorenzo-Seva (2011) found a convergence rate across all 10,400 simulated data matrices to be as small as 37.01%. Results did show that Polychoric correlations (that did converge) often appeared to be more reliable than Pearson correlations. However, Polychoric-based PA did not always appear to be superior to Pearson-based PA, specifically when there were four-ordered response categories, leading to a slight decrement in performance. They also suggested that the differences in performance between the Polychoric- and Pearson-based variants were small when using PA-MRFA. They therefore concluded that to assess the number of common factors of an ordinal data set in empirical practice, use the Polychoric 95% threshold PA-MRFA or, if convergence cannot be reached, the Pearson mean threshold PA-MRFA. The above issue of non-convergence therefore was seen as ok, especially given that the CIFS scale had four-ordered response categories.

Table 5.2: Number of Factors to be Extracted for WFMS and CIFS

Measurement Scale	Number of Factors	
	PA	MAP
WFMS	6	3
CIFS	5	3

Factor Analysis

Factor Analysis for both measures were undertaken using MPlus 8.1 to explore further their dimensionality. MPlus 8.1 was used as it is a flexible statistical modelling program that allows researchers to analyse a variety of observed variables, including those that are ordered categorical (ordinal), using a range of models and robust estimators (Muthén and Muthén 2018). As detailed in chapter three, the extraction method applied across all three approaches utilised (EFA, ESEM and CFA) was the WLSMV method. A robust method that allowed for the analysis of ordinal data containing outliers and violations of normality. Promax rotation was implemented when analysing the WFMS using EFA, as it was expected that the factors extracted would be moderately correlated. This expectation was in line with phase one of the current research, in which a range of different albeit interconnected frustrators were identified. In contrast, varimax rotation was employed when analysing the CIFS, as little correlation was expected between the factors. Scales of a similar nature (e.g. COPE) have been found to

contain very weak correlations between sub-scales, even between those that are conceptually polar opposite, such as, acceptance and denial (Carver, Scheier and Weintraub 1989). The fit indices used to assess model fit for each analytical approach are shown below (table 5.3) to aid interpretation.

Table 5.3: An Overview of the Fit Indices used in the Current Research

Fit Indices	Acceptable value/range	EFA	ESEM	CFA
SRMR	<0.08	*	*	
RMSEA	<0.08	*	*	*
CFI	.90 to 95		*	*
TLI	.90 to 95		*	*
MI	<10		*	*
EPC	<.316		*	*
χ2 (DIFFTEST)	p >.05			*

Note: * = applicable to the above approach

5.3.2.1 Exploratory Factor Analysis (EFA)

Work Frustration Measurement Scale (WFMS)

In response to the findings of the parallel analysis and MAP test, EFA was undertaken requesting a 3, 4, 5 and 6 factor solution. According to Costello and Osborne (2005) multiple runs of EFA should be conducted on the minimum and maximum number of factors indicated and in-between. When considering both RMSEA and SRMR all the solutions fit the data well statistically, with each additional factor added improving model fit (see table 5.4). Moderate correlations (see appendix 5l) were also identified between each of the factors, particularly for the 3, 4 and 5 factor models, supporting the use of promax rotation.

Table 5.4: Fit Indices for the WFMS attained through EFA with 3 to 6 factors

	RMSEA	SRMR
3 Factor Model	0.054	0.079
4 Factor Model	0.051	0.070
5 Factor Model	0.047	0.063
6 Factor Model	0.045	0.057

The 4-factor solution appeared to be the most theoretically consistent and easy to interpret. All personal aggression items were loaded together, as were all items related to unsuitable workload and job design, consistent with the proposed factor structure. Unlike the initial proposal however, they were found to be stand-alone factors, rather than sub-factors, highlighting the potential significance of these factors in triggering the emotional response of frustration. Other changes to the initial proposal included the combination of items within the workplace behaviour and ethics factor and Individual performance levels factor. A merger, which made sense theoretically given that both focus on the behaviour and ethics of others. The two remaining sub-factors within human factors and work design were also combined with items from organisational process and change. Again, this made sense with the issues being less personal and instead at a broader organisational level.

The 3, 5 and 6 factor solutions were illogical. The 3-factor model combined items, which were theoretically inconsistent, with items such as, 'my allocated workspace is unsuitable,' and 'the materials provided to do my work are inadequate,' being linked to 'I am sometimes subject to false accusations at work.' The 5-factor solution contained a method factor (factor 4) consisting only of positively worded items, and the 6-factor solution, a factor which consisted of only 2 strongly loaded (>.5) items. Given that a factor with fewer than three items is considered generally weak and unstable (Costello and Osborne 2005), this solution was deemed unacceptable. A 4-factor solution was deemed the best solution, consistent with the previously proposed structure.

In line with the recommendations of Matsunaga (2010) EFA was continued on the 4-factor model to reduce the number of items from the initial 61 to a more manageable pool. Retaining only those items, which loaded strongly onto one factor and displayed minimal cross-loading onto to other factors. Costello and Osborne (2005) purport items scoring >.5 to be strong loaders, therefore items loading < .5 were first removed in order, with the analysis re-done after the removal of each problematic item due to changes in model parameters (Pett, Lackey and Sullivan 2003). Any remaining items which had a cross-loading > .2 were then removed to help establish discriminant validity for each factor. This resulted in the removal of 34 items (57, 41, 36, 30, 14, 13, 37, 53, 35, 60, 59, 16, 5, 6, 46, 7, 56, 54, 58, 32, 43, 42, 31, 4, 29, 8, 28, 61, 20, 1, 39, 38, 24) leaving 27 items and an appropriate factor solution (RMSEA = 0.074, SRMR = 0.055) with at least 3 items loading on each factor (Seen table 5.5 below). This vast reduction in items due to the item pool being developed was antipcated, three to four times the size of the desired scale as recommended by Devellis (2003) and was seen as ideal to reduce participant fatigue during future administration.

The remaining factors were subsequently labelled, ‘Workplace Incivility and Perceived Incompetence of Others’ (factor 1), ‘Organisational Constraints and Personal Competence’ (factor 2), ‘Personal Aggression’ (factor 3), and ‘Quantitative Workload’ (factor 4).

Table 5.5: WFMS - Factor Loadings Structure Matrix

	Factors			
Item	1	2	3	4
There are people within my organisation who are selfish	0.883			
There is favouritism within my organisation	0.619			
There are people within my organisation who are dishonest	0.651			
Promises made by people within my organisation are often broken	0.589			
I deal with people at work who are disrespectful	0.668			
I deal with difficult people in my work	0.701			
I deal with people at work who are impatient	0.534			
I often face verbal abuse in my work			-0.969	
I deal with people who are aggressive towards me at work			-0.811	
I have been subject to unlawful discrimination at work			-0.636	
There are people in my workplace who are frequently late/absent	0.534			
I have too much work to do				0.602
I work under time pressure				0.728
I often have to work long hours				0.869
My work hours interfere with my social life				0.748
I often have to work through my lunch breaks				0.716
My allocated workspace is unsuitable		0.641		
The materials (e.g. equipment, funding, information and technology) provided to do my work are inadequate		0.715		

There are a lack of development opportunities in my organisation		0.549
There are people at work who are incompetent	0.581	
I sometimes find myself unable to do certain tasks to my best		0.582
There are people at work who are lazy	0.625	
People at work lack awareness (E.g. in relation to the workload/responsibilities of others)	0.563	
I sometimes lack understanding at work (E.g. in relations to one's own job role)		0.692
There is a lack of communication in my organisation		0.704
I face barriers to communication in my work		0.804
The policies and procedures within my organisation are insufficient		0.536

Coping Inventory for Frustrating Situations (CIFS)

Considering the findings of the PA and MAP test, EFA was undertaken on the CIFS requesting a 3, 4, and 5 factor solution. Similar to the WFMS, each solution fit the data relatively well statistically, except for the 3-factor model which exceeded the preferred SRMR value of ≤ 0.08 (See table 5.6). Each additional factor added improved model fit.

Table 5.6: Fit Indices for the CIFS attained through EFA with 3 to 5 factors

	RMSEA	SRMR
3 Factor Model	0.071	0.084
4 Factor Model	0.061	0.075
5 Factor Model	0.054	0.063

The 3 and 5-factor solutions were illogical, with the 3-factor solution not fitting the data well statistically, and the 5-factor solution containing a factor which consisted of only 2 strongly loaded (>.5) items. Both solutions were deemed unacceptable.

The 4-factor solution was again theoretically consistent and easy to interpret. As anticipated, all social coping items were loaded together on one factor, as were all aggressive coping

items. Different from the initial proposal, items reflecting avoidance behaviour loaded on to the same factor as the aggressive coping items, which made sense theoretically given that both can be perceived as negative responses to frustration. The sub-factor, active coping and planning, appeared strongly as a stand-alone factor rather than a sub-factor of self-sufficient coping. Thus, highlighting a clear distinction between active coping strategies and acceptance and positive re-interpretation. The latter two of which were loaded together on a separate factor. A 4-factor solution was therefore deemed the best solution, consistent with the previously proposed structure.

In line with the recommendations of Matsunaga (2010) EFA was continued on the 4-factor model to reduce the number of items from the initial 48 to a more manageable pool. Retaining only those items, which loaded strongly onto one factor and displayed minimal cross loading onto to other factors. As with the WFMS, items loading <.5 were first removed in order with the analysis re-done after the removal of each problematic item, followed then by any items which had a cross-loading >.2. The removal of 17 items (5, 8, 9,10 ,11 ,12 ,13 ,14 ,15 , 16 ,18 ,21 , 23 ,24 ,25 ,34 ,38) resulted in an understandable model, albeit one which fit just short of the recommended criteria (RMSEA = 0.088, SRMR = 0.074), suggesting the need for further investigation of the model. Exploratory Structural Equation Modelling (ESEM) was therefore conducted on the EFA sample (n=200) to gain additional information on model fit, including multiple fit statistics, modification indices (MIs) and expected parameter change (EPC) values normally provided during CFA.

5.3.2.2 Exploratory Structural Equation Modelling (ESEM)

As expected, the RMSEA was identical to that reported in the EFA model (0.088). Due to the integration of the CFA model within the analysis, further goodness-of-fit statistics were also provided (CFI = 0.903, TLI = 0.870, SRMR = 0.066) highlighting poor model fit. Although most of the items were shown to load significantly on their expected factors, significant cross-loadings >.2 were also present, along with several high MI's and EPC values indicating the need for model re-specification. Items 32 and 33 showed significant cross-loadings (>.2), along with extremely high MIs (≤142.703) and EPC values (≤0.904). Both items were removed from the model, starting with item 33 that possessed a higher cross loading than item 32.

On a re-run of ESEM there was a visible improvement in model fit (RMSEA = 0.080, CFI = 0.933, TLI = 0.908, SRMR = 0.058). Several items however still loaded significantly on more than one factor and displayed high MIs (>10) and EPC values (>.316). These items were reviewed to assess whether they remained theoretically consistent with the current model, and

those, which did not, were subsequently removed in order (Item 7, 45, 17, 31, and 30). This resulted in a good model fit (RMSEA = 0.058, CFI = 0.973, TLI = 0.961, SRMR = 0.044) (see table 5.7) with four factors labelled, ‘Social Coping’ (factor 1), ‘Aggressive Coping’ (factor 2), ‘Active Coping’ (factor 3), and ‘Positive-reinterpretation’ (factor 4).

Table 5.7: CIFS - Factor Loadings Structure Matrix from ESEM

Item	Factors			
	1	2	3	4
Talked to someone to find out more information about the situation	0.731			
Asked people who have had similar experiences what they did	0.700			
Conveyed information to others in an attempt to alleviate the issue	0.858			
Provided information to someone to highlight the issue	0.853			
Discussed your feelings with someone	0.510			
Arrived late to work/meetings or left early		0.565		
Reduced the amount of effort you put in to your job role		0.547		
Refused to perform certain tasks		0.588		
Took direct action to try to get rid of the problem			0.735	
Changed something to alleviate the issue			0.737	
Took direct action to get around the problem			0.758	
Did what had to be done, one step at a time			0.565	
Looked for something good in the situation				0.912
Tried to put things into perspective				0.837
Tried to see the situation in a positive light				0.837
Threatened someone, but not physically		0.805		
Screamed, shouted or swore at someone		0.851		
Became physically aggressive towards things (E.g. slamming the phone down, throwing the computer or punching the desk)		0.888		
Threw or hit company property		0.940		
Took your frustration out on someone else		0.875		
Made insensitive facial expressions (E.g. rolling your eyes, scowling)		0.694		
Engaged in negative gossip/ social undermining		0.770		

Excluded or bypassed certain colleagues	0.822
Tried to manipulate the situation/individual	0.789

5.3.2.3 Confirmatory Factor Analysis (CFA)

Following the completion of EFA, CFA was conducted on both measures using the remaining data set (n=210) in MPlus 8.1, to confirm the proposed distinctions among the four sub-scales for both measures. The χ^2 difference test (DIFFTEST) was also used to assess model fit when there was a strong conceptual rationale for doing so (e.g. there was significant correlation amongst each of the factors which made sense theoretically), comparing the unrestricted correlations model (H1) with a more restrictive H0 factor model (H0).

Work Frustration Measurement Scale (WFMS)

In line with the recommendations of Brown (2015: 290), a first-order factor solution was initially requested to establish a good fit model and examine the magnitude and pattern of correlations among the four factors established during EFA. The model was statistically appropriate (RMSEA = 0.076; CFI = 0.931; TLI = 0.924; SRMR = 0.066), with all except one factor loading remaining above .5 (see table 5.8). Item 33 ('my allocated workspace is unsuitable') had a factor loading of 0.427. Given that loadings of .40 are common in the social sciences (Costello and Osborne 2005) and that it made sense theoretically, the decision to retain the item was made. There were also moderately to strong significant correlations amongst all four factors (see table 5.9), suggesting there could be a single higher-order factor accounting for covariation among the four factors. A second-order factor analysis was conducted using the Mplus DIFFTEST procedure to examine the extent to which a second-order factor may describe the polychoric correlations among the four factors.

Firstly, the less restricted model (first-order model) containing 114 free parameters was estimated and the DIFFTEST option of the SAVEDATA command was used to save the derivatives needed for the nested $\chi 2$ difference test. The more restricted model (second-order model) with fewer free parameters (N= 112) was then fitted to the data and the $\chi 2$ difference test calculated using the derivatives from both analyses. Fit of the second-order model was good and largely similar to the first-order model (RMSEA = 0.076; CFI = 0.931, TLI = 0.924, SRMR = 0.067). The procedure did however reveal a significant decrease in fit, DIFFTEST(2) = 7.012, $p < .05$ compared to the first-order model, indicating that the first-order model was a better fit than the second-order model. The initial first-order four-factor model was deemed the most appropriate factor solution.

Table 5.8: Summary of WLSMV estimation (n=210) for each factor in the WFMS

Factor 1: Workplace Incivility and Perceived Incompetence of Others

Scale Item	Load
There are people within my organisation who are selfish	0.765
There is favouritism within my organisation	0.718
There are people within my organisation who are dishonest	0.786
Promises made by people within my organisation are often broken	0.852
I deal with people at work who are disrespectful	0.770
I deal with difficult people in my work	0.719
I deal with people at work who are impatient	0.729
There are people in my workplace who are frequently late/absent	0.713
There are people at work who are incompetent	0.811
There are people at work who are lazy	0.741
People at work lack awareness	0.729

Factor 2: Personal Aggression

Scale Item	Load
I often face verbal abuse in my work	0.835
I deal with people who are aggressive towards me at work	0.948
I have been subject to unlawful discrimination at work	0.650

Factor 3: Quantitative Workload

Scale Item	Load
I have too much work to do	0.819
I work under time pressure	0.699
I often have to work long hours	0.790
My work hours interfere with my social life	0.855
I often have to work through my lunch breaks	0.700

Factor 4: Organisational Constraints and Personal Competence

Scale Item	Load
My allocated workspace is unsuitable	**0.427**
The materials provided to do my work are inadequate	0.503
There are a lack of development opportunities in my organisation	0.700
I sometimes find myself unable to do certain tasks to my best	0.558

I sometimes lack understanding at work	0.574
There is a lack of communication in my organisation	0.854
I face barriers to communication in my work	0.767
The policies and procedures within my organisation are insufficient	0.687

Table 5.9: Correlation Matrix showing the Relations between the Four Factors

	Factor 1	Factor 2	Factor 3	Factor 4
Factor 1				
Factor 2	.520**			
Factor 3	.670**	.478**		
Factor 4	.804**	.658**	.659**	

**. Correlation is significant at the 0.01 level (2-tailed).

Coping Inventory for Frustrating Situations (CIFS)

A first-order four-factor model was first requested for the CIFS and showed good fit (RMSEA = 0.073; CFI = 0.958; TLI = 0.953; SRMR = 0.081), with all but one of the factor loadings remaining above .5 (see table 5.10). Item 5 had a loading of .486 which was considered appropriate in line with the recommendations of Costello and Osborne (2005). As expected, factors 1, 2 and 3 did not correlate well with factor 4 (see table 5.11), eliminating the need to conduct a second-order factor analysis. Factors 1, 2 and 3 were however significantly correlated suggesting these three factors may form one single factor. A two-factor model was therefore analysed using the Mplus DIFFTEST procedure to examine the extent to which a single factor could describe the Polychoric correlations among these three factors. The three factors forming one single factor and aggressive coping, a separate factor.

Firstly, the less restricted model (four-factor model) containing 102 free parameters was estimated and the DIFFTEST option of the SAVEDATA command was used to save the derivatives needed for the nested $\chi 2$ difference test. The more restricted model (two-factor model) with fewer free parameters (N= 97) was then fitted to the data and the $\chi 2$ difference test calculated using the derivatives from bother analyses. Fit of the two-factor model was poor (RMSEA = 0.131; CFI = 0.864, TLI = 0.850, SRMR = 0.136), and revealed a significant decrease in fit, DIFFTEST(5) = 187.593, $p < .0001$ compared to the four-factor model, indicating that a two-factor model should not be accepted. The initial first-order four-factor model was determined as the most appropriate factor solution.

Table 5.10: Summary of WLSMV estimation (n=210) for each factor in the CIFS

Factor 1: Social Coping

Scale Item	Load
Talked to someone to find out more information about the situation	0.755
Asked people who have had similar experiences what they did	0.812
Conveyed information to others in an attempt to alleviate the issue	0.877
Provided information to someone to highlight the issue	0.907
Discussed your feelings with someone	0.486

Factor 2: Active Coping

Scale Item	Load
Took direct action to try to get rid of the problem	0.825
Changed something to alleviate the issue	0.875
Took direct action to get around the problem	0.788
Did what had to be done, one step at a time	0.603

Factor 3: Positive-reinterpretation

Scale Item	Load
Looked for something good in the situation	0.891
Tried to put things into perspective	0.869
Tried to see the situation in a positive light	0.906

Factor 4: Aggressive Coping

Scale Item	Load
Arrived late to work/meetings or left early	0.695
Reduced the amount of effort you put in to your job role	0.714
Refused to perform certain tasks	0.820
Threatened someone, but not physically	0.945
Screamed, shouted or swore at someone	0.922
Became physically aggressive towards things (E.g. slamming the phone down, throwing the computer or punching the desk)	0.913
Threw or hit company property	0.960
Took your frustration out on someone else	0.778
Made insensitive facial expressions (E.g. rolling your eyes, scowling)	0.678
Engaged in negative gossip/ social undermining	0.745

Excluded or bypassed certain colleagues	0.812
Tried to manipulate the situation/individual	0.812

Table 5.11: Correlation Matrix showing the Relations between the Four Factors

	Social Coping	Active Coping	Positive Re-interpretation	Aggressive Coping
Social Coping				
Active Coping	.431**			
Positive Re-interpretation	.421**	.376**		
Aggressive Coping	.120	.281**	-.123	

**. Correlation is significant at the 0.01 level (2-tailed).

5.3.3 Step 5: Internal Consistency Assessment

After dimensionality had been established, the sub-scales of both measures, as well as the total WFMS were tested for internal consistency using the full sample (N=410). The total CIFS was not tested as not all factors were significantly correlated during prior analyses (see table 5.11). SPSS 25 was used to calculate Cronbach's Alpha and the Spearman-Brown Coefficient (i.e. split-half reliability) to check the extent to which each measure was consistent within itself, and that all parts of each test contributed equally to what was being measured. The cut-off value of ≥0.80 was employed which indicates strong internal reliability (Taber 2018). All sub-scales indicated a high level of internal consistency, as well as the total WFMS (See table 5.12).

Table 5.12: Internal Consistency of the WFMS and CIFS

	Cronbach's Alpha	Spearman-Brown
WFMS	0.93	0.88
Workplace Incivility and Perceived Incompetence of Others	0.90	0.87*
Personal Aggression	0.80	0.74*
Quantitative Workload	0.83	0.82*
Organisational Constraints and Personal Competence	0.82	0.76

CIFS	-	-
Social Coping	0.82	0.82*
Active Coping	0.80	0.80
Positive-reinterpretation	0.88	0.89*
Aggressive Coping	0.92	0.88

*unequal length

5.3.4 Step 6: Construct Validity

Construct validity was determined through the assessment of convergent and criterion-related validity. To assess each form of validity a set of hypotheses were developed and tested showing the proposed relations between the new scales and pre-validated scales. The pre-validated scales measuring concepts hypothesised to be either strongly related or unrelated to the constructs being assessed or theorised outcomes of the focal constructs.

To assess convergent validity of the WFMS, correlations between participant scores on the WFMS and several pre-validated scales were examined. Specifically, the OCS, ICAW scale, and QWI developed by Spector and Jex (1998). Each of which measured constructs found in prior literature to be related to frustration at work (Spector and Jex 1998). The OCS, ICAW and QWI being positively related to frustration. Given that the ICAW and QWI measure constructs that are more closely related to certain sub-scales within the WFMS (e.g. Workplace Incivility and Perceived Incompetence of Others and Quantitative Workload) the relationships between these scales overall were expected to be moderate. A strong relationship was expected between the OCS and WFMS, the OCS encompassing more than one source of frustration within the work context. It is important to note however that given the unique combination of factors included within the WFMS not previously captured in one single measure, specifically in relation to frustration at work, a perfect correlation was not expected with any pre-validated scale.

Criterion-related validity was assessed by examining the correlation between scores of the WFMS and the FS (Peters and O'Connor 1980) and the JSS (Spector 1994). The FS and JSS measuring participant levels of frustration and satisfaction at work respectively. Frustration and thus low levels of satisfaction being theorised outcomes of the constructs being assessed in the WFMS. The following was hypothesised:

Hypothesis 1: There will be a strong positive relationship between participant scores on the WFMS and the OCS.

Hypothesis 2: There will be a moderate positive relationship between participant scores on the WFMS and (a) the ICAW scale, and (b) the QWI.

Hypothesis 3: There will be a strong positive relationship between participant scores on the WFMS and the FS scale.

Hypothesis 4: There will be a strong negative relationship between participant scores on the WFMS and the JSS.

As expected, the results from the convergent validity analysis showed a strong positive correlation among the WFMS and OCS r (408) = .67, P<0.01, and a moderate positive correlation among the WFMS and (a) QWI r (408) = .42, P<0.01), and (b) ICAW scale r (408) = .53, p<0.01. Moreover, the results from the criterion-related validity analysis showed a strong positive correlation among the WFMS and FS scale r (408) = .66, P<0.01), and a strong negative correlation among the WFMS and JSS scale r (408) = -.72, P<0.01), all providing support for the measures construct validity (see table 5.13).

Table 5.13: A Correlation Matrix showing the Relations between the WMFS and Associated Scales

	WMFS	OCS	QWI	ICAW	FS	JSS
WFMS						
OCS	**.669****					
QWI	**.420****	.425**				
ICAW	**.533****	.538**	.250**			
FS	**.656****	.518**	.469**	.378**		
JSS	**-.718****	-.609**	-.309**	-.476**	-.632**	

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

To assess convergent validity of the CIFS, correlations were examined between participant scores on the CIFS subscales and several pre-validated scales/subscales. Subscales were

assessed rather than the total scale due to the prior finding that not all factors contained within the CIFS are significantly correlated (see table 5.11).

The aggressive coping subscale was expected to correlate positively with scores of the CWB scale (Spector et al. 2006), while the social coping, active coping, and positive re-interpretation subscales were expected to correlate with theoretically relevant subscales contained within Carver et al.'s (1989) COPE inventory. Given that the social coping subscale assessed informational, instrumental and emotional social support, scores on this subscale were expected to correlate positively with the 'use of instrumental social support' and 'use of emotional social support' subscales. It was predicted that the active coping subscale would correlate positively with subscales assessing similar self-sufficient coping strategies, the 'active coping' and 'planning subscales.' Likewise, the positive re-interpretation subscale was expected to be strongly related to the 'positive re-interpretation and growth subscale.'

All relationships were hypothesised to be moderate to strong, supporting construct validity, while also showing an element of distinction between the CIFS and previous behavioural measures. Notwithstanding the fact that each measure assesses similar behavioural reactions, the CIFS is unique in that it assesses a wide range of coping strategies utilised specifically within frustrating situations at work. The COPE inventory assesses the way in which people respond to during any difficult or stressful life event and is thus not specific to the work context and the emotion of frustration, an early warning sign for stress. Moreover, while the aggressive coping sub-scale is expected to correlate highly with the CWB scale, it only captures aggressive behaviours that were found in phase one to be associated with frustration.

Hypothesis 5: There will be a strong positive relationship between the aggressive coping sub-scale (CIFS) and the CWB scale.

Hypothesis 6: There will be a moderate positive relationship between the social coping sub-scale (CIFS) and the following COPE sub-scales, 'use of instrumental social support' and 'use of emotional social support.'

Hypothesis 7: There will be a moderate positive relationship between the active coping sub-scale (CIFS) and the following COPE sub-scales, 'active coping' and 'planning.'

Hypothesis 8: There will be a moderate positive relationship between the positive re-interpretation sub-scale (CIFS) and the following COPE sub-scales, 'positive reinterpretation and growth' and 'acceptance.'

As expected the results (see table 5.14) showed a strong positive correlation between the aggressive coping subscale (CIFS) and the CWB scale r (408) = .65, P<0.01, and a moderate positive correlation between the active coping subscale (CIFS) and both the active coping subscale (COPE) r (408) = .45, p<0.01 and planning subscale (COPE) r (408) = .4, p<0.01. A moderate correlation was also found between the positive re-interpretation subscale (CIFS) and the positive re-interpretation and growth (COPE) r (408) = .53, p<0.01. The relationships between the social coping subscale (CIFS) and the instrumental social support (COPE) r (408) = .39, p<0.01 and emotional social support subscales r (408) = .32, p<0.01, although significant, were weaker than expected. This may have been due to most items within the subscale assessing informational, rather than instrumental and emotional support.

Table 5.14: Correlation Matrix showing the Relations between the WMFS and Associated/ Non-associated Scales

	CWB	Instrumental social support	Emotional Social Support	Active Coping	Planning	Positive Re-interpretation & Growth
CIFS	.505**	.223**	.222**	.283**	.214**	.139**
Social Coping	.015	**.386****	**.319****	.279**	.267**	.256**
Aggressive Coping	**.646****	-.053	.020	-.012	-.092	.-.175**
Active Coping	.150**	.242**	.136**	**.452****	**.402****	.235**
Positive Re-interpretation	-.051	.325**	.305**	.360**	.388**	**.533****

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

5.4 Discussion

Phase two of the current research aimed to develop and validate two new measurement scales. One that could assess a wide range of sources of work frustration, and another that could measure constructive as well as destructive frustration coping strategies. As such, the

Work Frustration Measurement Scale (WFMS) (27-items) and the Coping Inventory for Frustrating Situations (CIFS) (24-items) (both including four subscales) were developed and assessed for construct validity and reliability. The initial development and validation process took part in two stages, capturing six steps proposed by Hinkin, Tracey and Enz (1997).

During stage one, the initial sets of items were generated for the WFMS and the CIFS, 62 and 50 items respectively (see appendix 5a and 5b). When developing these items, the importance of pre-existing literature, the number of items per construct, and item wording was realised. Both scales were informed by the findings from phase one (Chapter 4), along with pre-existing research and theory (E.g. Berkowitz 1980, Dollard et al. 1939, Spector 1978, Storms and Spector 1987). This enabled the development of two comprehensive scales that measured a wide range of work frustrators and frustration coping strategies. Each anticipated sub-scale containing at least four or five items in line with the recommendations of Harvey, Billings and Nilan (1985). Furthermore, a series of pre-validated scales were used to support the theoretical basis of each measure, anticipated sub-constructs, and help guide item wording. Item wording was checked throughout the development process to ensure items were short, meaningful and not too complex, as well as free from specialist jargon or ambiguous wording. Consequently, this led to a straightforward content adequacy assessment. The findings indicated that all items on the WFMS and all but two items on the CIFS were relevant to the constructs assessed. The two items were removed to enhance content validity, along with one item from WFMS in response to SMEs comments.

During stage two, the dimensionality of both scales was evaluated using the WLSMV estimation method in MPlus 8.1 and, in line with the recommendations of Matsunaga (2010) the number of items for each scale were reduced to a more management pool. For both scales, EFA and CFA (and ESEM for the CIFS) provided support for a four-factor solution that was theoretically consistent and easy to interpret. The final WFMS comprising of 27-items and four subscales reflecting workplace incivility and perceived incompetence of others, personal aggression, quantitative workload, and organisational constraints and personal competence. The CIFS, 24-items and four subscales reflecting social coping, aggressive coping, active coping, and positive-reinterpretation. The data for each subscale indicated a high level of internal consistency, as well as for the total WFMS.

Evidence for construct validity was found by assessing the relationships between the new scales developed and pre-validated scales purported to assess similar constructs. As expected, the WFMS was found to have moderate to strong relationships with measures of theoretically relevant constructs, such as, organisational constraints, quantitative workload,

and interpersonal conflict at work (Spector and Jex 1998). Moreover, the WFMS had strong relationships with measures of theorised outcomes of the constructs tested. Specifically, a strong positive relationship was found between the WFMS and the FS (Peters and O'Connor 1980), and a strong negative relationship was found between the WFMS and the JSS (Spector 1994), showing strong criterion-related validity. Subscales within the CIFS significantly correlated with measures of theoretically relevant constructs including, counter-productive work behaviour, active coping and planning, positive re-interpretation and growth, and social support. It is important to realise however that although the findings show evidence of construct validity for the WFMS and CIFS, they are the first step in a long and continuous process. Future research will be necessary to provide additional support to the conclusions made. The process of assessing construct validity is never finished, and further research should always be conducted over time to further assess the validity of new measurement tools and make changes where necessary (Nunnally 1978, Schwab 1980).

Limitations and Future Research

As with phase one of this research, the results of phase two should be considered in light of the research limitations, some of which were mentioned earlier in chapter 3, including the use of a gender unbalanced sample. A further limitation is the use of self-report, which resulted in one participant being removed due to extreme responses across all measures. A limitation that may also have resulted in over and/or under reporting of different frustrators and frustration coping strategies, especially due to social desirability. Although reversed items were included in the WFMS to help protect against response bias (Netemeyer et al. 2003: 99) and anonymity was assured, the scale still captured attitudes and behaviours that could be deemed socially inappropriate (e.g. favouritism, dishonesty, poor job knowledge, and aggression). Participants may therefore have been dishonest in their responses, altering or exaggerating them as a means of impression management.

Moreover, despite the common assumption that honest self-disclosure is enough to provide an accurate self-description, it could be argued that some individuals lack the introspective ability to provide an accurate response (Paulhus and Vazire 2007: 232). In other words, they are unable to assess themselves accurately due to constraints on self-knowledge. This could be particularly problematic when recalling frustration coping strategies as an individual may not be fully aware of their own reactions when frustrated. They could therefore recall acting in a manner that is very different from reality. Consequently, when assessing such strategies, future researchers should also consider the use of observation techniques, and/or a 360-degree approach that incorporates multiple perspectives from a variety of sources (e.g. managers, subordinates, peers, and customers). However, it is expected that this approach

will lead to low organisational transparency, participant resistance, and institutional interference, specifically due to the sensitive nature of work frustration, an organisational issue associated with negative personal (e.g. loss of power), organisational (e.g. reputational damage), institutional (e.g. illegitimacy), and societal (i.e. socioeconomic) outcomes (Saunders and Tosey 2015: 368).

Another limitation of the resulting scales is that they do not include all possible frustrators and frustration coping strategies. It was decided, early in the research that the traditional path of scale development would be followed, thus items with low inter-item correlations and factor loadings were removed to ensure scale reliability. This led to the development of two scales that contained common frustrators and frustration coping strategies, rather than all possible ones. A more inclusive scale likely being of greater interest to researchers. It was believed however, that the approach taken in the current research was the right one for several reasons. Firstly, the items removed were all part of a sub-scale that included many more items relevant to the constructs evaluated. As mentioned during the item development stage, a large item pool was developef in line with the recommendations of Netemeyer et al. (2003: 96) and Devellis (2003: 66), to ensure that after item analysis there was still a robust number of items to represent the constructs. The removal of items was therefore expected and not seen as problematic, with each construct still adequately represented. Secondly, given the earlier finding that different frustrators (e.g. workplace behaviour and ethics) and frustration coping strategies (e.g. social coping) often overlap somewhat, with employees being frustrated by more than one frustrator and/or engaging in more than type of coping strategy, it seemed logical that the scales did not need to contain all possible manifestations. Especially as the aim of this research was to develop two scales that were not limited by profession or sector and were thus overarching. Finally, the frustrators and frustration coping strategies removed were less frequently reported, and had they not been removed the scales would have lacked reliability.

Lastly, as with the findings of phase one (chapter four) the scales developed may not be suitable for use outside of the UK, especially to non-western cultures. Different cultures possess various cultural dimensions and values, such as individualism-collectivism, masculinity-femininity, uncertainty avoidance and power distance (Hofstede 1994), that are likely to influence the sources of frustration and subsequent outcomes. For example, research has shown that managers from cultures low in power distance and/or from feminine countries display more problem-solving behaviours during conflict than those from cultures high in power distance/ and or from masculine countries (Oudenhoven, Mechelse and Dreu 1998). It is important therefore, that before attempting to use these scales in non-western cultures that

further exploratory research in conducted with the non-western population to identify any differences and/or similarities in their experiences of work frustration. These findings should be utilised to adapt the WFMS and CIFS for use in those cultures.

Contribution to Knowledge and Future Implications

Despite the above limitations, the current research has provided a significant contribution to knowledge and the basis for further research. By identifying the frustrators that are the most common and thus most problematic, it has advanced the findings from phase one, providing a greater understanding of work frustrators in the UK. Moreover, it has provided additional support for previous research (e.g. Baillien et al. 2009, Duffy et al. 2012, Spector, Fox and Domagalski 2006) highlighting aggressive coping as a prominent frustration coping strategy. This was in contrast to phase one in which participants tended to report less aggressive coping strategies, perhaps due to the use of interviews and diaries (in addition to the questionnaire) that although confidential, were not anonymous, hindering the disclosure of socially inappropriate behaviours.

Phase two has also led to the development of two new up-to-date measurement tools (i.e. the WFMS and CIFS), beneficial for researchers, practitioners and organisations. Measures that capture additional frustrators (e.g. unlawful discrimination, favouritism and personal incompetence) and more constructive frustration coping strategies (e.g. social and active coping) than those used in previous frustration research. The measures typically used in prior research placing emphasis on job-related conflicts (e.g. Keenan and Newton 1984, Rizzo et al. 1970, and Spector and Jex 1998) and aggressive behaviour (e.g. Spector et al. 2006, Keenan and Newton 1984), except for the organisational climate (OC) (Litwin and Stringer 1968) and ICAW scale (Spector and Jex 1998). The former of which focuses on low intensity workplace relations such as poor teamwork, and the latter, generic forms of interpersonal conflict. Based on the findings from phase one, it can be argued that these measures no longer capture the wide range of frustrators in today's organisations. They are also restrictive, focusing on aggression because of frustration, limiting the development of interventions that promote constructive ways of coping, such as those identified in phase one of this research. The latter being particularly important to help reduce the negative consequences of frustration such as, low occupational commitment (Radebe and Dhurup 2016), employee turnover (O'Connor et al. 1984), strain and poor well-being (Spector 1988).

The WFMS can also be used by practitioners and organisations to help identify the frustrations present amongst employees, and thus work to reduce those frustrators. The fact that the WFMS captures the key frustrators in one measure will also make assessment easier. Prior

research typically uses more than one measure, such as the OCS, ICAW and the QWI combined (Spector and Jex 1998). Furthermore, practitioners may use the CIFS to aid the development of successful interventions in organisations, supporting employees to react in positive ways to frustration. Before this is possible however, further research is required to identify the mediating and/or moderating factors involved in the relationship between the sources of frustration and frustration coping strategies. Specifically, those that can be adapted and improved, such as, emotional intelligence (EI) and social support. By identifying these factors, it may be possible for organisations to identify the training needs of individuals and develop and implement appropriate interventions to educate groups and individuals. The final phase of this research aims to start addressing this need, testing a conditional process model in which the indirect effect of the sources of work frustration on frustration coping strategies through the emotion of frustration is contingent on emotional intelligence and social support (see chapter 6).

5.5 Chapter Overview

This chapter has outlined the initial development and validation of two new measures, the Work Frustration Measurement Scale (WFMS) (27-items) and the Coping Inventory for Frustrating Situations (CIFS) (24-items). The former assessing a wide range of sources of work frustration, and the later, both constructive as well as destructive frustration coping strategies. Items were generated following the recommendations of prior researchers and tested for content adequacy by SME's. Once content adequacy was established, the WFMS and CIFS were administered along with pre-validated scales to an appropriate sample and preliminary analysis conducted to assess suitability of the data set. For both measures, EFA and CFA (and ESEM for the CIFS) provided support for a first-order four-factor solution that was theoretically consistent and easy to interpret. The final WFMS comprising of four subscales reflecting workplace incivility and perceived incompetence of others, personal aggression, quantitative workload, and organisational constraints and personal competence. The CIFS, four subscales reflecting social coping, aggressive coping, active coping, and positive-reinterpretation. All subscales indicated a high level of internal consistency, and construct validity. The next phase of this research will utilise these measures along with other pre-validated scales to test a conditional process model (see chapter 6).

Chapter Six
Phase 3 – Testing a New Model of Work Frustration

6.1 Introduction and Aim

The ultimate aim of this research set out in chapter two was to identify alterable factors that can form the basis of successful interventions to a) help reduce work frustration, and b) support employees to react in ways that are more constructive. Given the important gaps in our understanding of work frustration, along with the methodological flaws of prior research, the first two phases of this research provided the foundations for achieving this aim. Phase one explored the sources of and behavioural reactions to frustration in great depth, identifying new frustrators and anticipated positive coping strategies. Phase two extended our existing understanding of work frustration through the development and initial validation of two new measurement scales, the WFMS and CIFS. The third phase of this research aimed to fulfil the ultimate aim of this research by drawing on the findings from phase one and using the newly development measures along with pre-validated scales to test a new model of work frustration and achieve the following research aim:

- To test a new model of work frustration, incorporating both potential mediators and/or moderators, which may influence both frustration tolerance and choice of coping strategy.

This chapter will provide an overview of the hypothesised model, followed by its theoretical underpinning and associated hypotheses. The methods used, along with the results and overall discussion are then presented.

6.2 Hypothesised Model

Expanding on previous models of work frustration (e.g. Fox and Spector 1999, Keenan and Newton 1985, Spector 1978, Spector 1997), the hypothesised model (figure 6.1) incorporated additional frustrators (e.g. bullying behaviour) and constructive coping strategies (e.g. social coping), identified in phase one (chapter four) and two (chapter five). It moved beyond the focus of previous research, that has focused typically on aggression as a behavioural reaction to frustration (e.g. Baillien et al. 2009, Dollard et al. 1939, Tepper et al. 2006), enabling the identification of additional factors that may aid the use of more constructive coping strategies. For example, emotional and social competence (ESC) and social support availability, that both moderate the direct and indirect effect of work frustrators on frustration coping strategies through the emotion of frustration.

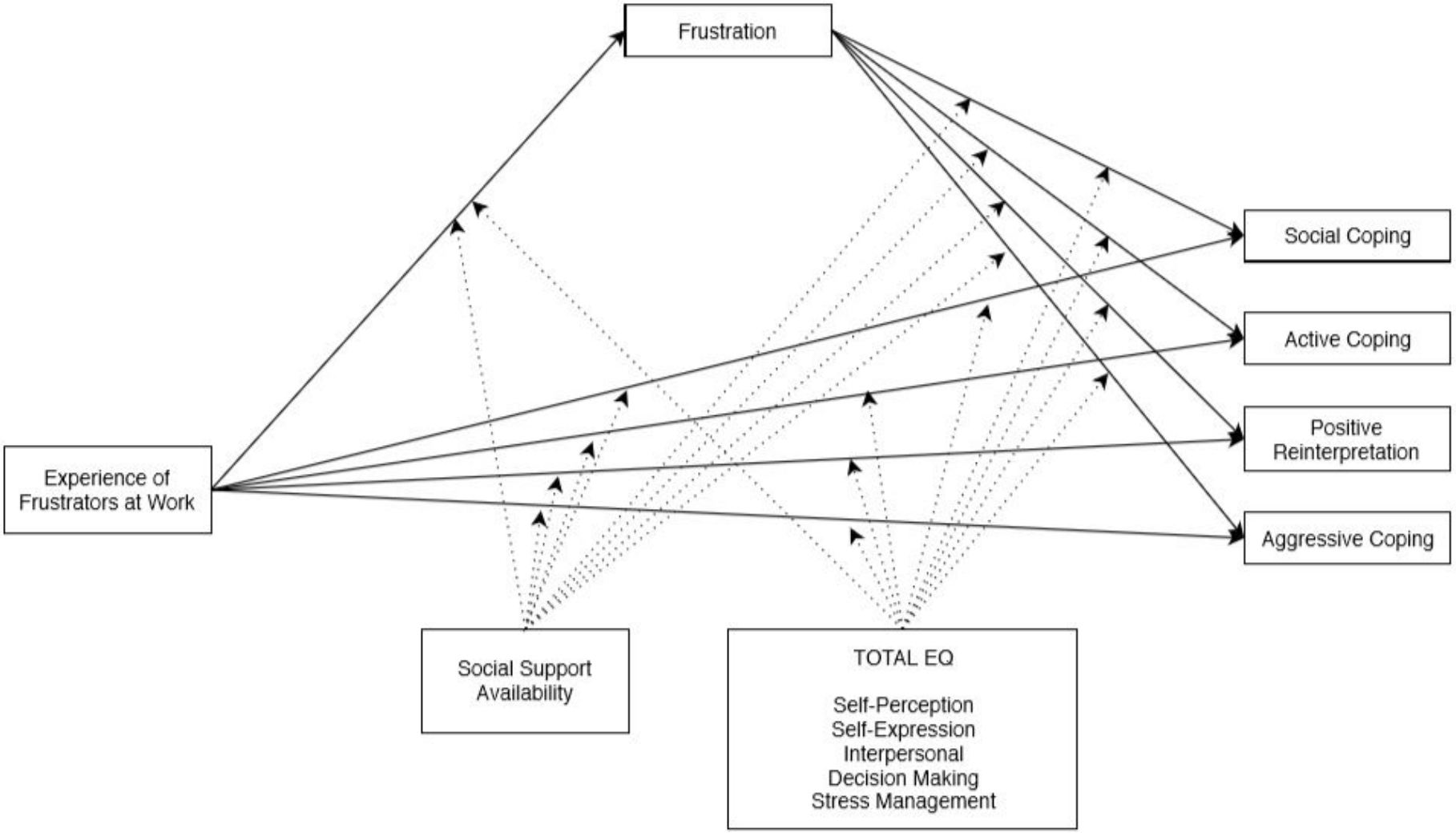

Figure 6.1: Hypothetical model depicting hypotheses 1 to 10 inclusive

6.3 Theoretical Underpinning and Associated Hypotheses

Underpinning the model is the Conservation of Resources (COR) theory (Hobfoll 1991, Hobfoll 2001), one of the most widely cited theories in occupational psychology (Hobfoll, Halbesleben, Neveu and Westman 2018). The COR theory argues that humans are motivated to maintain and accumulate their resources, resources being the objects, personal characteristics, conditions, or energies that are valued by an individual, or the means to obtain such (Hobfoll 1989). An individual's internal resources encompasses their inner energy including physical, emotional and cognitive energy, whereas their external resource is the outside energy that they hope to gain. If either are threatened, depleted, or not adequately accrued due to an accumulation of stressors, then stress and exhaustion will likely arise. Gaining additional resources can help to alleviate this stress, reduce emotional exhaustion, and create a more favourable situation.

Applying the COR theory to the current research, it was predicted that an accumulation of frustrators would lead to the experience of frustration, particularly if an individual does not possess adequate resources that may act as a buffer against stress:

> *Hypothesis 1: The experience of frustrators at work will be positively associated with the emotion of frustration.*

Given that in phase one the frustration coping strategies were identified as reactions to frustration (frustration resulting from an accumulation of work frustrators), the experience of work frustrators was also be expected to have a positive direct effect on each of the coping strategies assessed:

> *Hypothesis 2: The experience of frustrators at work will be moderately positively associated with the use of social coping, active coping and positive reinforcement, and aggressive coping strategies.*

Additionally, in line with previous research (e.g. Heacox and Sorenson 2004), it was predicted that the association between the experience of work frustrators and frustration coping strategies would be partially positively mediated by the emotion of frustration. In other words, the emotion of frustration would account for some of the relationship between the experience of work frustrators and each of the frustration coping strategies.

Hypothesis 3a: The association between frustrators at work and the use of social coping strategies will be partially positively mediated by the emotion of frustration.

Hypothesis 3b: The association between frustrators at work and the use of active coping strategies will be partially positively mediated by the emotion of frustration.

Hypothesis 3c: The association between frustrators at work and the use of positive interpretation as a method of coping will be partially positively mediated by the emotion of frustration.

Hypothesis 3d: The association between frustrators at work and the use of aggressive coping strategies will be partially positively mediated by the emotion of frustration.

Furthermore, based on the COR theory, ESC and social support availability were expected to moderate the direct and indirect effect of work frustrators on frustration coping strategies through the emotion of frustration. ESC acting as an internal (emotional) resource, and social support availability, an external resource, affecting frustration tolerance and choice of coping strategy. Given that ESC and social support availability were covered to a lesser extent in previous chapters, a more detailed discussion on each moderator is provided below, along with the rationale for their inclusion and associated hypotheses.

Why Emotional and Social Competence (ESC)?

As detailed in chapter two, ESC is a learned capability based on emotional intelligence (EI) (Emmering and Boyatzis 2012). EI defined as '*the ability to perceive and express emotion, assimilate emotion in thought, understand and reason with emotion, and regulate emotion in the self and others'* (Mayer et al. 2000: 396). It moves beyond pure ability-based models of EI (e.g. Salovey and Mayer 1997) that assess ability related to specific behaviour, to include a comprehensive set of emotional and social competencies based on a comprehensive theoretical framework with explicit links to personality and motivation theory (Emmerling and Boyatzis 2012). Although not superior to ability-based models of EI, ESC has more predictive ability (Jordan, Dasborough, Daus and Ashkanasy 2010) especially across a broad spectrum of occupations (O'Boyle et al. 2010). Moreover, it is typically more helpful in practice (e.g. in the workplace) for selecting and developing certain emotional and social competencies related to EI (Cherniss 2010), including those such as self-perception and independence, that enable an individual to adapt and manage effectively during emotional moments (e.g. frustrating situations) (Bar-On 1997). However, unlike well-known personality dimensions (e.g. introversion-extroversion), research surrounding ESC and frustration has been limited, with

most of the research focusing on areas unrelated to the workplace, such as frustration tolerance in pre-schoolers (Blair, Denham, Kochanoff and Whipple 2004, Denham, Blair, Schmidt and DeMulder 2010, Stansbury and Sigman 2010, Trentacosta and Shaw 2009). Phase three of the current research therefore incorporated ESC into the hypothesised model to enable the identification of emotional and social competencies that may influence frustration tolerance and ways of coping, and in turn form the basis of effective workplace interventions to develop such competencies.

ESC Assessment

The Multi-Health Systems (MHS) 133-item Emotional Quotient Inventory 2.0 (EQ-i$^{2.0}$) (see appendix 6a) developed in 2011 was used to assess ESC, as it captures a range of emotional and social competencies that can aid effective coping during emotional moments (e.g. frustrating situations) (Bar-On 1997). Measured on a five-point response scale (1=never/rarely to 5=always/almost always), the EQ-i$^{2.0}$ features a total EQ score, which indicates an individual's overall level of emotional and social functioning and exhibits strong internal reliability (.97) (MHS 2019). A score less than 90 considered to be in the low range, while a score between 90 and 110 is in the mid-range, and over 110 in the high range (Hines and Matteson 2017: 139). This score is then broken down into five composite scores measuring five distinct facets of emotional and social functioning, further exhibiting strong internal reliability (.88 to .93) (MHS 2019). These in turn, are broken down into 15 sub-facets (3 per composite score); the construct validity for each of these subscales supported in subsequent research (Van Zyl 2014). The inventory also includes a happiness score, also known as a well-being indicator, included as a product of ESC rather than a contributing factor, exploring the relationship between one's level of happiness and a) self-regard, b) optimism, c) interpersonal relationships, and d) self-actualization (see table 6.1).

While still reflecting the essence of the original EQ-i (Bar-On 1997), including its validated 1-5-15 factor structure, the EQ-i$^{2.0}$ does introduce several changes and advancements to improve the model, and reflect major changes in society and test use. Specifically, the EQ-i$^{2.0}$ includes two separate composite subscales for self-perception and self-expression, rather than one (emotional self-awareness), the self-expression subscale of which contains a new subscale, emotional expression, which captures the communication of one's feelings in a manner that the recipient can understand. The revised framework also includes a new decision-making composite resulting from the realignment and restructuring of the original adaptability and stress management composites. Moreover, to resolve interpretation issues, the problem-solving subscale was redefined as, 'the ability to find solutions to problems in situations where emotions are involved.' Lastly, the normative sample was updated, which

was essential given the changes in cultural diversity, attitudes and value systems in the population that have occurred since the original EQ-i was released (MHS 2019).

Table 6.1: The Composite, Subscales and Well-Being Indicator contained within the EQ-i$^{2.0}$ (adapted from MHS 2011)

	Composite Scale	Subscales
TOTAL EQ	Self-Perception	Self-regard
		Self-actualisation
		Emotional self-awareness
	Self-Expression	Emotional expression
		Assertiveness
		Independence
	Interpersonal	Interpersonal relationships
		Empathy
		Social responsibility
	Decision Making	Problem solving
		Reality testing
		Impulse control
	Stress Management	Flexibility
		Stress tolerance
		Optimism
	Well-Being Indicator	Happiness

To avoid fitting an overly complex model, the results of this research only include the total EQ score and the five distinct facets (self-perception, self-expression, interpersonal, decision-making, and stress management) of emotional and social functioning. Presented below are the hypothesised associations for each of these constructs.

Total EQ

Given that the total EQ score indicates an individual's overall level of emotional and social functioning (Cherniss 2010), including their level of self-perception, self-expression, interpersonal, decision-making, and stress management, competencies that enable an individual to adapt and manage effectively during emotional moments (e.g. frustrating situations) (Bar-On 1997), the following was hypothesised for total EQ:

Hypothesis 4a: The direct effect of the experience of frustrators at work on social coping, active coping and positive reinforcement will be moderated by total EI, such that it is stronger for higher than for lower levels of self-perception.

Hypothesis 4b: The direct effect on the experience of frustrators at work on aggressive coping will be moderated by total EI, such that it is stronger for lower than for higher levels of total EI.

Hypothesis 4c: The direct effect of the experience of frustrators at work on the emotion of frustration will be moderated by total EI, such that it is stronger for lower than for higher levels of total EI.

Hypothesis 4d: The direct effect of the emotion of frustration on social coping, active coping and positive reinforcement will be moderated by total EI, such that it is stronger for higher than for lower levels of total EI.

Hypothesis 4e: The direct effect of the emotion of frustration on aggressive coping will be moderated by total EI, such that it is stronger for lower than for higher levels of total EI.

Self-Perception Facet

The self-perception facet captures an individual's inner self and is linked to other self-related concepts such as, self-esteem and self-worth (Leary and Tangney 2012: 10). It assesses their feeling of inner strength and confidence (self-regard), persistence in the pursuit of personally relevant and meaningful goals (self-actualisation), as well as their level of understanding regarding what, when, why, and how emotions impact our thoughts and actions (emotional self-awareness) (MHS 2019). Research suggests that individuals who have a negative perception of themselves are more likely to experience frustration, despair and even depression, commonly associated with low levels of self-actualization (Bar-on 2013). They also tend to experience higher stress symptoms and more intense anger (Batıgün, Sahin and Demirel 2011), and are more likely to direct blame towards others due to their low self-regard (Kahn-Greene et al. 2006). The following was hypothesised:

Hypothesis 5a: The direct effect of the experience of frustrators at work on social coping, active coping and positive reinforcement will be moderated by self-perception, such that it is stronger for higher than for lower levels of self-perception.

Hypothesis 5b: The direct effect on the experience of frustrators at work on aggressive coping will be moderated by self-perception, such that it is stronger for lower than for higher levels of self-perception.

Hypothesis 5c: The direct effect of the experience of frustrators at work on the emotion of frustration will be moderated by self-perception, such that it is stronger for lower than for higher levels of self-perception.

Hypothesis 5d: The direct effect of the emotion of frustration on social coping, active coping and positive reinforcement will be moderated by self-perception, such that it is stronger for higher than for lower levels of self-perception.

Hypothesis 5e: The direct effect of the emotion of frustration on aggressive coping will be moderated by self-perception, such that it is stronger for lower than for higher levels of self-perception.

Self-Expression Facet

The self-expression facet is an extension of self-perception and focuses on the outward expression of one's internal perception. It includes an individual's tendency to openly express their thoughts and feelings in ways that can be easily understood (emotional expression), to defend and stand up for their personal rights (assertiveness) and be self-directed and free from emotional dependency on others (Independence) (MHS 2019). Individuals who possess low levels of self-expression are more likely to experience burnout due to an inability to cope with environmental demands and pressures connected to occupational stress (Vaezi and Fallah 2011). Moreover, because of their reluctance to express emotion they rarely make use of external support for coping with emotion. Instead, they engage in aggressive coping to regulate their emotions (Sullivan, Helms, Kliewer and Goodman 2010), a consequence that could be explained by their lack of assertiveness. High levels of assertiveness can help to increase the beneficial effects of social relationships, while decreasing feelings of depression (Elliott and Gramling 1990). Those who lack assertiveness however tend to view stressors as threatening rather than challenging, thus react in ways that indicate treat (Tomaka, Palacios, Schneider, Colotla, Concha and Herrald 1999). The following was hypothesised:

Hypothesis 6a: The direct effect of the experience of frustrators at work on social coping, active coping and positive reinforcement will be moderated by self-expression, such that it is stronger for higher than for lower levels of self-expression.

Hypothesis 6b: The direct effect on the experience of frustrators at work on aggressive coping will be moderated by self-expression, such that it is stronger for lower than for higher levels of self-expression.

Hypothesis 6c: The direct effect of the experience of frustrators at work on the emotion of frustration will be moderated by self-expression, such that it is stronger for lower than for higher levels of self-expression.

Hypothesis 6d: The direct effect of the emotion of frustration on social coping, active coping and positive reinforcement will be moderated by self-expression, such that it is stronger for higher than for lower levels of self-expression.

Hypothesis 6e: The direct effect of the emotion of frustration on aggressive coping will be moderated by self-expression, such that it is stronger for lower than for higher levels of self-expression.

Interpersonal Facet

The interpersonal composite facet measures one's ability to develop and maintain mutually satisfying relationships that are characterised by trust and compassion (interpersonal relationships), recognise, understand, and appreciate how other people feel (empathy), and act responsibly while showing concern for others (social responsibility) (MHS 2019). Similar to self-expression, low scores on the interpersonal facet are linked to higher rates of burnout (Vaezi and Fallah 2011), along with low levels of stress tolerance (Esmaeili and Jamkhaneh 2013). An individual's lack of interpersonal relationships, empathy and social responsibility limiting their ability to cope with situational demands as they are less psychosocially adjusted (Mayer, Roberts and Barsade 2008), resulting in negative interactions and conflicts in social relationships (Brackett, Rivers and Salovey 2011). In contrast, individuals who score high on the interpersonal facet and function well socially are better able to cope with these demands through social coping (Austin, Saklofske and Mastoras 2010). The following was hypothesised:

Hypothesis 7a: The direct effect of the experience of frustrators at work on social coping, active coping and positive reinforcement will be moderated by interpersonal, such that it is stronger for higher than for lower levels of interpersonal.

Hypothesis 7b: The direct effect on the experience of frustrators at work on aggressive coping will be moderated by interpersonal, such that it is stronger for lower than for higher levels of interpersonal.

Hypothesis 7c: The direct effect of the experience of frustrators at work on the emotion of frustration will be moderated by interpersonal, such that it is stronger for lower than for higher levels of interpersonal.

Hypothesis 7d: The direct effect of the emotion of frustration on social coping, active coping and positive reinforcement will be moderated by interpersonal, such that it is stronger for higher than for lower levels of interpersonal.

Hypothesis 7e: The direct effect of the emotion of frustration on aggressive coping will be moderated by interpersonal, such that it is stronger for lower than for higher levels of interpersonal.

Decision Making Facet

The decision-making facet focuses on the ways in which one uses emotional information. It assesses one's ability to find solutions to problems that involve emotion and their capacity to understand how these emotions impact on decision-making (problem solving). Furthermore, it measures one's capacity to remain objective when faced with a range of emotions, seeing things are they really are and perspective taking from other points of view (reality testing), as well as the ability to resist or delay an impulse or temptation to act (impulse control) (MHS 2019). Individuals who possess high levels of problem solving and reality testing are often better equip to deal with emotional and/or stressful situations. For instance, the police, whose ability to focus and assess clearly the situation in front of them enables them to solve potentially stressful and emotionally charged situations (Bar-On, Brown, Kirkcaldy and Thome 2000). Furthermore, while taking risks and acting on impulse may be adaptive, for example when there is little time to decide (Dickman 1990), those who possess strong impulse control are usually better at handling conflict and situations that may elicit frustration (Bar-on 2013). Individuals with low in impulse control typically having low self-control, displaying openly their frustration and anger, being unpredictable, explosive and compulsive in their behaviour (Stein and Book 2006). Undoubtedly, high levels of impulsivity often result in negative consequences, especially while experiencing negative emotions (Van Blyderveen et al. 2016). The following was hypothesised:

Hypothesis 8a: The direct effect of the experience of frustrators at work on social coping, active coping and positive reinforcement will be moderated by decision making, such that it is stronger for higher than for lower levels of decision making.

Hypothesis 8b: The direct effect on the experience of frustrators at work on aggressive coping will be moderated by decision making, such that it is stronger for lower than for higher levels of decision making.

Hypothesis 8c: The direct effect of the experience of frustrators at work on the emotion of frustration will be moderated by decision making, such that it is stronger for lower than for higher levels of decision making.

Hypothesis 8d: The direct effect of the emotion of frustration on social coping, active coping and positive reinforcement will be moderated by decision making, such that it is stronger for higher than for lower levels of decision making.

Hypothesis 8e: The direct effect of the emotion of frustration on aggressive coping will be moderated by decision making, such that it is stronger for lower than for higher levels of decision making.

Stress Management Facet

The stress management facet includes how well one can adapt their emotions, thoughts and behaviours to unfamiliar, unpredictable, and dynamic circumstances (flexibility), as well as cope with stressful or difficult situations in a positive manner (stress tolerance), remaining hopeful about the future and resilient in the face of setbacks and obstacles (optimism) (MHS 2019). According to King and Gardner (2006), while effective stress management enables an individual to manage their emotions successfully and is associated with challenge appraisal, task-focused coping, social support and positive affect, poor stress management is associated with avoidance, negative affect and threat appraisal. Indeed, stress management programmes including strategies such as yoga (Bussing, Ostermann, Ludtke and Michalsen 2012), cognitive-behavioural therapy (CBT) (Hofmann, Asnaani, Vonk, Sawyer and Fang 2012), mindfulness (Cavanaugh, Strauss, Forder and Jones 2014) and relaxation training (Richardson and Rothstein 2008), have found to improve an individual's capability for dealing with work-related stress and reduce stress-related symptoms (Eriksen, Ihlebaek, Mikkelsen, Gronningsaeter, Sandal and Ursin 2002). It can be argued therefore that individuals high in stress management are more likely to remain positive in frustrating situations, viewing such situations as opportunities for personal growth, dealing directly with the task and asking for support when and where required. On the other hand, those low in stress management are more likely to experience negative emotions, such as frustration and fear. The following was hypothesised:

Hypothesis 9a: The direct effect of the experience of frustrators at work on social coping, active coping and positive reinforcement will be moderated by stress management, such that it is stronger for higher than for lower levels of stress management.

Hypothesis 9b: The direct effect on the experience of frustrators at work on aggressive coping will be moderated by stress management, such that it is stronger for lower than for higher levels of stress management.

Hypothesis 9c: The direct effect of the experience of frustrators at work on the emotion of frustration will be moderated by stress management, such that it is stronger for lower than for higher levels of stress management.

Hypothesis 9d: The direct effect of the emotion of frustration on social coping, active coping and positive reinforcement will be moderated by stress management, such that it is stronger for higher than for lower levels of stress management.

Hypothesis 9e: The direct effect of the emotion of frustration on aggressive coping will be moderated by stress management, such that it is stronger for lower than for higher levels of stress management.

Social Support Availability

Social support has a threefold effect on work stressor-strain relations. It helps to reduce employee strain, mitigate perceived stressors, and moderate the stressor-strain relationship (Viswesvaran, Sanchez and Fisher 1999). When made available in organisations, employees are often willing to go beyond their normal duties and engage in activities that will benefit the organisation (Bakker, Demerouti and Verbeke 2004). In other words, they will partake in extra-role performance and organisational citizenship behaviours (OCBs) rather than counter-productive productive behaviours (CWBs). It is therefore an important resource in organisations, one that can be enhanced given the diagnosis of specific support-related deficiencies (Boyar, Campbell, Mosley Jr and Carson 2014).

Although social support is one of the most well-known variables proposed as a buffer against job stress (Haines, Hurlbert and Zimmer 1991, Hsieh and Tsai 2019, Johnson and Hall 1988, Van der Doef and Maes 1999), similar to mixed EI, the direct link between its availability and both frustration tolerance and choice of coping strategy is understudied. Research typically focuses on the relationship between social support and work disengagement (Bakker, Demerouti and Verbeke 2004, Demerouti et al. 2001, Van Der Doef, Maes and Diekstra 2000), performance (Bakker, Demerouti and Verbeke 2004, Ntsiful, Ahiakpor, Damoah, Sundagar and Wee 2018) and well-being (Van Der Doef and Maes 1999, Van Der Doef, Maes and Diekstra 2000). Given these points, social support availability was considered appropriate for

inclusion in the hypothesised model. Its inclusion enabling the identification of an important alterable resource that may influence frustration tolerance and ways of coping and can thus form the basis of suitable workplace interventions. The following was hypothesised:

Hypothesis 10a: The direct effect of the experience of frustrators at work on social coping, active coping and positive reinforcement will be moderated by social support availability, such that it is stronger for higher than for lower levels of social support availability.

Hypothesis 10b: The direct effect on the experience of frustrators at work on aggressive coping will be moderated by social support availability, such that it is stronger for lower than for higher levels of social support availability.

Hypothesis 10c: The direct effect of the experience of frustrators at work on the emotion of frustration will be moderated by social support availability, such that it is stronger for lower than for higher levels of social support availability.

Hypothesis 10d: The direct effect of the emotion of frustration on social coping, active coping and positive reinforcement will be moderated by social support availability, such that it is stronger for higher than for lower levels of social support availability.

Hypothesis 10e: The direct effect of the emotion of frustration on aggressive coping will be moderated by social support availability, such that it is stronger for lower than for higher levels of social support availability.

6.4 Research Methodology

Design

A within-participants design was adopted to test the hypothesised model, which included nine independent variables (IVs) (experience of work frustrators, frustration, ESC, self-perception, self-expression, interpersonal, decision making, stress management, social support availability) and four dependent variables (DVs) (social coping, active coping, positive interpretation, aggressive coping).

Participants

407 people responded to the questionnaire; however, 60 of those were removed from the current analysis, as they did not complete/submit their responses to all scales. This was expected as the data had to be collected using two online survey tools where respondents were required to move from one tool to the next and back again to submit their responses. The remaining sample of 347 was still deemed sufficient based on the recommendations of Boomsma (1983) whom suggested researchers obtain samples of 200 or more when

examining latent variable structural equation models (SEMs) (Tanaka 1987). The participants ranged in age from 17 to 69, 77.8% of which were female and 22.2% male. A further breakdown of the demographics is below (table 6.2).

Table 6.2: Participant demographics for each data collection method

Demographics		Frequency/M/SD
Gender	Male	N= 270
	Female	N= 77
Age		M: 27.03
		SD: 11.24
Education Level	Entry level	N=4
	Level 1 to 5 (e.g. GCSE to HND)	N=204
	Level 6 to 8 (e.g. BSc to PhD)	N=139
Marital Status	Single/Cohabiting	N= 263
	Married	N= 71
	Other	N = 13
Organisational Sector	Private	N = 131
	Public	N = 157
	Voluntary	N = 34
	Independent	N = 25
Work Status	Full-time	N = 116
	Part-time	N = 169
	Zero-hour	N = 53
	Other	N = 9
Work Location	Office/Company Premises	N = 209
	Home	N = 14
	Both of the above	N = 50
	Other	N = 74
Management	Yes	N = 85
	No	N = 262

Note: M=mean, SD=standard deviation

Measures

Several scales were administered to participants including the Work Frustration Measurement Scale (WFMS), Frustration Scale (FS), EQ-i$^{2.0}$ (described above in section 6.3), Comprehensive Evaluation of Social Support (CESS) scale (Boyar et al. 2014), and the Coping Inventory for Frustrating Situations (CIFS). The total score was calculated for all measures except for the CIFS. This was due to the earlier finding that not all factors contained within the CIFS are ignificantly correlated (see chapter 5). Composite scores were calculated for the EQ-i$^{2.0}$ in addition to the total score. To avoid duplication the WFMS and CIFS developed in phase two (see chapter 5) are not re-described below.

As in phase two of the current research, to assess participant's experiences of frustration as an emotion, an adapted version of Peters and O'Connor's (1980) 3-item FS (see appendix 5i) was utilised. The original scale displaying strong internal consistency (0.81). The second and third statement from the original measure were retained ('being frustrated comes with this job,' and 'overall, I experience very little frustration on this job (R)'). The first statement however was reworded from 'trying to get this job done was a very frustrating experience,' to 'trying to get my job done is very frustrating.' The revised statement was more appropriate for assessing an individual's current job role. Respondents were asked to indicate on a scale of 1 (strongly disagree) to 7 (strongly agree) how much they agreed with the statements. Prior to calculating the total score, reverse coding was undertaken on item 3, scores closer to 21 indicating high levels of frustration.

The CESS scale (Boyar et al. 2014) consists of 52 items capturing 16 important components of social support for work and family domains (see appendix 6b). Only the items assessing social support for work domains were administered. These included those assessing work-related support from a supervisor (e.g. my supervisor reduces my workload when it is too much), co-workers (e.g. my co-workers help me to figure out how to solve work problems), the organisation (e.g. my organization strongly considers my goals and values), and family members (e.g. my family is willing to listen to me when I talk about work). Items assessing family-related support from work (e.g. my supervisor asks about my family) were deemed unsuitable to assess the proposed hypotheses. Responses to items were measured on a five-point Likert type scale (1= strongly disagree to 5= strongly agree). Except for the work-related support from an organisation subscale (.60), the CESS subscales have shown a good level of internal consistency (.79 to .90). As the total score would be calculated for the current research, all subscales were utilised, and the internal consistency assessed again to check reliability.

Procedure

Following ethical approval from Coventry University Ethics (see appendix 3e) a URL link to the web-based questionnaire was disseminated via internal communication channels (i.e. email, noticeboards) and social media (e.g. Linkedin, Twitter, Facebook). Participants were directed to click on the link that took them to the participant information sheet (see appendix 3m), as well as the informed consent checklist (see appendix 3s) which they agreed to prior to completing the questionnaire. To protect anonymity of the research participants and aid completion of the EQI 2.0® participants created and noted down a participant information number (PIN) prior to taking part. Following completion of the WFMS, FS, CIFS and CESS, participants received a direct URL link to the EQI 2.0® and their PIN displayed as a reminder.

To ensure participant responses to the EQI 2.0® could be linked to their responses on the BOS they were asked to re-enter their PIN before commencing the EQI 2.0® assessment. Participants were then prompted to return to the BOS page to submit their responses and read the debrief form (see appendix 3y).

Following the completion of data collection all data was uploaded to SPSS version 25. A copy of the file was made in Microsoft Excel to enable conversion into a Comma Separated Values File for use with MPlus 8.1 (Muthén and Muthén 2018).

6.5 Data Analysis

6.5.1 Preliminary Analysis

Statistical Assumptions

Before undertaking statistical analysis on the data, it was first important to check the relevant assumptions. According to Stride, Gardner, Catley and Thomas (2015), when conducting moderated mediation, the variables should be continuous, as in the current research, and satisfy the assumptions of standard multiple regression. In particular, the data should be normally distributed and the relationship between the variables linear, there must be no multi-collinearity or heteroscedasticity and the residuals should be independent. The testing of assumptions detailed below provides a note on incomplete or missing data and the assessment of outliers.

Incomplete or Missing Data

Due to the use of two online survey platforms, several respondents did not complete/submit all their responses. These participants were removed from the analysis given the importance of all scale responses in testing the proposed model. The data was then eyeballed on several occasions when combining the data from the two survey tools and again prior to analysis. Checks on the frequency of responses to items using SPSS were conducted to ensure there had been no errors during data inputting. No errors were found.

Outliers

Each variable for the presence of statistical outliers was evaluated. Univariate outliers were determined using z-scores and conventional criteria (e.g. Tabachnick and Fidell 2013), with cases 3.29 or more standard deviations above or below the mean (i.e. $z \geq +/-3.29$), being classified as outliers. Mahalanobis distance was utilised to detect multivariate outliers with cases below the acceptable threshold (.001) proposed by Tabachnick and Fidell (2007)

deemed problematic. There were seven extreme univariate outliers (see Table 6.3), and two multivariate outliers, which were expected given the large data set (Selst and Jolicoeur 1994, Seo 2006).

Table 6.3: Number of univariate outliers per scale and the absolute skewness and kurtosis values

Variable	Z-scores (range)	Z-scores >3.29	Skewness	Kurtosis
TOTAL WFMS	-2.914, 2.493	0	-0.183	0.038
TOTAL FS	-2.044, 1.838	0	-0.181	-0.949
TOTAL EQ	-2.760, 2.760	0	0.081	-0.303
Self-Perception	-2.583, 2.331	0	-0.034	-0.314
Self-Expression	**-3.333**, 3.257	1	-0.037	0.291
Interpersonal	**-4.077**, 2.227	1	-0.33	0.142
Decision Making	-2.574, 2.894	0	0.169	-0.294
Stress Management	-3.004, 2.552	0	-0.072	-0.049
TOTAL CESS	-**4.194**, 2.602	1	-0.283	0.101
Social Coping	-2.856, 2.047	0	-0.155	-0.063
Active Coping	-2.387, 2.059	0	-0.001	-0.146
Positive Reinterpretation	-2.522, 1.558	0	-0.207	-0.455
Aggressive Coping	-1.141, **4.616**	4	1.481	2.693

Note: Outliers are highlighted in bold.

When examining the participants whom were flagged as outlier's, one participant was suspected of misreporting due to consistently extreme responses (E.g. all 4's or 1's) on the CESS. This participant was classed as an illegitimate outlier and removed from the dataset, leaving 346 participants. The remaining outliers appeared to be genuine respondents with no incorrect entry or improper sampling. As in phase two, they were deemed natural due to the nature of the data, the variable concerned (aggressive coping) containing serious offences and/or socially undesirable behaviours which few people would report. Deleting these cases would have resulted in the loss of participants who did admit to such offences/ behaviours. Moreover, it would have led to a decrease in sample size and the removal of valuable data points. These outliers were therefore retained to preserve important characteristics of the data set (von Hippel 2013), and extra caution taken when interpreting the results.

Normality of Residuals

As advised by Kim (2013) for sample sizes greater than 300, histograms were inspected to assess whether the linear combination of the variables in each proposed model were normally distributed, as well as the absolute values of skewness and kurtosis without considering z-values. An absolute skew value larger than 2 or an absolute kurtosis larger than 7 signalling

substantial non-normality (Kim 2013). On examination of the skewness and kurtosis values, it was evident that none of the variables displayed substantial non-normality (see table 6.3 above).

When reviewing the histograms all combinations possessed a normal bell-shaped curve except for those that incorporated aggressive coping. Combinations including aggressive coping as the DV were moderately (positively) skewed. P-P plots for each combination further supported this finding. The dots being distant from the line in plots including aggressive coping only, indicating deviation from normality. This was an expected finding given the presence of outliers in the aggressive coping subscale.

Although non-normality can impact negatively on the assumptions of linearity and homoscedasticity, the decision was taken not to transform the data as it can often lead to the incorrect interpretation of results, the transformed data not always being representative of the non-transformed data (Feng, Wang, Lu, Chen, He, Lu, Tu 2014). Instead bootstrapping was utilised when analysing each of the proposed models. A resampling technique that is robust and able to maintain adequate Type I error control and statistical power, even when data are non-normal or heteroscedastic (Erceg-Hurn and Mirosevich 2008). As a result, homoscedasticity was not assessed.

Linearity

According to Tabachnick and Fidell (2013: 118) when there are numerous variables for analysis, screening all possible pairs can be burdensome and thus one should use statistics on skewness to screen only pairs that are likely to depart from linearity. Given the deviation from normality associated with aggressive coping, a series of scatterplots were utilised to test the linear relationship between aggressive coping and each of the predictor variables (see appendix 6c). Although not curvilinear, the relationships did appear to be non-linear, reflecting the skewed distribution of aggressive coping. Non-linearity reduces the power of statistical tests such as linear regression (Tabachnick and Fidell 2001) and can often lead to the relationship between two variables being underestimated (Warner 2008). All models including aggressive coping were therefore interpreted with caution.

Multi-collinearity

The correlations between the predictor variables for each of the proposed models, along with collinearity statistics (tolerance and VIF) were assessed. As expected, total EQ was highly correlated with self-perception, self-expression, interpersonal, decision-making and stress management. Total EQ and its associated sub-constructs were assessed in different models

assessing conditional indirect effects. All remaining IVs were not highly correlated (<.80), the tolerance scores were all above 0.2 and the VIF scores well below 10. It was therefore determined that the data was suitable.

Independent Residuals

To check that the residuals were independent/uncorrelated for each predicted model the Durbin-Watson statistic was requested. For the assumption to be met the statistic should be close to 2 with values below 1 and above 3 being cause for concern. The values for each model ranged from 1.89 to 2.15 and thus the assumption was met.

6.5.2 *Simple Associations and Descriptive Statistics*

Table 6.4 provides the descriptive statistics and correlations among the variables as well as the Cronbach's alpha reliability coefficients for each of the scales that ranged from .58 to .92, all but one (positive reinterpretation) indicating high internal consistency.

Results of the Pearson correlation indicated that there was a significant positive association between the experience of frustration at work and frustration ($r(365) = .64$, $p < .01$), supporting hypothesis 1. Furthermore, there was a significant positive association between the experience of frustration at work and social coping ($r(365) = .22$, $p < .01$), active coping, ($r(365) = .18$, $p < .01$), and aggressive coping ($r(365) = .41$, $p < .01$), providing partial support for hypothesis 2. The relationship between the experience of frustration at work and positive reinterpretation however was negative ($r(365) = -.12$, $p < .05$), indicating that the experience of frustration at work is associated with use low levels of positive reinterpretation.

Table 6.4: Pearson Correlations, Means, Standard Deviations (SD) and Alpha Coefficients

	Mean	SD	EXFWORK	FRUS	FCOPE	SOCCOPE	ACTCOPE	POSRE	AGGCOPE	TOTALEQ	SSAVAIL	SELFPER	SELFEXP	INTPER	DECMAK	STRMANG
EXFWORK	65.86	13.30	**0.92**													
FRUS	12.49	4.64	.644**	**0.83**												
FCOPE	50.29	8.29	.348**	.279**	**0.84**											
SOCCOPE	13.74	3.06	.221**	.271**	.703**	**0.79**										
ACTCOPE	10.44	2.70	.178**	.145**	.739**	.575**	**0.83**									
POSRE	8.56	2.21	-.123*	-.112*	.439**	.322**	.369**	**0.58**								
AGGCOPE	17.55	4.86	.411**	.275**	.652**	0.103	.175**	-.113*	**0.84**							
TOTALEQ	93.03	15.23	-.144**	-.189**	.127*	.214**	.228**	.387**	-.220**	–						
SSAVAIL	86.89	14.36	-.452**	-.367**	0.077	.192**	.130*	.323**	-.208**	.278**	**0.89**					
SELFPER	96.54	16.10	-0.095	-.153**	.201**	.260**	.238**	.395**	-.132*	.880**	.327**	–				
SELFEXP	92.99	12.92	-0.07	-.125*	.109*	.169**	.180**	.237**	-.127*	.823**	.188**	.675**	–			
INTPER	100.47	15.08	-.144**	-0.092	.148**	.265**	.200*	.384**	-.200**	.716**	.340**	.646**	.397**	–		
DECMAK	92.30	14.07	-.130*	-.171**	-0.049	0.068	.118*	.236**	-.299**	.779**	0.086	.537**	.655**	.338**	–	
STRMANG	90.42	15.14	-.140**	-.219**	0.099	0.103	.189**	.312**	-.143**	.881**	.172**	.699**	.680**	.506**	.697**	–

Note: Alpha Coefficients are provided in bold. *p<.05, **p<.01.

EXFWORK = Experience of frustrators at work, FRUS = Emotion of frustration, TOTAL EQ = Total EQ, SSAVAIL = Social support availability SELFPER = Self-perception, SELFEXP = Self-expression, INTPER = Interpersonal, DECMAK = Decision-making, STRMANG = Stress management, FCOPE = Frustration coping strategies, AGGCOPE = Aggressive coping, SOCCOPE = Social coping, ACTCOPE = Active coping, POSRE = Positive reinterpretation

6.5.3 Testing a Conditional Process Model

Mplus 8 was used to analyse the conditional process model (i.e. the direct and indirect effects, as well as the conditional direct and indirect effects). As recommended by Hayes (2018: 98) bootstrapping procedures were employed to obtain estimates of the indirect effects. Due to the complexity of the model, (i.e. the number of variables assessed) acronyms for each predictor and outcome variable were utilised throughout the analysis to increase readability (see table 6.5).

Table 6.5: Acronyms for each predictor and outcome variable

	Variable Name	Acronym
Predictor Variables	Experience of frustrators at work	EXFWORK
	Emotion of frustration	FRUS
	TOTAL EQ	TOTALEQ
	Social support availability	SSAVAIL
	Self-perception	SELFPER
	Self-expression	SELFEXP
	Interpersonal	INTPER
	Decision Making	DECMAK
	Stress management	STRMANG
Outcome Variables	Frustration Coping Strategies	FCOPE
	Aggressive coping	AGGCOPE
	Social coping	SOCCOPE
	Active coping	ACTCOPE
	Positive reinterpretation	POSRE

Simple Mediation Model

The MODEL INDIRECT command (see appendix 6d) was used to assess the indirect effect of FRUS on the direct relationship between EXFWORK and the coping strategies assessed (see figure 6.2). As the model was saturated, the fit indices produced from the analysis ($\chi 2$ = 0, DF = 0, $p<.001$, TLI = 1, CFI = 1, RMSEA = 1) were deemed of little use statistically.

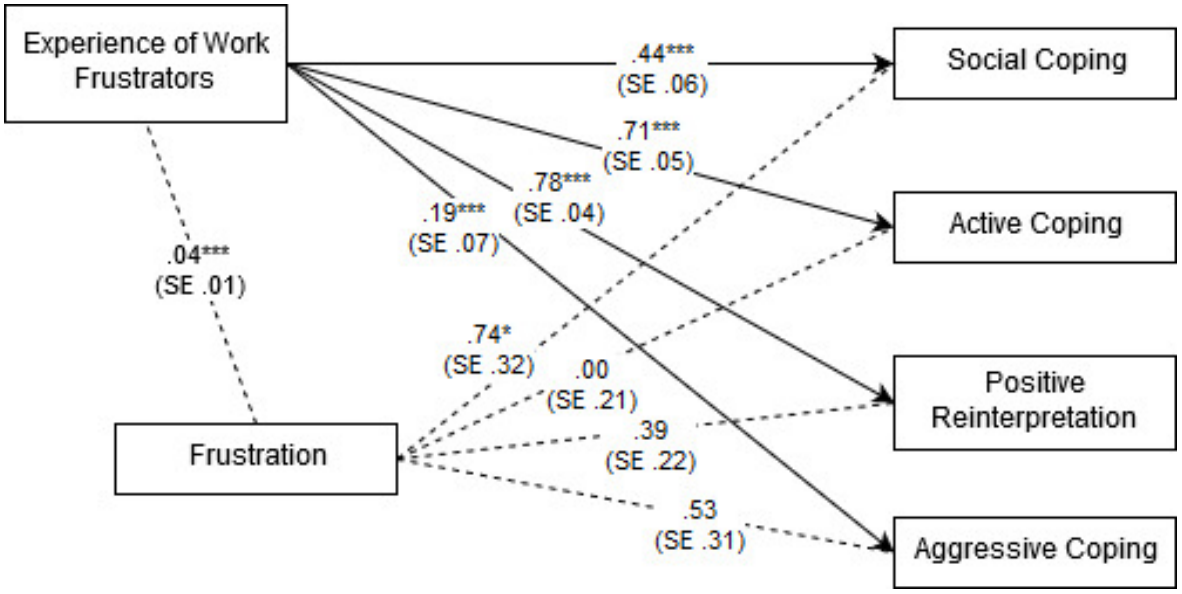

Figure 6.2: Estimated mediation model based on experience of frustrators at work

*Note: The numbers represent the standardised regression coefficients from a bootstrap procedure, SE = standard error, → = direct effect, - - = indirect effect. *p<.05, **p<.01, ***p<.001.*

The R^2 values for the model indicated that EXFWORK and FRUS accounted for 17% (p<.001), 43% (p<.001), 47% (p<.001) and 5% (p<.05) of the variance in SOCCOPE, ACTCOPE, POSRE, and AGGCOPE respectively. The proportion of variance in SOCCOPE, POSRE and AGGCOPE accounted for by EXFWORK therefore increased following the addition of FRUS into the model. The proportion of variance in ACTCOPE accounted for by EXFWORK remained constant.

As shown in table 6.6, both the direct [.435, 95% BC bootstrap CI (.323, .541)] and indirect effect [.028, 95% BC bootstrap CI (.006, .066)] of the EXFWORK on SOCCOPE through FRUS were positive and significant. The EXFWORK being significantly positively related to SOCOPE (β = .44, p<.001) and FRUS (B = .04, p < 0.001), and FRUS positively related to SOCCOPE (B = .74, p < .05). The results suggesting that not only is the experience of frustrators at work moderately related to the use of social coping strategies, but also an increase in frustration, which in turn is strongly related to the use of social coping strategies. Findings supporting hypothesis 2 and 3a.

The direct effect of the EXFWORK on ACTCOPE [.713, 95% BC bootstrap CI (.616, .808)], POSRE [.782, 95% BC bootstrap CI (.705, .862)], and AGGCOPE [.189, 95% BC bootstrap CI (.061, .314)] was significantly positive. The EXFWORK significantly positively related to

ACTCOPE (β = .71, p<.001), POSRE (β = .78, p<.001), and AGGCOPE (β = .19, p<.001), indicating that the experience of frustrators at work is strongly related to the use of active coping and positive reinterpretation strategies and to a small extent aggressive coping, further supporting hypothesis 2. Contrary to hypotheses 3b, c, and d, the indirect effect of the EXFWORK on ACTCOPE [.000, 95% BC bootstrap CI (-.016, .018)], POSRE [.015, 95% BC bootstrap CI (.000, .039)], and AGGCOPE [.020, 95% BC bootstrap CI (.000, .055)] through FRUS was not significant.

The finding that EXFWORK had a significantly positive effect on POSRE was a pleasant surprise given the significant negative correlation between EXFWORK and POSRE shown in table 6.4, and indicated a net (Cohen, Cohen, West and Aiken 2003) or negative (Conger 1974) suppression effect, with FRUS acting as the suppressor variable. A suppressor variable defined as a predictor that has zero or little correlation with the dependent variable but by virtue of correlation with another predictor variable, improves the overall effect of the predictor/s on the DV (Horst 1941). Indeed, instead of having a significant mediating effect on the relationship between EXFWORK and POSRE, FRUS, which had zero effect on POSRE (see table 6.5), suppressed irrelevant variance in EXPFRUS, allowing for a positive increased relationship between EXFWORK and POSRE.

Table 6.6: Standardised Model Coefficients, Standard Errors and Confidence Intervals for the Mediation Model estimated using MODEL INDIRECT

	Bootstrap Estimate	SE	BC 95% CI Lower	BC 95% CI Upper
SOCCOPE				
Direct effect	0.435	0.056	0.323	0.541
Indirect effect	0.028	0.015	0.006	0.066
Total effect	0.463	0.054	0.355	0.567
ACTCOPE				
Direct effect	0.713	0.049	0.616	0.808
Indirect effect	0	0.008	-0.016	0.018
Total effect	0.713	0.048	0.616	0.807
POSRE				
Direct effect	0.782	0.04	0.705	0.862
Indirect effect	0.015	0.01	0	0.039
Total effect	0.797	0.039	0.722	0.872

AGGCOPE				
Direct effect	0.189	0.065	0.061	0.314
Indirect effect	0.02	0.014	0	0.055
Total effect	0.209	0.062	0.087	0.331

Note: Based on 10,000 bootstrap samples. SE = Standard Error; BC = Bias Corrected; CI = confidence interval

Moderated-Mediation Model

Despite a lack of evidence for an unconditional indirect effect of the EXFWORK on ACTCOPE, POSRE, and AGGCOPE through FRUS, moderation of the indirect paths for all outcome variables was still undertaken using MODEL CONSTRAINT (see appendix 6e). According to Hayes (2018: 426), similar to how a significant relationship between X and Y is not a requirement of moderation of X's effect on Y, the significance of the relationship between X and Y though M has no bearing on whether the indirect effect of X is moderated. It is therefore appropriate to conduct moderated-mediation without being concerned whether X is significantly indirectly related to Y though M as it does not indicate whether X's indirect on Y is moderated.

Separate models were estimated for each of the four coping strategies assessed to aid interpretation. Moreover, to avoid any issues with multicollinearity the sub-constructs of TOTAL EQ (SELFPER, SELFEXP, INTPER, DECMAK, STRMANG) were assessed independently of both SSAVAIL and TOTAL EQ.

TOTAL EQ and SSAVAIL as Potential Moderators

The first four models estimated the moderating effect of TOTALEQ and SSAVAIL on both the direct and indirect effect of EXFWORK on SOCCOPE, ACTCOPE, POSRE, and AGGCOPE through FRUS (see figures 6.3-6.6). All models had very poor overall fit based on the significant chi square tests ($\chi 2 = 1381.664$, DF = 2, $p<.001$), TLI values (between -5.234 and -5.404), CFI values (.146-.169), and RMSEA values (1.412). Although a good-fitting model does not prove that it is correctly specified or valid, fit statistics are important and a good indicator of whether a model is reasonably consistent with the data, contains redundant parameters, and/ or requires re-specification (Kenny 2015). The estimated models were subjected to further examination in line with the hypotheses proposed to identify redundancy and where future re-specification may be required.

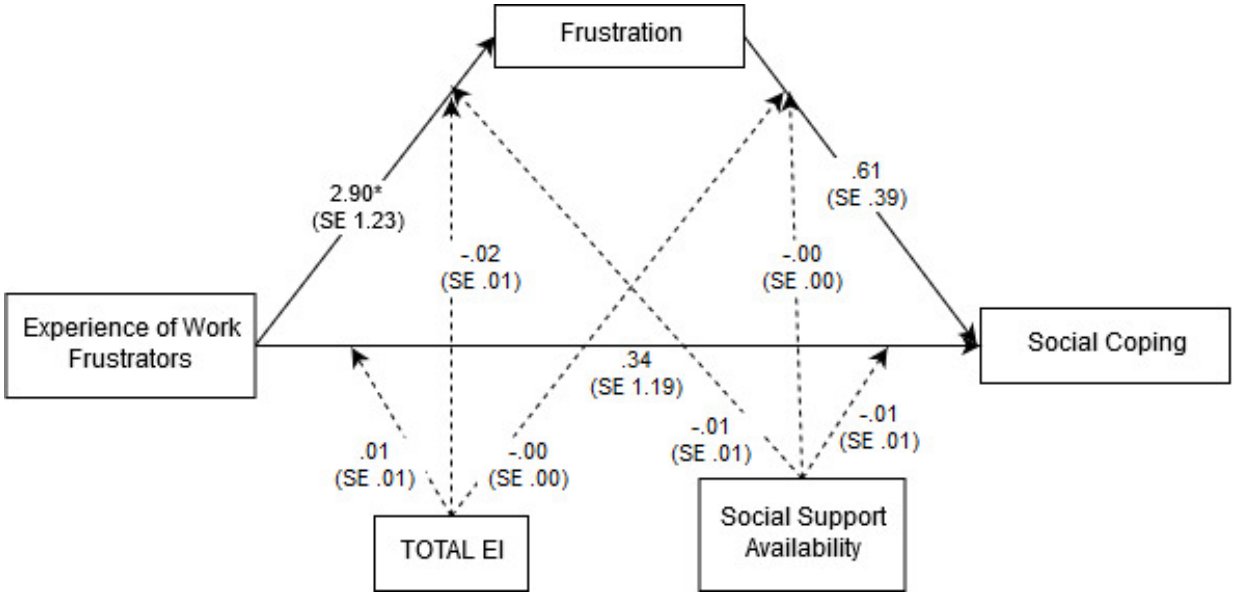

Figure 6.3: Estimated moderated-mediation model for social coping with total EQ and social support availability acting as potential moderators

*Note: The numbers represent the standardized regression coefficients from a bootstrap procedure, SE = standard error, → = direct / indirect effect, - - - = moderating effect. *p<.05, **p<.01, ***p<.001.*

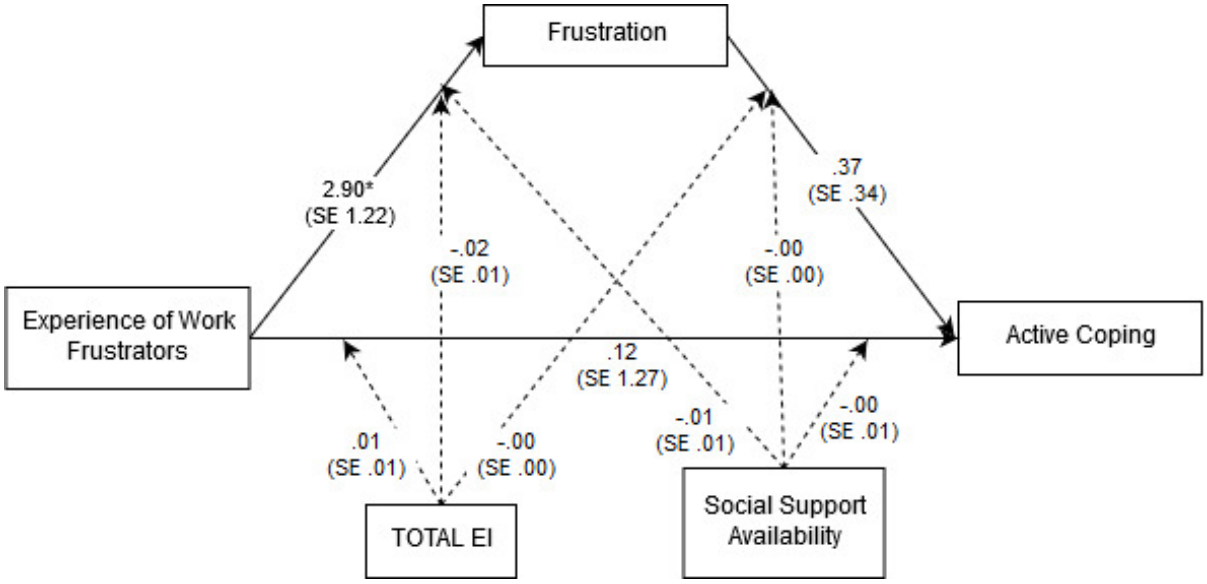

Figure 6.4: Estimated moderated-mediation model for active coping with total EQ and social support availability acting as potential moderators

*Note: The numbers represent the standardized regression coefficients from a bootstrap procedure, SE = standard error, → = direct / indirect effect, - - - = moderating effect. *p<.05, **p<.01, ***p<.001.*

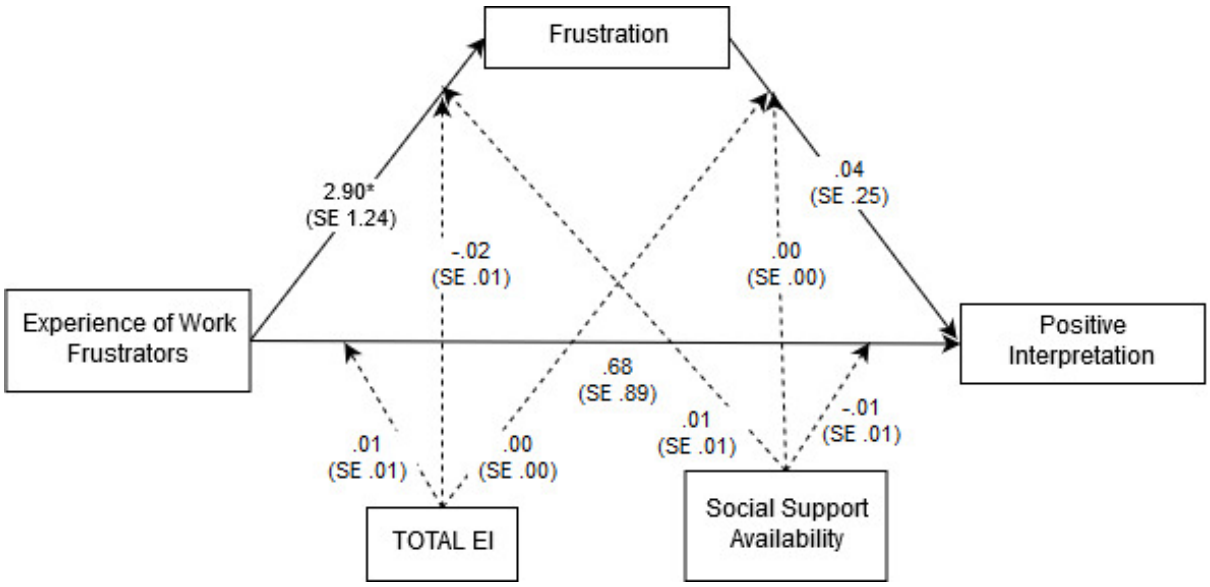

Figure 6.5: Estimated moderated-mediation model for positive reinterpretation with total EQ and social support availability acting as potential moderators

*Note: The numbers represent the standardized regression coefficients from a bootstrap procedure, SE = standard error, → = direct / indirect effect, - - - = moderating effect. *p<.05, **p<.01, ***p<.001.*

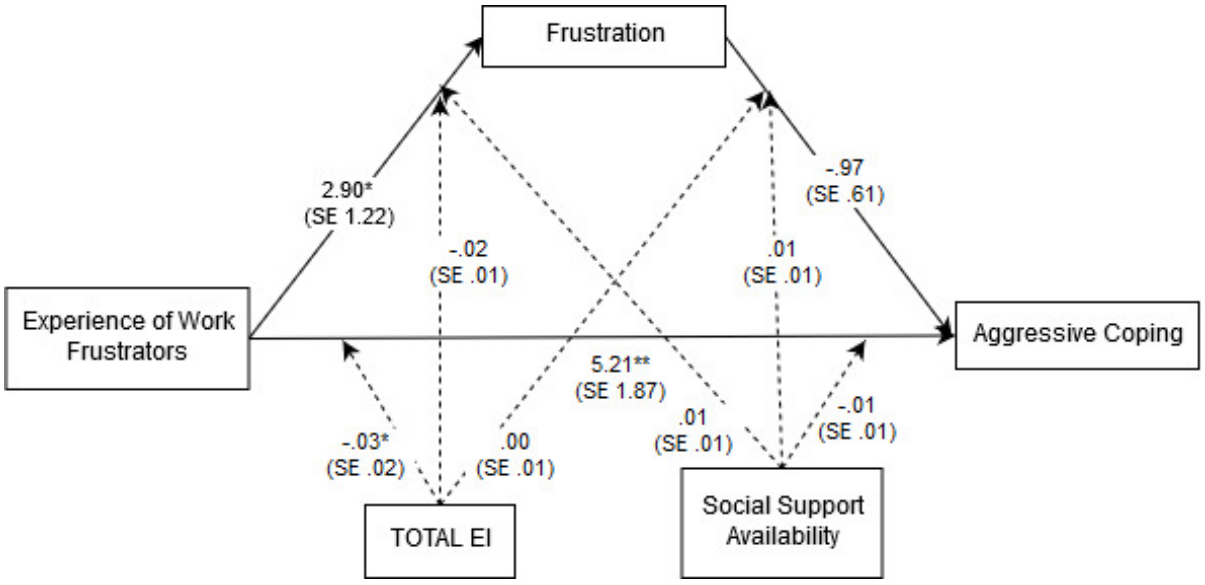

Figure 6.6: Estimated moderated-mediation model for aggressive coping with total EQ and social support availability acting as potential moderators

*Note: The numbers represent the standardized regression coefficients from a bootstrap procedure, SE = standard error, → = direct / indirect effect, - - - = moderating effect. *p<.05, **p<.01, ***p<.001.*

When TOTALEQ and SSAVAIL were included to the SOCCOPE model, the R^2 value rose to .54 from .17, indicating that TOTALEQ and SSAVAIL accounted for an extra 37% of the variance in SOCCOPE. Similarly, when added to the AGGCOPE model R^2 value rose to .60 from .05, indicating that TOTALEQ and SSAVAIL accounted for an extra 55% of the variance in AGGCOPE. However, when added to the ACTCOPE model the R^2 value decreased from .43 to .38, indicating that the EXFWORK and FRUS alone, without TOTALEQ and SSAVAIL, explained an extra 5% of the variance in ACTCOPE. Likewise, when included in the POSRE model the R^2 value decreased from .47 to .22 and was no longer significant, indicating that the EXFWORK and FRUS alone explained an extra 25% of the variance in POSRE. The findings therefore highlighting that TOTALEQ and SSAVAIL may only help to explain differences in frustration tolerance and the use of social or aggressive coping strategies in frustrating situations.

In line with the above notion, the moderating effect of TOTALEQ and SSAVAIL on both the direct and indirect effect of the EXFWORK on ACTCOPE and POSRE through FRUS were not significant. Surprisingly, this was also the case for SOCCOPE. The results therefore showing no support for hypotheses 4 (a, c, d, e) and 10 (a, c, d, e). TOTALEQ did however have a significant ($p<.05$) moderating effect on the direct relationship between EXFWORK and AGGCOPE. The positive relationship between the EXFWORK and AGGCOPE being partially conditional on low levels of TOTALEQ, supporting hypothesis 4b. SSAVAIL did not have a significant moderating effect on the direct relationship between the EXFWORK and AGGCOPE, showing no support for hypotheses 10b.

Additionally, while there was a lack of support for the moderating effects of TOTALEQ and SSAVAIL, it is important to note that there was a statistically significant direct relationship between SSAVAIL and SOCCOP, and SSAVAIL and POSRE. Higher levels of SSAVAIL positively associated with the use of SOCCOP and POSRE.

Table 6.7: Standardised Model Coefficients, Standard Errors and Confidence Intervals for the Moderated-Mediation Model estimated using MODEL CONSTRAINT

	Consequent							
	M (FRUS)				Y (SOCCOPE)			
Antecedent	Bootstrap Estimate	SE	BC 95% CI Lower	BC 95% CI Upper	Bootstrap Estimate	SE	BC 95% CI Lower	BC 95% CI Upper
X (EXFWORK)	2.9	1.23	0.657	5.42	0.34	1.19	-2.04	2.593
M (FRUS)	-	-	-	-	0.61	0.39	-0.128	1.369
W (TOTALEQ)	0.08	0.09	-0.085	0.263	0.03	0.05	-0.067	0.135
Z (SSAVAIL)	-0.07	0.06	-0.198	0.047	0.13	0.06	0.018	0.242
X × W	-0.02	0.01	-0.041	0.008	0.01	0.01	-0.01	0.024
X × Z	0.01	0.01	-0.009	0.022	-0.01	0.01	-0.026	0.017
M × W	-	-	-	-	0	0	-0.008	0.003
M × Z	-	-	-	-	0	0	-0.009	0.006
	R-square = .43 P<0.001				R-square = .54 P<0.01			

Note: Based on 10,000 bootstrap samples. SE = Standard Error; BC = Bias Corrected; CI = confidence interval

Table 6.8: Standardised Model Coefficients, Standard Errors and Confidence Intervals for the Moderated-Mediation Model estimated using MODEL CONSTRAINT

	Consequent							
	M (FRUS)				Y (ACTCOPE)			
Antecedent	Bootstrap Estimate	SE	BC 95% CI Lower	BC 95% CI Upper	Bootstrap Estimate	SE	BC 95% CI Lower	BC 95% CI Upper
X (EXFWORK)	2.9	1.22	0.686	5.443	0.12	1.26	-2.318	2.663
M (FRUS)	-	-	-	-	0.37	0.34	-0.28	1.045
W (TOTALEQ)	0.08	0.09	-0.086	0.262	0.03	0.06	-0.08	0.136
Z (SSAVAIL)	-0.07	0.06	-0.197	0.048	0.07	0.06	-0.04	0.177
X × W	-0.02	0.01	-0.041	0.008	0.01	0.01	-0.015	0.024
X × Z	0.01	0.01	-0.009	0.022	0	0.01	-0.025	0.02
M × W	-	-	-	-	0	0	-0.007	0.003
M × Z	-	-	-	-	0	0	-0.007	0.006
	R-square = .43 P<0.001				R-square = .38 P>0.05			

Note: Based on 10,000 bootstrap samples. SE = Standard Error; BC = Bias Corrected; CI = confidence interval

Table 6.9: Standardised Model Coefficients, Standard Errors and Confidence Intervals for the Moderated-Mediation Model estimated using MODEL CONSTRAINT

	Consequent							
	M (FRUS)				Y (POSRE)			
Antecedent	Bootstrap Estimate	SE	BC 95% CI Lower	BC 95% CI Upper	Bootstrap Estimate	SE	BC 95% CI Lower	BC 95% CI Upper
X (EXFWORK)	2.9	1.24	0.603	5.376	0.68	0.89	-1.071	2.405
M (FRUS)	-	-	-	-	0.04	0.25	-0.444	0.554
W (TOTALEQ)	0.075	0.09	-0.089	0.261	0.01	0.04	-0.071	0.103
Z (SSAVAIL)	-0.07	0.06	-0.196	0.049	0.13	0.04	0.046	0.205
X × W	-0.02	0.01	-0.041	0.008	0.01	0.01	-0.014	0.019
X × Z	0.01	0.01	-0.01	0.022	-0.01	0.01	-0.027	0.003
M × W	-	-	-	-	0	0	-0.004	0.005
M × Z	-	-	-	-	0	0	-0.005	0.005
	R-square = .43 P<0.001				R-square = .22 P>0.05			

Note: Based on 10,000 bootstrap samples. SE = Standard Error; BC = Bias Corrected; CI = confidence interval

Table 6.10: Standardised Model Coefficients, Standard Errors and Confidence Intervals for the Moderated-Mediation Model estimated using MODEL CONSTRAINT

	Consequent							
	M (FRUS)				Y (AGGCOPE)			
Antecedent	Bootstrap Estimate	SE	BC 95% CI Lower	BC 95% CI Upper	Bootstrap Estimate	SE	BC 95% CI Lower	BC 95% CI Upper
X (EXFWORK)	2.9	1.22	0.696	5.454	5.21	1.87	1.606	8.989
M (FRUS)	-	-	-	-	-0.97	0.61	-2.164	0.29
W (TOTALEQ)	0.08	0.09	-0.085	0.262	0.14	0.07	0.001	0.291
Z (SSAVAIL)	-0.07	0.06	-0.198	0.047	-0.07	0.07	-0.201	0.066
X × W	-0.02	0.01	-0.041	0.008	-0.03	0.02	-0.065	-0.006
X × Z	0.01	0.01	-0.009	0.022	-0.01	0.02	-0.037	0.023
M × W	-	-	-	-	0	0.01	-0.007	0.012
M × Z	-	-	-	-	0.01	0.01	-0.004	0.019
	R-square = .43 P<0.001				R-square = .60 P<0.01			

Note: Based on 10,000 bootstrap samples. SE = Standard Error; BC = Bias Corrected; CI = confidence interval

Facets of ESC as Potential Moderators

An error occurred when attempting to run the moderated-mediation model for all five sub-constructs, the analysis providing no output. The researcher and a third party checked the input code and no errors were detected. The model was run multiple times, each time with a different combination of moderators to identify where there may be an issue with variance and/or convergence. SELFPER, SELFEXP, and INTPER were problematic and removed from the analysis. The following four models therefore assessed the moderating effect of DECMAK and STRMANG only, on the direct and indirect effect of EXFWORK on SOCCOPE, ACTCOPE, POSRE, and AGGCOPE through FRUS (see figure 6.7-6.10).

All four models had very poor overall fit based on the significant chi square tests ($\chi 2$ = 1323.955, DF = 2, p<.001), TLI values (between -5.133 and -5.418), CFI values (.144 - .182), and RMSEA values (1.382). As with the previous poor fitting models, the models were subjected to further examination in line with the hypotheses proposed to identify redundancy and where future re-specification may be required.

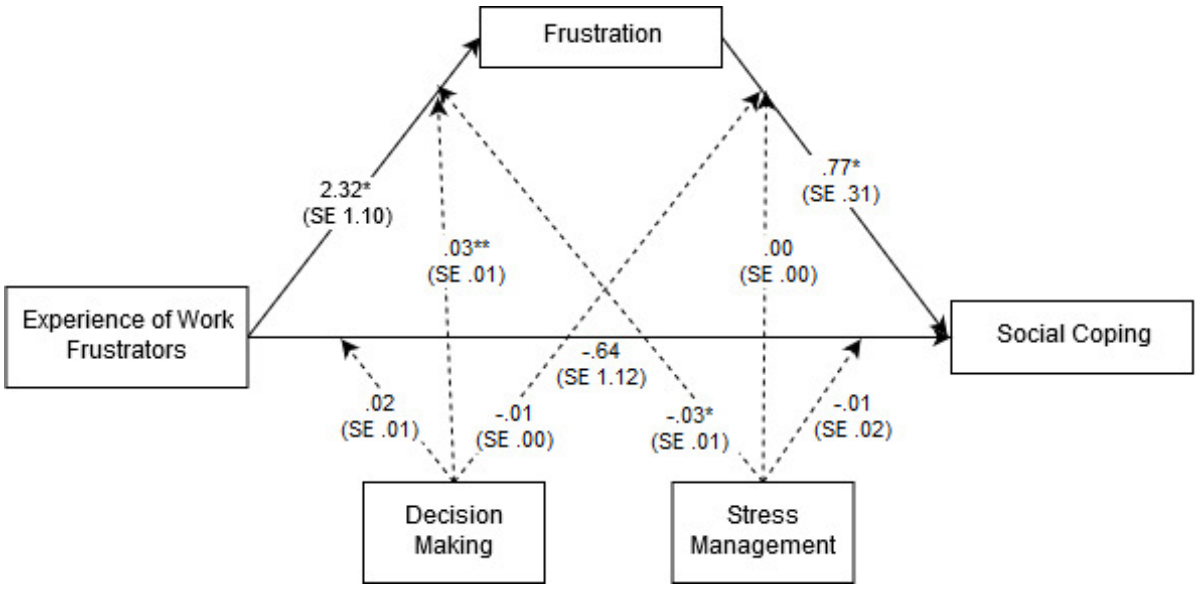

Figure 6.7: Estimated moderated-mediation model for social coping with decision-making and stress management acting as potential moderators

*Note: The numbers represent the standardized regression coefficients from a bootstrap procedure, SE = standard error, → = direct / indirect effect, - - - = moderating effect. *p<.05, **p<.01, ***p<.001.*

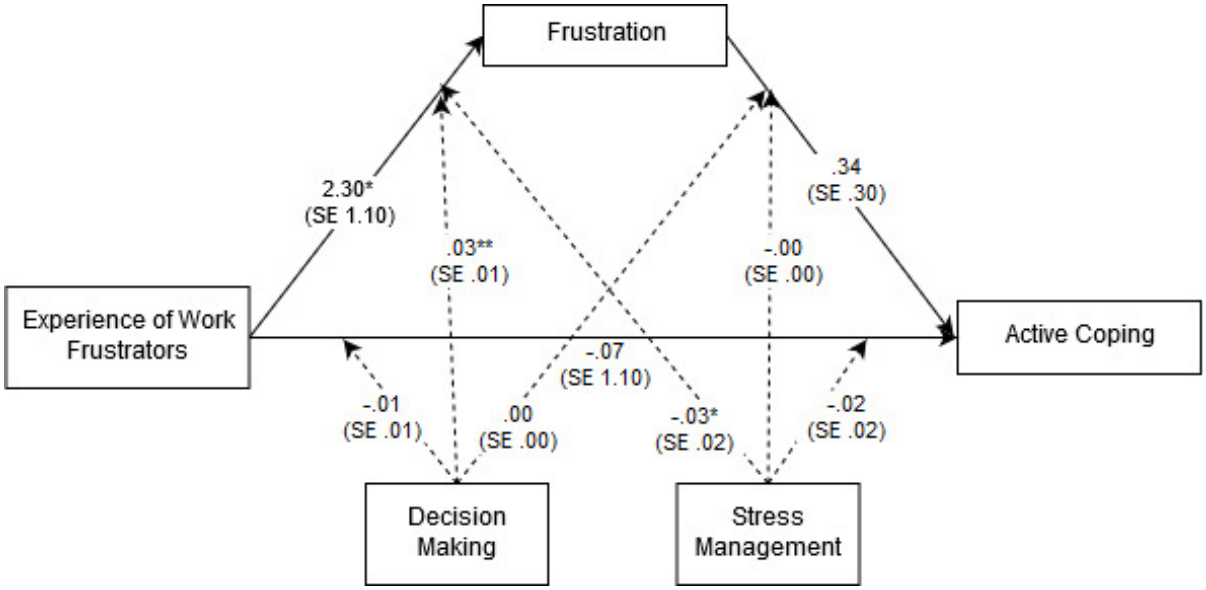

Figure 6.8: Estimated moderated-mediation model for active coping with decision-making and stress management acting as potential moderators

*Note: The numbers represent the standardized regression coefficients from a bootstrap procedure, SE = standard error, → = direct / indirect effect, - - - = moderating effect. *p<.05, **p<.01, ***p<.001.*

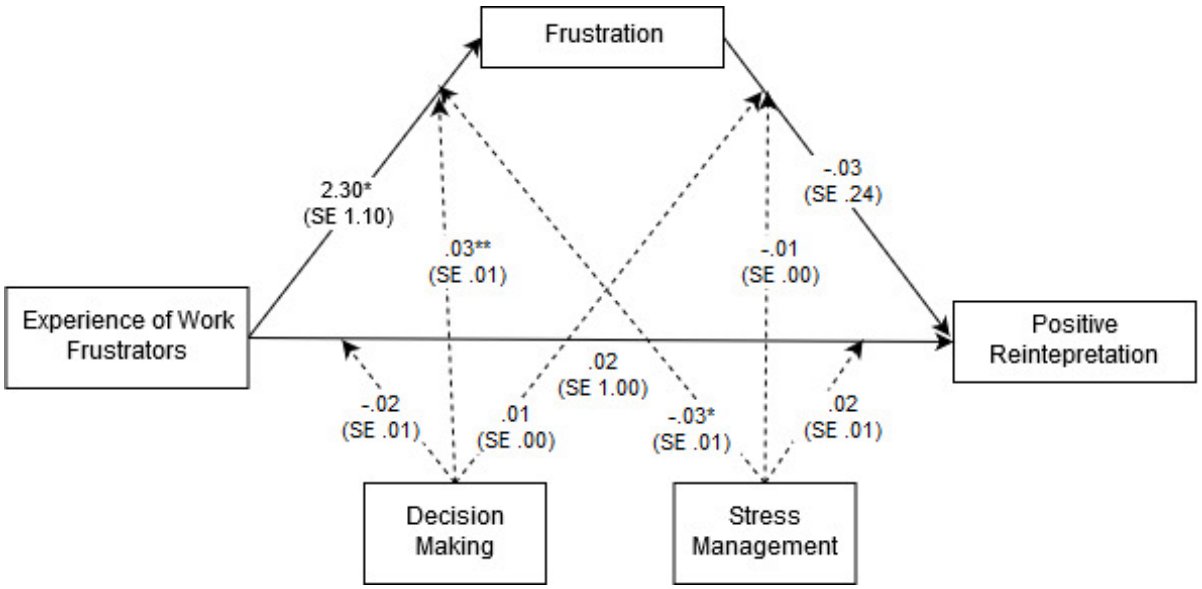

Figure 6.9: Estimated moderated-mediation model for positive reinterpretation with decision-making and stress management acting as potential moderators

*Note: The numbers represent the standardized regression coefficients from a bootstrap procedure, SE = standard error, → = direct / indirect effect, - - - = moderating effect. *p<.05, **p<.01, ***p<.001.*

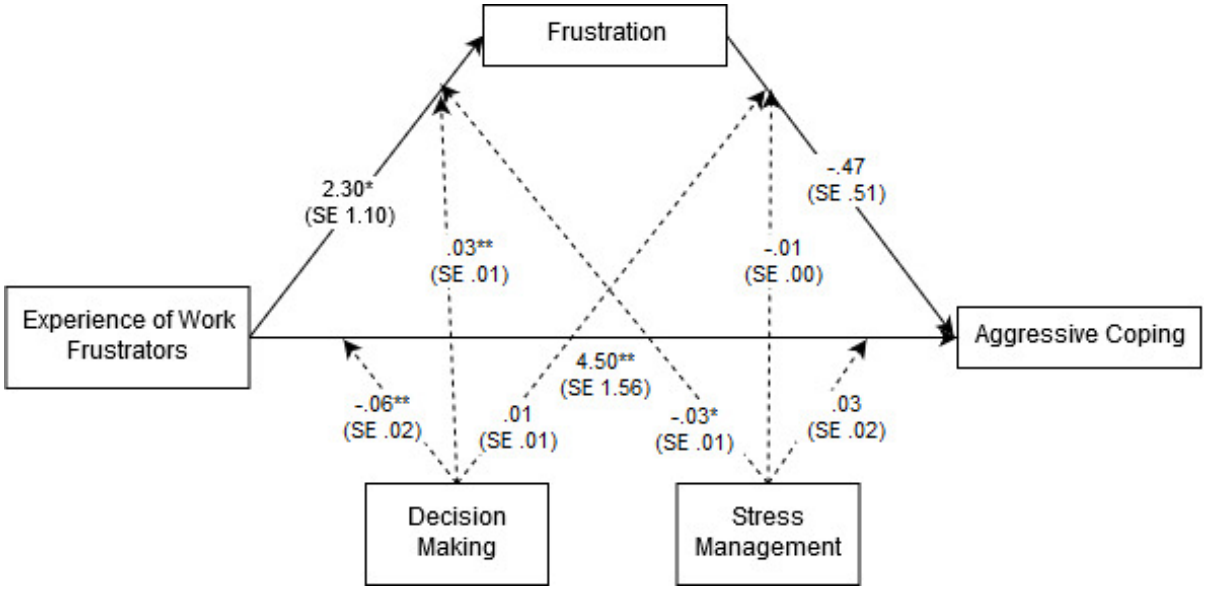

Figure 6.10: Estimated moderated-mediation model for aggressive coping with decision-making and stress management acting as potential moderators

*Note: The numbers represent the standardized regression coefficients from a bootstrap procedure, SE = standard error, → = direct / indirect effect, - - - = moderating effect. *p<.05, **p<.01, ***p<.001.*

When DECMAK and STRMANG were included to the SOCCOPE model, the R^2 value rose to .60 from .17, indicating that DECMAK and STRMANG accounted for an extra 43% of the variance in SOCCOPE. Similarly, when added to the AGGCOPE model the R^2 value rose to .40 from .05, indicating that DECMAK and STRMANG accounted for an extra 35% of the variance in AGGCOPE. Conversely, when added to the ACTCOPE model the R^2 value decreased from .43 to .30 and was no longer significant, indicating that the EXFWORK and FRUS explained an extra 13% of the variance in ACTCOPE. Likewise, when added to the POSRE model the R^2 value decreased from .47 to .12 and was no longer significant, indicating that the EXFWORK and FRUS alone explained an extra 35% of the variance in POSRE. The findings highlighting that DECMAK and STRMANG may only help to explain differences in frustration tolerance and the use of social or aggressive coping strategies in frustrating situations. It is worth noting however that the proportion of variance accounted from by DECMAK and STRMANG was less than that accounted for by TOTALEQ and SSAVAIL.

In line with the above notion, the moderating effect of DECMAK and STRMANG on the direct effect of both the EXFWORK and FRUS on ACTCOPE and POSRE were not significant. Surprisingly, this was also the case for SOCCOPE, thus showing no support for hypotheses

8 (a, d) and 9 (a, d). The moderating effect of DECMAK (p<.001) and STRMANG (p<.05) on the relationship between the EXFWORK and FRUS was significant. The relationship between the EXFWORK and FRUS being partially conditional on high levels of DECMAK and low levels of STRMANG, supporting hypotheses 8c and 9c. Additionally, the moderating effect of DECMAK on the relationship between the EXFWORK and AGGCOPE was significant (p<.01). The relationship between the EXFWORK and AGGCOPE being partially conditional on low levels of DECMAK, supporting hypothesis 8b. DECMAK and STRMANG did not have a significant moderating effect on the direct relationship between the FRUS and AGGCOPE, or the direct relationship between the EXFWORK and AGGCOPE (STRMANG only), showing no support for hypotheses 8e and 9 (b, e).

Additionally, while there was a lack of support for the moderating effects of DECMAK and STRMANG, it is important to note that there was a statistically significant direct relationship between DECMAK and FRUS, indicating that individuals with low levels of DECMAK experience higher levels of FRUS.

Table 6.11: Standardised Model Coefficients, Standard Errors and Confidence Intervals for the Moderated-Mediation Model estimated using MODEL CONSTRAINT

	Consequent							
	M (FRUS)				Y (SOCCOPE)			
Antecedent	Bootstrap Estimate	SE	BC 95% CI Lower	BC 95% CI Upper	Bootstrap Estimate	SE	BC 95% CI Lower	BC 95% CI Upper
X (EXFWORK)	2.32	1.1	0.367	4.712	-0.64	1.12	-2.81	1.504
M (FRUS)	-	-	-	-	0.77	0.31	0.151	1.38
W (DECMAK)	-0.2	0.08	-0.365	-0.051	-0.01	0.09	-0.185	0.159
Z (STRMANG)	0.18	0.1	-0.001	0.392	0.08	0.08	-0.068	0.226
X × W	0.03	0.01	0.01	0.013	0.02	0.02	-0.015	0.047
X × Z	-0.03	0.01	-0.063	-0.009	-0.01	0.02	-0.035	0.022
M × W	-	-	-	-	-0.01	0	-0.016	0.002
M × Z	-	-	-	-	0	0	-0.008	0.01
	R-square = .44 P<0.001				R-square = .60 P<0.01			

Note: Based on 10,000 bootstrap samples. SE = Standard Error; BC = Bias Corrected; CI = confidence interval

Table 6.12: Standardised Model Coefficients, Standard Errors and Confidence Intervals for the Moderated-Mediation Model estimated using MODEL CONSTRAINT

	Consequent							
	M (FRUS)				Y (ACTCOPE)			
Antecedent	Bootstrap Estimate	SE	BC 95% CI Lower	BC 95% CI Upper	Bootstrap Estimate	SE	BC 95% CI Lower	BC 95% CI Upper
X (EXFWORK)	2.3	1.1	0.329	4.654	-0.07	1.1	-2.192	2.095
M (FRUS)	-	-	-	-	0.34	0.3	-0.256	0.921
W (DECMAK)	-0.2	0.08	-0.368	-0.054	0.06	0.09	-0.114	0.219
Z (STRMANG)	0.18	0.1	-0.002	0.391	-0.01	0.07	-0.14	0.136
X × W	0.03	0.01	0.01	0.014	-0.01	0.02	-0.042	0.02
X × Z	-0.03	0.01	-0.063	-0.009	0.02	0.01	-0.013	0.042
M × W	-	-	-	-	0	0	-0.007	0.01
M × Z	-	-	-	-	0	0	-0.012	0.003
	R-square = .44 P<0.001				R-square = .30 P>0.05			

Note: Based on 10,000 bootstrap samples. SE = Standard Error; BC = Bias Corrected; CI = confidence interval

Table 6.13: Standardised Model Coefficients, Standard Errors and Confidence Intervals for the Moderated-Mediation Model estimated using MODEL CONSTRAINT

	Consequent							
	M (FRUS)				Y (POSRE)			
Antecedent	Bootstrap Estimate	SE	BC 95% CI Lower	BC 95% CI Upper	Bootstrap Estimate	SE	BC 95% CI Lower	BC 95% CI Upper
X (EXFWORK)	2.3	1.1	0.327	4.647	0.02	1	-1.926	2.014
M (FRUS)	-	-	-	-	-0.03	0.24	-0.504	0.443
W (DECMAK)	-0.2	0.08	-0.368	-0.054	0.07	0.07	-0.076	0.214
Z (STRMANG)	0.18	0.1	-0.002	0.39	-0.01	0.06	-0.127	0.103
X × W	0.03	0.01	0.01	0.054	-0.02	0.01	-0.047	0.005
X × Z	-0.03	0.01	-0.063	-0.009	0.02	0.01	-0.005	0.04
M × W	-	-	-	-	0.01	0	-0.001	0.013
M × Z	-	-	-	-	-0.01	0	-0.012	0.001
	R-square = .44 P<0.001				R-square = .12 P>0.05			

Note: Based on 10,000 bootstrap samples. SE = Standard Error; BC = Bias Corrected; CI = confidence interval

Table 6.14: Standardised Model Coefficients, Standard Errors and Confidence Intervals for the Moderated-Mediation Model estimated using MODEL CONSTRAINT

	Consequent							
	M (FRUS)				Y (AGGCOPE)			
Antecedent	Bootstrap Estimate	SE	BC 95% CI Lower	BC 95% CI Upper	Bootstrap Estimate	SE	BC 95% CI Lower	BC 95% CI Upper
X (EXFWORK)	2.3	1.1	0.329	4.653	4.5	1.56	1.457	7.537
M (FRUS)	-	-	-	-	-0.47	0.51	-1.449	0.519
W (DECMAK)	-0.2	0.08	-0.368	-0.054	0.11	0.1	-0.087	0.289
Z (STRMANG)	0.18	0.1	-0.002	0.39	-0.02	0.09	-0.191	0.145
X × W	0.03	0.01	0.01	0.054	-0.06	0.02	-0.096	-0.017
X × Z	-0.03	0.01	-0.063	-0.009	0.03	0.02	-0.015	0.064
M × W	-	-	-	-	0.01	0.01	0	0.025
M × Z	-	-	-	-	-0.01	0.01	-0.02	0.005
	R-square = .44 P<0.001				R-square = .40 P<0.01			

Note: Based on 10,000 bootstrap samples. SE = Standard Error; BC = Bias Corrected; CI = confidence interval

For a clear overview of which hypotheses were or not supported, please see table 6.15 below. Hypotheses 5 to 7 are not included due to the omission of SELFPER, SELFEXP, and INTPER from the analyses.

Table 6.15: An Overview of Hypotheses

Hypotheses		Supported Yes/No
1	The experience of frustrators at work will be positively associated with the emotion of frustration.	Y
2	The experience of frustrators at work will be moderately positively associated with the use of social coping, active coping and positive reinforcement, and aggressive coping strategies.	Y
3a	The association between frustrators at work and the use of social coping strategies will be partially positively mediated by the emotion of frustration.	Y
3b	The association between frustrators at work and the use of active coping strategies will be partially positively mediated by the emotion of frustration.	N

3c	The association between frustrators at work and the use of positive interpretation as a method of coping will be partially positively mediated by the emotion of frustration.	N
3d	The association between frustrators at work and the use of aggressive coping strategies will be partially positively mediated by the emotion of frustration.	N
4a	The direct effect of the experience of frustrators at work on social coping, active coping and positive reinforcement will be moderated by total EQ, such that it is stronger for higher than for lower levels of self-perception.	N
4b	The direct effect on the experience of frustrators at work on aggressive coping will be moderated by total EQ, such that it is stronger for lower than for higher levels of total EQ.	Y
4c	The direct effect of the experience of frustrators at work on the emotion of frustration will be moderated by total EQ, such that it is stronger for lower than for higher levels of total EQ.	N
4d	The direct effect of the emotion of frustration on social coping, active coping and positive reinforcement will be moderated by total EQ, such that it is stronger for higher than for lower levels of total EQ.	N
4e	The direct effect of the emotion of frustration on aggressive coping will be moderated by total EQ, such that it is stronger for lower than for higher levels of total EQ.	N
8a	The direct effect of the experience of frustrators at work on social coping, active coping and positive reinforcement will be moderated by decision making, such that it is stronger for higher than for lower levels of decision making.	N
8b	The direct effect on the experience of frustrators at work on aggressive coping will be moderated by decision making, such that it is stronger for lower than for higher levels of decision making.	Y
8c	The direct effect of the experience of frustrators at work on the emotion of frustration will be moderated by decision making, such that it is stronger for lower than for higher levels of decision making.	Y
8d	The direct effect of the emotion of frustration on social coping, active coping and positive reinforcement will be moderated by decision making, such that it is stronger for higher than for lower levels of decision making.	N
8e	The direct effect of the emotion of frustration on aggressive coping will be moderated by decision making, such that it is stronger for lower than for higher levels of decision making.	N
9a	The direct effect of the experience of frustrators at work on social coping, active coping and positive reinforcement will be moderated by stress management, such that it is stronger for higher than for lower levels of stress management.	N
9b	The direct effect on the experience of frustrators at work on aggressive coping will be moderated by stress management, such that it is stronger for lower than for higher levels of stress management.	N

9c	The direct effect of the experience of frustrators at work on the emotion of frustration will be moderated by stress management, such that it is stronger for lower than for higher levels of stress management.	Y
9d	The direct effect of the emotion of frustration on social coping, active coping and positive reinforcement will be moderated by stress management, such that it is stronger for higher than for lower levels of stress management.	N
9e	The direct effect of the emotion of frustration on aggressive coping will be moderated by stress management, such that it is stronger for lower than for higher levels of stress management.	N
10a	The direct effect of the experience of frustrators at work on social coping, active coping and positive reinforcement will be moderated by social support availability, such that it is stronger for higher than for lower levels of social support availability.	N
10b	The direct effect on the experience of frustrators at work on aggressive coping will be moderated by social support availability, such that it is stronger for lower than for higher levels of social support availability.	N
10c	The direct effect of the experience of frustrators at work on the emotion of frustration will be moderated by social support availability, such that it is stronger for lower than for higher levels of social support availability.	N
10d	The direct effect of the emotion of frustration on social coping, active coping and positive reinforcement will be moderated by social support availability, such that it is stronger for higher than for lower levels of social support availability.	N
10e	The direct effect of the emotion of frustration on aggressive coping will be moderated by social support availability, such that it is stronger for lower than for higher levels of social support availability.	N

6.6 Discussion

Phase three of the current research tested a new model of work frustration, expanding on previous models (e.g. Fox and Spector 1999, Keenan and Newton 1985, Spector 1978, Spector 1997), incorporating potential moderators, which may influence both frustration tolerance and choice of coping strategy. It incorporated additional frustrators (e.g. bullying behaviour) and constructive coping strategies (e.g. social coping), specifically those identified in phase one (chapter four) and two (chapter five). It therefore moved beyond the focus of previous research that has focused typically on aggression as a behavioural reaction to frustration (e.g. Baillien et al. 2009, Dollard et al. 1939, Tepper et al. 2006), enabling the identification of additional factors (ESC and social support availability) that may aid the use of more constructive coping strategies. Each additional factor acting as potential moderators in the direct and indirect relationship between work frustrators and frustration coping strategies

through the emotion of frustration. The following three sections will provide a summary of the results, followed by an outline of the limitations, future research and practical applications.

Simple Associations

As expected, the experience of frustrators at work was significantly positively associated with the emotion of frustration, indicating that the more frustrators an individual experiences at work the higher their levels of frustration, supporting hypothesis 1 and the COR theory (Hobfoll 1991, Hobfoll 2001). There was also a significant positive association between the experience of frustration at work and social, active, and aggressive coping, providing partial support for hypothesis 2 and further strengthening the findings of phase one that identified social, active and aggressive coping as important behavioural reactions to frustration.

Contrary to expectations, the relationship between the experience of frustrators at work and positive reinterpretation was negative. The experience of frustrators at work associated with low rather than high levels of positive reinterpretation. One possible explanation for this result might be that participants perceived the frustrator/s as changeable, leading them to engage in more problem-focused (e.g. active coping) rather than emotion-focused coping strategies (positive reinterpretation). According to Carver et al. (1989), to protect themselves individuals typically engage in coping tactics such as positive reinterpretation and acceptance when they perceive stressors to be unchangeable (i.e. not manageable). Gaining an understanding of how participants appraise a frustrating situation (i.e. manageable or not manageable) and the impact this may on the implementation of different coping strategies could therefore be of benefit in future research. Moreover, it is advisable that researchers consider additional factors that may act as mediators and/or moderators in the relationship between the experience of frustrators at work and positive reinterpretation. For example, self-esteem (Scheier, Carver and Bridges 1994), self-compassion (Neff, Hsieh and Dejitterat 2005), self-kindness (Doron et al. 2014), hope (Litman 2006), and mindfulness (Weinstein et al. 2009), each of which have all be associated with the use of positive reinterpretation.

The Unconditional Direct and Indirect Effects

The model assessing the mediating role of frustration in the relationship between the experience of frustrators at work and each of the coping strategies assessed showed mixed results. The direct and indirect effect of the experience of frustrators at work on social coping through frustration was significant. The experience of frustrators at work directly associated with greater use of social coping strategies and indirectly through high levels of frustration. These findings supported hypothesis 2 and 3a and matched those observed in phase one. The direct effect of the experience of frustrators at work on frustration, as well as active coping,

positive reinterpretation and aggressive coping strategies was also significant. The experience of frustrators at work related directly to the use of active coping and positive reinterpretation strategies, and to a small extent aggressive coping, providing further support for hypothesis 2.

Contrary to expectations, the indirect effect of the experience of frustrators at work on active coping, positive reinterpretation and aggressive coping through frustration was not significant, showing no support for hypotheses 3b, c, and d. The direct relationships between frustration and each of the three coping strategies were non-significant. This finding differed from that in phase one, was somewhat surprising regarding aggressive coping, especially given the frustration-aggression hypothesis (Dollard et al. 1939). The vast number of researchers that have reported a significant positive relationship between frustration and aggression (e.g. Baillien et al. 2009, Dollard et al. 1939, Duffy et al. 2012, Elias 2013: 204, Gaucher and Chebat 2019, Spector 1997, Spector, Fox and Domagalski 2006, Tepper et al. 2006, Toscano and Windau 1998). However, it is important to bear in mind the skewed distribution of aggressive coping in the current data set, as well as the finding of non-linearity. As discussed earlier in this chapter, non-linearity reduces the power of statistical tests such as linear regression (Tabachnick and Fidell 2001) and can often lead to the relationship between two variables being underestimated (Warner 2008). The non-significant relationship between frustration and aggressive coping is thus interpreted with caution.

Similar to previous coping research (e.g. Gaylord-Hardon, Cunningham, Holmbeck and Grant 2010), phase three also revealed a net suppression effect, the emotion of frustration acting as a suppressor rather than a mediator variable in the relationship between the experience of frustrators at work and positive reinterpretation. The emotion of frustration suppressing irrelevant variance in the experience of frustrators at work, resulting in a positive increased relationship between experience of frustrators at work and positive reinterpretation, indirectly allowing for a more concise estimate of the IV-DV relationship. One explanation for this finding is that frustration may remove the variance associated with more ‘manageable’ frustrators at work. As mentioned previously, ‘manageable’ frustrators at work are typically associated with the use of more problem-focused (e.g. active coping) rather than emotion-focused coping strategies (positive reinterpretation) (Carver et al. 1989). It may be the case that participants who experienced a frustrating albeit manageable situation, used problem-focus focusing coping to solve or alleviate the situation, accepting and acknowledging the situation as frustrating. However, those who experienced a frustrating situation that they perceived to be non-manageable, may have used emotion-focus coping (e.g. positive reinterpretation) to regulate their emotional response, behaviour closely linked to denial and avoidance (Wortman

2004), resulting in low levels of frustration being reported. It would be wise therefore for future researchers to assess a participant's appraisal of the frustrating situation (i.e. manageable or not manageable) and whether this appraisal moderates the relationship between the experience of frustrators at work, frustration and positive reinterpretation.

The Conditional Direct and Indirect Effects

Conditional process analysis was undertaken to assess whether the direct and indirect effect of the experience of frustration at work on each of the coping strategies through frustration was conditional on other factors. Inconsistent with expectations, the estimated models assessing the moderating effect of total EQ, social support availability, decision-making, and stress management on both the direct and indirect paths had very poor overall fit. The models were subjected to further examination to identify redundancy and where future re-specification may be required.

The results indicated that total EQ, social support availability, decision-making and stress management did not explain any additional variance in active coping and positive reinterpretation. Each of the potential moderators appearing to have little or no influence on the use of active coping and positive reinterpretation strategies, providing no support for hypotheses 4 (a, c, d), 8 (a, c, d), 9 (a, c, d), and 10 (a, c, d). Although these findings were not as expected, with further research it might be still be possible to identify potential moderators in the relationship between frustration and both active coping and positive reinterpretation. According to research conducted by Dijkstra and Homan (2016) the use of more engaged coping such as active confronting and reassuring thoughts during stressful incidents is often dependent on an individual’s perceived sense of control. It may be therefore that the relationship between frustration and both active coping and positive reinterpretation is conditional on perceived control and/or other changeable factors.

Together total EQ and social support availability did account for an extra 37% and 55% of the variance in social and aggressive coping respectively. Likewise, decision-making and stress management accounted for an extra 43% and 35% of the variance. The results indicating that total EQ, social support availability, decision-making and stress management may explain differences in frustration tolerance and the use of social and aggressive coping strategies in frustrating situations.

Further inspection of the results indicated that both total EQ and decision-making had a significant moderating effect on the direct relationship between the experience of frustrators at work and aggressive coping. Individuals scoring low in total EQ and/or decision-making who

experience a high level of frustrators at work being more likely to engage in aggressive coping strategies. This finding supported hypothesis 4b and 8b, and the idea that people low in EQ are more likely to engage in negative emotion focused coping (Noorbakhsh, Besharat and Zarei 2010) and have greater negative interactions and conflicts (Garcia-Sancho, Salguero and Fernandez-Berrocal 2014). Moreover, it provided further support for the association between low levels of impulse control, frustration and anger (Stein and Book 2006).

Inconsistent with expectations, social support availability and stress management did not moderate the direct relationship between the experience of frustrators at work and aggressive coping, showing no support for hypothesis 9b and 10b. This finding may be due to its association with social rather than aggressive coping. While the availability of social support may influence whether an individual partakes in positive and/or social coping strategies as found in previous research (e.g. Bakker, Demerouti and Verbeke 2004), it may not reduce the likelihood of them engaging in aggressive behaviour.

Similarly, total EQ and social support availability had no significant moderating effect on the direct relationship between the experience of frustrators at work and the emotion of frustration, providing no support for hypotheses 4c and 10c. The moderating effect of decision-making and stress management on the relationship between the experience of frustration at work and the emotion of frustration was however significant. Individuals high in decision-making and low in stress management who experience a great number of frustrators at work experiencing high levels of frustration. The moderating effect of stress management consistent with hypothesis 9c and the findings of King and Gardner (2006), that ineffective stress management is associated with negative affect. Interestingly, the moderating effect of decision-making was not as anticipated, individuals with high levels of decision-making ability reporting greater rather than less frustration, showing no support for hypothesis 8c. It could be argued, that while decision-making ability can help to determine an individual's choice of coping strategy (e.g. those high in decision making were found to be less aggressive), it can increase the level of frustration experienced.

The moderating effect of total EQ, social support availability, decision-making and stress management on the direct relationship between the experience of frustrators at work and social coping, active coping and positive reinforcement was not significant, showing no support for hypotheses 4a, 8a, 9a and 10a. Likewise, the moderating effect of each moderator on the direct relationship between the emotion of frustration and all four coping strategies was not significant, providing no support for hypotheses 4(d, e), 8(d, e), 9(d, e) and 10(d, e). Despite these findings, there was a significant positive relationship between social support availability

and the use of social coping strategies and positive reinterpretation, supporting the idea that social support availability encourages the use of OCBs (Bakker, Demerouti and Verbeke 2004), and highlighting the need for further studies that consider these variables. It could be that the direct relationship between the experience of frustrators at work and social coping and positive reinterpretation is mediated by social support availability, and that the indirect effect of social support availability is conditional on additional moderators. Future research should therefore, be conducted to assess a greater number of possible mediators and moderators that may explain the inconsistencies in these results.

Summary

In conclusion, while there were several non-significant pathways contrary to hypotheses, the findings in phase three did provide additional support for phase one and raised questions that will aid future research and scale development. Moreover, three potential moderators (total EQ, decision-making ability, and stress management) were identified that may be useful to organisations, helping them to increase employee tolerance to frustration and decrease the use of aggressive coping strategies.

Limitations and Future Research

As with phase one of this research, there were limitations surrounding the use of self-report measures. Firstly, individuals are not always good judges of their own emotion-related abilities and tendencies (Brackett, Rivers, Shiffman, Lerner and Salovey 2006, Sheldon, Dunning and Ames 2014, Boyatzis 2018); meaning participants may have unintentionally provided inaccurate responses regarding their emotional functioning. Future research should therefore consider the use of 360-degree forms of assessment, collating information not only from the participant, but also from those around them (O'Connor, Hill, Kaya and Martin 2019).

Secondly, the use of self-report may have led to deliberate low reporting of aggressive coping strategies and thus, non-linearity in the aggressive coping sub-scale. As stated by Lee (1993), individuals often tend to underreport on questions about sensitive topics such as deviant behaviour, for fear of being caught and punished. Kolarcik, Geckova, Reijneveld and van Dijk (2016) for example, found that low self-reporting of delinquency behaviour was, as least in part, the result of social desirability. The current research did attempt to minimise this issue with anonymous questionnaires. It was expected that this would reduce issues surrounding social desirability, fear of discovery and reprisals.

The use of self-report as the only method of data collection may have also resulted in single source bias (SSB), a form of common method variance (CMV) attributable to the measurement

method rather than to the construct of interest' (Bagozzi and Yi 1991: 426) that can bias observed relationships between the measured constructs (Schaller, Patil and Malhotra 2015). CMV is common in organisational behaviour research due to the nature of the topic and the appropriateness of certain methods for assessing specific work-related constructs, such as job satisfaction, which is best assessed using self-report (Chan 2009, Skinner 1957). Although the behaviour of individuals within an organisation could have been observed in phase three, the situations that they perceive to be frustrating and their experience of frustration internally would not have been directly observable, along with their perceived availability of social support. Self-report was seen as the most appropriate method for phase three, albeit future researchers should consider the integration of 360-degree forms of assessment to assess particular aspects such as emotional functioning.

Due to issues with high variance and no convergence, only two of the five aspects of total EQ could be examined, decision-making and stress management. Although a lack of convergence is an indication that the data does not fit the model well, because there are too many poorly fitting observations, it is important that we do not rule out these aspects (i.e. self-perception, self-expression, and interpersonal). Further investigation into the possible mediating and/or moderating effects of these variables is recommended, especially given the links between frustration and self-perception (Bar-on 2013), as well as burnout with self-expression and interpersonal (Vaezi and Fallah 2011). Researchers may wish to consider the incorporation of these variables in more simplified models.

Further inspection of the scatterplots (see appendix 6c) also raised the question whether the relationship between the experience of frustration at work and aggressive coping might be 'curvilinear plus linear.' In other words, individuals may continue to display few aggressive coping strategies when experiencing a high number of frustrators at work, however only to a point; the use of aggressive coping increasing beyond this point as the number of frustrators increase. It would be interesting to assess this curvilinear plus linear relationship in future studies and whether this this moderated by additional variables such as interpersonal relations and psychological capital (i.e. self-efficacy, optimism, hope and resiliency). Both of which have been found in previous research to moderate the curvilinear relationship between job insecurity and OCB. The U-shaped curve being more pronounced among individuals with lower psychological capital or poor interpersonal relations (Lam, Liang, Ashford and Lee 2015).

Finally, it is noted that while the moderating effect of social support availability on the relationship between the experience of frustrators and both social coping and positive

reinterpretation was not significant, the availability of social support should not be ignored. The current research also finding a significant positive relationship between social support availability and the use of social coping strategies and positive reinterpretation. Future research should further investigate these connections to help identify any further variables that may enhance our understanding social support availability and the potential role it may have in frustration research.

Contribution to Knowledge and Future Implications

Despite the above limitations, phase three has provided a significant contribution to knowledge and the basis for further research. Firstly, it has provided additional support for phase one, showing a positive relationship between the experience of frustrators at work and the use of social, active and aggressive coping strategies. Moreover, while there were several non-significant findings, the research did identify several potential moderators (total EQ, decision-making ability, and stress management) that may be useful to organisations, helping them to increase employee tolerance to frustration and decrease the use of aggressive coping strategies. It is suggested, as a result of these findings, that organisations introduce new or improved methods of identifying and reducing frustration across their workforce, such as flexible working options, and training aimed at building personal resilience and managing stress. Personal resilience and stress management training used by only 40% and 27% of organisations respectively (CIPD 2019). Resilience training may help employees to become more tolerant to frustration and/or cope in ways that are more productive by building on their personal strengths enhancing their professional relationships, maintaining positivity, developing emotional insight, and becoming more reflective. Indeed, research has shown that development and strengthening of personal resilience can reduce vulnerability to workplace adversity (Jackson, Firtko and Edenborough 2007).

Additionally, to help reduce the use of aggressive coping strategies such as bullying and theft in the presence of frustrators, training should be given to employees to increase their ESC and decision-making ability. Although individuals high in decision-making were also found to experience higher frustration levels, it was seen that they were more objective, seeing the frustrators as they really are. Research conducted by Mills and Aldag (1999) suggested that when an individual's perception of reality is distorted, they are more likely to engage in avoidance coping and experience somatic tension. However, those low in reality distortion tend to use positive thinking and interpersonal coping strategies (Mills and Aldag 1999). It is important to realise therefore that while high decision-making ability may help directly reduce the use of aggressive coping strategies, it might also lead to an increased level of frustration, albeit expressed in a more positive way. Given that decision-making did not have a significant

moderating effect on social coping, active coping, and positive reinterpretation in the current research, it is important that future researchers look to assess the impact of further theoretically relevant factors, especially those that may moderate the moderating effect of decision-making.

6.7 Chapter Overview

This chapter has provided an overview of a new hypothesised model of work frustration, its theoretical underpinning and associated hypotheses. The hypothesised model incorporating additional frustrators and constructive coping strategies to those included in previous models, specifically those identified in phase one (chapter four) and two (chapter five) of the current research. It moved beyond the focus of previous research that has focused typically on aggression as a behavioural reaction to frustration, enabling the identification of additional factors (e.g. ESC and social support availability) that may aid the use of more constructive coping strategies. While there were several non-significant pathways contrary to hypotheses, additional support was found for phase one, and questions raised that will aid future research and scale development. Moreover, several potential moderators (total EQ, decision-making ability, and stress management) were identified that may be useful to organisations, helping them to increase employee tolerance to frustration and decrease the use of aggressive coping strategies.

Chapter Seven
Contributions and Recommendations

7.1 Chapter Overview

As outlined in the introduction to this thesis (chapter one) and the review of the literature (chapter two), frustration has become a significant issue for the UK workforce (Hay Group 2013, Staples 2018, Personnel Today 2019), industry estimates in 2013 suggesting that frustrated employees now account for around 20% or more of an organisation's workforce (Hay Group 2013). A statistic that has since risen, especially amongst office workers with an online survey of UK office workers reporting that 97% of employees are now frustrated, with many wanting to escape office life as a result (Staples 2018),

Work frustration leads to various issues such as, low job satisfaction, high work anxiety and physical health symptoms (Spector 1997), as well as absenteeism, decreased productivity, and employee theft and fraud (Spector, Fox and Domagalski 2006). It is of high importance therefore, especially given the consequences of work frustration for both the individual and organisation that the sources of work frustration in the UK and the way in which employees cope with this frustration is fully understood, so that successful interventions can be developed to ensure individual and organisational benefits.

Despite its importance, research on the topic of work frustration has been highly speculative and often narrow in focus due to a purposeful and/or deductive approach (e.g. Fox and Spector 1999, Keenan and Newton 1984, Peters, O'Connor and Rudolf's 1980, Spector 1978, Spector 1997, Reio 2011). It has also been reductionist in terms of the methodology utilised, with most data gathered from questionnaires (e.g. Simminger 1971, Spector 1975) or case studies (e.g. Gilmer 1961, Taylor and Walton 1971). As a result, our view of frustration at work has remained relatively static over time. The view being that frustration at work is pre-dominantly the result of job-context constraints (e.g. Fox and Spector 1999, Jex, Beehr and Roberts 1992, Keenan and Newton 1984) and leads primarily to aggressive behaviour (e.g. Dollard et al. 1939, Elias 2013: 204, Spector 1997). In addition, most of the research has not been generalisable across organisational sectors due to the samples utilised, with numerous studies focusing on a single profession or workplace community (e.g. Jex, Beehr and Roberts 1992, Keenan and Newton 1984, Seok-Eun and Jung-Wook 2007, Lazar, Jones and Shneiderman 2006, Mazzola et al. 2011, Poulston 2009). Furthermore, it has concentrated largely on

organisations in the US (e.g. Chen and Spector 1992, Fox and Spector 1999, Heacox and Sorenson 2004, Lazar, Jones and Schneiderman 2006, Paul and Dykstra 2017, Peters, O'Connor and Rudolf 1980, Reio 2011, Sheptak and Menaker 2015, Spector 1975, Storms and Spector 1987), research on frustration in UK organisations being minimal.

The current research explored the area of work frustration in great depth, expanding on previous research, whilst also tackling the issues above by gathering data from individuals working specifically in the UK and across a wide variety of organisational sectors (I.e. numerous industry types), using both exploratory and confirmatory methods so that a more comprehensive view could be established. The ultimate aim being to identify alterable factors that can form the basis of successful interventions to a) help reduce work frustration, and b) support employees to react in ways that are more constructive.

In achieving this aim, the following objectives were met:

1. To explore and identify new and existing sources of work frustration across different organisational sectors;
2. To explore and identify a range of behavioural reactions to work frustration across different organisational sectors;
3. To develop two comprehensive taxonomies, classifying the sources of work frustration and frustration coping strategies per a set of common conceptual domains and dimensions;
4. To develop and validate two new measurement tools, one assessing the sources of work frustration, and another, frustration coping strategies.
5. To test a new model of work frustration, incorporating both potential mediators and/or moderators, which may influence both frustration tolerance and choice of coping strategy.

To meet these objectives, the research took a critical realist approach (see chapter three), enabling the use of a sequential mixed-methods design. The design involved mixing at multiple levels within the research; particularly those beyond the method level (e.g. the paradigm level), and consisted of three phases, phase one informing phase

two, and phase two informing phase three, each phase using different albeit complementary approaches to data collection and analysis:

Phase 1: An exploration of the sources of and behavioural reactions to work frustration, using a multi-method approach to data collection, thematic and quantitative content analysis.

Phase 2: The development and initial validation of two new self-report measures of work frustration using a six-step systematic approach to scale development/ validation and factor analytic techniques.

Phase 3: A quantitative assessment of a new model of work frustration using a path-analytic approach, incorporating both potential mediators and/or moderators, which may influence both frustration tolerance and choice of coping strategy.

The philosophical position adopted and the rationale for its use was detailed in chapter three, along with an overview of the general methodology and methodological considerations faced within and across each of these phases, including transparency and replicability, reflexivity, sample size, correlation type, and ethics, followed by participant recruitment. Chapter's four to six detailed the objectives of each phase, the participants, materials and procedures undertaken, followed by the results and an in-depth discussion, enabling the findings from each phase to inform the next. This final chapter will thus provide a summary of the key contributions from each phase, particularly their contribution to literature and practical implications, followed by the limitations of this research as a whole and the proposals for future research. A quick reference table is presented below to aid reader understanding, providing an overview of the objectives, methods, findings, contributions and implications (table 7.1).

Table: 7.1: Quick Reference Table Summarising the Objectives, Methods, Findings, Contributions and Implications

Objectives	Sample	Research Design/ Method/ Analysis	Findings	Contributions	Implications
Phase 1					
• To explore and identify new and existing sources of work frustration across different organisational sectors; • To explore and identify a range of behavioural reactions to work frustration across different organisational sectors; • To develop two comprehensive taxonomies, classifying the sources of work frustration and frustration coping strategies per a set of common conceptual	Total = 182 participants Open-questionnaire (n=157) Semi-structured interviews (n=16) Diary (n=9) Worked in the UK within a variety of occupations in the public, private and voluntary sector, or were self-employed.	A multi-method triangulation approach involving three different qualitative methods (open-questionnaire, semi-structured interviews, and diary). Thematic analysis and quantitative content analysis.	• Frustration at work occurs because of a multitude of factors that block goal-seeking behaviour, specifically those related to human factors and work design, workplace behaviour and ethics, workplace performance and productivity, and organisational processes and change. • High demands and insufficient resources are key determinants of frustration at work and may influence frustration tolerance and choice of coping strategy. • Frustration at work can lead individuals to employ a range of constructive and/or destructive coping	• Adds to the frustration literature by providing an in-depth exploration of the phenomenon across multiple organisational sectors, identifying additional frustrators (e.g. bullying) and those that have dissipated over time (e.g. role conflict), as well as more constructive coping strategies (e.g. self-sufficient coping). • Highlights the importance of the JD-R Model in aiding our understanding of frustration at work. • Suggests that frustration does not always lead to aggression, and aggression is not always a	• Organisations need to ensure a reasonable balance between employee demands and resources to reduce frustration. • Organisations must ensure workers have effective interpersonal support from management and colleagues, as well as independent practices. • Justifies the need to develop two new frustration measures: one assessing the sources of frustration at work, and

Objectives	Sample	Research Design/ Method/ Analysis	Findings	Contributions	Implications
domains and dimensions;			strategies, including social, avoidant, self-sufficient and aggressive coping. • Individuals are more likely to use destructive coping strategies (e.g., aggressive coping) if their experience of frustration becomes frequent or pro-longed, if they view the frustrator as arbitrary, and/or there is a lack of social support available.	consequence of frustration, providing further evidence against the FAH. • Provides two comprehensive taxonomies, classifying the sources of work frustration and frustration coping strategies per a set of common conceptual domains and dimensions.	another, frustration coping strategies. • Highlights the need for further assessment of the potential mediators/ moderators in the relationship between the experience of frustration at work and choice of coping strategy is required.
Phase 2					
• To develop and provide initial evidence for the reliability and validity of a new measure of the sources of work frustration; • To develop and provide initial evidence for the reliability and	Content adequacy assessment = 3 SMEs Questionnaire = 411 participants Worked in the UK within a variety of	A systematic approach involving item generation, content adequacy assessment, questionnaire administration, factor analysis, internal consistency	WFMS • EFA and CFA provided support for a four-factor solution that was theoretically consistent and easy to interpret. • The final scale comprised of 27-items and four subscales reflecting workplace incivility and perceived	• Adds to the frustration literature by using confirmatory methods to gain an empirical understanding of work frustration. • Provides additional support for previous research that has highlighted	• Provides researchers, practitioners and organisations in the UK with two up-to-date measures of frustration, enabling them to assess a broad range of frustrators and

Objectives	Sample	Research Design/ Method/ Analysis	Findings	Contributions	Implications
validity of a new measure of frustration coping strategies.	occupations in the public, private and voluntary sector, or were self-employed.	assessment, and construct validation. Coefficients requested included ICC, Cronbach's Alpha and Spearman-Brown. Tests used included the KMO test, TOS, Optimal PA and MAP. Factor analytic techniques included, EFA, CFA and ESEM. Bivariate correlations used to assess construct validity.	incompetence of others, personal aggression, quantitative workload, and organisational constraints and personal competence. CIFS • EFA, ESEM and CFA provided support for a four-factor solution that was theoretically consistent and easy to interpret. • The final scale comprised of 24-items and four subscales reflecting social coping, aggressive coping, active coping, and positive-reinterpretation. • All subscales indicated a high level of internal consistency, as well as the total WFMS. • Construct validity was shown for both scales	aggressive coping as a prominent frustration coping strategy. • Provides two new measurement tools that display good reliability and validity: - The WFMS: A new measure of frustration at work that captures additional frustrators (e.g. unlawful discrimination, favouritism and personal incompetence) than previously assessed in frustration research, and does so in one measure, making assessment easier. - The CIFS: A new measure of frustration coping strategies that	frustration coping strategies. • Enables the future assessment of potential mediators/ moderators in the relationship between the experience of frustrators at work and frustration coping strategies, which is required to aid the development of successful interventions to increase frustration tolerance and support employees to react in ways that are more positive.

Objectives	Sample	Research Design/ Method/ Analysis	Findings	Contributions	Implications
			through the assessment on convergent and criterion-related validity.	captures more constructive coping strategies (e.g. social and active coping) than previously assessed in frustration research.	
Phase 3					
• To test a new model of work frustration, incorporating both potential mediators and/or moderators, which may influence both frustration tolerance and choice of coping strategy.	Total = 347 participants Worked in the UK within a variety of occupations in the public, private and voluntary sector, or were self-employed.	A path-analytic approach to test a hypothesised model of work frustration. IVs (experience of work frustrators, frustration, emotional and social competence, self-perception, self-expression, interpersonal, decision-making, stress management,	• Individuals who experience a greater number of frustrators at work: - Are more likely to experience higher levels of frustration, which in turn is strongly related to the use of social coping strategies. - May, irrespective of frustration levels, use social, active, and aggressive coping strategies. - May, when frustrators are perceived as non-manageable, engage	• Adds to the frustration literature by using confirmatory methods gain a greater empirical understanding of work frustration. • Supports the findings of phase one that identified social, active and aggressive coping are key behavioural reactions to frustration. • Highlights the importance of perceived manageability in the	• Organisations need to encourage workers to engage in social and active coping strategies, rather than aggressive coping when experiencing a frustrating situation. • Organisations should assess employee ESC to identify individuals who may benefit from ESC training. Managers should look out for

Objectives	Sample	Research Design/ Method/ Analysis	Findings	Contributions	Implications
		social support availability). DVs (social coping, active coping, positive interpretation, aggressive coping). Statistics requested included tolerance, VIF, and Durbin-Watson. Correlational, mediation and moderated-mediation analysis to test hypothesised model.	in positive reinterpretation. • The possible mediating and/or moderating effects of self-perception, self-expression, and interpersonal could not be computed. • The estimated models assessing the moderating effect of total EQ, social support availability, decision-making, and stress management on both the direct and indirect paths had very poor overall fit and were thus subjected to further examination. • All except the following moderating effects were found to be non-significant: - Individuals who score low on total EQ and decision-making are more likely to engage in	relationship between the experience of frustrators at work and the use of positive reinterpretation. • Provides support for the notion that people low in EQ are more likely to engage in negative emotion-focused coping and have greater negative interactions and conflicts. • Provides support for the association between low levels of impulse control, frustration and anger. • Highlights that while high levels of decision-making can lead to low levels of aggressive coping, it can also increase the level of frustration experienced.	individuals who score low in total EQ, decision-making and stress-management. • Highlights the need to understand how participants appraise a frustrating situation (i.e. manageable or not manageable) and the impact this may on the implementation of different coping strategies. • Justifies the need for future research to consider additional factors that may act as mediators and/or moderators in the relationship between the experience of

Objectives	Sample	Research Design/ Method/ Analysis	Findings	Contributions	Implications
			aggressive coping strategies in frustrating situations. - Individuals who score high in decision-making and low in stress management are more likely to experience high levels of frustration because of a high number of frustrators at work. • Although not a significant moderator high levels of social support availability were directly associated with the use of social coping and positive re-interpretation.	• Provides support for the findings of King and Gardner (2006), that ineffective stress management is associated with negative affect. • Highlights the need for future studies that consider the role of social support availability in frustration tolerance and choice of coping strategy.	frustrators at work and positive reinterpretation. • Justifies the need to explore social support availability in the relationship between the experience of frustrators at work social coping and positive reinterpretation. • Highlights the need for further investigation into the possible mediating and/or moderating effects of elf-perception, self-expression, and interpersonal.

7.2 Novel Contributions to the Literature

7.2.1 Phase One

Phase one has furthered insight into the high prevalence of work frustration in the UK across a variety of organisational sectors, supporting recent media (Huffington Post 2016, Personnel Today 2019, The Guardian 2019, The Telegraph 2016) and research reports (Process Bliss 2019, Staples 2018). Furthermore, strong support has been provided for our knowledge and understanding of how frustration occurs. This supports the consensus that frustration occurs because of one's inability to achieve or maintain their goal (Berkowitz 1980, Cicchetti 2016: 543, Dollard et al. 1939: 7, Spector 1978: 816, Storms and Spector 1987: 227), the experience of goal-blockage leading to strain, failed outcomes, and negative emotion (i.e. frustration).

It has also corroborated the importance of the COR theory (Hobfoll 1989), JD-R model and the act of job crafting (Bakker and Demerouti, 2007; Bakker et al. 2003a; Bakker et al. 2003b; Demerouti et al. 2001) in helping to explain frustration tolerance and alleviate frustration at work. Phase one showed how high demands paired with a reduction in resource as detailed in the JD-R model can lead to frustration, as well as the value of balancing one's own demands and resources as a buffer against stress. Furthermore, it provided support for the 'negative loss spiral' proposed in the COR theory (Hobfoll 1989) in which resource loss leads to stress, and in turn results in further resource loss due to a lack of resource to help counteract the opposing stresses.

While there were a vast number of frustrators reported that were in line with previous research, phase one also revealed various changes and additions. Firstly, it highlighted a range of inadequate materials; including work-related information, funding, and non-technical equipment, expanding on prior research that has focused predominantly on computer equipment (Bessiere et al. 2006, Lazar et al. 2004, Lazar, Feng and Allen 2006, Lazar, Jones and Shneiderman 2006, Lazar et al. 2006). In other words, it emphasised the continued importance of basic needs and non-technical equipment in the digital workplace. Secondly, while previous research has found a link between a lack of formal training and frustration at work (Clark 2014, Shenge 2014, Sheptak and Menaker 2015, Zhao and Bryant 2006), phase one revealed a greater emphasis on informal training (i.e. support and guidance from colleagues, mentoring and/or coaching). The shift in focus from formal to informal training likely due to the rapid technological and organisational changes, resulting in a constant need to learn at work and stay ahead of the competition (de Grip 2015), as well as the importance of informal training in helping to bridge the training gap between generations (Yamamura and Stedham 2007). Thirdly, in support of the findings of Narayanan, Menon and Spector (1999),

issues surrounding role ambiguity, as well as role conflict were rarely identified, suggesting that role ambiguity and role conflict may no longer act as prominent frustrators at work, or that perhaps, they are less impactful in comparison to others. Fourthly, it identified additional frustrators, including those in relation to the physical work environment, such as traffic delays between meetings. This reflects the increased variation in working environments today, and specifically the increase in remote and blended working (Hoefling 2017), the latter of which, along with irregular working patterns, also led to frustration because of aspects not directly related to their work environment, such as work-life conflict.

A particularly interesting albeit unexpected addition to the literature was the finding that workplace incivility was a source of frustration, a behaviour typically viewed because of frustration rather than a pre-instigating condition (Dollard et al. 1939, Elias 2013, Spector 1978, 1997). One possible explanation for this finding, offered in chapter four, is that this behaviour violates conventional norms for civility and respect. This is assuming however, that norms of civility are based on societal ideas regarding civility that are invariant. Miner et al. (2018) argue that these norms can vary, and that incivility may not always be perceived as norm violating. They purport that organisational norms regarding interpersonal behaviour may not necessarily reflect societal norms and that they may vary across departments and between individuals. This appeared to be the case in the current research for those working in noisy and/or potentially life-threatening situations, such as the emergency services, participants themselves acknowledging that the extent to which incivility is viewed as unacceptable at work, is dependent on context and intended meaning.

Together with the changes and additions surrounding frustrators at work, phase one has also contributed to the frustration literature through the identification of constructive coping strategies. For instance, social and self-sufficient coping, which are in contrast to those cited in previous research such as bullying and aggression (Baillien et al. 2009), social undermining (Duffy et al. 2012), and theft and fraud (Spector, Fox and Domagalski 2006). These newly identified behaviours are reflective of what is commonly referred to in organisational psychology research as proactive behaviour, ‘taking initiative in improving current circumstances or creating new ones’ (Crant 2000: 436). For example, displaying personal initiative (Frese et al. 1996) and taking charge (Morrison and Phelps 1999). Although seemingly absent in prior research, the finding of more constructive behaviours supported the notion of Ayoko, Konrad and Boyle (2012), that the initial expression of frustration does not always lead to negative outcomes. Instead, it may help to prompt change and identify potential issues that require attention.

Of course, such positive outcomes may not always occur depending on the duration and frequency of frustration. What appeared to be highly evident in phase one, was that if the frustration became frequent or pro-longed, participants would eventually begin to engage in destructive rather than constructive behaviours. That is to say, although a few short periods of frustration may lead to positive outcomes, when left unresolved and/or the frustration occurs frequently, it can lead to outcomes such as, absenteeism (Grandey et al. 2004), low occupational commitment (Radebe and Dhurup 2016), and turnover (O'Connor et al. 1984). A finding that supports the notion that when faced with continual or severe frustration, an individual is more likely to engage in destructive coping strategies (e.g. aggression, absenteeism and turnover) (Spector 1978). It is also important to remember that some individuals use solely destructive strategies irrespective of the frequency and duration of frustration, and the social support available. In phase one for example, it was clear that choice of coping strategy was in part dependent on whether the frustrator was perceived as arbitrary or not. Participants tended to report more destructive rather than constructive strategies when the frustrator was perceived as personal and/or purposeful. A finding reflective of Cohen (1955) and Pastore (1952) who proposed that people only become frustrated and/or aggressive when frustrations are arbitrary, not if they believe the goal interference is justified.

7.2.2 Phase Two

Phase two has extended our existing understanding of work frustration through the development and initial validation of two new measurement scales, the Work Frustration Measurement Scale (WFMS) and the Coping Inventory for Frustrating Situations (CIFS). Both measures incorporated contemporary frustrators and positive coping strategies, found in phase one to be present across different organisational sectors. Although a wide range of frustrators were identified in phase one, the process undertaken in phase two enabled the identification of those that are the most common and thus most problematic. Moreover, while aggressive coping was cited less so in phase one, it appeared more prominent in phase two, providing additional support for previous research that has highlighted aggressive coping as a prominent frustration coping strategy (e.g. Baillien et al. 2009, Duffy et al. 2012, Spector, Fox and Domagalski 2006), the slight discrepancy in findings, perhaps due to the methodology utilised. Naturally, participants would have been less inclined to discuss aggressive behaviours in phase one due to the use of interviews and diaries, which although confidential, were not anonymous. Conversely, the sole use of an online questionnaire in phase two would have allowed for the anonymous disclosure of socially inappropriate behaviours.

The measures developed in phase two also capture additional frustrators (e.g. incivility, unlawful discrimination, and personal incompetence) and more constructive frustration coping

strategies (e.g. social and active coping) than those used in previous frustration research, thus contribute to the existing pool of measurement tools. The measures typically used in prior research placing emphasis on job-related conflicts (e.g. Keenan and Newton 1984, Rizzo, House and Lirtzman 1970, and Spector and Jex 1998) and aggressive behaviour (e.g. Spector et al. 2006, Keenan and Newton 1984), except for the organisational climate (OC) (Litwin and Stringer 1968) and ICAW scale (Spector and Jex 1998). The former of which focuses on low intensity workplace relations such as poor teamwork, and the latter, generic forms of interpersonal conflict. Based on the findings from phase one, it was probable that previous measures did not capture the range of frustrators that have emerged over time within organisations, and were also restrictive, focusing on aggression as a consequence of frustration, limiting the development of interventions that promote more constructive ways of coping. The latter being particularly important to help reduce the negative consequences of frustration such as low occupational commitment (Radebe and Dhurup 2016), employee turnover (O'Connor et al. 1984), and strain and poor well-being (Spector 1988). The development and initial validation of the WFMS and CIFS has helped to address this limitation. The WFMS and CIFS capture a unique combination of new and existing work frustrators and behavioural reactions to work frustration respectively, including those not previously captured in one single measure.

7.2.3 Phase Three

Phase three has expanded on previous models of work frustration (e.g. Fox and Spector 1999, Keenan and Newton 1985, Spector 1978, Spector 1997), incorporating additional frustrators and constructive coping strategies, specifically those identified in phase one and two. It has therefore moved beyond the focus of previous research that focused typically on aggression as a behavioural reaction to frustration (e.g. Baillien et al. 2009, Dollard et al. 1939, Tepper et al. 2006), enabling the assessment of additional factors (ESC and social support availability) that may influence frustration tolerance and aid the use of more constructive coping strategies. Each additional factor acts as potential moderators in the direct and indirect relationship between work frustrators and frustration coping strategies through the emotion of frustration.

While there were several non-significant pathways contrary to hypotheses, support was provided for the relationship between the experience of frustrators at work and frustration, social, active, and aggressive coping, strengthening the findings of phase one and further supporting the notion that frustration does not always lead to aggression (Ayoko, Konrad and Boyle 2012). Moreover, despite the finding of a non-significant relationship between the experience of frustrators at work and positive reinterpretation, which was inconsistent with phase one, similar to previous coping research (e.g. Gaylord-Harden et al. 2010) the analysis

revealed an interesting and somewhat thought-provoking net suppression effect. The emotion of frustration acted as a suppressor rather than a mediator variable in the relationship between the experience of frustrators at work and positive reinterpretation. One possible explanation for this finding offered in chapter six is that frustration may remove the variance associated with more 'manageable' frustrators at work, those typically associated with the use of problem-focused (e.g. active coping) rather than emotion-focused coping strategies (positive reinterpretation) (Carver et al. 1989). It may be that individuals, who experienced a frustrating albeit manageable situation, use problem-focus focusing coping to solve or alleviate the situation, accepting and acknowledging the situation as frustrating. However, those who experience a frustrating situation that they perceive to be non-manageable may use emotion-focus coping (e.g. positive reinterpretation) to regulate their emotional response (e.g. reduce frustration levels), behaviour closely linked to denial and avoidance (Wortman 2004). This finding should inform future research to help strengthen our knowledge and understanding of positive reinterpretation as a frustration coping strategy.

Adding to the literature on individual differences in frustration tolerance and choice of coping strategy, phase three also identified three potential moderators that may be useful in increasing frustration tolerance and promoting constructive coping strategies. Firstly, the findings suggested that both total EQ and decision-making may influence an individual's choice of coping strategy, and, whether they choose to engage in aggressive coping strategies. Individuals low in total EQ and/or decision-making who experience a high level of frustrators at work being more likely to engage in aggressive coping strategies. This finding is consistent with the notion that people low in EQ have more negative interactions and conflicts (Garcia-Sancho, Salguero and Fernandez-Berrocal 2014), and the finding that low impulse control is typically associated with anger and frustration (Stein and Book 2006). Secondly, the findings revealed that both decision-making and stress management might work to increase and/or decrease an individual's level of frustration tolerance. Individuals high in decision-making and low in stress management being less tolerant to frustrators at work. However, while the moderating effect of stress management was consistent with researcher expectations and the findings of King and Gardner (2006), that ineffective stress management is associated with negative affect, the moderating effect of decision-making was not as anticipated, individuals with high levels of decision-making ability reporting greater rather than less frustration. This finding is an important contribution to the literature and suggests that while high levels of decision-making can reduce the likelihood of aggressive coping in frustrating situations, it can also increase the level of frustration experienced.

7.3 Practical Implications

In addition to the theoretical contributions outlined above, the three phases gave rise to a variety of practical contributions detailed throughout this thesis (see chapters four to six). The most pertinent of which are described below and are beneficial to researchers in fields such as Psychology and Human Resource (HR) Management, practitioners including Occupational/Business Psychologists and HR Consultants, independents, and organisations in the public, private, and voluntary sector.

7.3.1 Phase One

The findings from phase one have important implications for organisations in terms of work design, with organisations needing to ensure a reasonable balance between employee demands and resources to reduce frustration. When detailing the sources of their frustration, participants frequently reported an imbalance between job demands and resources, which is line with the JD-R Model (Bakker and Demerouti 2007, Demerouti et al. 2001) gave them little time to adequately recover and achieve or maintain their work goals. For some participants, this also resulted in a negative loss spiral in which losses gained in momentum (Hobfoll 1989). A reasonable approach to tackle this imbalance could be to allow employees to alter the level of demands and resources available in their jobs to make them more meaningful, engaging, and satisfying. An approach, reflective of job crafting, that expands perspectives on job design (Demerouti 2014), has been found in prior research to have positive effects on employee psychological well-being (Berg, Grant and Johnson 2010), engagement and performance (Tims, Bakker and Derks 2012), that enables the individual to make their own changes. This is of high importance given the increase in remote and blended working, as well as the finding that employees are now subject to greater mental demands, which are less visible to organisation and management.

As a priority, organisations also need to increase the amount of interpersonal support available to employees, especially from management, support that seeks to enable change rather than hindering it. In phase one, when describing their reactions to frustration at work, participants often described how they would engage in potentially constructive behaviour during the initial stages of frustration, voicing their concerns to management, using positive confrontation to bring about positive change, nevertheless, line management or those in higher authority typically ignored them. This appeared to cause further frustration for participants, as management were not listening to their concerns, showing a lack of care and consideration. It could be suggested therefore that providing greater interpersonal support to employees may encourage the continuation of constructive coping strategies at work, as well as reduce the frequency and duration of frustration.

7.3.2 Phase Two

The development and initial validation of two new up-to-date measures of frustration in phase two, the WFMS and CIFS, will be of benefit to researchers, practitioners, independents, and organisations, thus having both methodological and workplace implications. Given further development and validation, the WFMS may help researchers, practitioners and organisations to identify the frustrators present amongst employees, and thus work to reduce those frustrators. The fact that the WFMS captures the key frustrators also makes assessment easier. Prior research typically using more than one measure, such as the OCS, ICAW and the QWI combined (Spector and Jex 1998). Similarly, the CIFS could aid the development of successful interventions in organisations, supporting employees to react in positive ways to frustration.

7.3.3 Phase Three

While phase three produced several non-significant findings, it also identified three potential moderators (total EQ/ESC, decision-making ability, and stress management) that can aid in the development of targeted interventions aimed at increasing employee tolerance to frustration and decreasing the use of aggressive coping strategies.

Firstly, given that ineffective stress management is associated with higher levels of frustration, practitioners and organisations could introduce training aimed at building personal resilience and managing stress. Personal resilience and stress management training currently used by only 40% and 27% of organisations respectively (CIPD 2019). Resilience training may help employees to become more tolerant to frustration and/or cope in ways that are more productive by building on their personal strengths enhancing their professional relationships, maintaining positivity, developing emotional insight, and becoming more reflective. Indeed, research has shown that development and strengthening of personal resilience can reduce vulnerability to workplace adversity (Jackson, Firtko and Edenborough 2007).

Secondly, to help reduce the use of aggressive coping strategies such as bullying and theft in the presence of frustrators, practitioners and organisations could also implement training to increase employee ESC and decision-making ability, found in phase three to be associated with low levels of aggressive coping. It is important to realise however, that increasing decision-making ability may also lead to an increase in frustration levels for employees, individuals high in decision-making also found to experience higher frustration levels. While this may appear counterintuitive, it is thought that the benefits gained from increasing decision-making ability far outweigh the risks, especially given that individuals low in reality distortion

(i.e. high in decision-making), are more likely to use positive thinking and interpersonal coping strategies (Mills and Aldag 1999).

Prior to implementing the above training, practitioners and organisations must first gather additional information on the type of training programmes available, as well as assess individual, team and organisational needs, enabling the development of specific objectives (Karim, Huda and Khan 2012). Following the training, evaluation should be undertaken. Training is extremely costly to organisations (Karim, Huda and Khan 2012); thus, it is important to assess its effectiveness as an intervention to increase frustration tolerance and promote positive ways of coping with frustration, as well as enable the development of more effective training in the future. Of course, some may argue that such training may not be the most effective method of increasing employee stress management and decision-making ability. In which case, further research should be undertaken to identify alternative methods of employee development, the costs and associated benefits.

7.4 Limitations, Revelations and Directions for Future Research

As discussed in chapter's three to six, there were a range of limitations to each phase of this research; including issues surrounding transparency and replicability, self-report and common method bias, as well as sample characteristics, which along with interesting and/or unexpected findings, have provided several directions for future research. The following sub-sections provide an overview of those that are most eminent.

7.4.1 The Sources of Work Frustration and Frustration Coping Strategies

Notwithstanding its significant contribution to the literature, it is important to acknowledge that the analysis in phase one does not provide a definitive account of the sources of work frustration and frustration coping strategies. Rather, the themes and taxonomies presented represent the researcher's interpretation of the data and, given the complexity of organisations that are ever evolving, it is likely new frustrators and methods of coping will emerge in the future. Researchers should therefore continue to explore the sources of work frustration and frustration coping strategies, refining and extending our knowledge and understanding of frustration at work over time.

When choosing to further investigate the sources of work frustration, one would advise researchers continue to use exploratory methods (e.g. interviews, diaries, and open questionnaires) when and where possible, enabling the identification of new and evolving frustrators across organisations. When exploring frustration coping strategies researchers should also consider the use of observation techniques, and/or a 360-degree approach that

incorporates multiple perspectives from a variety of sources (e.g. managers, subordinates, peers, and customers) in addition to self-report. Despite the common assumption that honest self-disclosure is sufficient to provide an accurate self-description, it could be argued that some individuals lack the introspective ability to provide an accurate response (Paulhus and Vazire 2007: 232). In other words, they are unable to assess themselves accurately due to constraints on self-knowledge. This could be particularly problematic when recalling frustration coping strategies as an individual may not be fully aware of their own reactions when frustrated. They could therefore recall acting in a manner that is very different from reality. However, it is expected that this approach will lead to low organisational transparency, participant resistance, and institutional interference, specifically due to the sensitive nature of work frustration, an organisational issue associated with negative personal (e.g. loss of power), organisational (e.g. reputational damage), institutional (e.g. illegitimacy), and societal (i.e. socioeconomic) outcomes (Saunders and Tosey 2015: 368). Certainly, while the response rate from individuals was satisfactory for phase one, the number of organisations that allowed distribution of the study through internal communication channels was limited (3). A vast number of organisations declined to participate, primarily as they were undergoing substantial change, government cuts, or restructuring. They did not want to unsettle their employees any further or elicit an undesirable response.

7.4.2 The WFMS and CIFS

Further testing is required on both the WFMS and CIFS. This should be done using a larger more diverse (i.e. a wider range of professionals and an increasing number of males) sample over an extended period, to provide additional support to the conclusions made and enable the assessment of external reliability. Although the findings show evidence of internal reliability and construct validity, they are the first step in a long and continuous process. As noted by Nunnally (1978) and Schwab (1980), the process of assessing construct validity is never finished, and further research be conducted over time to further assess the validity of new measurement tools and make changes where necessary. Changes of which may also be prompted by advancements in the literature, especially as new frustrators and coping strategies emerge.

One would also recommend testing the original items for the WFMS with all positively worded items (i.e. reverse coded items) reversed so that they are in line with all other items. Although positively worded items were used in the initial WFMS to alleviate bias, these items did lead to the emergence of a method factor, which could have potentially contaminated the factor structure and led to the removal of items that may still be of value. Further research should therefore be conducted on the original items prior to re-administering both measures.

7.4.3 The Role of Social Support Availability

Additional research on social support availability would also help us to understand the role it may have in promoting constructive ways of coping with frustration. Whilst phase three found no significant moderating effect of social support availability on the relationship between the experience of frustrators and both social coping and positive reinterpretation, it did find a significant positive relationship between social support availability and the use of social coping strategies and positive reinterpretation. Taken together, these results suggest that social support availability may actually mediate rather than moderate the direct relationship between the experience of frustrators at work and social coping and positive reinterpretation and, that the indirect effect of social support availability is conditional on moderators such as age, gender and ethnic group, found in a review of the literature to have an impact on social support availability (Vaux 1985). To help confirm this proposition future research should focus on testing a conditional process model in which the indirect effect of the sources of work frustration on social coping and positive reinterpretation through social support availability is contingent on age, gender and ethnic group.

7.4.4 Situational Appraisal as a Predictor of Positive Reinterpretation

Further to the above, it would also be interesting to gain an understanding of how participants appraise a frustrating situation (i.e. manageable or not manageable) and the impact this may have on the implementation of different coping strategies, especially positive reinterpretation. As explained earlier, phase three revealed a net suppression effect, the emotion of frustration acting as a suppressor rather than a mediator variable in the relationship between the experience of frustrators at work and positive reinterpretation. A possible explanation for this finding being that frustration removes the variance associated with more 'manageable' frustrators at work, those typically associated with the use of more problem-focused (e.g. active coping) rather than emotion-focused coping strategies (positive reinterpretation) (Carver et al. 1989). It could be that individuals, who experience a frustrating albeit manageable situation, use problem-focus focusing coping to solve or alleviate the situation, accepting and acknowledging the situation as frustrating. However, those who experience a frustrating situation that they perceive to be non-manageable, use emotion-focus coping (e.g. positive reinterpretation) to regulate their emotional response, behaviour closely linked to denial and avoidance (Wortman 2004), resulting in low levels of frustration being reported. To investigate this notion research could be conducted to test a mediation model in which the indirect effect of the sources of work frustration on positive reinterpretation is dependent on an individual's appraisal of the frustrating event (i.e. cognitive appraisal).

7.4.5 Inspection of a 'Curvilinear plus Linear Relationship'

Future research might also investigate the possibility of a 'curvilinear plus linear relationship' between the experience of frustration at work and aggressive coping, highlighted in phase three. Further inspection of the scatterplots suggested that individuals may continue to display few aggressive coping strategies when experiencing a high number of frustrators at work, however only to a point; the use of aggressive coping increasing beyond this point as the number of frustrators increase. It would therefore be interesting to assess this relationship further using nonlinear modelling and whether it is mediated by additional variables such as interpersonal relations and psychological capital. Both variables have been found in previous research to moderate the curvilinear relationship between job insecurity and OCB, the U-shaped curve being more pronounced among individuals with lower psychological capital or poor interpersonal relations (Lam, Liang, Ashford and Lee 2015).

7.4.6 The Moderating Effects of Self-Perception, Self-Expression, and Interpersonal

Due to issues with high variance and no convergence in phase three, only two of the five aspects of total EQ could be examined, decision-making and stress management. Although a lack of convergence is an indication that the data does not fit the model well, because there are too many poorly fitting observations, it is important that we do not rule out these aspects (i.e. self-perception, self-expression, and interpersonal). Further investigation into the possible moderating effects of these variables should thus be undertaken using more simplified models (i.e. less parameters), especially given the links between frustration and self-perception (Bar-on 2013), as well as burnout with self-expression and interpersonal (Vaezi and Fallah 2011).

7.5 Concluding Remarks

The principle contributions of this research were fourfold. Firstly, the use of multiple data collection methods that were exploratory in nature, a wide range of frustrators and frustration coping strategies were identified, including contemporary frustrators and constructive coping strategies not reflected in prior research. Secondly, two comprehensive taxonomies, classifying the sources of work frustration and frustration coping strategies per a set of common conceptual domains and dimensions were developed, capturing the sources of frustration and frustration coping strategies across a range of UK occupations. Thirdly, two new measurement scales were developed, the Work Frustration Measurement Scale (WFMS) and the Coping Inventory for Frustrating Situations (CIFS), both of which showed good validity and reliability. Fourthly, a new model of work frustration was developed and tested, which identified three potential moderators (total EQ/ESC, decision-making ability, and stress management) that may be used to develop targeted interventions aimed at increasing employee tolerance to frustration and decreasing the use of aggressive coping strategies. It

is expected that the two taxonomies, scales and the model of work frustration developed in this research will aid both research in this area as well as practical interventions for positive coping moving forward, decreasing the use of counterproductive coping strategies, levels of stress/anxiety in individuals, and staff turnover, while also making for a happier workforce.

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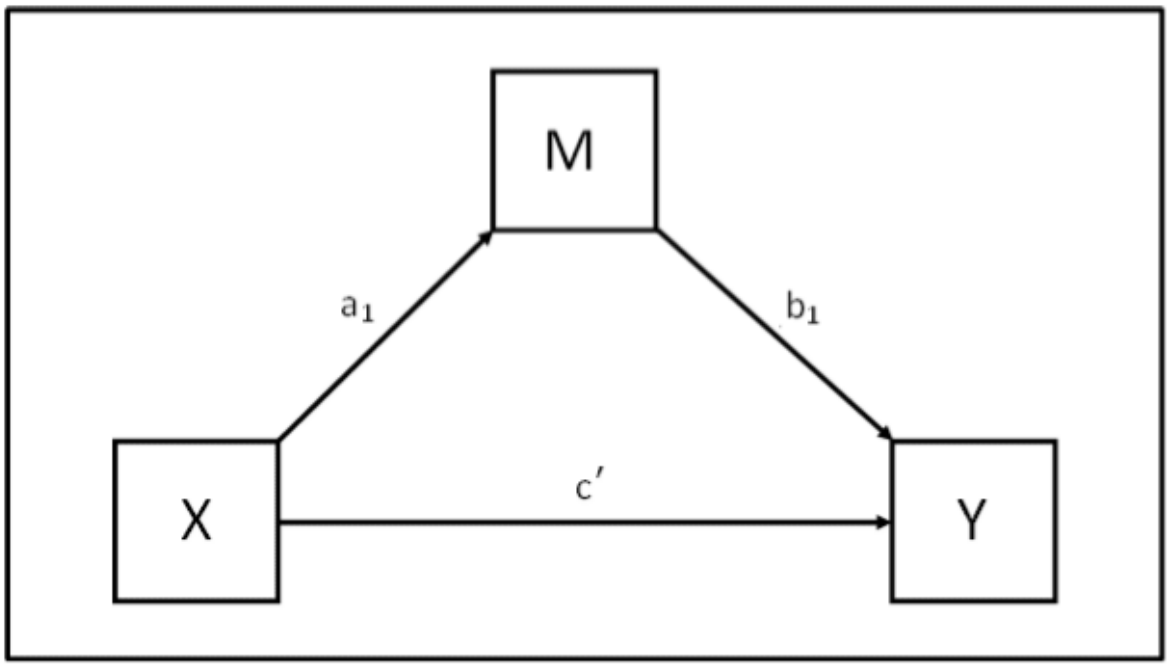
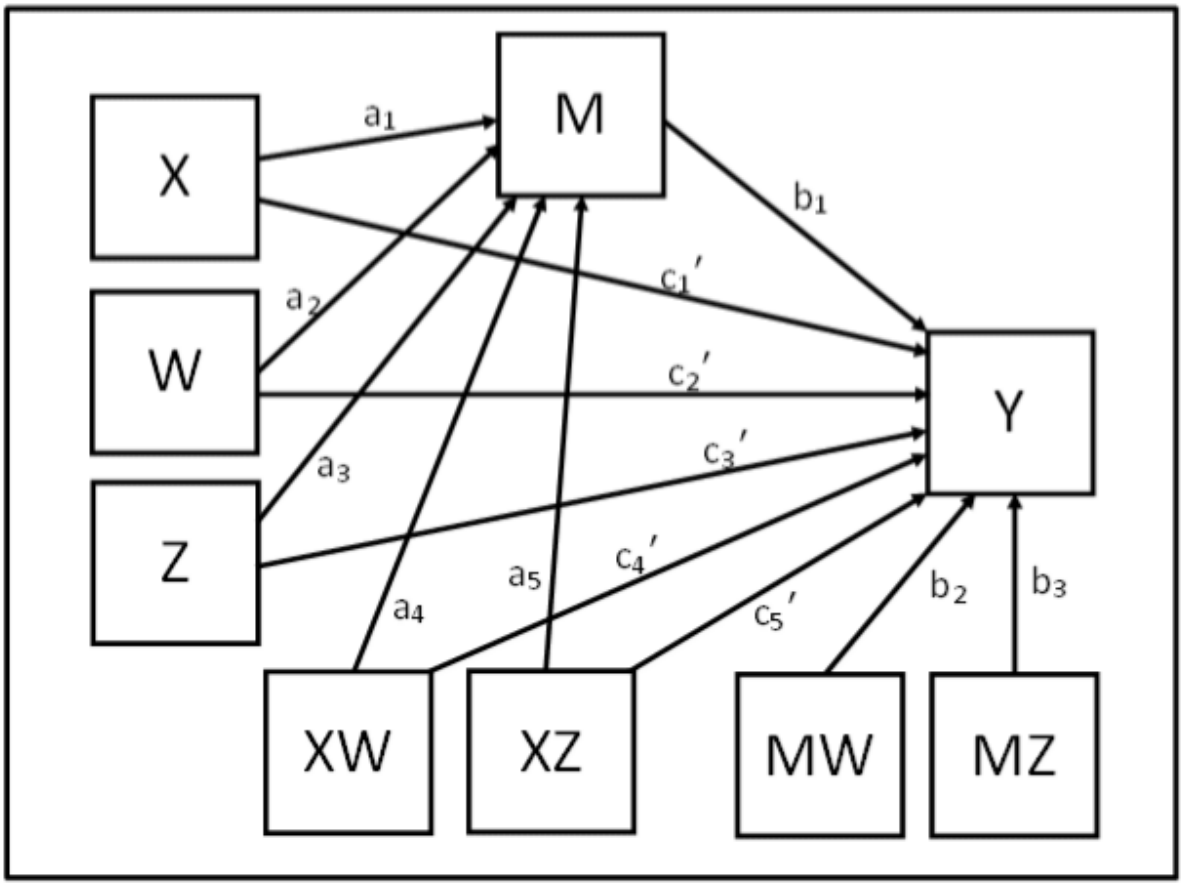
Appendices

3a: Statistical diagram for model 4a



3b: Statistical diagram for model 76



3c: Ethics certificate for phase one

Certificate of Ethical Approval

Applicant:

Sophie Ward

Project Title:

Exploring the Sources of and Reactions to Workplace Frustration: A Triangulation Study

This is to certify that the above named applicant has completed the Coventry University Ethical Approval process and their project has been confirmed and approved as Medium Risk

Date of approval:

20 April 2016

Project Reference Number:

P41723

3d: Ethics certificate for phase two

Certificate of Ethical Approval

Applicant:

Sophie Ward

Project Title:

Development and Validation of Two Self-Report Measures of Work Frustration: The Work Frustration Measurement Scale (WFMS), and the Coping Inventory for Frustrating Situations (CIFS)

This is to certify that the above named applicant has completed the Coventry University Ethical Approval process and their project has been confirmed and approved as Medium Risk

Date of approval:

09 November 2017

Project Reference Number:

P60880

3e: Ethics certificate for phase three

Certificate of Ethical Approval

Applicant:

Sophie Ward

Project Title:

Frustration in the Modern Day Workplace: It's just the way things are isn't it? - Testing a New Model of Work Frustration

This is to certify that the above named applicant has completed the Coventry University Ethical Approval process and their project has been confirmed and approved as Medium Risk

Date of approval:

20 September 2018

Project Reference Number:

P75440

3f: Example gatekeeper letter

Miss Sophie Ward
ANON
_
_
_
_

COMPANY ADDRESS

DATE OF LETTER
Dear _____,

I am a first year PhD student at Coventry University and as part of my research degree I am required to conduct a wealth of research into my area of study. I have identified the need for further research into the sources of work frustration in today's organisations from a variety of different organisational sectors, and the individual differences in employee tolerance to frustration. I am writing to ask if it would be possible to recruit participants for this study who are currently under employment within your organisation as soon as the study has been approved by the University's Ethics Committee. I have approached your organisation as it is a private sector organisation which will be suitable for my proposed study.

I have prepared a description of the study and what is involved in it for potential participants, and I have attached a copy for you to read. I have also attached a copy of the scales which will be used in the study. Ideally, I would like to begin data collection on 01/05/2016 but I am very happy to be guided by you on this.

I would anticipate that the set of questionnaires and scales would take no more than a total of 30 minutes to complete, and I would need an email to be sent out to all participants which will explain the purpose of the research project and include an URL link to the web-based questionnaire, participant information, informed consent check list and debrief information. I will endeavour to keep the disruption to the lives of each participant to an absolute minimum.

I hope that you find the attached project of interest and will be interested in working with me on it. Please feel free to contact me if you have any queries.

Many thanks for taking the time to read this and I hope to hear from you soon.

Content removed on data protection grounds

3g: Demographic question sheet

Note: Phase 2 step 1 included questions 1 and 2 only. Phase 2 step 2 included questions 1, 2, 6 and 7 only. All questions were included in phase 1 and 3.

1. What is your gender?

   Female ☐ Male ☐

2. What is your age?

   ☐

3. What is your marital status?

   Single ☐ Married/Civil Partnership ☐ Divorced/Widowed ☐

4. Do you have any dependents?

   Yes ☐ No ☐

5. What is the highest level of education you have currently completed?

   Entry Level ☐ Level 1 (E.g. GCSE D-G) ☐

   Level 2 (E.g. GCSE A*-C) ☐ Level 3 (E.g. AS/A-Level) ☐

   Level 4 (E.g. HNC) ☐ Level 5 (E.g. HND) ☐

   Level 6 (E.g. BSc/BA) ☐ Level 7 (E.g. MA/MSc) ☐

   Level 8 (E.g. PhD) ☐

6. What organisational sector do you work for?

   Commercial ☐ Public ☐ Private ☐ Independent ☐

7. Are you responsible for managing other employees within your job role?

   Yes ☐ No ☐

8. What type of contract are you on (E.g. full-time or part-time)?

   Note: If you do possess a contract of employment, e.g. you are an independent, then please select the option that best matches your working hours.

   Part-time ☐ Full-time ☐ Zero-Hours ☐

   Other (please specify) ☐

9. What is your work location?

Office ☐ Home ☐ Office and Home ☐

Other (please specify) ☐

3h: Participant information sheet – phase one – questionnaire

Please note: If you have already taken part in either the interview or diary aspect of this study then you are unable to take part in the questionnaire study due to duplication of data.

What is the purpose of this study? To identify the sources of and reactions to work frustration in today's organisations from the perspective of UK employees working in a variety of different organisational sectors.

Why have you been approached? You have been chosen to take part in this study because you are currently working either as an independent, or you are volunteer/employed as a full/part-time employee within a UK based organisation.

Do I have to take part? No, participation is voluntary. Although by completing the consent form and answering the questions it is assumed that you are agreeing for your data to be used for the purposes of this study. This does not affect your right to withdraw which you can do by contacting the researcher with your participant reference number via e-mail either during the study or up to two weeks following completion of the questionnaire and your data will be destroyed.

What do I have to do if I take part? You will be required to provide some basic demographic information and complete some open questions. For each open question you need to write your responses in as much detail as possible. The questionnaire should take around 10-15 minutes to complete.

What are the potential disadvantages and risks associated with taking part? There are no significant disadvantages or risks associated with taking part in this research. However if you feel negatively affected by taking part in any part of this study then please contact the researcher directly, a member of management or counselling service within your organisation, or an independent organisation such as the Samaritans via email jo@samaritans.org. If you are a student it is advised that you contact a counselling service within your Institution.

What are the benefits of taking part? Taking part may help you to gain insight into the area of occupational psychology and work frustration. Your responses will also aid the development of an up-to-date and comprehensive taxonomy of the antecedents of frustration within organisations, as well as two new measurement scales which will further research within the area of occupational psychology, and may help in the development of successful intervention programmes to help reduce frustration in organisations and support employees in the future.

What will happen to the results of the study? The results of this study will at all times remain anonymous. The data will be stored on a password protected computer and destroyed prior to 2021. Any analysis and discussion of the results will be presented as part of my PhD thesis and handed into the university. It is also possible the results may be published as part of a scholarly journal and/or presented at a national/international conference.

Who is organising/funding the study? I am the researcher and organising the study. No funding is required.

Who has reviewed the study? The study has been reviewed by the Coventry University Ethics department.

Content removed on data protection grounds

3i: Participant information sheet – phase one – interview

Please note: If you have already taken part in either the questionnaire or diary aspect of this study then you are unable to take part in the interview study due to duplication of data.

What is the purpose of this study? To identify the sources of and reactions to work frustration in today's organisations from the perspective of UK employees working in a variety of different organisational sectors.

Why have you been approached? You have been chosen to take part in this study because you are currently working either as an independent, or you are volunteer/employed as a full/part-time employee within a UK based organisation.

Do I have to take part? No, participation is voluntary. Although by completing the consent form and taking part in the interview it is assumed that you are agreeing for your data to be used for the purposes of this study. This does not affect your right to withdraw which you can do by either notifying the researcher during the interview, or by contacting the researcher with your participant reference number via e-mail up to two weeks following completion of the interview and your data will be destroyed.

What do I have to do if I take part? You will be required to provide some basic demographic information and to take part in a 30 minute semi-structured interview which will be audio-taped for research purposes.

What are the potential disadvantages and risks associated with taking part? There are no **significant** disadvantages or risks associated with taking part in this research. However there is a slight risk that taking part could lead to the disclosure of previous criminal offences. It is important to note therefore that the researcher may be required or compelled to disclose information (including notes and recordings) obtained in the study, and may have a duty to report to the police or other appropriate authority, the details of any criminal offence disclosed in the interview, for which you have not been previously apprehended, charged or convicted and/or any details of any actual or perceived risk of harm or injury to you (including self-harm) or any third person. The researcher will stop the interview and caution you, if you begin to disclose details of any criminal offence for which you have not been previously apprehended, charged or convicted. If you wish to discuss offences for which you have not been apprehended, charged or convicted you should only do so if you understand this caution, and only discuss such offences in general terms.

If you feel negatively affected by taking part in any part of this study then please contact the researcher directly, a member of management or counselling service within your organisation, or an independent organisation such as the Samaritans via email jo@samaritans.org. If you are a student it is advised that you contact a counselling service within your Institution.

What are the benefits of taking part? Taking part may help you to gain insight into the area of occupational psychology and work frustration. Your responses will also aid the development of an up-to-date and comprehensive taxonomy of the antecedents of frustration within organisations, as well as two new measurement scales which will further research within the area of occupational psychology, and may help in the development of successful intervention programmes to help reduce frustration in organisations and support employees in the future.

What will happen to the results of the study? The results of this study will remain confidential, unless as discussed above, you disclose the details of a criminal offence for which you have not been apprehended, charged or convicted and/or any details of any

actual or perceived risk of harm or injury to you (including self-harm) or any third person. In this instance, the researcher may be required or compelled to disclose this information, and may have a duty to report it to the police or other appropriate authority.

The data will be stored on a password protected computer and destroyed prior to 2021. Any analysis and discussion of the results will be confidential and anonymous, and presented as part of my PhD thesis and handed into the university. It is also possible the results may be published as part of a scholarly journal and/or presented at a national/international conference.

Who is organising/funding the study? I am the researcher and organising the study. No funding is required.

Who has reviewed the study? The study has been reviewed by the Coventry University Ethics department.

Content removed on data protection grounds

3j: Participant information sheet – phase one - diary

Please note: If you have already taken part in either the questionnaire or interview aspect of this study then you are unable to take part in the diary study due to duplication of data.

What is the purpose of this study? To identify the sources of and reactions to work frustration in today's organisations from the perspective of UK employees working in a variety of different organisational sectors.

Why have you been approached? You have been chosen to take part in this study because you are currently working either as an independent, or you are volunteer/employed as a full/part-time employee within a UK based organisation.

Do I have to take part? No, participation is voluntary. Although by completing the consent form and completing the diary it is assumed that you are agreeing for your data to be used for the purposes of this study. This does not affect your right to withdraw which you can do by contacting the researcher with your participant reference number via e-mail either during the study or up to two weeks following completion of the diary and your data will be destroyed.

What do I have to do if I take part? You will be required to provide some basic demographic information and to complete a diary for a period of 5 working days. You will be provided with a diary template via email to complete for each working day and a set of instructions on how to complete the diary. You will also be given the opportunity to discuss face-to-face or via telephone the study requirements with the researcher prior to commencing the study. You will be required to keep your diary on a password protected computer, and then to email your diary directly to the research at the end of the 5 working days.

What are the potential disadvantages and risks associated with taking part? There are no significant disadvantages or risks associated with taking part in this research. However there is a slight risk that taking part could lead to the disclosure of criminal offences. It is important to note therefore that the researcher may be required or compelled to disclose information obtained in the study, and may have a duty to report to the police or other appropriate authority, the details of any criminal offence disclosed in the diary, for which you have not been apprehended, charged or convicted and/or any details of any actual or perceived risk of harm or injury to you (including self-harm) or any third person. If you wish to disclose offences for which you have not been apprehended, charged or convicted you should only do so if you understand this caution, and only disclose such offences in general terms.

If you feel negatively affected by taking part in any part of this study then please contact the researcher, a member of management or counselling service within your organisation, or an independent organisation such as the Samaritans via email jo@samaritans.org. If you are a student it is advised that you contact a counselling service within your Institution.

What are the benefits of taking part? Taking part may help you to gain insight into the area of occupational psychology and work frustration. Your responses will also aid the development of an up-to-date and comprehensive taxonomy of the antecedents of frustration within organisations, as well as two new measurement scales which will further research within the area of occupational psychology, and may help in the development of successful intervention programmes to help reduce frustration in organisations and support employees in the future.

What will happen to the results of the study? The results of this study will remain confidential, unless as discussed above, you disclose the details of a criminal offence for which you have not been apprehended, charged or convicted and/or any details of any actual or perceived risk of harm or injury to you (including self-harm) or any third person. In this instance, the researcher may be required or compelled to disclose this information, and may have a duty to report it to the police or other appropriate authority.

The data will be stored on a password protected computer and destroyed prior to 2021. Any analysis and discussion of the results will be confidential and anonymous, and presented as part of my PhD thesis and handed into the university. It is also possible the results may be published as part of a scholarly journal and/or presented at a national/international conference.

Who is organising/funding the study? I am the researcher and organising the study. No funding is required.

Who has reviewed the study? The study has been reviewed by the Coventry University Ethics department.

Content removed on data protection grounds

3k: Participant information sheet – phase two – step one

What is the purpose of this study? To support the development and validation of two new self-report measures of work frustration: The Work Frustration Measurement Scale (WFMS), and the Coping Inventory for Frustrating Situations (CIFS).

Why have you been approached? You have been chosen to take part in this study because you have been identified as a researcher with a broad expertise in both the research area and in research methodology.

Do I have to take part? No, participation is voluntary. Although by completing the consent form and responding to the questions enclosed in the two excel spreadsheets provided it is assumed that you are agreeing for your responses to be used for the purposes of this study. This does not affect your right to withdraw which you can do by contacting the researcher via e-mail either during the study or up to 3 working days after submitting your responses and your data will be destroyed.

What do I have to do if I take part? You will first be required to provide some basic demographic information. You will then be asked to look through the item bank developed thus far for the WFMS and CIFS, and rate independently on a scale from 1 (not relevant at all) to 4 (fully relevant) the degree to which each of the items are relevant to the construct and sub-constructs being measured for both measures. You will also be asked to confirm the appropriateness of wording, as well as provide any other comments you deem necessary in relation to both scales, including alternative wording for particular items. You will be asked to complete this within 2 weeks of receiving the item bank/questions.

What are the potential disadvantages and risks associated with taking part? There are no significant disadvantages or risks associated with taking part in this research.

What are the benefits of taking part? Taking part will aid the development of two new up-to-date measurement scales which will further research within the area of occupational psychology, and may help in the development of successful intervention programmes to help reduce frustration in organisations and support employees in the future.

What will happen to the results of the study? The results of this study will remain confidential. The responses will be stored on a password protected computer and destroyed prior to 2021. Any analysis and discussion of the results will be confidential and anonymous, and presented as part of my PhD thesis and handed into the university. It is also possible the results may be published as part of a scholarly journal and/or presented at a national/international conference.

Who is organising/funding the study? I am the researcher and organising the study. No funding is required.

Who has reviewed the study? The study has been reviewed by the Coventry University Ethics department.

Content removed on data protection grounds

Content removed on data protection grounds

3l: Participant information sheet – phase two – step two

What is the purpose of this study? To support the development and validation of two new self-report measures of work frustration: The Work Frustration Measurement Scale (WFMS), and the Coping Inventory for Frustrating Situations (CIFS).

Why have you been approached? You have been approached to take part in this study because you are currently working either as an independent, or you are a volunteer/ employed as a full/part-time employee within a UK based organisation.

Do I have to take part? No, participation is voluntary. Although by completing the consent form and answering the questionnaire it is assumed that you are agreeing for your data to be used for the purposes of this study. This does not affect your right to withdraw which you can do by contacting the researcher with your participant reference number via e-mail either during the study or up to two weeks following completion of the questionnaire and your data will be destroyed.

What do I have to do if I take part? You will be required to provide some basic demographic information and complete several scales focusing on the sources of frustration at work, and your reactions to such, as well as factors such as interpersonal conflict and job satisfaction. The questionnaire as a whole should take around 30-40 minutes to complete.

What are the potential disadvantages and risks associated with taking part? There are no significant disadvantages or risks associated with taking part in this research. However if you feel negatively affected by taking part in any part of this study then please contact the researcher directly, a member of management or counselling service within your organisation, or an independent organisation such as the Samaritans via email jo@samaritans.org. If you are a student it is advised that you contact a counselling service within your Institution.

What are the benefits of taking part? Taking part may help you to gain insight into the area of occupational psychology and work frustration. Your responses will also aid the development of two new up-to-date measurement scales which will further research within the area of occupational psychology, and may help in the development of successful intervention programmes to help reduce frustration in organisations and support employees in the future.

If you are a UG student at Coventry University you can also gain research credits for your participation. This does not impact upon your right to withdraw.

What will happen to the results of the study? The results of this study will at all times remain anonymous. The data will be stored on a password protected computer and destroyed prior to 2021. Any analysis and discussion of the results will be presented as part of my PhD thesis and handed into the university. It is also possible the results may be published as part of a scholarly journal and/or presented at a national/international conference.

Who is organising/funding the study? I am the researcher and organising the study. No funding is required.

Who has reviewed the study? The study has been reviewed by the Coventry University Ethics department.

Content removed on data protection grounds

Content removed on data protection grounds

3m: Participant information sheet – phase three

What is the purpose of this study? To gain a more in-depth understanding of the relationship between the sources of frustration and an individual's coping strategies which will be useful for researchers, practitioners and organisations in assessing work frustration. The ultimate aim being to identify possible interventions to reduce work frustration, and help employees to react in more positive ways to frustration, some frustration of which is inevitable.

Why have you been approached? You have been chosen to take part in this study because you are currently working either as an independent, or you are employed as an apprentice or full/part-time employee within a UK based organisation.

Do I have to take part? No, participation is voluntary. Although by completing the consent form and answering the questions it is assumed that you are agreeing for your data to be used for the purposes of this study. This does not affect your right to withdraw which you can do by contacting the researcher with your participant reference number via e-mail either during the study or up to two weeks following completion of the questionnaire and your data will be destroyed.

What do I have to do if I take part? You will be required to provide some basic demographic information and complete a variety of scales which will instruct you to carefully read each of the items or questions and select the statement or answer which best reflects your current experience, attitude or behaviour. You will also be asked to complete the Emotional Quotient Inventory (EQ-i 2.0®). In order to complete the EQi 2.0 you will be directed to the MHS test portal. The questionnaire as a whole should take around 30 minutes to complete.

What are the potential disadvantages and risks associated with taking part? There are no significant disadvantages or risks associated with taking part in this research. However If you feel negatively affected by taking part in any part of this study then it is advised that you contact a member of management within your organisation, the researcher, or an independent organisation such as the Samaritans via email jo@samaritans.org. If you are a student it is advised that you contact a counselling service within your Institution.

What are the benefits of taking part? Taking part may help you to gain insight into occupational psychology and work frustration. It may also help to develop better intervention programmes to help reduce frustration in organisations and support employees.

If you are a UG student at Coventry University you can also gain research credits for your participation. This does not impact upon your right to withdraw.

What will happen to the results of the study? The results of this study will at all times remain anonymous. The data will be stored on a password protected computer and are planned for disposal prior to 2022. Any analysis and discussion of the results will be presented as part of my PhD thesis and handed into the university. It is also possible the results may be published as part of a scholarly journal and/or presented at a national/international conference.

The EQi 2.0 test publisher MHS will have access to the responses provided on the EQi 2.0 assessment only. The data submitted to MHS will be transmitted and stored in the United States with a third-party cloud-services provider (CSP) who complies with the U.S.–EU Privacy Shield Framework. The Framework of which is adequate according to GDPR regulations. MHS holds all information collected in strict confidence. The raw data will be

downloaded from the MHS database by the researcher in excel format and a write-up of the overall results will also be provided to MHS.

Who is organising/funding the study? I am the researcher and organising the study. No funding is required.

Who has reviewed the study? The study has been reviewed by the Coventry University Ethics department.

Content removed on data protection grounds

3n: Informed Consent Form – phase one - questionnaire

I have read and I understand the participant information sheet for this study.	☐
By completing this questionnaire, I am giving my consent for you to use my questionnaire answers in this research study. I understand that my answers will remain anonymous and that they will be submitted to Coventry University as part of the researcher's final PhD thesis, and potentially published as part of a scholarly journal and/or presented at a national/international conference.	☐
I understand that I have the right to withdraw from the study at any point during the study without a given reason.	☐
I understand that I have the right to withdraw my answers at any point without a given reason for a short period after the study has been conducted (2 weeks after participation) by contacting the researcher using the details on the participant information sheet and quoting my participant reference number.	☐
I have made a note of my participant reference number.	☐
I agree to my consent form being securely stored by the university for 5 years.	☐

3o: Informed Consent Form – phase one - interview

Title of Project: **Exploring the Sources of and Reactions to Work frustration: Extending Previous Research using Mixed Methodology**

Name of Researcher(s): Content removed on data protection grounds

To email please contact:

Please initial box to affirm consent

1. I confirm that I have read and understand the participant information sheet dated ..... for the above study and have had the opportunity to ask questions. ☐
2. I understand that my participation is voluntary and that I am free to withdraw at any time during the interview, and for a short period after the study has been conducted (2 weeks after participation), without a given reason, by contacting the researcher using the details above and quoting my participant reference number. ☐
3. I agree to the interview being audio-taped. ☐
4. I agree to take part in the above study. ☐
5. By undertaking this interview study, I am giving my consent for you to use my answers in this research study. I understand that my answers will be submitted to Coventry University as part of the researcher's final PhD thesis, and potentially published as part of a scholarly journal and/or presented at a national/international conference. ☐
6. I agree to my consent form being securely stored by the university for 5 years. ☐
7. I understand that the researcher may be required or compelled to disclose information obtained in the interview, and may have a duty to report to the police or other appropriate authority, the details of any criminal offence disclosed in the interview, for which I, or others known to me, have not been previously apprehended, charged or convicted and/or details of any actual or perceived risk of harm or injury to myself (including self-harm) or any third person. The researcher will stop the interview and caution me, if I begin to disclose details of any criminal offence for which I, or others known to me, have not been previously apprehended, charged or convicted. If I decide to discuss offences for which I have not been apprehended, charged or convicted I understand I should only discuss such offences in general terms. ☐

Name of Participant	Date	Signature
Name of Person taking consent (If different from researcher)	Date	Signature

3p: Informed Consent Form – phase one – diary

Title of Project: **Exploring the Sources of and Reactions to Work frustration: Extending Previous Research using Mixed Methodology**

Name of Researcher(s): Content removed on data protection grounds

To email please contact:

Please initial box to affirm consent

1. I confirm that I have read and understand the participant information sheet dated ..... for the above study and have had the opportunity to ask questions. ☐
2. I understand that my participation is voluntary and that I am free to withdraw at any time during the research, and for a short period after the study has been conducted (2 weeks after participation) without a given reason, by contacting the researcher using the details above and quoting my participant reference number. ☐
3. I agree to take part in the above study and to keep my diary on a password protected computer. ☐
4. By undertaking this diary study, I am giving my consent for you to use my answers in this research study. I understand that my answers will be submitted to Coventry University as part of the researcher's final PhD thesis, and potentially published as part of a scholarly journal and/or presented at a national/international conference. ☐
5. I agree to my consent form being securely stored by the university for 5 years. ☐
6. I understand that the researcher may be required or compelled to disclose information obtained in the diary, and may have a duty to report to the police or other appropriate authority, the details of any criminal offence disclosed in the diary, for which I have not been previously apprehended, charged or convicted and/or details of any actual or perceived risk of harm or injury to myself (including self-harm) or any third person. If I decide to disclose offences for which I have not been apprehended, charged or convicted I understand I should only disclose such offences in general terms. ☐

Name of Participant	Date	Signature
Name of Person taking consent (If different from researcher)	Date	Signature

3q: Informed Consent Form – phase two – step one

Title of Project:	**Development and Validation of Two Self-Report Measures of Work Frustration: The Work Frustration Measurement Scale (WFMS), and the Coping Inventory for Frustrating Situations (CIFS)**
Name of Researcher(s):	Content removed on data protection grounds

To email please contact:

Please initial box to affirm consent

1. I confirm that I have read and understand the participant information sheet for the above study and have had the opportunity to ask questions. ☐
2. I understand that my participation is voluntary and that I am free to withdraw at any time during the research, and for a short period after the study has been conducted (3 working days after submission) without a given reason, by contacting the researcher using the details above. ☐
3. I agree to take part in the above study and to keep my responses on a password protected computer. ☐
4. By undertaking this study, I am giving my consent for you to use my responses in this research study. I understand that my responses will be submitted to Coventry University as part of the researcher's final PhD thesis, and potentially published as part of a scholarly journal and/or presented at a national/international conference. ☐
5. I agree to my consent form being securely stored by the university for 5 years. ☐

Name of Participant	Date	Signature
Name of Person taking consent (If different from researcher)	Date	Signature

3r: Informed Consent Form – phase two – step two

I have read and I understand the participant information sheet for this study.	☐
By completing this questionnaire, I am giving my consent for you to use my questionnaire answers in this research study. I understand that my answers will remain anonymous and that they will be submitted to Coventry University as part of the researcher's final PhD thesis, and potentially published as part of a scholarly journal and/or presented at a national/international conference.	☐
I understand that I have the right to withdraw from the study at any point during the study without a given reason.	☐
I understand that I have the right to withdraw my responses at any point without a given reason for a short period after the study has been conducted (2 weeks after participation) by contacting the researcher using the details on the participant information sheet and quoting my participant reference number.	☐
I have made a note of my participant reference number.	☐
I agree to my consent form being securely stored by the university for 5 years.	☐

3s: Informed Consent Form – phase three

I have read and I understand the participant information sheet for this study.	☐
By completing this questionnaire, I am giving my consent for you to use my questionnaire answers in this research study. I understand that my answers will remain anonymous and that they will be submitted to Coventry University as part of the researcher's final PhD thesis, and potentially published as part of a scholarly journal and/or presented at a national/international conference.	☐
I understand that test publisher MHS will have access to the responses I provide on the EQi 2.0 only, and that data submitted to MHS will be transmitted and stored in the United States with a third-party cloud-services provider (CSP) who complies with the U.S.–EU Privacy Shield Framework. A write-up of the overall results will be provided to MHS.	☐
I understand that I have the right to withdraw from the study at any point during the study without a given reason.	☐
I understand that I have the right to withdraw my responses at any point without a given reason for a short period after the study has been conducted (2 weeks after participation) by contacting the researcher using the details on the participant information sheet and quoting my participant reference number.	☐
I have made a note of my participant reference number which I understand will be required to complete the EQi 2.0 assessment.	☐
I agree to my consent form being securely stored by the university for 5 years.	☐

3t: Debrief Sheet – phase one - questionnaire

Thank you for participating as a participant in this questionnaire study which aims to identify the sources of and reactions to work frustration in today's organisations from the perspective of independents, volunteers and employees working in a variety of different organisational sectors in the UK. This study was conducted to aid the development of an up-to-date and comprehensive taxonomy of the antecedents of frustration within organisations, as well as two new measurement scales that will be useful tools for researchers, practitioners and organisations. It is expected that the scales developed from this study will also be used to validate a comprehensive model of work frustration, which will in turn, aid the development of successful interventions to reduce work frustration and support employees in the future.

Content removed on data protection grounds

If you wish to withdraw your data from this study you may still do so without a given reason within the next two weeks by emailing the researcher with your participant reference number and your data will be destroyed.

Many Thanks,

Sophie Ward

PhD Student
Coventry University

3u: Debrief Sheet – phase one - interview

Thank you for participating as a participant in this interview study which aims to identify the sources of and reactions to work frustration in today's organisations from the perspective of independents, volunteers and employees working in a variety of different organisational sectors in the UK. This study was conducted to aid the development of an up-to-date and comprehensive taxonomy of the antecedents of frustration within organisations, as well as two new measurement scales that will be useful tools for researchers, practitioners and organisations. It is expected that the scales developed from this study will also be used to validate a comprehensive model of work frustration, which will in turn, aid the development of successful interventions to reduce work frustration and support employees in the future.

Content removed on data protection grounds

If you wish to withdraw your data from this study you may still do so without a given reason within the next two weeks by emailing the researcher with your participant reference number and your data will be destroyed.

Many Thanks,

Sophie Ward

PhD Student
Coventry University

3v: Debrief Sheet – phase one - diary

Thank you for participating as a participant in this diary study which aims to identify the sources of and reactions to work frustration in today's organisations from the perspective of independents, volunteers and employees working in a variety of different organisational sectors in the UK. This study was conducted to aid the development of an up-to-date and comprehensive taxonomy of the antecedents of frustration within organisations, as well as two new measurement scales that will be useful tools for researchers, practitioners and organisations. It is expected that the scales developed from this study will also be used to validate a comprehensive model of work frustration, which will in turn, aid the development of successful interventions to reduce work frustration and support employees in the future.

Content removed on data protection grounds

If you wish to withdraw your data from this study you may still do so without a given reason within the next two weeks by emailing the researcher with your participant reference number and your data will be destroyed.

Many Thanks,

Sophie Ward

PhD Student
Coventry University

3w: Debrief Sheet – phase two – step one

Thank you for participating as a participant in phase 1 of this study which aims to support the development and validation of two new self-report measures of work frustration: The Work Frustration Measurement Scale (WFMS), and the Coping Inventory for Frustrating Situations (CIFS).

It is expected that this particular study will lead to the development and validation of two new measurement tools, one of which will assess the sources of work frustration, and the other, the reactions to work frustration. Both tools of which will be useful for researchers, practitioners and organisations, and will be utilised for the researcher's final PhD study, testing a comprehension model of work frustration. The ultimate aim of the final study being to identify possible interventions to reduce work frustration, and help employees to react in more positive ways to frustration, some frustration of which is inevitable.

Content removed on data protection grounds

If you wish to withdraw your data from this study you may still do so without a given reason within the next 3 working days by emailing the researcher with your participant reference number and your data will be destroyed.

Many Thanks,

Sophie Ward

PhD Student
Coventry University

3x: Debrief Sheet – phase two – step two

Thank you for participating as a participant in phase 2 of this study which aims to support the development and validation of two new self-report measures of work frustration: The Work Frustration Measurement Scale (WFMS), and the Coping Inventory for Frustrating Situations (CIFS).

It is expected that this particular study will lead to the development and validation of two new measurement tools, one of which will assess the sources of work frustration, and the other, the reactions to work frustration. Both tools of which will be useful for researchers, practitioners and organisations, and will be utilised for the researchers final PhD study, testing a comprehension model of work frustration. The ultimate aim of the final study being to identify possible interventions to reduce work frustration, and help employees to react in more positive ways to frustration, some frustration of which is inevitable.

Content removed on data protection grounds

Furthermore if you feel in any way negatively affected by this study it is advised that you contact a member of management or counselling services within your organisation, the researcher directly or an independent organisation such as the Samaritans via email jo@samaritans.org.

If you wish to withdraw your data from this study you may still do so without a given reason within the next two weeks by emailing the researcher with your participant reference number and your data will be destroyed.

Many Thanks,

Sophie Ward

PhD Student
Coventry University

3y: Debrief Sheet – phase three

Thank you for participating as a participant in this study investigating the relationship between the sources of frustration and an individual's coping strategies.

The study is being conducted to help identify possible interventions to reduce work frustration, and support employees to react in more positive ways to frustration, some frustration of which is inevitable. If you would like to learn more about work frustration you may wish to take a look at the following papers:

Situational Constraints and Work Outcomes: The Influences of a Frequently Overlooked Construct
https://www.jstor.org/stable/pdf/257114.pdf

A model of work frustration–aggression
https://onlinelibrary.wiley.com/doi/pdf/10.1002/(SICI)1099-1379(199911)20:6%3C915::AID-JOB918%3E3.0.CO;2-6

User Frustration with Technology in the Workplace
https://www.cs.umd.edu/~ben/papers/Lazar2003User.pdf

Content removed on data protection grounds

Furthermore if you feel in any way negatively affected by this study it is advised that you contact a member of management or counselling services within your organisation, the researcher directly or an independent organisation such as the Samaritans via email jo@samaritans.org.

If you wish to withdraw your data from this study you may still do so without a given reason within the next two weeks by emailing the researcher with your participant reference number and your data will be destroyed.

Many Thanks,

Sophie Ward

4a: Interview Information Sheet

Thank you for agreeing to take part in an interview focusing on the causes of and reactions to work frustration. This information sheet is to help you think about your experiences of work frustration prior to the interview, to help you prepare and ease any feelings of uncertainty regarding the content of the interview.

Content removed on data protection grounds

During your interview you will be asked to think about the following:

- **What work frustration means to you**
- **What sources of frustration within your current role you have experienced**
- **How you have reacted when frustrated within your current role**
- **How those around you in the workplace have reacted when frustrated (if applicable)**
- **What sources of frustration you have experienced within a previous position or organisation in the last 15 years (if applicable)**
- **How you have reacted when frustrated within a previous position or organisation in the last 15 years (if applicable)**

You will be asked to discuss your thoughts with the researcher/interviewer and to expand on any points that they require further information on.

4b: Semi-Structured Interview Guide

Use the questions below as probes/reminders
Welcome/Rapport building

Brief introduction to discussion/topic (based on PI sheet)

State participant number on recording prior to commencing the formal interview

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Part 1) Work frustration

1. *What does work frustration mean to you?*

Probe: Allow the interviewee time to think and tell you what they understand work frustration to be.

Tell the interviewee a definition of work frustration (i.e. work frustration is frustration that is caused by some stimulus condition within the organisation which may result in interference with goal attainment or maintenance)

Part 2) Interviewee's own experiences of and reactions to work frustration within their current role

2. *Can you please tell me about what has caused you to become frustrated at different points in time during your current role*

Probe: Ask the interviewee to tell you more about their experience (i.e. "Please can you tell me more about that?" "Can you give me some more detail about that situation/why that caused you frustration?"). Allow the interviewee time to think and echo their points.

Prompt: Thinking about times in which you have felt frustrated at work within you current role, what/whom has led you to feel frustrated and why?

3. *Thinking about the different times in which you have become frustrated in your current role. What actions, if any, have you undertaken when you have become frustrated?*

Probe: Ask the interviewee to tell you more about their behaviour (i.e. "Please can you tell me more about that?" "Can you tell me how you did that?" "Can you tell me what you did next?" ''Can you tell me why you did that?'' ''Can you give me any more examples of how you have shown your frustration within your current role?''). Allow the interviewee time to think and echo their points.

Prompt: What have you done as a result of your frustration? How have you expressed your frustration?

Part 3) Interviewee's experiences of other employee's reactions to work frustration within their current role

4. *Within your current role have you seen other employee's within your workplace become frustrated and how they reacted to this frustration?*

Prompt: Have you witnessed others within your current workplace become frustrated? Have you seen other individuals within your current workplace express frustration?

If the answer is no, move to part 4. If the answer is yes, ask question 5.

5. *Based on your observations, can you please tell me what actions these employees undertook in response to their frustration?*

Probe: Ask the interviewee to tell you more about the employee's behaviour (i.e. "Please can you tell me more about that?" "Can you tell me how they did that?" "Can you tell me what they did next?"). Allow the interviewee time to think and echo their points.

Prompt: What have you observed other employees within your workplace do as a result of their frustration? How have your colleagues expressed their frustration?

Part 4) Interviewee's own experiences of and reactions to work frustration in previous roles or organisations within the past 15 years

6. *Prior to your current position and within the last 15 years, did you ever work in a different position within your current organisation, or in an organisation which is different from the one in which you work now?*

Prompt: Did you previously hold a different position within your current organisation? Did you previously work for a different organisation from the one you currently work for?

If the answer is no, move on to part 5. If the answer is yes, ask question 7.

7. *As far as you can remember did you ever experience frustration within your previous position or organisation?*

If the answer is no, move on to part 5. If the answer is yes, ask question 8.

8. *Can you please tell me a bit more about what caused you to become frustrated within your previous position or organisation?*

Probe: Ask the interviewee to tell you more about their experience (i.e. "Please can you tell me more about that?" "Can you give me some more detail about that situation/why that caused you frustration?"). Allow the interviewee time to think and echo their points.

Prompt: Thinking about times in which you felt frustrated at work within your previous position or organisation, what/whom has led you to feel frustrated and why?

9. *Thinking about the different times in which you became frustrated in your previous position or organisation. What actions, if any, did you undertake when you became frustrated?*

Probe: Ask the interviewee to tell you more about their behaviour (i.e. "Please can you tell me more about that?" "Can you tell me how you did that?" "Can you tell me what you did

next?" ''Can you tell me why you did that?''). Allow the interviewee time to think and echo their points.

Prompt: What did you do as a result of your frustration? How did you express your frustration?

If the below has not already arisen ask question 10.

10. *Have you ever left a position or an organisation within the last 15 years as a result of work frustration and why?*

Probe: Ask the interviewee to tell you more about why they left (i.e. "Please can you tell me more about that?" ''Was it your choice to leave?'' "Can you explain more about your reasons for deciding to leave?'' "Can you tell me how you did that?"). Allow the interviewee time to think and echo their points.

Part 5) Summary

11. *Thank you for your time. Do you have any questions that you would like to ask me about what we have just discussed or this research in general?*

4c: Questionnaire

The following questions are focused on the causes of and reactions to work frustration. By work frustration we mean, frustration that is caused by some stimulus condition within the organisation which may result in interference with goal attainment or maintenance.

Please answer the questions in as much detail as possible.

When answering each question please think ONLY about events that have occurred since the year 2000.

Work frustration within your Current Role

1. **Have you experienced a frustrating event within your current role within your organisation?**

   Yes No

[If the respondent selects yes they will move to question 2. If they select no they will automatically be directed to question 6]

Thinking about a specific frustrating event that you have experienced within your current role within your organisation:

2. **What/ whom was the source (cause) of the frustration that you experienced on this occasion and why?** *(Please do not mention names of individuals here)*

3. **What action/s did you take when you became frustrated by this source?** *(I.e. In what way/s did you express your frustration when you became frustrated?)*

Continuing to think about your current role within your organisation:

4. **Are there any other sources (causes) of work frustration that you have experienced during your current role that you would like to tell us about?**

5. **Are there any other ways in which you have reacted to work frustration during your current role that you would like to tell us about?**

Work frustration within your Current Role: A Focus on Colleagues

6. **Have you seen other employee's/colleagues become frustrated while in your current role and how they reacted to this frustration?**

   Yes No

[If the respondent selects yes they will move to question 7. If they select no they will automatically be directed to question 8]

7. **Based on your observations, what actions did these employees undertake in response to their frustration?**
   (I.e. In what ways have you seen other employee's express their frustration while in your current role?)
   Please do not state the names of any employees. Please allocate each employee a number, e.g. 1, 2, 3.

Work frustration in General

Thinking now about your experiences of and reactions to work frustration in general:

8. **Are there any other sources of work frustration that you have experienced during any work position since the year 2000 that you would like to tell us about?**

9. **Are there any other ways in which you have reacted to work frustration during any work position since the year 2000 that you would like to tell us about?**

10. **Have you ever left a position or an organisation since the year 2000 as a result of work frustration and why?**

END

4d: Diary Template

Content removed on data protection grounds

In order to successfully complete this study:

1. You are required to complete the study for a period of 5 working days. Therefore if you work full-time Monday to Friday then please complete one diary entry for each working day from Monday to Friday. If you work part-time however, for example, you only work Mondays, Tuesdays and Fridays, then please complete one diary entry for each of those days only, and then continue to complete the diary in the following week until you have completed all 5 entries.
2. For each diary entry please write the date (E.g. 01/03/2016) that the entry applies to in the specified box, as well as how many hours you worked (E.g. 8.5 hours) on that particular day.
3. If your organisation has provided approval for you to complete this study during working time you are asked to complete the diary as soon as is practically possible after each frustrating event that you experience or observe in the workplace. If you are unable to note down the frustrating event straight after it has occurred then please ensure that you enter this event into your diary as soon as possible at the end of your working day. If your organisation has not provided this approval you are asked to complete the diary outside of working hours but during the same working day. The researcher will inform you if your organisation has provided this approval before you commence this study.
4. Each time you write down a frustrating event you should note the time in which the event occurred, what caused the frustrating event and why, as well as what action/s you took as a result of the frustration. Please ensure you write in as much detail as possible.
5. If you do not experience a frustrating event on a particular day then please state this in the 'Other' box at the end of each diary entry.
6. It is recommended that you spend around 30 minutes a day on your diary entry.

Example:

Time Please note down the time in which this event occurred, e.g. 11am.	**Frustrating Event** Please note down the source of your frustration, e.g. Customer, and why it frustrated you.	**Behavioural Reaction** Please note down what action/s you took as a result of the frustration.
11:45am	Supervisor/Workload. My supervisor emailed me telling me to complete tasks that were outside of my contractual duties. They did not even ask if I was ok to do so and what other work I had. I felt frustrated due to the lack of consideration towards me and my current workload, which resulted in	When receiving the email I hit the desk and shouted. I then moaned to my co-workers about my supervisor and the high workload, before replying to my supervisor and agreed to complete the work as I did not

	further stress and frustration as I then had too much work to do.	want to cause an issue and appear incapable.

Diary Entry 1

Date:

Hours worked:

Time Please note down the time in which this event occurred, e.g. 11am.	**Frustrating Event** Please note down the source of your frustration, e.g. Customer, and why it frustrated you.	**Behavioural Reaction** Please note down what action/s you took as a result of the frustration.

Other:

Diary Entry 2

Date:

Hours worked:

Time Please note down the time in which this event occurred, e.g. 11am.	**Frustrating Event** Please note down the source of your frustration, e.g. Customer, and why it frustrated you.	**Behavioural Reaction** Please note down what action/s you took as a result of the frustration.

Other:

Diary Entry 3

Date:

Hours worked:

Time Please note down the time in which this event occurred, e.g. 11am.	**Frustrating Event** Please note down the source of your frustration, e.g. Customer, and why it frustrated you.	**Behavioural Reaction** Please note down what action/s you took as a result of the frustration.

Other:

Diary Entry 4

Date:

Hours worked:

Time Please note down the time in which this event occurred, e.g. 11am.	**Frustrating Event** Please note down the source of your frustration, e.g. Customer, and why it frustrated you.	**Behavioural Reaction** Please note down what action/s you took as a result of the frustration.

Other:

Diary Entry 5

Date:

Hours worked:

Time Please note down the time in which this event occurred, e.g. 11am.	**Frustrating Event** Please note down the source of your frustration, e.g. Customer, and why it frustrated you.	**Behavioural Reaction** Please note down what action/s you took as a result of the frustration.

Other:

5a: The Work Frustration Measurement Scale (WFMS) – Initial Items Developed

Thinking about your current job role/organisation please indicate how much you agree with the following statements (1= totally disagree, 4 = totally agree) **People refer to colleagues, customers and management with your organisation.**			
	Item	Sub-Scale	
1	There is a lack of teamwork within my organisation	Workplace Behaviour and Ethics	Political Deviance
2	There are people within my organisation who are selfish		Political Deviance
3	There is favouritism within my organisation		Political Deviance
4	I am treated fairly at work (R)		Political Deviance
5	I get blamed for things at work that are not my fault		Political Deviance
6	I am sometimes subject to false accusations at work		Political Deviance
7	I feel socially undermined at work		Political Deviance
8	People at work question my decisions		Political Deviance
9	There are people within my organisation who are dishonest		Political Deviance
10	Promises made by people within my organisation are often broken		Political Deviance
11	I deal with people at work who are disrespectful		Workplace Incivility
12	I deal with difficult people in my work		Workplace Incivility
13	People at work show care and consideration for others (R)		Workplace Incivility
14	I feel listened to at work (R)		Workplace Incivility
15	I deal with people at work who are impatient		Workplace Incivility
16	Mangers abuse their power at work		Personal Aggression
17	I often face verbal abuse in my work		Personal Aggression
18	I deal with people who are aggressive towards me at work		Personal Aggression
19	I have been subject to unlawful discrimination at work		Personal Aggression
20	There is a lot of non-compliance within my organisation		Organisational Deviance
21	**People in my workplace are dishonest (R) (removed at stage 1)**		Organisational Deviance
22	There are people in my workplace who are frequently late/absent		Organisational Deviance
23	I have too much work to do	Human Factors and Work Design	Unsuitable Workload and Job Design
24	I work under time pressure		Unsuitable Workload and Job Design
25	I have unreasonable expectations placed on me at work		Unsuitable Workload and Job Design

26	I often have to work long hours		Unsuitable Workload and Job Design
27	I work unsociable hours as part of my work		Unsuitable Workload and Job Design
28	I often have to work through my lunch breaks		Unsuitable Workload and Job Design
29	I have a lack of control of situations I face at work		Unsuitable Workload and Job Design
30	I have a lack of freedom over my job role		Unsuitable Workload and Job Design
31	I have to do very repetitive tasks in my role		Unsuitable Workload and Job Design
32	I get enjoyment out of my role (R)		Unsuitable Workload and Job Design
33	The environment I work in is comfortable (R)		Environment, Material and Personnel Issues
34	My allocated workspace is unsuitable		Environment, Material and Personnel Issues
35	The materials (e.g. equipment, funding, information and technology) provided to do my work are inadequate		Environment, Material and Personnel Issues
36	There are sufficient materials provided to enable me to do my job (R)		Environment, Material and Personnel Issues
37	The staffing levels at work are poor		Environment, Material and Personnel Issues
38	There are sufficient facilities (e.g. parking and break-out areas) at work (R)		Environment, Material and Personnel Issues
39	There is a lack of reward and recognition in my job		Insufficient Pay, Progression and Reward
40	I am provided with sufficient training opportunities at work (R)		Insufficient Pay, Progression and Reward
41	There are a lack of development opportunities in my organisation		Insufficient Pay, Progression and Reward
42	I get paid enough to do my job (R)		Insufficient Pay, Progression and Reward
43	People at work often make mistakes	Individual Performance Levels	Incompetence and Poor Management
44	I sometimes make mistakes at work		Incompetence and Poor Management
45	There are people at work who are incompetent		Incompetence and Poor Management
46	I sometimes find myself unable to do certain tasks to my best		Incompetence and Poor Management
47	People at work take responsibility for their job role (R)		Lack of Responsibility and Laziness
48	There are people at work who are lazy		Lack of Responsibility and Laziness
49	People at work lack understanding (E.g. in relation to what is required of them)		Incomprehension and Misunderstanding

50	People at work lack awareness (E.g. in relation to the workload/responsibilities of others)		Incomprehension and Misunderstanding
51	I sometimes lack understanding at work (E.g. in relations to one's own job role)		Incomprehension and Misunderstanding
52	There is a lack of communication in my organisation	Organisational Processes and Change	Inadequate Communication and Guidance
53	I face barriers to communication in my work		Inadequate Communication and Guidance
54	I feel well informed of the reasons behind change in my work (R)		Inadequate Communication and Guidance
55	There is sometimes conflicting communication at work		Inadequate Communication and Guidance
56	The policies and procedures within my organisation are insufficient		Poor Policies and Procedures
57	The policies and procedures in my organisation are necessary (R)		Poor Policies and Procedures
58	The policies and procedures within my organisation are long/rigid/repetitive		Poor Policies and Procedures
59	I am happy with changes that are made at work (R)		Insufficient and Problematic Change
60	I am often faced with last minutes changes at work		Insufficient and Problematic Change
61	There is constant change in my organisation		Insufficient and Problematic Change
62	I sometimes find change in my organisation is meaningless		Insufficient and Problematic Change

5b: The Coping Inventory for Frustrating Situations (CIFS) – Initial Items Developed

Please consider each statement in the list below and indicate how frequently you have engaged in such actions to cope with a frustrating situation at work.

You may have undertaken some of these behaviours at home when returning from work, e.g. being verbally aggressive towards others. Please therefore also take this into consideration when responding to each statement.

Responses will be measured on a four-point scale ranging from 'never' to 'always'.

	Item	Subscale	
1	Talked to someone to find out more information about the situation	Social Coping	Informational
2	Asked people who have had similar experiences what they did		Informational
3	Conveyed information to others in an attempt to alleviate the issue		Informational
4	Provided information to someone to highlight the issue		Informational
5	Offered solutions/feedback to try to overcome the problem		Informational
6	Discussed your feelings with someone		Emotional
7	Spoke to someone you trusted about how you feel (E.g. a friend, partner or family member)		Emotional
8	Sought emotional support from a professional (E.g. GP or counsellor)		Emotional
9	Got upset and let your emotions out (E.g. cried)		Emotional
10	Showed sympathy and understanding towards others		Emotional
11	Asked for practical help from others in attempt to resolve or circumvent the issue		Instrumental
12	Sought support from someone who could do something concrete about the problem		Instrumental
13	Actively supported other people in an attempt to resolve or circumvent the issue		Instrumental
14	Walked away from the situation	Avoidant Coping	Physical
15	Took a break to cool down/reflect		Physical
16	Took involuntary (E.g. went off sick) or voluntary absence (E.g. took a holiday)		Physical
17	Isolated yourself from the people around you		Physical
18	Avoided the situation or person that was causing you frustration		Physical
19	Arrived late to work/meetings or left early		Physical
20	Reduced the amount of effort you put in to your job role		Psychological
21	Thought about leaving your job/organisation		Psychological
22	Refused to perform certain tasks		Psychological
23	Engaged in other work-related tasks to take your mind off things		Psychological

24	Engaged in non-work activities to take your mind off things (E.g. physical exercise, mindfulness breathing)		Psychological
25	Used alcohol, food or caffeine to make yourself feel better		Psychological
26	Took direct action to try to get rid of the problem	Self-Sufficient Coping	Active Coping & Planning
27	Changed something to alleviate the issue		Active Coping & Planning
28	Took direct action to get around the problem		Active Coping & Planning
29	Did what had to be done, one step at a time		Active Coping & Planning
30	Tried to come up with a way to handle the problem		Active Coping & Planning
31	Thought about what I can do to resolve the issue		Active Coping & Planning
32	Learned to live with it		Acceptance
33	Accepted that it's happened and cannot be changed		Acceptance
34	Continued working in a polite and professional manner		Acceptance
35	Looked for something good in the situation		Positive Re-interpretation
36	Tried to put things into perspective		Positive Re-interpretation
37	Tried to see the situation in a positive light		Positive Re-interpretation
38	Made a joke in an attempt to lighten things up		Positive Re-interpretation
39	Threatened someone, but not physically	Aggressive Coping	Overt
40	Screamed, shouted or swore at someone		Overt
41	Became physically aggressive towards things (E.g. slamming the phone down, throwing the computer or punching the desk)		Overt
42	Threw or hit company property		Overt
43	Took your frustration out on someone else		Overt
44	Made insensitive facial expressions (E.g. rolling your eyes, scowling)		Covert
45	Purposefully sighed heavily and outwardly		Covert
46	Engaged in negative gossip/ social undermining		Covert
47	Excluded or bypassed certain colleagues		Covert
48	Tried to manipulate the situation/individual		Covert
49	Took someone else's ideas and used them as you own		Covert
50	Stole from your employer		Covert

5c: Items' relevance scores for the WFMS

Items' Relevance Scores (WFMS)		
Item	**Mean**	**SD**
Item1	2.6667	2.08167
Item2	3.3333	2.08167
Item3	3.6667	1.52753
Item4	3.3333	2.08167
Item5	3.3333	2.08167
Item8	3.3333	2.08167
Item9	4.3333	1.15470
Item10	4.0000	1.00000
Item11	4.0000	1.00000
Item12	3.0000	1.73205
Item13	3.0000	2.00000
Item14	3.0000	2.00000
Item15	4.0000	1.73205
Item18	4.3333	1.15470
Item19	4.3333	1.15470
Item20	4.0000	1.73205
Item 21	4.0000	1.00000
Item22	4.3333	1.15470
Item23	3.6667	2.30940
Item24	4.0000	1.73205
Item25	4.0000	1.73205
Item26	4.0000	1.73205
Item27	2.6667	.57735
Item28	4.3333	1.15470
Item29	4.0000	1.73205
Item30	4.0000	1.73205
Item31	4.3333	1.15470
Item32	3.0000	2.00000
Item33	3.3333	2.08167
Item34	3.3333	2.08167
Item35	4.6667	.57735
Item36	4.6667	.57735
Item37	4.6667	.57735
Item38	4.3333	1.15470
Item39	4.3333	1.15470
Item40	2.6667	2.08167
Item41	4.0000	1.73205
Item42	3.0000	2.00000
Item43	4.3333	1.15470
Item44	4.3333	1.15470
Item45	4.3333	1.15470
Item46	4.3333	1.15470
Item47	3.0000	2.00000
Item48	3.3333	2.08167
Item49	4.6667	.57735
Item50	4.6667	.57735
Item51	4.6667	.57735
Item52	4.6667	.57735
Item53	4.6667	.57735
Item54	4.6667	.57735
Item55	4.6667	.57735

Item56	4.6667	.57735
Item57	4.6667	.57735
Item58	4.6667	.57735
Item59	3.3333	2.08167
Item60	4.0000	1.73205
Item61	4.3333	1.15470
Item62	3.0000	2.00000

Note: Item 6, 7, 16, and 17 were removed from the analysis due to zero variance.

5d: Items' relevance scores for the CIFS

Items' Relevance Scores (CIFS)		
Item	**Mean**	**SD**
Item1	4.6667	.57735
Item2	4.6667	.57735
Item3	4.6667	.57735
Item4	3.3333	2.08167
Item5	4.6667	.57735
Item6	4.6667	.57735
Item7	4.6667	.57735
Item8	4.6667	.57735
Item9	3.6667	1.52753
Item10	4.6667	.57735
Item11	4.6667	.57735
Item12	4.6667	.57735
Item13	4.6667	.57735
Item14	4.6667	.57735
Item15	4.6667	.57735
Item16	4.6667	.57735
Item17	4.3333	1.15470
Item18	4.6667	.57735
Item19	4.3333	1.15470
Item20	3.3333	2.08167
Item21	3.3333	2.08167
Item22	3.0000	2.00000
Item23	4.6667	.57735
Item24	4.6667	.57735
Item25	4.6667	.57735
Item26	4.6667	.57735
Item27	4.6667	.57735
Item28	4.6667	.57735
Item29	4.0000	1.73205
Item30	4.6667	.57735
Item31	4.6667	.57735
Item32	4.3333	1.15470
Item33	4.3333	1.15470
Item34	3.3333	2.08167
Item35	4.6667	.57735
Item36	4.6667	.57735
Item37	4.6667	.57735
Item38	4.6667	.57735
Item39	4.6667	.57735
Item40	4.6667	.57735
Item41	4.6667	.57735
Item42	4.6667	.57735
Item43	4.6667	.57735
Item44	4.6667	.57735
Item45	4.6667	.57735
Item46	4.6667	.57735
Item47	4.6667	.57735
Item48	3.0000	2.00000
Item 49	1.3333	.57735
Item 50	2.0000	1.73205

5e: Spector and Jex's (1997) Organizational Constraints Scale, OCS

Some materials have been removed from this thesis due to Third Party Copyright. Pages where material has been removed are clearly marked in the electronic version. The unabridged version of the thesis can be viewed at the Lanchester Library, Coventry University.

5f: Spector and Jex's (1997) Quantitative Workload Inventory, QWI

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5g: Spector and Jex's (1997) Interpersonal Conflict at Work Scale, ICAWS

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5h: Job Satisfaction Survey (Spector 1994)

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5i: Peters and O'Connor's (1980) 3-item frustration scale

Adapted version for use in the current study:

1. Trying to get my job done is very frustrating
2. Being frustrated comes with this job
3. Overall, I experience very little frustration on this job (R)

Responses are on a 7-point likert type scale where 1= strongly disagree and 7 = strongly agree

5j: Carver et al. (1989) COPE Inventory

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5k: Spector et al.’s (2006) - Counterproductive Work Behaviour Checklist (CWB-C)

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5l: Factor correlations for the WFMS using EFA with 3, 4, 5 and 6 factors

3 FACTOR PROMAX FACTOR CORRELATIONS

	1	2	3
1	1.000		
2	0.566	1.000	
3	0.476	0.285	1.000

4 FACTOR PROMAX FACTOR CORRELATIONS

	1	2	3	4
1	1.000			
2	0.499	1.000		
3	0.345	0.404	1.000	
4	0.466	0.289	0.193	1.000

5 FACTOR PROMAX FACTOR CORRELATIONS

	1	2	3	4	5
1	1.000				
2	0.437	1.000			
3	0.326	0.397	1.000		
4	0.320	0.419	0.381	1.000	
5	0.492	0.463	0.337	0.287	1.000

6 FACTOR PROMAX FACTOR CORRELATIONS

	1	2	3	4	5	6
1	1.000					
2	0.375	1.000				
3	0.009	0.055	1.000			
4	0.420	0.366	-0.022	1.000		
5	0.342	0.399	-0.072	0.371	1.000	
6	0.493	0.348	0.065	0.445	0.344	1.000

6a: The MHS (2011) 133-item Emotional Quotient Inventory 2.0 (EQ-i2.0)
Please note this scale is copyrighted.

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6b: The CESS scale (Boyar et al. 2013)

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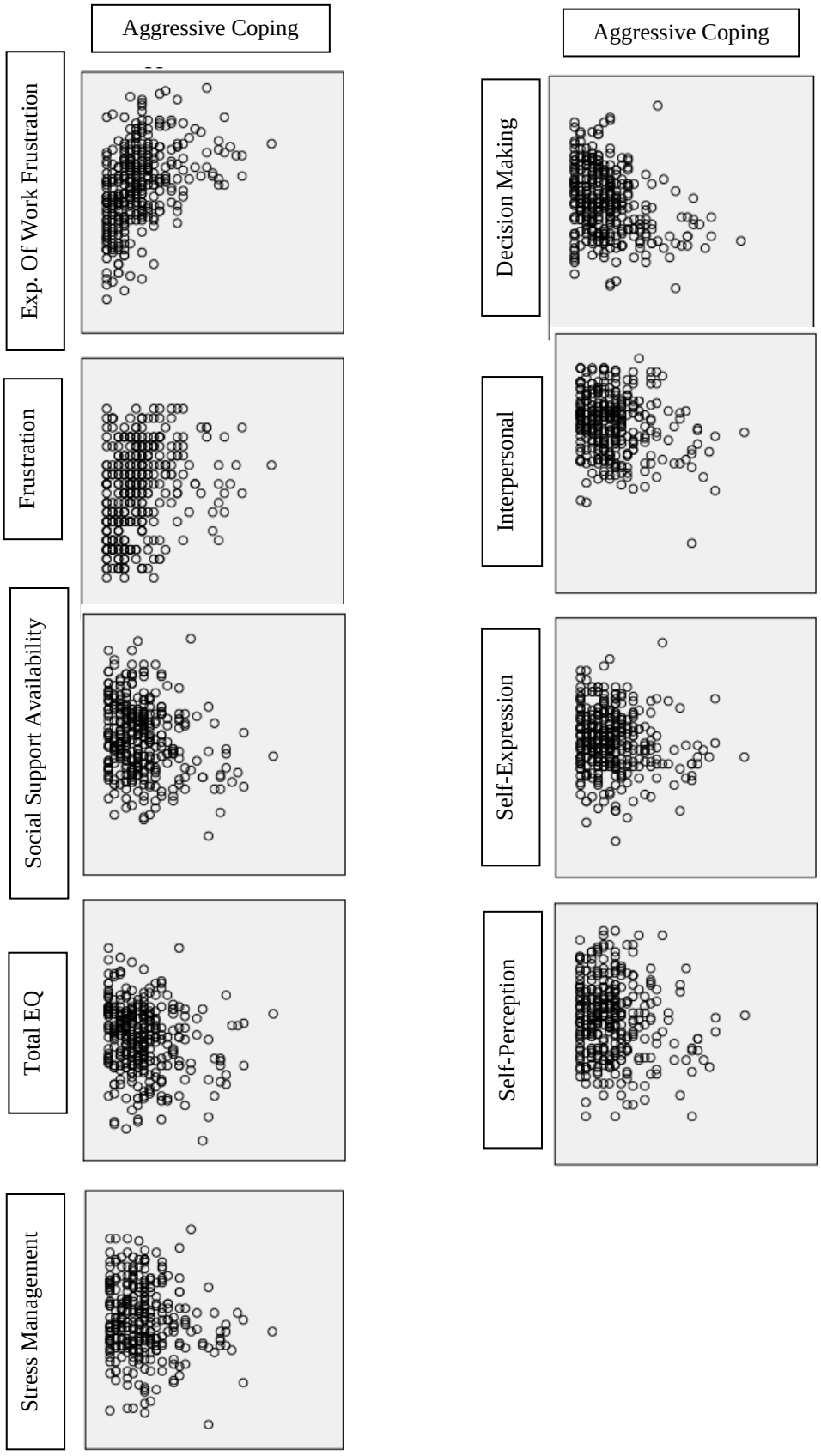
6c: Scatterplots with aggressive coping as the dependent variable



6d: MODEL INDIRECT command

```
TITLE: Basic Mediation

 DATA:  FILE = C:\EXAMPLE.csv;

 VARIABLE:
 NAMES X1 X2 X3 X4 X Y1SC Y2AC Y3PI Y4AG Y M EI SS;

USEVARIABLES X M Y1SC Y2AC Y3PI Y4AG;

ANALYSIS:
TYPE = GENERAL;
ESTIMATOR = ML;
ITERATIONS = 10000;
CONVERGENCE = 0.00005;
BOOTSTRAP = 10000;

MODEL:
M ON X;
Y1SC ON X;
Y1SC ON X M;
Y2AC ON X;
Y2AC ON X M;
Y3PI ON X;
Y3PI ON X M;
Y4AG ON X;
Y4AG ON X M;

MODEL INDIRECT:
Y1SC IND X;
Y2AC IND X;
Y3PI IND X;
Y4AG IND X;

OUTPUT:
STAND CINT (bcbootstrap);
```

6e: MODEL CONSTRAINT command

Example – Coding used to assess moderated-mediation with social coping as the dependent variable and social support availability and TOTALEI as moderators.

```
TITLE: Moderated mediation model TEST

 DATA:  FILE = C:\EXAMPLE.csv;

 VARIABLE:
 NAMES X M EI SP SE IS DM SM SS Y1 Y2 Y3 Y4;

 USEVARIABLES X M SS EI Y1 MSS MEI XSS XEI;

 DEFINE:
 X = X/10;
 MSS = M*SS;
 MEI = M*EI;
 XSS = (X*SS);
 XEI = (X*EI);

 ANALYSIS:
 TYPE = GENERAL;
 ESTIMATOR = ML;
 BOOTSTRAP = 10000;
 difftest is mydiffSSEIY1.dat;

 MODEL:
 [Y1] (b0);
 Y1 ON M (b1);
 Y1 ON SS (b2);
 Y1 ON EI (b3);
 Y1 ON MSS (b9);
 Y1 ON MEI (b10);
 Y1 ON X (cdash1);
 Y1 ON SS (cdash2);
 Y1 ON EI (cdash3);
 Y1 ON XSS (cdash5);
 Y1 ON XEI (cdash6);

 [M] (a0);
 M ON X (a1);
 M ON SS (a2);
 M ON EI (a3);
 M ON XSS (a4);
 M ON XEI (a5);


 MODEL CONSTRAINT:

 NEW(LOW_SS MED_SS HIGH_SS LOW_EI MED_EI HIGH_EI
 ILOSS_LOEI IMESS_LOEI IHISS_LOEI
 ILOSS_MEEI IMESS_MEEI IHISS_MEEI
 ILOSS_HIEI IMESS_HIEI IHISS_HIEI
 DLOSS_LOEI DMESS_LOEI DHISS_LOEI
 DLOSS_MEEI DMESS_MEEI DHISS_MEEI
```

```
DLOSS_HIEI DMESS_HIEI DHISS_HIEI
TLOSS_LOEI TMESS_LOEI THISS_LOEI
TLOSS_MEEI TMESS_MEEI THISS_MEEI
TLOSS_HIEI TMESS_HIEI THISS_HIEI);

!low med and high values for each moderator variable
!mean +/- 1 SD

LOW_SS = 86.8902 - 14.35511;
MED_SS = 86.8902;
HIGH_SS = 86.8902 +  14.35511;

LOW_EI = 93.0289 - 15.23266;
MED_EI = 93.0289;
HIGH_EI = 93.0289 + 15.23266;

!INDIRECT EFFECTS FOR EACH COMBINATION OF MODERATOR VALUES

ILOSS_LOEI = a1*b1 + a4*b1*LOW_SS + a5*b1*LOW_EI +
a1*b9*LOW_SS + a4*b9*LOW_SS*LOW_SS + a5*b9*LOW_EI*LOW_SS +
a1*b10*LOW_EI + a4*b10*LOW_SS*LOW_EI + a5*b10*LOW_EI*LOW_EI;

IMESS_LOEI = a1*b1 + a4*b1*MED_SS + a5*b1*LOW_EI +
a1*b9*MED_SS + a4*b9*MED_SS*MED_SS + a5*b9*LOW_EI*MED_SS +
a1*b10*LOW_EI + a4*b10*MED_SS*LOW_EI + a5*b10*LOW_EI*LOW_EI;

IHISS_LOEI = a1*b1 + a4*b1*HIGH_SS + a5*b1*LOW_EI +
a1*b9*HIGH_SS + a4*b9*HIGH_SS*HIGH_SS + a5*b9*LOW_EI*HIGH_SS +
a1*b10*LOW_EI + a4*b10*HIGH_SS*LOW_EI + a5*b10*LOW_EI*LOW_EI;

ILOSS_MEEI = a1*b1 + a4*b1*LOW_SS + a5*b1*MED_EI +
a1*b9*LOW_SS + a4*b9*LOW_SS*LOW_SS + a5*b9*MED_EI*LOW_SS +
a1*b10*MED_EI + a4*b10*LOW_SS*MED_EI + a5*b10*MED_EI*MED_EI;

IMESS_MEEI = a1*b1 + a4*b1*MED_SS + a5*b1*MED_EI +
a1*b9*MED_SS + a4*b9*MED_SS*MED_SS + a5*b9*MED_EI*MED_SS +
a1*b10*MED_EI + a4*b10*MED_SS*MED_EI + a5*b10*MED_EI*MED_EI;

IHISS_MEEI = a1*b1 + a4*b1*HIGH_SS + a5*b1*MED_EI +
a1*b9*HIGH_SS + a4*b9*HIGH_SS*HIGH_SS + a5*b9*MED_EI*HIGH_SS +
a1*b10*MED_EI + a4*b10*HIGH_SS*MED_EI + a5*b10*MED_EI*MED_EI;

ILOSS_HIEI = a1*b1 + a4*b1*LOW_SS + a5*b1*HIGH_EI +
a1*b9*LOW_SS + a4*b9*LOW_SS*LOW_SS + a5*b9*HIGH_EI*LOW_SS +
a1*b10*HIGH_EI + a4*b10*LOW_SS*HIGH_EI + a5*b10*HIGH_EI*HIGH_EI;

IMESS_HIEI = a1*b1 + a4*b1*MED_SS + a5*b1*HIGH_EI +
a1*b9*MED_SS + a4*b9*MED_SS*MED_SS + a5*b9*HIGH_EI*MED_SS +
a1*b10*HIGH_EI + a4*b10*MED_SS*HIGH_EI + a5*b10*HIGH_EI*HIGH_EI;

IHISS_HIEI = a1*b1 + a4*b1*HIGH_SS + a5*b1*HIGH_EI +
a1*b9*HIGH_SS + a4*b9*HIGH_SS*HIGH_SS + a5*b9*HIGH_EI*HIGH_SS +
a1*b10*HIGH_EI + a4*b10*HIGH_SS*HIGH_EI + a5*b10*HIGH_EI*HIGH_EI;

!DIRECT EFFECTS FOR EACH COMBINATION OF MODERATOR VALUES
```

```
DLOSS_LOEI = cdash1 + cdash5*LOW_SS + cdash6*LOW_EI;
DMESS_LOEI = cdash1 + cdash5*MED_SS + cdash6*LOW_EI;
DHISS_LOEI = cdash1 + cdash5*HIGH_SS + cdash6*LOW_EI;

DLOSS_MEEI = cdash1 + cdash5*LOW_SS + cdash6*MED_EI;
DMESS_MEEI = cdash1 + cdash5*MED_SS + cdash6*MED_EI;
DHISS_MEEI = cdash1 + cdash5*HIGH_SS + cdash6*MED_EI;

DLOSS_HIEI = cdash1 + cdash5*LOW_SS + cdash6*HIGH_EI;
DMESS_HIEI = cdash1 + cdash5*MED_SS + cdash6*HIGH_EI;
DHISS_HIEI = cdash1 + cdash5*HIGH_SS + cdash6*HIGH_EI;

!TOTAL EFFECTS FOR EACH COMBINATION OF MOD VALUES

TLOSS_LOEI = ILOSS_LOEI + DLOSS_LOEI;
TMESS_LOEI = IMESS_LOEI + DMESS_LOEI;
THISS_LOEI = IHISS_LOEI + DHISS_LOEI;

TLOSS_MEEI = ILOSS_MEEI + DLOSS_MEEI;
TMESS_MEEI = IMESS_MEEI + DMESS_MEEI;
THISS_MEEI = IHISS_MEEI + DHISS_MEEI;

TLOSS_HIEI = ILOSS_HIEI + DLOSS_HIEI;
TMESS_HIEI = IMESS_HIEI + DMESS_HIEI;
THISS_HIEI = IHISS_HIEI + DHISS_HIEI;


PLOT:     TYPE = plot2;
OUTPUT:     STAND CINT(bcbootstrap);
```