RESILIENCE TO TRAUMATIC INCIDENTS PROGRAMME FOR POLICE CONSTABLES: A FEASIBILITY STUDY

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ABSTRACT

A range of potentially traumatic horrific, threatening or dangerous critical incidents can be encountered by police officers. (Arnetz, Nevedal, Lumley, Backman, & Lublin, 2008). In U.K policing, reactive approaches to deal with traumatic exposure is the norm. However, the impact of these incidents is not ameliorate by debriefings and other short-term interventions (Violanti, 2006). Whilst trauma-focused therapies are available, the complex nature of the trauma history and co-morbidity of conditions presented by police officers, often result in a lengthy treatment process and period of recovery. Some officers may never return to frontline duties due to the severity of the psychological impact.

In recent years, there has been interest in developing trauma resilience for high-risk cohorts. However, none have been implemented in a U.K police service. The author has developed the Resilience to Traumatic Incidents (ReTraIn) Programme for frontline police, which has been adapted from efficacious interventions (Arnetz, Lumley, Pole, Blessman, & Arble, 2010; Manzella and Papazoglou, 2014). The aim of the Programme is to reduce unpredictability of an incident through imaginal exposure and build resilience to identified predictors of PTSD through an increase of engagement coping strategies.

The Programme was delivered to 45 frontline officers. Twenty-seven officers completed outcome measures 12 months following the intervention, and after 18 months eight officers attended acceptability interviews. The outcomes of the study were positive, although they must be considered tentative until replicated by a larger scale study. Since attending ReTraIn, participants used more engagement

coping strategies (problem-focused), and felt more psychologically prepared to cope with traumatic incidents. There was an observed association between psychological preparedness and a decrease in disengagement coping strategies. A positive association between disengagement coping and trauma symptomology supported the literature. Further, a non-significant reduction was observed in trauma symptomology.

The findings of the feasibility study has suggested the acceptability of the ReTraIn Programme and has indicated tentative benefits which merit further research. Research into the efficacy of ReTraIn has positive implications for front-line police officers as well as the demand on psychological services and counselling psychologists who work in this area.

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1.1 Introduction

“Victim in South Wales ‘cannibal attack’ met her alleged killer hours earlier” (The Guardian, 2014a).

“He's eating her: 999 phone call about 'cannibal killer' attack at Welsh hotel. 'There was screaming and screaming,’ [she] told the 999 operator. 'Oh my God. It's awful' A hotel owner cried out “he’s eating her” in a frantic 999 call after seeing a “cannibal” killer mauling the face of his victim, an inquest has heard”. (The Independent, 2017).

A range of horrific, threatening or dangerous critical incidents can be encountered by police officers working on the frontline. These are potentially traumatic as they can compromise police officers’ psychological and physical integrity (Arnetz, Nevedal, Lumley, Backman, & Lublin, 2008). There is also the risk for police officers to be seriously assaulted, injured or killed (Halpern, Maunder, Schwartz, & Gurevich, 2012).

Police officers who are frequently exposed to occupationally-derived trauma have an elevated risk of adverse mental health outcomes (Prati & Pietrantoni, 2010). Police Complex Spiral Trauma (PCST) conceptualises the unique form of trauma

within the police culture. The complex and cumulative trauma experienced by officers can form and expand through time, tension, and frequency of multiple and potentially traumatic exposure during years of police service (Papazoglou, 2013). The result of such exposure can result in police officers suffering with post-traumatic stress disorder (PTSD). Indeed, during the last 5 years one in six police officers in the U.K have been absent for a week or more due to PTSD (Police Dependants' Trust, 2018). The psychological impact of PTSD on the individual can be devastating. However, there are also repercussions in the wider familial, organisational and societal context. This includes for services in which counselling psychologists provide therapeutic treatment.

The author has developed the Resilience to Traumatic Incidents (ReTraIn) Programme for frontline police constables. The essence of this programme is to adequately prepare officers prior to trauma exposure. The aim is to reduce unpredictability of the incident and to specifically build resilience to identified predictors of PTSD (Maia et al., 2011). This could enable officers to proffer adaptive coping in place of maladaptive strategies (Ciarrochi, Deane, & Williams, 2010; Howard, Tuffin, & Stephens, 2000; Koch, 2010), increasing a sense of peri-trauma and post-trauma control.

The implementation of this trauma resilience programme could psychologically prepare officers for exposure to threatening critical incidents. Preparation could render the event less traumatic, rather than waiting until the officer has been exposed and disturbed by the incident (Arnetz, Lumley, Pole, Blessman & Arble, 2010). To the author's knowledge this proactive programme is the first of its kind

in the U.K. The aim of the current study is to identify the acceptability of the ReTraIn Programme and explore the feasibility of conducting a larger scale study.

1.2 Literature review

The announcement of the substantial reduction of Home Office funding in 2010, signalled an age of austerity for British police forces. In line with Government predictions there has been a significant decrease in the numbers of police officers across England and Wales (The Guardian, 2014b). Recent figures suggesting that four out of five police officers will be injured during their career further compounds this issue. The seriousness of these physical and psychological injuries, will result in a third of officers being requiring time off (Police Dependants' Trust, 2018).

In the face of depleted resources, the implementation of strategies to safeguard the mental health of serving officers is particularly pertinent. Counselling psychologists working within police forces are in a unique position to improve the mental health of employees on an individual and community level. As part of their therapeutic role, counselling psychologists can identify emerging themes, implement targeted initiatives and test their efficacy.

1.2.1 Post-Traumatic Stress Disorder.

Psychological trauma occurs when the human self-defense system becomes overwhelmed and disorganized. Trauma generally involves threats to life, bodily integrity, or psychological integrity; close personal encounters with violence and death; or sudden unexpected disruptions of affiliative bonds and individual frames of reference. Traumatic events are usually accompanied by feelings of intense

fear, helplessness, loss of control, and threat of annihilation, which result in emotional, cognitive, and biological changes. The traumatic experience also concurrently depends on an identifiable objective occurrence and one's subjective interpretation and response (Figley 2012).

Reactions to trauma vary widely. Whether a specific event elicits a traumatic response depends on both subjective and objective variables such as personality, past traumatic experiences, psychological resilience, degree of social support, extent of physical injury, and material loss. The personal, social, or political circumstances of the event are also highly influential factors. The responses to potentially traumatic events generally consist of cognitive, behavioural, and psychological experiences, as well as avoidance of the trauma. Responses vary between the extremes of a spontaneous recovery from the traumatic symptoms (marked by returning to equilibrium, both emotionally and functionally), to symptoms persisting more than a month and a possible diagnosis of posttraumatic stress disorder (Figley, 2012).

Post-Traumatic Stress Disorder or PTSD refers to severe anxiety that develops after exposure to any event that results in psychological trauma. This event may involve the threat of death to oneself, to someone else, or to one's own or someone else's physical, sexual, or psychological integrity. The absence of a spontaneous return to equilibrium within 4 weeks after the traumatic event often prompts a diagnosis of PTSD. Because the diagnostic criteria adopted for defining PTSD have widespread ramifications in disciplines such as law, psychology, and psychiatry, their formulation has generated considerable theoretical, political, and academic debate and controversy. Furthermore, these criteria, and the very

definition of PTSD, have evolved (and are still evolving) in relation to historical context.

Post-traumatic stress disorder is one of the most investigated psychological consequences of critical incident exposure. Since its inception in the Diagnostic and Statistical Manual-III (1980), there has been much research and debate. While other psychiatric disorders were predominantly agnostic to aetiology, a diagnosis of PTSD required a specific type of event to precede the onset of a clinical syndrome (Pineles et al., 2011). It was theorised that exposure to a recognisable stressor outside the range of human emotion would evoke symptoms of distress in almost everyone. It became apparent the development of PTSD was the exception rather than the rule.

Research has identified that pre-trauma risk factors, in conjunction with a Criterion A stressor, are significant in the development of PTSD (Pineles et al., 2011). PTSD causes significant distress and functional impairment to the sufferer. PTSD can occur following exposure to actual or threatened death, serious injury or sexual violation. Traumatic exposure can be directly or vicariously experienced (DSM-5; American Psychiatric Association [APA], 2013). Whilst many trauma exposed individuals experience sub-clinical stress or PTSD type symptomology, this often diminishes within three months (Roberts, Kitchiner, Kenardy & Bisson, 2012). However, at least one-third of individuals will go on to meet the diagnostic criteria for PTSD (Elzinga & Bremner, 2002).

According to the Diagnostic and statistical manual of mental disorders (5th ed., DSM-5; American Psychiatric Association [APA], 2013), PTSD is typified by

flashbacks, avoidance of trigger stimuli and sleep disturbance. Sufferers experience negative alternations of mood and cognitions, heightened anxiety, hyper vigilance and self-destructive behaviour. Presentation of high levels of derealisation and depersonalisation can also be experienced. To meet the diagnostic criteria for PTSD, symptoms must persist for at least a month, cause significant distress and functional impairment to the sufferer.

It is estimated that between 23% and 30% of people who have experienced a traumatic event will meet the diagnostic criteria of PTSD (American Psychiatric Association [APA], 2013; Ehlers, Mayou & Bryant, 1998, cited in Kliem & Kröger, 2013; Elzinga & Bremner, 2002). A higher prevalence of PTSD is observed for those in 'at risk' occupations, such as police officers (Varker & Devilly, 2012). Significantly more police officers (34%) experience clinically significant subsyndromal PTSD (Marmar et al., 2006). These symptoms are disturbing and debilitating, but fail to meet the full diagnostic criteria for PTSD. As such these are not recorded as PTSD but as mental health sickness absence.

1.2.2 Theories of PTSD.

Learning theory postulates that PTSD is a conditioned fear in which there is a malfunction of extinction mechanisms (Bisson, 2009; Cloitre, 2009). According to this theory, the activation of stress hormones during trauma exposure prolongs the stress response. The resulting over-consolidation of a trauma memory generates a fear network. Increased sensitisation to trauma-related environmental stimuli, eliciting conditioned fear responses and symptoms of PTSD, such as hypervigilance and hyperarousal. When confronted with traumatic contextual triggers, avoidance behaviour and emotional numbing serve as negative

reinforcers (Bisson, 2009; Cahill et al., 2009).

At least two major psychological theories of PTSD have emerged. Foa and her colleagues (e.g. Foa et al., 1989; Rauch & Foa, 2006) have argued that complex fear structures exist in the memory and produce cognitive, behavioural, and physiological reactions when activated. These structures are important in triggering an appropriate response to danger but can become pathological in certain situations. In PTSD, now benign stimuli become associated with danger and representations of physiological arousal and behavioural reactions. Beliefs around aspects of the trauma, influenced by pre-existing schemas, become negative in two ways: first, a view of the world as a dangerous place, and, second, a view of the self as incompetent. They argue that the traumatic memory is stored in a fragmented manner which interferes with information processing. In order to address the pathological fear structure, it has to be activated and then new information that is incompatible with it needs to be made available and incorporated – for example, the lack of current danger experienced during *in vivo* exposure to triggers. Again, resolution requires integration of new information with pre-existing structures (Bisson, 2009).

Ehlers and Clark build on classical cognitive theory to propose that negative appraisals of what happened underpin the development of PTSD (Bisson, 2009; Ehlers et al., 2010; Hackmann et al., 2004; Dunmore et al., 2001). They argue that PTSD sufferers develop excessively negative appraisals about external threat, viewing the world as a dangerous place, and of internal threat, viewing the self as incapable. This leads to misinterpretation of situations, and PTSD develops when

the traumatic memory induces a sense of current threat promoted by excessively negative appraisals of what happened. Recall becomes biased by these appraisals and needs to be addressed for a successful outcome. They also argue that certain stimuli become strongly associated with particular responses and that unless these are addressed the condition is maintained. Often individuals are not aware of the specific associated triggers, and the therapy developed out of this model places great emphasis on detecting what these are and then developing experiments to overcome them (Bisson, 2009).

The premise of cognitive theories maintain that some individuals respond to trauma with maladaptive interpretations about its cause and consequences. From this perspective, a full array of individual differences and trauma symptomatology can be understood. Cognitive distortions result in irrational and automatic Thoughts. These can include an overgeneralisation of danger and negative views of the self, others and the future (Ehlers & Clark, 2000). Thus, in addition to the conditioned fear response, the subjective meaning of the trauma elicits secondary negative emotional reactions, such as guilt and anger (Foa, Keane, Friedman, & Cohen, 2009). The cognitive theory espouses that counselling psychologists should help clients not only work through the trauma event, but the meaning they make of it. This may include feeling a constant threat of imminent danger, self-blame, perceived weakness, and inability to cope as well as trust issues.

1.2.3 The psychological impact of police work.

Addressing psychological concerns within policing is complex. Policing can be an exciting and challenging role in which success and safety are often predicated upon being attentive to an important piece of evidence and subtle indications of a

hazardous situation. Thus, in addition to organisational stressors such as volume of work, working relationships, lack of clarity of purpose or organisational change (HSE, 2008) there is constant pressure for police officers to remain vigilant and engaged. If not managed correctly, this can result in chronic state of hyperarousal, psychological exhaustion and burnout (Hesketh & Tehrani, 2018).

There is a significant threat of exposure to psychological trauma due to the nature of police work. The recently published report form the College of Policing (2018) identifies three primary roles in which police personnel can experience direct or vicarious trauma (Hesketh & Tehrani, 2018). These are, specialist roles, disaster management and response policing. Continued occupationally-derived trauma has been linked with poorer mental health, decreased performance and post-traumatic stress responses (Arnetz, Nevedal, Lumley, Backman, & Lublin, 2008; Berking, Meier, & Wupperman, 2010). Importantly, the changes to PTSD diagnostic criteria now allow the possibility of the condition following vicarious, as well as direct, exposure to trauma.

1.2.3.1 Specialist roles.

Individuals working within specialist roles are exposed to a single trauma, such as dealing with grieving families or viewing thousands of child abuse images. This environment of continual exposure increases vulnerability to burnout, compassion fatigue and vicarious trauma. Specialist roles that are psychologically challenging include child protection, domestic violence, scenes of crime, collision investigation and cyber-crime.

There are also specialisms that officers perform in addition to their already

challenging substantive roles. These include, family liaison, negotiators and body recovery. Increased technical skills, emotional intelligence and the ability to manage uncertainty and complexity are required of individuals in specialist roles to manage increasing complexity and demands of modern policing. Such requirements necessitate the need to develop high levels of resilience (Hesketh & Tehrani, 2018).

Historically, a level of consensus of roles that pose the greatest risk to role holders have emerged between police forces. A number of police forces have introduced role risk assessments for individuals in high-risk specialist roles. These assessments are designed to detect common hazards within the specific high-risk roles. This enables the identification of individuals who may require psychological support.

1.2.3.2 Disaster management.

Periodically police forces will be called upon to manage a range of disasters. This encompasses, natural disasters, transport disasters, major fires, terrorist and major criminal activity. Whilst no universally accepted definition of a disaster exists, an event that threatens public security and welfare is described as a civil emergency by the Civil Contingency Act. When a civil emergency is declared, emergency powers are handed to the police and other emergency services, the NHS and local authorities and the NHS. Disaster management is not a daily occurrence. However, the UK has experienced most of the aforementioned disastrous events during the past year (2017). This has initiated major policing responses throughout the country.

1.2.3.3 Response.

The largest group in the police population are the officers and staff who provide a first response to traumatic incidents and events. The primary difference between the hazards faced by specialist teams and response is the predictability of exposure. By the nature of their work, response officers typically experience periods of high demand with very little control over their daily activities. Response officers typically work shift patterns and are single crewed. This role requires self-reliance and resilience. The depletion of personal physical and emotional resources and ability to cope can lead to anxiety, depression and burnout. It is perhaps unsurprising that response officers account for most sickness absence within the police service (Hesketh & Tehrani, 2018).

The Home Office Police Workforce Report (2017) identified the scale of sickness absence in front line officers. In 2017, 2,358 full-time response officers were absent due to long-term sickness, a further 4,426 were on recuperative duties and 4,111 occupied duty posts that were adjusted/restricted. These figures do not include short and medium-term sickness absence.

Historically, physical conditions such as musculoskeletal injuries accounted for the majority of sickness absence. However, there is an uptrend in mental health conditions accounting for a higher proportion of sickness absence (Hesketh & Tehrani, 2018). The Police dependants' Trust (2018) have identified that four out of five police officers will be injured on duty and a third of these officers will require sickness absence due to the severity of their psychological and physical injuries. Indeed, sickness absence projections suggest that by 2020 physical

sickness absence will be superseded by absence due to mental health (unpublished organisational data, 2018). It is worth noting that this projection is based on reported mental health sickness absence figures which are likely to be a conservative estimate, due to the stigma of mental illness within the police service.

Response policing is unique in that officers are required to engage in very different roles. In the course of their daily duties, response officers encounter highly emotive, horrific, threatening or dangerous incidents (Arnetz, et al., 2010). Critical incidents encompass a multitude of violent crimes, sudden death, child death and vehicular accidents (Arnetz, et al., 2008). There is also the potential for police officers to be seriously assaulted, injured or killed (Halpern, Maunder, Schwartz, & Gurevich, 2012). These critical incidents are potentially traumatic events that can compromise police officers' psychological and physical integrity (Prati & Pietrantoni, 2010).

During the course of their shift, response officers can oscillate between fighting for their own survival on the street to emotionally supporting victims of crimes or guarding a horrific crime scene. The emotional labour of dealing with the high expectations of the public in situations where there is conflict or highly distressed or emotional people may also result in compassion fatigue (Hesketh & Tehrani, 2018). Exposure to traumatic scenes or events may result in response officers experiencing symptoms related to traumatic stress. This multiplicity exists due to response officers typically being first to arrive on scene (Manzella & Papazoglou, 2014). The unique psychological and physiological experience of police work has been described a "biological rollercoaster" (Gilmartin, 2002).

1.2.4 The policing brain.

Police officers and staff deal with a variety of demanding events. Traumatic incidents often occur with no warning and there is no time to consider the best form of action. An officer's psychological wellbeing can be impacted due to the nature and severity of a criminal act, a sense of helplessness, lack of control or if the victim is a child or vulnerable person. The burden of responsibility for others can lead to feelings of guilt or shame. The potential of re-exposure to a traumatic incident or event can be fear inducing and re-trigger trauma symptoms. This can be further exacerbated by lack of organisational support and media intrusion (Arnetz, et al. 2008; Hesketh & Tehrani, 2018).

In a cross-sectional sample of police officers, Marmar and colleagues (2006) identified that greater peritraumatic distress and greater peritraumatic dissociation significantly predicted PTSD symptoms. The activation of brain systems such as the amygdala and hypothalamic–pituitary–adrenal axis is thought to be activated by peritraumatic and posttraumatic fear following critical incident exposure. These systems have a role in triggering and regulating peripheral physiological activation. The prolonged or intense activation of these symptoms appear to contribute to the psychophysiological, cognitive, and behavioural abnormalities associated with PTSD (Arnetz et al., 2008). This suggests that if peritraumatic distress and dissociation were mitigated, trauma symptoms would be less likely to persist.

Physiological arousal is experienced by police officers before, during, and even after exposure to stressful and potentially traumatic situations (Andersen et al.,

2015). As a result of responding to multiple calls, this physiological arousal occurs numerous times during a police officers' shift. Further, these elevations in physiological arousal commences when officers don their uniform at the start of their shift. Arousal continues to increase upon receiving a direct call to duty, where officers experience anticipatory stress, this continues during their shift (Anderson, Litzenberger, & Plecas, 2002; Van der Kolk et al., 1996).

Papazoglou (2013) has presented an inclusive and dimensional theoretical conceptualization of police trauma. This is termed Police Complex Spiral Trauma (PCST) and constitutes a symbolic representation of the complex and cumulative form of police trauma. From this perspective, trauma expands as a unified process and form through tension, time, and frequency of multiple and potentially traumatic exposure during police officers' life-long career.

Miller (2017) has suggested that through police work, individuals' brains may naturally become more efficient in some areas, at the cost of important functionality in others. Whilst the hippocampus and amygdala are the areas of the brain that work together to deal with stress, however these areas can be damaged when the stress response is chronic, due to the release of toxic stress hormones. Damage in the hippocampus can interrupt the necessary processing of a traumatic incident into a past memory. Advances in neuroscience suggest that resilience to trauma can be improved through training the prefrontal cortex.

1.2.5 The prevalence of PTSD in policing.

Police officers who are frequently exposed to occupationally-derived trauma have an elevated risk of adverse mental health outcomes. Trauma sequelae can include

adjustment disorder, acute stress disorder (ASD) and post-traumatic stress disorder (PTSD). In addition, cognitive ability and work-performance can be impaired (Arnetz et al., 2008; Halpern et al., 2012; Prati & Pietrantoni, 2010).

The prevalence of occupationally-derived PTSD among police officers has been cited as varying between 7% and 19% (Marmar et al., 2006). Significantly more police officers (34%) may experience clinically significant subsyndromal PTSD. These symptoms are disturbing and debilitating, but fail to meet the full diagnostic criteria for PTSD (Marmar et al., 2006). Recent figures show that one in six U.K police officers will be absent from work as a result of PTSD (Police Dependants' Trust, 2018).

The variability in PTSD prevalence among police officers has been explained by the presence of individual risk and resilience factors (Prati & Pietrantoni, 2010). Vulnerability or resilience to developing PTSD following traumatic exposure can be attributed to a combination of pretrauma, peritrauma, and posttrauma individual differences coping strategies, cognitive ability, social support and previous exposure to trauma (DiGangi, 2013) and psychological preparation (Arnetz, et al. 2008, 2010).

1.2.6 Risk factor malleability.

In their systematic review of the literature, DiGangi and colleagues (2013) proposed a continuum of 'risk factor malleability' as a conceptualisation of PTSD predictors. Categories that represent relatively fixed or stable predictors across the lifespan would be plotted towards one end of the continuum. These predictors include personality and cognitive ability. On the opposing pole are predictors that are more malleable. These include coping styles and life stressors (Pineles et al.,

2011). Pretrauma psychopathology and psychophysiological factors would likely be positioned somewhere between the poles (DiGangi et al., 2013). This research suggests that malleable PTSD predictors such as coping strategies may be manipulated to provide trauma resilience. Therefore, a trauma resilience programme espousing adaptive coping strategies could offer protective factors to high risk groups, such as police officers.

1.2.7 Management of trauma exposure the U.K police service.

1.2.7.1 Debriefing.

Within the U.K police service, it is typical to adopt a reactive approach following exposure to potentially traumatic incidents. Historically, psychological debriefing was one such approach. However, due to the absence of clear benefit in preventing PTSD, the National Institute for Clinical Excellence (NICE) does not recommend immediate, one-off brief psychological interventions for those exposed to potentially traumatic experiences (NICE 2013, CG26; Evidence Update 29).

Many police forces in the U.K have implemented Trauma Risk Management (TRiM). This is a peer support assessment developed by the Royal Navy to identify and the risk of exposure to critical incident. Assessments are undertaken 72 hours following exposure and are repeated one month after. Individuals assessed as exceeding the accepted clinical threshold are referred for appropriate psychological support. There is a paucity of empirical evidence demonstrating the efficacy of TRiM in the police service, as research has been predominantly conducted within the armed forces.

A recent comparison study was undertaken by Watson and Andrews (2018). They conducted a cross-sectional online questionnaire study to compared 693 employees from three forces using TRiM, with 166 employees from two forces without TRiM. Results suggested that the TRiM group had less stigmatised views toward experiencing mental health difficulties, fewer perceived barriers to help-seeking and less psychological distress compared with the non-TRiM group. However, there is a significant discrepancy in the sample sizes for each group. Therefore, more research is needed to test the efficacy of this assessment. Despite the results being promising, such debriefings and other short-term interventions do not completely ameliorate the impact of these incidents and psychological treatment is often required (Violanti, 2006).

1.2.7.2 Psychological treatment of PTSD.

Trauma-focused therapies such as Eye Movement and Desensitisation Reprocessing (EMDR), Shapiro, 1989) and Trauma-focused CBT (TF-CBT; Ehlers & Clark, 2002; Foa, 2011) are considered the treatments of choice in PTSD (National Institute for Clinical Excellence (NICE); 2013; The Institute of Medicine report, 2008; as cited in Cukor, Spitalnick, Difede, Rizzo & Rothbaum, 2009). This is attributable to the empirical support that suggest they have better treatment outcomes when compared with non-trauma focused, supportive counselling (Foa, Olasov Rothbaum, Riggs & Murdock, 1991; Powers, Halpern, Ferenschak, Gillihan, & Foa, 2010; Roberts et al., 2012).

Successful treatment of PTSD from a trauma-focused perspective occurs through 1) an imaginal or in vivo exposure to the traumatic memory or cues, and 2)

cognitive restructuring. The aim of the imaginal reliving of intrusive memories is facilitate a more organised, coherent and contextualised memory of the trauma that is less prone to involuntary retrieval (Ehlers & Clark, 2000; Grey et al. 2001). Within a TF-CBT framework, clinicians may utilise Foa's (2011) model of repeated exposure to stimuli. This model aims to reduce emotional responding through imaginal reliving. Cognitive restructuring refers to the identification of unhelpful patterns of thinking and the assimilation of more balanced interpretations of the trauma into autobiographical memory (Cahill, Rothbaum, Resick, & Follette, 2009). A reduction in overall distress is achieved by correcting distorted schemas about the self, world, and trauma. This results in a more adaptive and realistic interpretation of the event.

Evidence-based treatments for PTSD are available in the psychological services of some police forces. However, the complex nature of the trauma history and co-morbidity of conditions presented by police officers often result in a lengthy treatment process and period of recovery. During which the officer is unable to perform their duties. When the psychological impact is too severe, some officers may never return to frontline duties. Following depletion in resources the mental wellbeing of colleagues may be adversely affected due to increased pressure. Therefore, the prevalence of traumatic stress has implications for sufferers, their families, colleagues, the organisation and the community it serves.

A prerequisite for effective treatment is emotional engagement during exposure therapy. Failure to engage emotionally has been related to negative treatment outcomes and high attrition rates (Barrera, Mott, Hofstein & Teng, 2013). The

tolerability of exposure methods within trauma-focused models may be challenging for clients and may explain some of the attrition (Hamama, Hamama-Raz, Dagan, Greenfeld, Rubinstein, & Ben-Ezra, 2011).

High attrition rates have been reported in many trauma-focused studies (Barrera, Mott, Hofstein & Teng, 2013). Up to 26% of participants drop out of trauma-focused treatments and more refuse to participate. In contrast, attrition rates for non-trauma based treatments and waiting-list condition is 11% (Lefkowitz, Prout, Bleiberg, Paharia, & Debiak, 2005). Intolerability to imaginal imagery occurs due to the trauma exposed individual's sensitivity to specific stimuli. A trauma resilience programme based on TF-CBT could therefore be more tolerable when delivered prior to exposure. An exploration of such a programme with a police cohort who are at risk of trauma exposure would be merited.

1.2.8 Trauma resilience: prevention rather than cure.

Most people experience a traumatic event at some point in their lives, yet the majority will not develop PTSD or other mental health problems. The emotional and neurobiological responses to psychosocial stressors and trauma vary widely among individuals following exposure to a potentially traumatic event. Yet resilience, as manifested in spontaneous recovery, is the most common outcome (Bisson, 2009).

Psychological resilience can be characterized by the ability to bounce back from negative experiences. Most people experience an initial, brief spike in distress after a potentially traumatic event and may struggle for a short period

to maintain psychological equilibrium. For example, they may experience several weeks of sporadic difficulty concentrating, intermittent sleeplessness, or daily variability in levels of well-being while still managing to function (Bisson, 2009).

Importantly, therefore, attention has focused on developing the coping responses of individuals who are at high risk of exposure, either directly or vicariously, to enable them to adapt their response during and after a difficult event such that they are less likely to have a trauma response or to develop PTSD. While there is a distinction between this and resilience as it is often defined within the literature, nevertheless the implementation of such a trauma resilience programme could psychologically prepare officers to experience threatening critical incidents. Preparation could render the event less traumatic, rather than waiting until the officer has been exposed and disturbed by the incident (Arnetz, et al., 2010). Therefore, a proactive approach to trauma could protect the mental health of trauma exposed officers. A reduction in counselling referrals for resilient officers could also improve the accessibility of psychological treatment for other police personnel.

The Canadian Armed Forces “The Road to Mental Readiness (R2MR)

Training" is a programme designed to increase the resilience of military personnel. This training encompasses resilience and mental health including: 1) goal setting, towards achieving a specific goal, action taking, and evaluation; 2) visualisation of the best tactical practices in response to a critical incident, 3) positive self-talk using specific keywords and 4) tactical breathing. This resilience training is embedded throughout the career of Canadian Armed Forces (CAF) members', including the deployment cycle (Canadian Armed Forces, 2013). Self-reported surveys of military personnel suggest that this programme may help to improve quality of life and reduce the impact of trauma exposure (Arrabito & Leung, 2014).

A stress reduction intervention for police officers in the U.S.A was developed and tested by McCraty and Atkinson (2012). They hypothesised that reducing psychophysiological reactivity such as cardiovascular and respiratory parameters, during critical incident scenarios would improve health and performance outcomes. Five class-based training modules were delivered to 65 participants. The training components were: 1) psychoeducation about stress, the impact on health and job performance; 2) A breathing technique to control physiological responses during stressful situations; and 3) communication strategies to be applied in the workplace and at home.

Outcome measures demonstrated an increase of mental health improvements such as positive emotion, vitality and self- regulation in response to stress. Further, a reduction was observed in participants' negative emotion and depressive symptoms. Additionally, a 14% reduction in annual health care costs to police

organisations was demonstrated. This equated into cost savings of $1,179 per employee per year (McCraty and Atkinson, 2012).

The inclusion of mindfulness-based training has been used to increase resilience in police cohorts. Researchers postulate that mindfulness practice can help officers decrease their chronic and acute stress responses. By remaining in the present moment, work performance and long term mental and physical health can improve (Christopher *et al.,* 2016; Manzella & Papazoglou, 2014).

In their feasibility study, Christopher and colleagues (2016) tested the preliminary effectiveness of an adapted Mindfulness-Based Resilience Training (MBRT). A sample of 43 police officers completed an 8-week MBRT designed to address police officer stress. Using multilevel models, significant improvements in self-reported mindfulness, resilience, emotional intelligence, police-related stress, burnout, emotion regulation, mental health, physical health and quality of sleep. There was a non-significant trend in the self-report mean differences of family functioning and pain interference variables. There was no significant changes in cortisol awakening response (CAR), however exposure to chronic work-related stress could have blunted CAR at baseline (Christopher, *et al*., 2016).

The relationship between mindfulness skills and PTSD symptomology among 183 police officers in the U.S.A was explored by Chopko and Schwartz (2013). Multiple regression analyses identified that increased non-judgmental acceptance appears to be a primary correlate of reduced post-traumatic stress symptoms of

avoidance, intrusion, and hyperarousal as measured by the Impact of Event Scale-Revised (IES-R; Weiss & Marmar, 1997). However, empirical associations between other mindful-based constructs and post-traumatic symptomology was inconsistent.

In a recent study, Manzella and Papazoglou (2014) developed a programme for senior police educators which was tested at the German Federal Police University. The programme aims were for the trainers to learn how to help their trainees become better aware of the impact of trauma exposure on their mental health and daily functioning. The eighteen participants were given psychoeducation about trauma and learned resilience. Following the training, the usefulness of the exercises and their predicted future application was rated.

Mindfulness was considered useful by all but one of the participants. Journaling and processing dyads were also considered useful by eleven participants. Eleven participants agreed that they would consider applying the practical exercises with their trainees. Conversely, trainers who felt they lacked the expertise, were more likely to be either neutral or averse to implementing the intervention (Manzella & Papazoglou, 2014). This suggests that officers participating in a top down trauma resilience programme would require significant training and support if they were to implement a trauma resilience intervention successfully. This could be achieved through an in-force programme in which role specific training would be provided and post-training consultative support be accessible.

A resilience intervention to attenuate future critical incident-induced fear was developed and tested in a Swedish Police Force by Arnetz and colleagues (Arnetz and colleagues (2013; Arnetz et al., 2008) The randomised control intervention was delivered over a 10 week duration. Five components were presented to police officers during training: 1) psychoeducation regarding stress responses to potentially traumatic incidents; 2) classroom based guided imagery to prepare officer exposure to critical incident; 3) the application of relaxation techniques to manage stress reactions; 4) rehearsal of police tactics, and 5) learning post-event coping. The focus of this intervention was to prepare police officers to respond optimally when encountering traumatic incidents. Officers were exposed to critical incidents via audio recordings that had been rated as highly stressful by experienced senior police officers.

Participants engaged in cued relaxation breathing prior to listening to two recordings of the same incident during which they were instructed to visualise themselves in the situation. The first recording was a detailed description of a critical incident. The second recording was an augmented version of the same critical that included directions from senior officers pertaining to the best tactical responses. Twelve months after the intervention, new recruits participated in a critical incident simulation. Compared with controls, the 18 officers who had received training in relaxation techniques and visual imagery exercises had improved job performance, well-being and stress resilience (Arnetz et al., 2013, 2008).

Andersen and colleagues developed a psychophysiological intervention for Finnish firearms officers (Andersen *et al.*, 2015). This intervention extended the applicability of mental preparedness by integrating it into traditional use of force training. This intervention incorporated psychological components from Arnetz and colleagues (2013; 2009) and physiological aspects of mental preparedness from McCraty and colleagues (2009; 2012). The psychological components included the "conscious awareness of one's state of mind, ability to notice physiological arousal, ability to focus on the task at hand without distraction of unnecessary thoughts, and the clarity of mind to make the correct decisions. The physiological aspect of mental preparedness comprises enhanced control over one's autonomic nervous system stress responses by applying a set of controlled breathing and visualization techniques" (Andersen, et al., 2015; p. 3-4).

The resilience training programme was delivered to eighteen participants who were completing a 5-day tactical training programme that included both classroom and simulated critical incident. A feasibility study was undertaken to identify the relevance and acceptability to firearms officers and to assess participants' physiological stress responses during the resilience training. The results demonstrated a significant reduction in participants' average heart rate and improvements in their ability to engage in controlled respiration during simulated critical incidents. Even when the graphic content of the scenarios increased, improvements in stress responding were observed over the course of the five day training.

1.2.9 The aim of the current study – feasibility and acceptability.

Response police officers deal with a range of potentially traumatic incidents that challenge their psychological and physical health which increase their susceptibility to experiencing symptoms of traumatic stress. Through research, more is known about the psychological impact of policing and how these challenges may be mitigated. The traditional approach to managing psychological trauma within the U.K police service has been to provide support or following exposure to a potentially traumatic incident. However, in such instances the damage may have already occurred.

In recent years, there has been interest in developing trauma resilience in occupations such as the police service who are predictably exposed potentially traumatic incidents and are at high risk of developing PTSD. The maxim of such interventions is that prevention of traumatic stress is preferable to cure. The results for trauma resilience programmes have been promising, however to date none have been implemented and tested in a U.K police service.

The current study is to investigate the feasibility of a trauma resilience programme for police constables in a Welsh police force. The outcome of resilience in this case will be defined narrowly as an absence of PTSD symptoms rather than the broader absence of any psychopathology. The programme will aim to specifically build resilience to identified predictors of PTSD (Maia et al., 2011) and promote adaptive coping in place of maladaptive strategies (Ciarrochi, Deane, & Williams, 2010; Howard, Tuffin, & Stephens, 2000; Koch, 2010). The

Resilience to Traumatic Incidents (Retrain) Programme will provide training to response officers. The content will synthesis an amalgam of interventions demonstrated to be successful with a police cohort (Arnetz et al., 2008; 2010; 2013; Manzella & Papazoglou, 2014). While other approaches to resilience training exist, this course will be responsive to the needs of the police service generally through the UK, and to south Wales in particular.

The primary research questions that will be explored in this study are:

- Is a further trial investigating the ReTraIn Programme feasible?
- Is the ReTraIn Programme acceptable to front-line police officers?
- Does preliminary evidence support future work?

This study will identify methodological issues to and tentatively evaluate the ReTraIn Programme as a starting point towards conducting a future randomised control trial.

CHAPTER 2: DESIGN, METHODS AND ETHICS

This chapter describes design of the study, methods used and ethical considerations used to investigate the acceptability and feasibility of the Resilience to Traumatic Incidents (ReTraIn) Programme for Police Constables. An explanation of the mixed-method approach and validation of the methods adopted in for this investigation will be provided.

2.1 Development of Resilience to Traumatic Incidents (ReTraIn) Programme

The author scripted ten trauma scenarios based on an amalgam of the five most frequently presented themes presented to the in-house counselling service. Clients gave their permission for their experiences to be incorporated into the scenarios. These experiences were anonymised and no identifiable information was used. The inclusion of these themes in the Critical Incident History Questionnaire (Weiss, et. al., 2010) suggested the universality of their potential psychological impact. The author collaborated with a sergeant and inspector who provided additional policing details and tactics and co-facilitated the delivery of the Programme.

The scenarios that were developed for ReTraIn were: 1) assault on duty; 2) witnessing an injury to a colleague; 3) the death of a baby; 4) fatal road traffic collision; and 5) completed suicide. Standard and enhanced versions of each scenario were scripted. The enhanced scenarios were based on their corresponding

standard versions, but incorporated additional mindfulness and policing prompts. Additionally, there were different outcomes in the enhanced versions of the assault on duty and witnessing an injury to a colleague, compared with the standard versions.

To aid participants' ability to visualise the critical incidents and increase authenticity, the scripts were narrated by police personnel who had acting experience. Policing and mindfulness prompts in the enhanced scenarios were voiced by the sergeant and author respectively. The author narrated the additional relaxation, mindfulness and safe-place exercises. The audio recordings were produced in-house by the Corporate Communications department. Each scenario included sound effects to facilitate participants' visualisation and engagement in the exercise.

The format of ReTraIn was adapted from the Trauma Imagery Prevention Program for Urban Police (TIPP-UP) (Arnetz, Lumley, Pole, Blessman, & Arble, 2010). In the TIPP-UP Programme, imagery training was taught using audio scripts of critical incidents to enable participants to create mental images of stressors relevant to police work and mentally rehearse appropriate responses (Arnetz et al., 2008; 2010). The critical incidents in TIPP-UP were: 1) car chase; 2) angry crowd; 3) house fire; 4) the unknown object; 5) accident scene. Arnetz and colleagues (2010) have suggested imaginal exposure in which officers can visualise themselves coping with a traumatic situation could psychologically prepare them to experience threatening critical incidents. This could render the

event less traumatic, rather than waiting until the officer has been exposed and disturbed by the incident.

A PowerPoint presentation that had been embedded with video and audio files was delivered to participants using a computer linked to a projector. QuickTime 7 was installed on the computer to allow the audio and video files to be played. Participant packs containing PowerPoint hand-outs, supplementary exercises and a bibliography were provided. The supplementary exercises section contained information on challenging unhelpful thoughts, a template and an example of a thought record, a grounding exercise and self-talk skills. Each pack contained a password-protected CD-ROM. This contained audio files of the standard and enhanced trauma scenarios used during the Programme. Additionally, adapted versions of the relaxation, mindfulness and safe-place exercises for home use were included.

2.2 Trauma Resilience Programme Content

2.2.1 Psycho-education.

Psycho-education about trauma was used as an introductory session which facilitated discussion and justified the subsequent elements of the Programme. It was then used as a constant thread throughout the Programme to facilitate cohesion. Research has shown that “knowledge about trauma helps reduce negative consequences and results in higher functioning and fewer complications after a potentially traumatic critical incident” (Manzella and Papazoglou, 2014 p 107).

The Psycho-education element incorporated current scientific findings relating to the impact of trauma on the brain and the consequences to mental and physical health. Disengagement and engagement coping strategies were discussed in relation to their respective risk and protective qualities with regards trauma symptomology (Manzella & Papazoglou, 2014).

Senior officers who were field experts provided inputs to demystify the processes of the Post Incident Management (PIM) procedure and investigations conducted by the Independent Office for Police Conduct (IOPC). The aim was that this knowledge would help to lessen anxiety when subjected to such processes following a critical incident.

2.2.2 Relaxation techniques and visual imagery.

Participants practiced progressive muscle relaxation techniques prior to listening to the standard trauma scenarios. This was used to aid imagery and were included as prompts in the enhanced scenarios. The aim was to enable participants to induce relaxation regardless of the situation and provide a safe and contained environment in which participants could engage with the mental imagery component of the Programme.

2.2.3 Mindfulness.

A Mindfulness exercise called ‘be where your feet are’ was adapted from Manzella and Papazoglou's (2014) senior police officer training. This was introduced to participants prior to hearing the enhanced scenarios, and were incorporated as mindfulness prompts within the vignettes. This exercise was used to help interrupt the neural ‘vicious cycle’ of activation of the amygdala increasing muscle and vice versa, which has been linked to the maintenance of negative emotions (Berking, Meier and Wupperman, 2010). Participants were encouraged to continue to practice this exercise following ReTraIn.

2.2.4 Journaling.

Journal writing provides an evidence-based treatment for trauma survivors (Arnetz, et al., 2010; Manzella & Papazoglou, 2014). Journaling enables immediate cognitive processing that can attenuate horrific memories. When instructed to include thoughts and feelings about the critical incident, the process of journaling negates avoidance. Further, re-reading the journal entry can be akin to exposure techniques used in evidence based treatment for PTSD, such as trauma focused-CBT (Foa, 2011).

2.2.5 Processing in dyads.

Participants were instructed to incorporate a mindfulness practice to be ‘in the moment’ and either discussed or listened to a potentially traumatic incident or stressful situation. This provided an opportunity for participants to share an

incident that they felt safe to do so, actively listen and then feedback to ‘partners’ in the formed dyad (Manzella & Papazoglou, 2014). The aim was for officers to rehearse and experience potential benefits of accessing support from colleagues and additionally utilising a protective strategy for use in challenging situations. By incorporating this exercise in their policing roles, they could maintain empathy whilst remaining grounded when delivering news of a death to loved ones, supporting grieving relatives and victims of abuse.

2.2.6 Safe-place exercise.

The purpose of the safe-place exercise was to guide participants to relax their minds and to imagine a safe place, using each of their senses (script from Lynch & Mack; therapist manual downloaded March 2015). Before beginning the exercise, the author explained the difference between grounding and relaxation. In this context, relaxation was used to allow them to focus internally and find a comfortable, soothing place that they could revisit when required.

Prior to listening to the audio recording, participants were asked to think of a safe and peaceful place. They were instructed to let go of any upsetting or stressful thoughts that came into their mind and refocus on the audio recording. At the end of the exercise, participants were asked to notice any changes in their stress level and discussed their experience. Participants were encouraged to practice this as a way to relax and improve quality of sleep.

2.3 Experimental Design

The methodological issues of recruitment, retention, attrition, and acceptability were explored using a mixed-method design. This experimental design provided tentative findings pertaining to the successful application of the ReTraIn Programme and specific coping strategies. Whilst there is no control group, these findings provide a necessary basis from which to develop further research with a larger sample. Quantitative and qualitative data were gathered at baseline and at 12 month follow-up using self-reported measures.

While the inclusion of a control group would have resulted in a more robust experimental design, it is not a required element of a feasibility study. At this stage of the development of ReTraIn, it was preferable to maximise the sample size to enable a more detailed understanding of attrition and other methodological factors. Moreover, the small sample size (forty-five officers were recruited as participants) meant that including a control arm would have diluted the capacity to test the acceptability of the intervention. Quantitative analyses was conducted on IBM SPSS Statistics version 24. The resulting descriptive and inferential statistics allowed tentative findings pertaining the success of the ReTraIn Programme to be drawn.

Acceptability interviews were conducted 18 months after attending the ReTraIn programme. Conducting qualitative interviews captured the voices of participants

and their lived-experiences of utilising coping strategies from the ReTraIn Programme. Collecting discourse from high and low scores added to the richness and authenticity of these data. Of particular interest to the study was understanding the contexts in which the strategies were or were not adopted, and whether or not officers found them helpful. Interviews explored perceived successes, barriers to implementation of strategies and suggestions to improve the Programme. The perceived value of the ReTraIn programme and factors that inhibited or promoted officers' adherence and integration into daily life was explored.

The justification of synthesising quantitative and qualitative findings through a mixed-methods design was to provide a more robust exploration into the acceptability of ReTraIn. Therefore, the author took a pragmatic approach to integrating these results into the development of the intervention.

2.4 Study Setting

The feasibility study was based in a Police Force in South Wales. The policing area covers an area of 600 square miles, encompasses 5 Local Authority areas and polices a road network that carries large volumes of traffic. In April 2015, the Force was divided into the East and West Local Policing Areas (LPAs). There are ten distinct neighbourhoods across the LPAs, headed by Inspectors. In addition to front-line policing, the Force has a number of staff and officers occupying specialist roles. The establishment figures as of April 2017/18 are:

- Almost 1,200 Police Officers (approximately 500 response officers)
- Approximately 600 Police staff
- Around 130 Police Community Support Officers
- Nearly 100 Special Constables
- A team of more than 415 volunteers, including Cadets

(Data obtained from the Organisation's intranet and Recruitment).

2.5 Participants

Police officers from a response work stream were recruited via the Force Intranet. Response officers are typically the first to respond to potentially traumatic incidents such as, death, abuse, physical and sexual assault, road traffic collisions and terrorist threats. They can also respond to incidents where there is a significant threat to their safety.

A sample of 45 participants completed baseline measures prior to attending the two-day Resilience to Traumatic Incidents (ReTraIn) Programme. The sample at baseline comprised 25 male (56%) and 20 female (44%) response officers. This is reflective of the current establishment figures of 51.10% male to 40.90% of female response officers within the organisation. Five training courses were delivered between August and September 2015. At 12-month follow-up, 27 participants completed outcome measures. Of the 27 participants who completed follow-up measures, there were 17 male and 10 female respondents. This equated to a slightly higher attrition rate in female (50%) participants when compared with

male participants (32%). Please refer to Table 10 (pp144-145), for demographics and attrition/retention for the sample.

Table 1

Illustrating demographics of baseline and follow-up samples

	Baseline		Total	Follow-up		Total
	Male	Female		Male	Female	
Mean age	43 years	42 years		44 years	44 years	
Marital status						
Single	2	1	3	1	1	2
Cohabiting	1	6	7	1	2	3
Married	15	8	23	12	4	16
Separated	0	0	0			
Divorced	1	1	2			
Widowed	0	1	1			
No Response	6	3	9	3	3	6
Length of Service						
Less than 10 years	4	6	10	4	3	7
11-20 years	12	11	23	9	4	13
Over 21 years	4	0	4	2		2
No Response	5	3	8	2	3	5

2.5.1 Inclusion criteria and exclusion criteria.

2.5.1.1 Inclusion criteria.

Participants who met the following criteria were included in the study:

- 'Response' police constables (Age 18-65)
- Able to attend the ReTraIn Programme
- Able to complete outcome measures

2.5.1.2 Exclusion criteria.

Officers were excluded from the study based on the following criteria:

Screening: Officers completed a self-report screening checklist to identify the presence of traumatic sequela or trauma exposure within 4 weeks. Officers who answered the questions of the checklist affirmatively received a clinical assessment, supplemented with the Post-traumatic Stress Disorder Checklist – Civilian Version (PCL-C; Weathers, Litz, Huska, & Keane, 1993;

- Exceeding the clinical threshold of 33 on the Post-traumatic Stress Disorder Checklist – Civilian Version (PCL-C; Weathers, Litz, Huska, & Keane, 1993)
- Identified as requiring psychotherapeutic intervention
- Currently receiving psychological treatment for PTSD
- Retirement prior administration of follow-up measures

2.6 Measures

Participants' views regarding the acceptability of the ReTraIn Programme was captured using quantitative and qualitative methods. A researcher developed questionnaire elicited both qualitative and qualitative responses related to each element of the Programme at a12-month follow-up (Appendix A). This enquiry was supplemented by qualitative interviews 18 months after attending ReTraIn. A sample that reflected maximum variation in response to the Programme was chosen.

2.6.1 PTSD checklist for screening.

The Post-traumatic Stress Disorder Checklist – Civilian Version (PCL-C; Weathers, Litz, Huska, & Keane, 1993) was used to supplement clinical interviews with officers who had answered the questions of the screening checklist affirmatively. The PCL-C is a standardized self-report rating scale for PTSD which is applied generally to any traumatic event. The scale comprises 17 items that correspond to the key symptoms of PTSD. Respondents rate how much they have been bothered by a symptom over the past month on a 5-point Likert format, ranging from 1'not at all' to 5 'extremely'. Response categories 3–5 (moderately or above) were treated as symptomatic and responses 1–2 (below moderately) as non-symptomatic. The PCL-C has demonstrated good internal consistency and retest reliability. In addition, favourable patterns of convergent and discriminant validity have been observed (Conybeare, Behar, Solomon, Newman, & Borkovec, 2012).

2.6.2 Demographic questionnaire.

Factual information about participants was collected via a researcher-developed demographic questionnaire at baseline. This questionnaire identified participants', age, sex, length of service, and marital status (Appendix B).

2.6.3 Traumatic symptomology.

The Impact of Event Scale—Revised (IES-R; Weiss & Marmar, 1997) was the primary study outcome measure of trauma resilience. This is a self-report measure

of traumatic stress and is composed of 22 items. The intensity of distress associated with a particular event was measured on a five-point scale ranging from 0–4, with labels of ‘Not at all’ to ‘Extremely’. The scale assessed PTSD symptomatology during the past 7 days. There are three subscales: avoidance, intrusion and hyperarousal; and a total score. The three subscales have strong internal consistency and satisfactory test–retest reliability (Weiss & Marmar, 1997). Measures were taken at baseline and at the 12-month follow-up phase. The internal consistency reliability of the subscales has been found to be high, with avoidance alphas ranging from .84 to .86, intrusion alphas ranging from 0.87 to 0.92, and hyperarousal alphas ranging from .79 to .90 (Morris et al., 2005).

2.6.4 Coping.

The Coping Strategies Inventory Short 32 (CSI-S; Tobin, 1984, 1995) was the primary outcome measure for assessing engagement and disengagement coping. The 32-item scale assessed the coping thoughts and behaviours in response to a traumatic or challenging situation stressor of respondents’ choosing. The extent to which participants performed a particular coping response was indicated on a 5-item Likert scale, ranging from ‘not at all’ to ‘very much’.

The CSI-S incorporates primary and higher order subscales relating to engagement and disengagement coping strategies. Engagement coping reflects the participants’ on-going negotiation with the stressful environment. The Engagement Tertiary Subscale includes Primary Subscale items of problem

solving, cognitive restructuring, social support and express emotions. Primary items are combined to reflect Problem Focused and Emotion Focused Secondary Subscale items.

In contrast, disengagement coping refers to strategies that result in withdrawing from the person/environment transaction. Consequently, behaviours that might improve the situation are not initiated, thoughts about the situation are avoided and feelings are not shared. The Disengagement Tertiary Subscale includes, problem avoidance, wishful thinking, self-criticism and social withdrawal items from the Primary Subscale. Primary items are combined to produce the Secondary Subscales of Problem Focused Disengagement and Emotion Focused Disengagement (Tobin, 1984, 1995).

2.6.5 ReTraIn evaluation.

The ReTraIn Evaluation measure is a researcher-developed 13-item scale. Using a 5-point Likert scale ranging from strongly disagree to strongly agree, participants indicate whether or not they have used elements of the ReTraIn in the intervening 12 months. Each question includes a corresponding question to elicit qualitative data and space is provided for participants to provide additional feedback on the Programme as a whole. In addition to the quantitative and qualitative data, this measure was also used to identify the purposive sample that was invited to attend qualitative interviews**.**

Table 2

Illustrating measures used and scheduling

	PCL-C	Demographics	IES-R	CSI- S	ReTraIn Evaluation	Acceptability Interviews
Screening	N=4					
Base-line		N=45	N=45	N=45		
Completion						
12 month follow-up			N=27	N=24	N=27	
18-month follow-up						N=8

2.7 Evaluation of the Feasibility and Acceptability of the Trial

- Eligibility rate will be calculated as the proportion of police officers working on response.
- The recruitment rate will be calculated by number of officers who consent to participate divided by the number of those eligible
- Retention rate will be calculated as the number of participants who complete outcome measures divided by the number who record baseline outcome measures

A further trial will be considered feasible if > 70% of participants complete all the interventions and outcome measures. If this rate is between 65% and 70% then adjustments in future work should be considered. A rate < 65% requires substantive change to the intervention and/or to the trial process (Courtier, et al., 2017).

2.8 Procedure

Officers who expressed an interest in taking part in the feasibility study were given a participant information pack. The pack contained an information sheet outlining the research (Appendix C), a consent form (Appendix D), and screening form (Appendix E). Officers were requested to return their consent and screening forms to the researcher by email. Where contraindications to participating in the study were identified by the screening form, the author provided a clinical assessment during which the PCL (Weathers, Litz, Huska, & Keane, 1993) was completed. On meeting the inclusion criteria, participants were allocated a date to attend the two-day training.

Prior to the training, participants completed a battery of pre-test measures. These included the demographic form, the IES-R (Weiss & Marmar, 1997) and the CSI-Short 32 (Tobin, 1984, 1995). Training sessions took place in comfortable training rooms in three central location within the organisation. Where possible, group sizes were restricted to 10 participants.

The author reminded the cohort about the research and the objectives of the ReTraIn Programme. The Programme was facilitated by the author and was co-facilitated by an experienced police officer. Uniformed co-facilitation by an experienced officer who has an interest in mental health, provides an important addition to training. Such co-facilitators can draw on their policing experience and speak to the compatibility of trauma resilience strategies with operational demands.

Twelve-months following the training, participants were contacted by email and requested to complete and return the follow-up measures that were attached to the message. The measures included the IES-R (Weiss & Marmar, 1997), the CSI-S (Tobin, 1984, 1995) and the ReTraIn Evaluation measure. Non-respondents were contacted a maximum of three times to request completed measures. Participants were given the option to return their measures via email or confidentially through the internal mailing system.

Eighteen months following ReTraIn, a purposive sample of eight participants identified as either high or low scoring attended acceptability interviews. High scorers in the sample were defined as participants who indicated their use of eight or more elements on the ReTraIn Evaluation measure. The low scoring strata identified that they had utilised three or fewer ReTraIn elements. Using these criteria, a total of 15 respondents were considered high scoring whilst six participants were low scoring. Six high scoring participants were randomly chosen and invited to attend a qualitative interview as were the six low scoring participants. Due to unexpected operational duties, the purposive sample consisted of three low scoring and five high scoring participants. The high scoring sample comprised of two female and three male participants. The low scoring sample were all male. Please refer to Table 10 (pp144-145), for full participant demographic and attendance information.

Prior to the acceptability interviews, participants were given a précis of ReTraIn coping strategies (Appendix F). Participants were given the opportunity to ask questions regarding the research and were assured of the confidentiality and

anonymity of any research material. The semi-structured, qualitative interviews were facilitated by the author (Appendix G).With the participants' permission, these interviews were recorded and transcribed verbatim by the author and subsequently stored securely using password protected files.

The general structure to the interview enabled a comparison between high and low scoring strata, whilst the flexibility of the questions of resulted in an unconstrained fluid discourse. This resulted in open dialogue pertaining to the acceptability of the ReTraIn Programme and coping strategies and allowed pertinent themes to emerge.

2.9 Ethical Considerations

Ethics approval was granted by the University Research Ethics Committee prior to the commencement of the feasibility study (07/07/15; HAS/15/06/80). Officers who expressed an interest in participating in the study received participant information sheets (appendix D) and consent forms (appendix E) in advance of any data collection and were given the opportunity to ask any questions. Participants were informed through written and oral communication that they could withdraw from the study and the ReTraIn Programme at any time and without any consequences to their future counselling treatment or career progression. Participants were informed that should they wish to withdraw from the research study, they will be given the option to continue to attend the ReTraIn programme. Participants were able to withdraw their data from the study, up until the point of analysis.

A potential risk that the author considered was the possibility of re-traumatising participants. In order to mitigate such risks, the author screened out officers who may be at greater risk due to psychological vulnerability as indicated in the screening tool. The author also considered the content and delivery of the critical incident scenarios and utilised safety monitoring during the duration of the Programme. These considerations will be discussed below.

2.10 Trauma Scenarios

The content of the ReTraIn Programme did not exceed the experiences that front-line officers are expected to encounter during the course of their daily duties. In contrast to traumatic exposure in the field, during ReTraIn participants listened to audio recordings of scripted critical incidents in a safe, contained and prepared manner. Further, research has demonstrated a reduction of stress responses following exposure to a critical incident in police officers who have successfully visualised themselves coping with a traumatic incident (Arnetz, et al., 2010).

Officers who were identified as being at potential risk of re-traumatisation were screened out of the feasibility study. Potential contraindicators to participating in ReTraIn were outlined in the screening form (Appendix F). This included, exposure to a traumatic incident during the last month, currently experiencing trauma-related symptomology, and / or receiving counselling support for traumatic stress. When these contraindications were present, officers attended a clinical assessment to discuss their suitability to attend the ReTraIn Programme and participate in the feasibility study. During the clinical interview, a measure of

traumatic stress was taken using the PCL-C (Weathers, et al., 1993). Officers were informed if their scores exceeded the accepted clinical threshold of 33 on the PCL-C and were offered counselling support.

2.11 Safety Monitoring

The author conducted a risk assessment of the feasibility study, which was approved by the University of the West of England (Appendix H). Prior to the start of the feasibility study, co-facilitators were briefed on the signs and symptoms that may indicate potential adverse effects of the trauma resilience training. The management of emotive situations was identified by the training team, who made themselves available to speak confidentially with participants and offered further therapeutic support as necessary. The author planned that any serious, or adverse events related to ReTraIn would be escalated the supervision team. Although such contingencies were necessary, they were not needed during the ReTraIn Programme.

2.12 General Data Protection Regulation (GDPR; 2018)

Any written material produced from the project has been anonymised through the use of pseudonyms, and with personal details changed. Recordings of participants' interviews have been stored in password protected files in accordance with the General Data Protection Regulation (GDPR; 2018). The author and research supervisor will be the only people to have access to the data. Hard data was securely stored in a locked filing cabinet, in a secured room within a police building that only the researcher can access. Storage of identifiers was

kept separated to the storage of data (both quantitative and qualitative). Electronic data has been password protected. All data will be destroyed following the study.

CHAPTER 3: QUANTITATIVE RESULTS

3.1 Research Questions

This chapter examines the results of the quantitative outcome data for the Resilience to Traumatic Incidents (ReTraIn) Programme and feasibility of conducting a future Randomised control trial. Due to insufficient power and lack of control group no conclusions can be drawn regarding the efficacy of ReTraIn. Therefore, tentative findings of the potential effectiveness of ReTraIn are presented and explored through descriptive and inferential statistics. Additional data on the feasibility of ReTraIn pertaining to recruitment, retention and statistical power required for a further study will be presented through demographic information and attrition rates.

The primary research questions that will be explored in this study are:

- Is a further trial investigating the ReTraIn Programme feasible?
- Is the ReTraIn Programme acceptable to front-line police officers?
- Does preliminary evidence to support future work?

3.2 Research Sample and Attrition

From a potential sample of approximately 500 response officers, sixty individuals expressed an interest in attending the ReTraIn Programme and participating in the research study. Five training dates between July and September 2015 were available. In total, fifteen officers were unable to take part in the programme; sickness absence precluded five officers from attending, two officers were on planned leave during the training dates, and two officers could not attend due to

depleted establishment numbers on shift. A further two officers were interested in participating, but were not working on response.

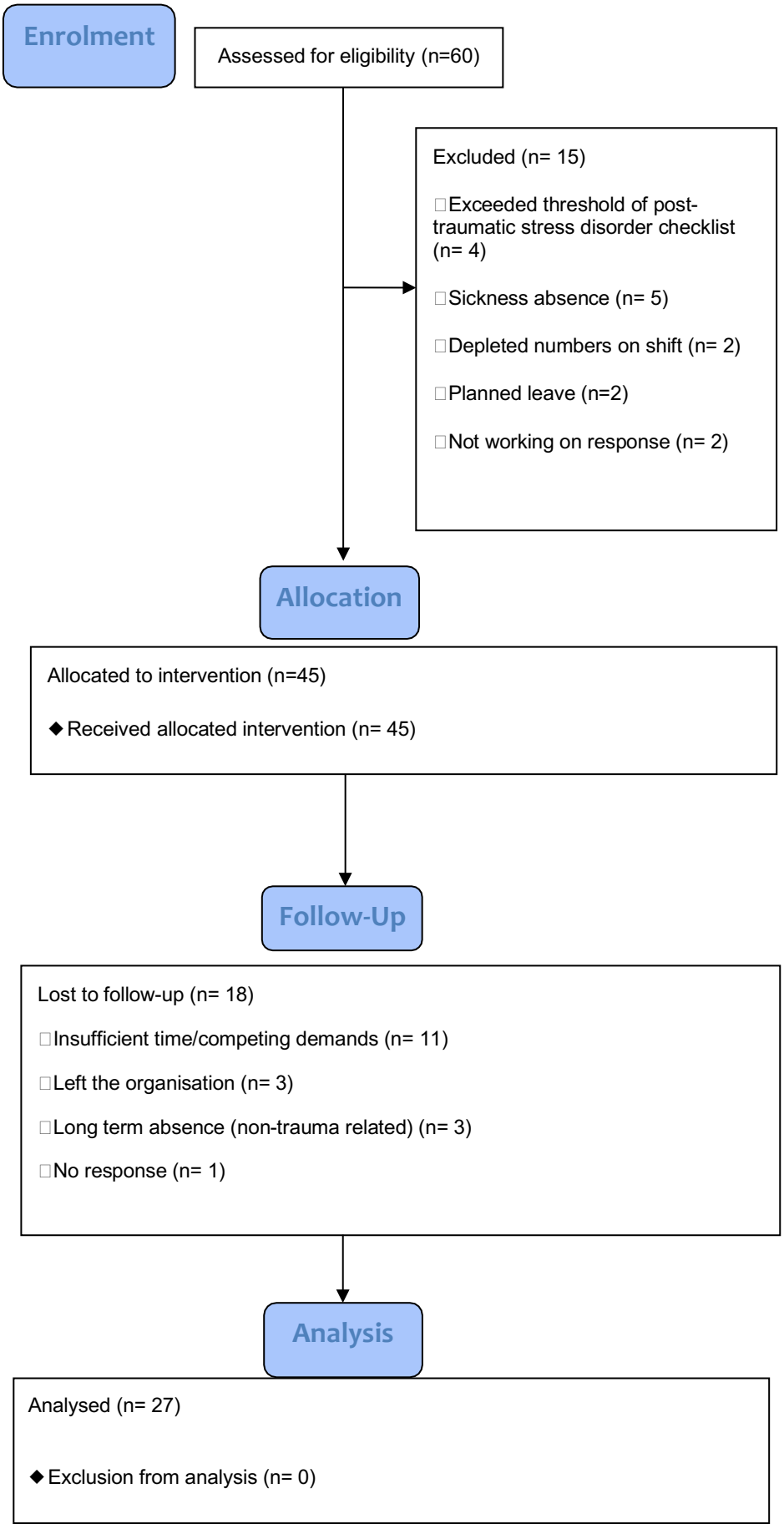
Four officers were screened out due to potential contradictions outlined in the screening form (Appendix F). These officers indicated that they had experienced a traumatic incident within the last month and were experiencing trauma symptoms. Officers attended a clinical assessment and completed the Post-traumatic Stress Disorder Checklist – Civilian Version (PCL-C; Weathers, Litz, Huska, & Keane, 1993). The officers' scores ranged from 34 to 52 and exceeded the accepted clinical threshold of 33. Consequently, psychological treatment was arranged for the female and three male officers. This resulted in a total sample of 45 participants who attended the two-day training and completed baseline measures. No attrition was observed during the training intervention.

Twelve-months after attending the ReTraIn programme, completion of outcome measures were requested via email. Non-respondents were contacted a maximum of three times to request completed measures. Seven participants responded to the first email request and returned their measures, a second email prompted an additional eight participants and the third email resulted in a further 12 participants returning their measures. Consequently, 27 participants completed outcome measures. This demonstrates a follow-up attrition rate of 18 participants (40%) from the base-line sample. Insufficient time and competing demands was cited as the primary reason for non-completion of follow-up data by 11 participants. Three participants had left the organisation, three participants were

on long-term absence which was un-related to trauma and one participant did not respond to contacts.

Figure 1

Participant flow diagram illustrating phases of the study



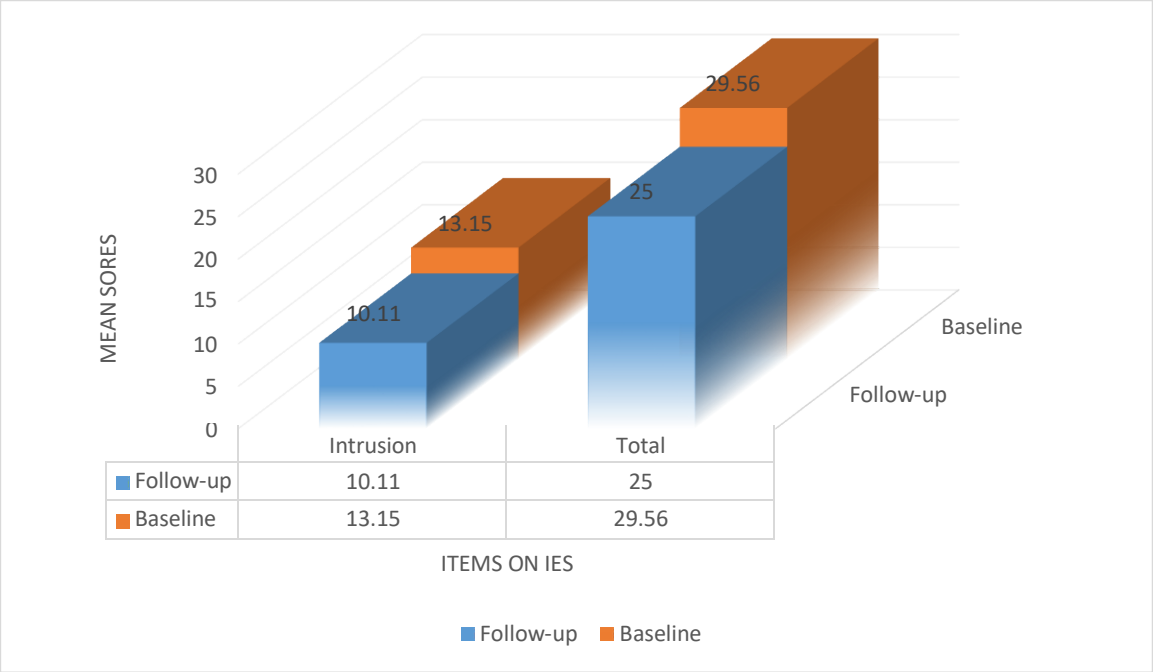
3.3 Changes in Trauma Symptomology

A comparison of total scores for participants at baseline and follow-up, was conducted using a paired samples t-test. The follow-up means for the Impact of Events Scale-Revised (IES-R; Weiss, & Marmar, 1996) total score was lower (M = 25.00, SD = 21.54) compared with base-line mean scores (M = 29.56, SD = 21.20), although there was no statistically significant change $t(26) = 1.359$, p = 0.186, d = 0.261.

A paired samples t-test was used to compare pre-training and follow-up outcomes of the IES subscales of intrusion, avoidance and hyperarousal. Changes were observed between the means on the intrusion subscale. The outcomes of intrusion were lower 12-months after completing ReTraIn (M = 10.11, SD = 9.08) than measures taken before the intervention (M = 13.15, SD = 8.75). Although this change was not statistically significant, $t(26) = 2.005$, p=0.055, d =0.385, it suggests a trend toward a reduction of intrusive thoughts and images. The means for the avoidance subscale were lower at follow-up (M = 8.63, SD = 7.36), however there was no statistically significant change compared with baseline (M = 9.44, SD = 7.63) measures, $t(26) = 0.546$, p =0.590, d = 0.104. For the measure of hyperarousal, baseline measures were marginally lower (M = 6.96, SD = 6.60) than observed at follow up (M = 6.26, SD = 6.41), although this was not statistically significant $t(26) = 0.704$, p =0.488, d= 0.135.

Figure 2

Illustrating comparison of mean IES scores



3.4 Trauma Symptomology and Disengagement Coping Strategies

The strength and direction of the linear relationship between the IES-R measures of trauma symptomology and the CSI-S disengagement subscales was determined using a Pearson correlation test. Statistically significant, positive correlations were observed between the disengagement coping subscale of problem avoidance and the IES-R trauma subscales of avoidance $r(21) = .55$, $p = .007$ and the IES-R composite score $r(21) = .42$, $p = .047$. The strength of these associations were strong and moderate respectively.

The strongest positive associations were between CSI-S primary disengagement subscale of self-criticism with the total IES-R score $r(21) = .71$, $p < .001$ and its three subscales: intrusion $r(21) = .66$, $p = .001$; avoidance $r(21) = .69$, $p < .001$ and

hyperarousal $r(21) = .70$, $p < .001$. Large, positive and significant associations were found between CSI-S primary subscale of social withdrawal, the IES-R total score $r(21) = .59$, $p = .003$, and its subscales of intrusion $r(21) = .55$, $p = .007$, avoidance $r(21) = .54$, $p = .009$, and hyperarousal $r(21) = .62$, $p = .002$.

There were large statistically significant, positive correlations with IES-R avoidance subscale and the CSI-S disengagement subscale of wishful thinking $r(21) = .58$, $p = .004$. The remaining subscales of intrusion $r(21) = .41$, $p = .049$, hyperarousal $r(21) = .51$, $p = .013$, and IES-R total follow-up scores $r(21) = .52$, $p = .011$, were moderately associated with wishful thinking. These data suggest that disengagement strategies are associated with higher IES scores. There were no statistically significant correlations problem avoidance and the symptom of intrusion r(21) =-.30, p =.159 and hyperarousal r(21) =.35, p =.104.

Table 3

Table showing correlations between IES subscales and global scores with CSI primary disengagement subscales

	CSI primary disengagement subscales			
IES-R symptoms	**Problem avoidance**	**Wishful thinking**	**Self-criticism**	**Social withdrawal**
Intrusion	.304	.414*	.664**	.547**
Avoidance	.547**	.576**	.687**	.535**
Hyperarousal	.348	.509*	.699**	.622**
Total score	.418*	.519*	.712**	. 588**

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

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

3.5 Psychological Preparedness and Trauma Symptomology

The strength and direction of a relationship between items on the psychological preparedness as indicated on the ReTraIn follow-up measure and the IES-R was investigated using the Pearson correlation coefficient. A statically significant, negative correlation of moderate strength was observed between the IES total score and participants' assertion that since attending the ReTraIn Programme 'I feel more psychologically prepared to cope with traumatic incidents' $r(25) = . -.39$, $p = 0.04$. This statement was significantly, negatively correlation with the avoidance symptoms $r(21) = -.48 p = 0.01$. There was a statistically significant negative correlation of moderate strength between participants' evaluation of their psychological preparedness to deal with traumatic situations and problem focused disengagement $r(21) = -.42$, $p = 0.05$, and emotion focused disengagement $r(25) = -.51$, $p = 0.01$ on the CSI.

Table 4

Table showing negative correlations between participants' self-reported psychological preparedness with follow-up measures

ReTraIn Follow-up	IES global score	IES avoidance	CSI problem focused disengagement	CSI emotion focused disengagement
Psychological preparedness	-.393*	-.484*	-.415*	-.513*

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

3.6 Coping Strategies

The Coping Strategies Short-32 (CSI-S; Tobin, 1985, 1995) was used to assess engagement and disengagement coping. Engagement coping reflects the participants' on-going negotiation with the stressful environment. The Engagement Tertiary Subscale includes Primary Subscale items of problem solving, cognitive restructuring, social support and express emotions. Primary items are combined to reflect Problem Focused and Emotion Focused Secondary Subscale items (Tobin, 1985, 1995). In contrast, disengagement coping refers to strategies that result in withdrawing from the person/environment transaction. The Disengagement Tertiary Subscale includes, problem avoidance, wishful thinking, self-criticism and social withdrawal items from the Primary Subscale. Primary items are combined to produce the Secondary Subscales of Problem Focused Disengagement and Emotion Focused Disengagement (Tobin, 1985, 1995).

Changes between baseline and follow-up measures of coping were analysed using Differential statistics and paired sampled t-tests. Due to the cognitive elements of

the training, Problem Focused Engagement and its corresponding primary subscale items were of particular interest to the study.

3.7 Engagement Coping

Baseline and follow-up changes in participants' problem-focused engagement as determined by the CSI, were analysed using a paired-samples t-test. When coping with a stressful or traumatic situation, participants' used more problem focussed engagement following ReTraIn (M = 25.71; *SD* = 6.09) than before the intervention (*M* = 20.60; *SD*= 6.92), (*t*(16) = 2.686, *p* =.*016*, *d*= .65).
When comparing baseline (*M* = 9.80; *SD* = 3.70) and follow-up (*M* = 13.00; *SD* =3.61) means for the cognitive restructuring subscale, a statistically significant change was observed, *t*(16) = -3.084, *p* = 0.007, *d*=-.747. This suggests that following ReTraIn participants utilised more cognitive restructuring when coping with stressful situations.

A non-significant change between baseline (*M*=10.29; *SD*= 4.12) and follow-up (*M*=12.77; *SD*=2.97) was observed on the problem solving subscale, *t*(16) = -1.983, *p* = 0.065. *d*= -.480. A non-significant change was observed between follow-up (*M*=10.18; *SD* = 3.03) and baseline *(M* = 9.94; *SD* =5.64) measures of social support, *t*(16) = -0.194, *p* = .849, *d*=-.046.

Figure 3

Illustrating significant changes in problem focused engagement and cognitive restructuring after ReTraIn

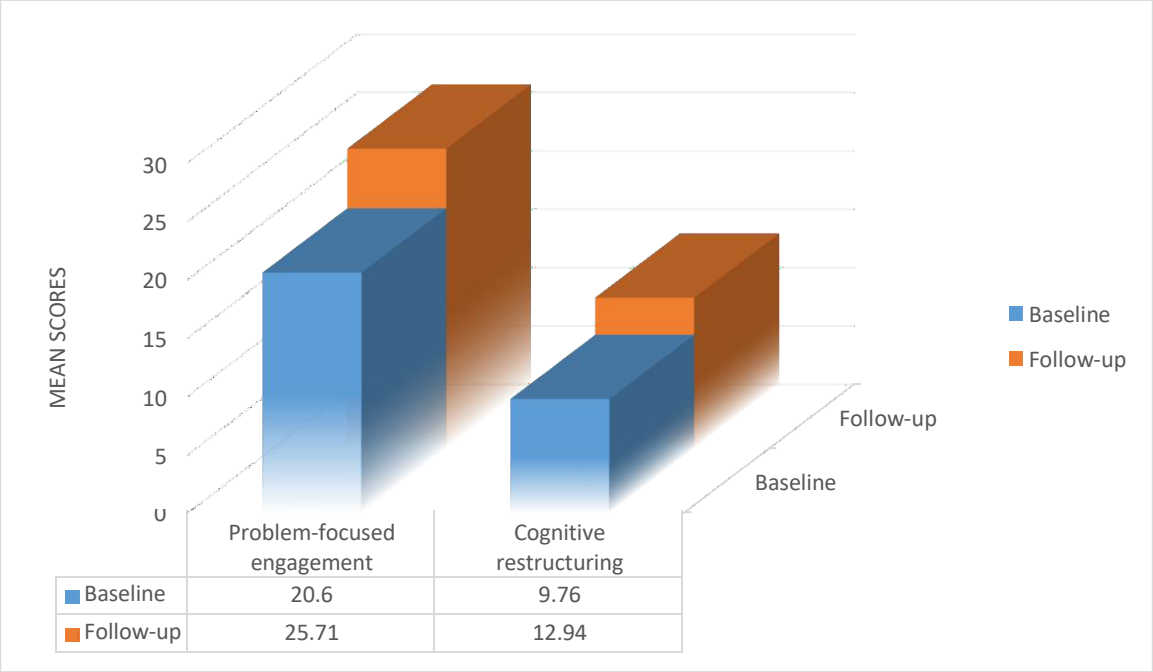


Table 5

Illustrating comparison of mean and statistical analyses of CSI subscales

	Baseline		Follow Up		Sig (2-tailed)
	Mean	SD	Mean	SD	
Primary Scales					
Engagement					
Problem Solving	10.29	4.12	12.76	2.97	.065
Cognitive Restructuring	9.76	3.70	12.94	3.61	.007
Express Emotions	10.83	5.21	12.06	3.45	.338
Social Support	9.94	5.64	10.18	3.03	.849
Disengagement					
Problem Avoidance	8.65	2.87	7.71	3.67	.247
Wishful Thinking	20.41	32.14	7.65	3.37	.127
Self-Criticism	7.53	4.19	7.59	2.65	.954
Social Withdrawal	7.71	5.23	9.06	4.16	.222
Secondary Scales					
Engagement					
Problem Focused Engagement	20.06	6.92	25.71	6.09	.016
Emotion Focused Engagement	21.28	10.48	22.06	5.58	.736
Disengagement					
Problem Focused Disengagement	17.73	6.44	15.46	7.18	.263
Emotion Focused Disengagement	16.20	7.75	17.13	6.61	.596
Tertiary Scales					
Engagement	40.82	14.61	47.94	10.70	.206
Disengagement	31.61	12.86	31.56	11.24	.984

3.8 Power Calculation

Drawing on the effect size (d = 0.261) achieved in the total change of IES between baseline and follow-up, a power calculation was carried out. With standard parameters (α =.05, β = .20), a slightly more conservative effect size of 0.25 suggests that a future randomised-control trial will need to have a sample size of 200 in each arm in order to find a statistically significant result. There was

a 40% attrition rate observed in this study. On this basis, a total sample of 667 participants will need to be recruited to achieve follow-up retention of 400 participants.

3.9 Summary of Findings

Since attending ReTraIn, participants used more self-reported problem-focused engagement coping strategies and particularly cognitive restructuring during stressful or traumatic situations.

The results suggested that the more psychologically prepared participants felt in dealing with traumatic incidents, the less trauma symptomology they experienced. This was particularly evident in the avoidance symptom cluster. For participants who felt more psychologically prepared in dealing with traumatic incidents, there was a corresponding decrease in using problem-focused disengagement and emotion-focused disengagement coping strategies. This suggests that the more psychologically prepared officers felt since ReTraIn, they were less likely to rely on wishful thinking, problem avoidance, social withdrawal and self-criticism to cope with stressful or traumatic events.

A positive association between disengagement coping strategies and trauma symptomology was observed in the current study. Higher levels of PTSD symptoms of intrusion, avoidance and hyperarousal were associated with higher self-criticism, social withdrawal, wishful thinking and problem avoidance. The only non-significant association was between problem avoidance and intrusion.

There was a non-significant reduction in PTSD symptomology at follow-up. This non-significant trend was particularly evident for intrusion.

CHAPTER 4: RESULTS FROM EVALUATION MEASURE

The ReTraIn Evaluation (Appendix A) was a researcher developed measure used to gather secondary data pertaining to the acceptability of specific components of the Programme. There were thirteen questions in a five point Likert-scale format ranging from 1 ‘strongly disagree’ to 5 ‘strongly agree’. Four items related to psychological preparedness and seven items referred to the specific coping strategies presented during training.

These data provided an evaluation of the Programme and offered greater insight into participants’ acceptance of the training and their acceptability of each component since the training. Quantitative and qualitative data are presented for the two highest rated items in the category of psychological preparedness; psycho-education and preparedness through mental imagery. The three highest adaptive coping strategies: relaxation, mindfulness and cognitive restructuring; as well as the lowest rated coping strategies: processing in dyads, journaling and re-listening to scenarios.

Additionally, participants provided additional comments about the course as a whole. The main theme was that officers found the course useful and suggested that it should be rolled-out across the organisation. Another suggestion was that this course should be given to student officers prior to deployment to give them a level of protection prior to experiencing traumatic incidents. Please refer to Table 9 (pp144-145) for a demographic information for each participant.

P25: *This has been a fantastic, innovative and brilliantly delivered course, that given the opportunity, can really challenge and change organisational culture.*

P29: *A very beneficial course. Should have been available to all sooner.*

P32: *I wish I had received this training as a probationer, as it could have prevented me from being damaged.*

4.1 Psychological Preparedness

Five items on the ReTraIn questionnaire related to an increase in participants' psychological preparedness. These items primarily refer to knowledge and awareness through psycho-education that can be drawn upon to increase resilience to potentially traumatic incidents. These items were: psycho-education of psychological trauma; psychological preparedness for traumatic incidents; knowledge of adaptive strategies; demystifying the Post Incident Management (PIM) process; and demystifying the Independent Office for Police Conduct (IOPC) investigations.

4.1.1 Highest rated preparedness items.

4.1.1.1 Psycho-education.

At Follow-up, the highest item related to psychological preparedness was item 1, psycho-education of psychological trauma (M=3.85) and was rated second overall. Most participants (N=16; 59.3%) agreed that they have drawn on their knowledge of psycho-education since ReTraIn. Only one participant disagreed with the statement and no one strongly disagreed.

Q 1. ***Since ReTraIn I have drawn on my knowledge of psychological trauma***

Participants were asked to provide qualitative feedback whether the psycho-education element of ReTraIn has provided them with a deeper understanding of how traumatic incidents can affect individuals. Many identified that this element of the programme provided a strong evidence base of understanding. A prominent theme was that the knowledge gained through psycho-education was akin to increasing their ability to cope with traumatic incident and that this knowledge not only benefitted themselves, but their colleagues:

P1: *I think it has not only helped me, but others I've come into contact with*

P6: *It has helped me to cope better by understanding why I may be feeling like I am after an incident*

The training was developed to be interactive and facilitate discussion. Although group exercises were included during the psycho-education element, information was largely disseminated by the facilitator / author and predominantly based on neuroscience and research. My initial concern was that participants may find it challenging to engage with the material. However, many participants identified benefits in understanding the neuro-psychological processes involved in psychological trauma.

P18: *Understanding chemical changes in body and how to tackle it*

P21: *Understanding what happens in the brain actually explains reasoning for certain actions*

P29: *Helps to put a scientific reason for the behaviour/feelings*

P41: *Yes, I understand why my mind (or someone else's) works this way*

A primary reason for including the psycho-education element, was to normalise the stress response. The aim was to challenge the assumption that it is a weakness rather than a natural response to an abnormal situation. It was hoped that this knowledge and preparation might alleviate some of the associated anxiety and enable participants to access support. This was echoed in the responses of a large proportion of participants.

Psycho-education was a constant thread throughout the Programme and each element was delivered in a way to demonstrate the scientific underpinning and evidence base. When responding to this question, unsurprisingly some participants linked this question with specific strategies that they found useful. Some participants linked psycho-education with knowledge of adaptive coping strategies.

P26: *Knowing how to train myself and take steps before during and after the incident will be very useful.*

P36: *This knowledge will help me with a coping strategy after such trauma.*

4.1.1.2. Psychological preparedness.

At follow-up, the majority of participants (N=19; 70.4%) agreed that since ReTraIn they felt more psychologically prepared to cope with traumatic incidents (M = 3.67). This was the second highest rated preparedness item and was third overall. No participants strongly disagreed with this statement, and only one disagreed.

Q 2. ***Since attending the ReTraIn Programme I feel more psychologically prepared to cope with traumatic incidents***

Participants were asked to identify how the scenario mental imagery element of the Programme has or would affect their behaviour during a critical incident. Participants suggested that this preparation provided them with composure that enabled them to take a moment to feel grounded and assess the situation. This would allow them to perform professionally and feel less panicked. Another emergent theme focused on acceptance of the situation and compassion for oneself.

P6: *It has taught me to take a deep breath, take in what's happening and the deal with it.*

P25*: Allows you to rehearse mindful techniques and emotional control, which can then be replicated in actual trauma.*

P27: Structural response, feeling more confident accepting the things I can't control.

4.1.2 Lowest rated preparedness items.

4.1.2.1 Demystifying IOPC investigations.

Demystifying IOPC, which was the thirteenth item on the survey, was the lowest ranked item relating to psychological preparedness and was tenth lowest overall. Even though this was the lowest rated item the mean indicated that the average number of responses were neutral. Indeed, ten participants (the majority) were neutral in their response to drawing on their knowledge of IOPC investigations since ReTraIn. However, six participants agreed with this statement. This was higher than the combined number of five participants who disagreed and strongly disagreed. Six participants did not complete these items.

Q 13. ***Since attending the ReTraIn Programme I have drawn on my knowledge of the IOPC investigation process.***

Participants were asked to consider if they now have a better understanding of the IOPC and how this has or may affect their behaviour following a traumatic incident. The responses suggested that there were many myths surrounding IOPC investigations which were concerning for officers. The input by a senior field expert helped dispel these myths as officers identified that IOPC involvement was not an indication of wrong-doing, but a process that needed to be followed in exceptional circumstances. This reduced suspicion of the IOPC and associated anxiety.

P6: *By understanding why they may get involved, it may not be because I have done something wrong.*

P24: *Very good input again, highlights to me how dangerous rumours are*

P41: *I would be less suspicious of the PSD and IPCC process which has previously been shrouded in mystery*

4.1.2.2 Demystifying the PIM process.

Similarly to the IOPC input, the twelfth item demystifying the PIM process was rated ninth overall, and was the second to lowest preparedness item. The mean score suggested the average responses of participants were slightly higher than neutral. Eleven participants, which was just over half of all respondents were neutral about drawing on their knowledge of PIM. Similarly to responses related to IOPC, six respondents agreed with this statement which was two higher than the sum of respondents who disagreed and strongly disagreed.

As with the item relating to the IOPC, six participants did not complete these items.

Q 12. ***Since attending the ReTraIn Programme I have drawn on my knowledge of the PIM process.***

Participants were asked to indicate whether they have a better understanding of PIM since the training and how this would or has affected their behaviour following a traumatic incident. The overwhelming qualitative response was that very few officers were aware of this process prior to ReTraIn and consequently felt more psychologically prepared to cope with this process. Some officers had erroneous beliefs that were anxiety inducing. Consequently an input by senior officers who were field experts enabled myths to be dispelled. A couple of

officers identified that they may still be a little concerned, but that the input has reduced their fears.

P1: *Much less fear over what is happening, willing to be much more open.*

P17: Didn't know what a PIM was prior to the course. BIG HELP

P25: *I had no knowledge but considerable perception prior to the training*

4.1.3 ReTraIn coping strategies.

Follow-up ratings of the eight coping strategies were based on participants' experience of implementing them in the 12 months following training. The coping strategies that were presented during ReTraIn were: re-listening to scenarios; mindfulness; 'be where your feet are' mindfulness practice; relaxation; talking with others; 'processing in dyads'; journaling and cognitive restructuring.

4.1.3.1 Highest rated coping strategies.

4.1.3.1.1 Relaxation.

Follow-up ratings showed that relaxation was the highest rated coping strategy. The mean rating of this item suggested that on average respondents agreed that they had used relaxation techniques since ReTraIn. This was supported by the frequency of sixteen participants agreeing and four participants strongly agreeing with this statement. Only one participant identified that they had not used the relaxation techniques from the training and six participants were neutral.

Q 7. ***Since attending the ReTraIn Programme, I have used the relaxation techniques.***

Participants identified that the relaxation exercise enabled them to feel calm and to clear their minds. Some participants identified that relaxation allowed them to re-balance themselves and give them the space to take a perspective, which has aided traumatic incidents being processed. Others identified that relaxation was a useful preparatory strategy that would help them feel composed. For some participants, the relaxation techniques were more useful in aiding sleep than coping with a traumatic incident. Some respondents stated they would try this technique, but there was a sense of time being a factor.

P16: *It has already helped me process two traumatic incidents.*

P27: *I have issues relaxing and switching off, so I feel that this has really helped me.*

P33: *It just seems to re-balance it all and put everything back into perspective and the correct place so to speak.*

4.1.3.1.2 Mindfulness.

Follow-up data shows that mindfulness was the second highest coping strategy and joint third overall. Eighteen participants agreed and one participant strongly agreed that they have practiced mindfulness since the intervention. The number of positive responses to this strategy, exceeded the two negative and five neutral responses. One participant from the follow-up sample did not complete this

question. The mean of this item suggested that on average respondents used mindfulness.

Q 4. *Since* attending *the ReTraIn Programme, I have practiced the mindfulness techniques.*

The qualitative feedback suggested that in highly emotive situations, participants identified that being immersed in the moment enabled them to feel centred and grounded. During the course one of the participants described mindfulness as 'coolness of thought under pressure' this description summed up many participants' responses. Participants acknowledged that mindfulness is a practice that requires repetition and that many were willing to commit to this process. Mindfulness was new to the majority of participants. Those who currently practice mindfulness identified its use when dealing with traumatic situations. Practicing mindfulness was context dependent for some participants. One participant was more convinced that they would use mindfulness following an incident. Another expressed doubts about adopting this practice.

P9: *Gives you a moment to think logically.*

P27: *Makes me feel an inner calm and not at all panicky.*

P39: *At times of stress I remember to stay in the moment which assists me in dealing with the incident.*

P26: *Not sure on the technique. I think I would rely more on experience and training to stay focused and on track.*

4.1.3.1.3 Cognitive restructuring.

The third highest coping strategy was cognitive restructuring, this item was sixth overall. Sixteen participants agreed or strongly agreed since ReTraIn they have identified and challenged unhelpful patterns of thinking. This was supported by the mean of this item that showed on average respondents had used cognitive restructuring. Half this number of participants were neutral and only two participants did not use this strategy.

Q 11. *Since attending the ReTraIn Programme I have identified and challenged unhelpful patterns of thinking.*

The qualitative feedback for this strategy was positive, no participants offered negative feedback. The responses suggested that this strategy helped them gain better awareness of patterns of unhelpful thinking and how these can be problematic to their wellbeing. Participants identified that the thought record was a useful tool in enabling them to challenge unhelpful patterns of thinking and to enable them to take a more balanced perspective of the situation …

P14: *To help me overcome fears.*

P42: *To deal with situations more rationally, negative thoughts lead to worry and can lead to focusing on something that was not the original issue.*

4.1.3.2 Lowest rated coping strategies.

4.1.3.2.1 Processing in dyads.

Rated thirteenth, the lowest rated coping strategy was processing in dyads. Twelve participants were neutral about using this strategy following a traumatic incident. Although, five participants indicated that they used this strategy, twice as many participants did not. The overall mean was just below neutral.

Q 9. *Since attending the ReTraIn Programme I have used the 'processing in dyads' exercise, being present whilst hearing about or sharing a traumatic or stressful experience.*

Participants were asked to elaborate on whether they have used this exercise or would consider using it. Responses suggested the benefits of processing an incident with another trusted person as well as listening mindfully. Although some focused on the listening element of the exercise, the majority of the responses focused on the benefits of them talking and processing. Some participants enjoyed the structure of this exercise, whereas some found it difficult to actively listen and stay grounded. An important consideration in utilising this practice was identifying a trusted person with whom to share.

P26: *I have talked to my support network but didn't feel the need to be so structured. Preferred to chat.*

P32: *Only if I could find someone to talk with that I would feel would take me seriously and not tell others about it or mock me for it.*

4.1.3.2.2 Journaling.

The next lowest rated coping strategy and twelfth overall, was journaling. Eight respondents were neutral about using this coping strategy. This was the same combined number as those who agreed and strongly agreed. However, this was exceeded by the combined number of respondents who disagreed and strongly disagreed.

Q 10. ***Since attending the ReTraIn Programme I have used the 'journaling' exercise to process traumatic and/or stressful incidents.***

Participants were requested to indicate whether or not they had used this exercise or would consider using it in future. For some participants, this was the most useful coping strategy. For those who agreed with this statement, it allowed them to express themselves fully. Participants found the practice of writing about a traumatic incident and re-reading enabled them to process details.

However, some participants did not feel comfortable using this strategy. Some mentioned issues of confidentiality when committing to paper their innermost thoughts and feelings pertaining to a traumatic incident. For another participant, journaling brought up uncomfortable thoughts and feelings from a previous incident. Other participants preferred to talk than write.

P7. *This process is one that I feel has helped me cope more than others, as it allows me to express myself fully.*

P9: *Writing and re-reading allows you to process/discuss details.*

P26: *There is a factor of admitting feelings to yourself in writing them down.*

P21: *I did not feel comfortable during this as someone may be able to read my thoughts and emotions.*

4.1.3.2.3 Re-listening to scenarios.

Re-listening to scenarios was the third lowest coping strategy and was rated joint tenth overall. The mean score suggested on average respondents were neutral about using this strategy. However, fourteen participants had listened to the scenarios since the training. This was more that the eleven participants who had not listened to the scenarios since the training, which was the combined number who disagreed and strongly disagreed with this statement. Two participants were neutral.

Q 3. ***I have re-listened to the trauma scenarios.***

Participants identified the main benefits of re-listening to the scenarios were psychological preparedness for dealing with future traumatic incidents and eliciting a sense of calm. Participants identified that this would enable them to deal with traumatic situations. Re-listening to the scenarios seemed to prompt an awareness of the impact unprocessed incidents. Participants indicated that the process was useful during training and acknowledged the need for repetition, however, lack of time seemed to pose a challenge to this. During the training, it was suggested that participants might also wished to consider and work through their own scenarios, one participant expressed this preference. Another identified that visual imagery was challenging.

P27: *I have listen to them again. I had not realised how some incidents in the past had made me feel so bad and so this has helped.*

P32: *I hoped to listen to the scenarios, but I find it hard to find the time.*

P16: *I haven't re-listened, but having practiced them during training, I feel will help me deal with an incident which will mean that it is likely to have less of an impact on me both personally and professionally.*

P23: *I have tried. However, I've always found it difficult to engage in role-play or unreal scenarios.*

Table 6

Showing frequency and percentages of ReTraIn coping strategies

Item Number	Category	Item description	FOLLOW UP		
			Rank Order	Mean Score (2 Dec)	Median Score (2 Dec)
7	Adaptive coping	Relaxation	1	3.89	4
1	Preparedness	Psycho-education	2	3.85	4
2	Preparedness	Mental imagery - scenarios	3	3.67	4
4	Adaptive coping	Mindfulness	3	3.67	4
5	Preparedness	Awareness of coping strategies	5	3.63	4
11	Adaptive coping	Cognitive restructuring	6	3.62	4
8	Adaptive coping	Talking	7	3.56	3
6	Adaptive coping	'Be where your feet are' exercise	8	3.33	4
12	Preparedness	Demystifying PIM	9	3.05	3
3	Adaptive coping	Re-listening to scenarios	10	3.00	4
13	Preparedness	Demystifying IOPC	10	3.00	2
10	Adaptive coping	Journaling	12	2.78	3
9	Adaptive coping	Processing in dyads	13	2.77	3

Table 7

Showing Follow-up ratings and frequencies for psychological preparedness items

Likert rating	Psycho-education		Preparedness/ imagery		Adaptive strategies		PIM process		IOPC investigation	
	Frequency	%	Frequency	%	Frequency	%	Frequency	%	Frequency	%
Strongly disagree	0	0	0	0	0	0	1	4.8	1	4.8
Disagree	1	3.7	1	3.7	2	7.4	3	14.3	4	19.0
Neutral	6	22.2	7	25.9	8	29.6	11	52.4	10	47.6
Agree	16	59.3	19	70.4	15	55.6	6	28.6	6	28.6
Strongly Agree	4	14.8	0	0	2	7.4	0	0	0	0
N=	27		27		27		21		21	

Table 8

Showing Follow-up ratings and frequencies psychological preparedness item

Likert rating	Re-listened to scenarios		Mindful-ness		'Be where your feet'		Relaxation		Share with others		Processing in dyads		Journaling		Cognitive restruct	
	F	%	F	%	F	%	F	%	F	%	F	%	F	%	F	%
Strongly disagree	3	11.1	1	3.8	2	7.4	0	0	0	0	2	7.4	4	14.8	1	3.8
Disagree	8	29.6	1	3.8	3	11.1	2	7.4	3	11.1	8	29.6	7	25.9	1	3.8
Neutral	2	7.4	5	19.2	7	25.9	4	14.8	11	40.7	12	44.4	8	29.6	8	30.8
Agree	14	51.9	18	69.2	14	51.9	16	59.3	8	29.6	5	18.5	7	25.9	13	50.0
Strongly agree	0	0	1	3.8	1	3.7	5	18.5	5	18.5	0	0	1	3.7	3	11.5
N=	27		26		27		27		27		27		27		26	

CHAPTER 5: ACCEPTABILITY INTERVIEWS

A purposive sample was chosen to attend qualitative interviews based on the number of ReTraIn elements they used in the 18-months since the training. For the complete demographics of each participant, please refer to Table 9 (pp144-145). High scorers used eight or more, whereas low scorers used 3 elements or lower. Qualitative interviews were conducted with five high scoring and three low scoring participants. Each strata were interviewed separately to avoid potential group influence using a semi structured interview (Appendix G).

Of particular interest to the study was to identify the elements of the training that were or were not adopted by participants, in which contexts they were or were not utilised and whether or not officers found them helpful. During the interviews six themes to emerge from discourse: 1) The use of adaptive coping has increased since the training; 2) A combination of strategies were used; 3) Some strategies were divisive; 4) The strategies are transferable; 5) All strategies should be included in future training; 6) The scenarios were appropriate to policing. The themes will be discussed below in greater detail and illustrated with participant quotations.

5.1 The Use of Adaptive Coping has Increased Since the Training

All participants in the purposive sample agreed that their coping strategies had changed since the training, even the low scorers. Even when they had prior knowledge of particular strategies, the training enhanced and expanded their utilisation. Consequently, participants suggested that they adopt more of a strategy

for coping with the challenges associated with policing. There seemed to be a consensus of consciously using more adaptive coping strategies and of protecting their wellbeing and resilience.

P 12 (low scorer): *"... maybe talking to friends and family I wouldn't have done before as much. Talking to colleagues who've been to similar incidents has helped.*

P 14 (low scorer): "*I do it more since the training. Taking some time out and being mindful, in nature helps me relax and be ready for the next bout".*

P 38 (low scorer): "*Changed since the training, have more of a strategy now".*

A prominent theme was the change of mind set participants adopted since the training. This was focused around mindfulness and elements of CBT. This helped reduce cognitive distortions and anxiety which has enabled them to focus on dealing with the situation.

5.2 A Combination of Strategies Were Used

It was evident from the qualitative interviews that the participants had enjoyed and learned something from the course. I was interested to discover that all participants who took part in the qualitative interviews said that they had continued to use a range of coping strategies 18 months after training. This was of particular surprise when interviewing the group of 'low scoring' participants. There was no particular consensus of preferred technique. Participants used a

combination of techniques, that either ‘clicked with them’ during the training or that they were familiar with. The choice of coping strategy seemed to depend on the individual and the context of traumatic incident. During the interviews it emerged that all participants in the purposive sample had adopted two coping strategies, and each one of the coping strategies was used by at least one participant. Choice of coping strategy was attributed to personal choice and perceive ‘fit’ rather than context driven. Once adopted, such coping strategies were transferrable to many policing and non-policing scenarios of differing emotional intensity. Although not universally adopted, the most often mentioned strategies were mindfulness and talking with others.

5.2.1 Mindfulness.

Mindfulness was a popular strategy for dealing with potentially traumatic situations. The usefulness of this practice had been cited by all but two participants. Three participants identified that they have since downloaded a mindfulness app. For those who used mindfulness, there was a sense of being in the moment and using the ‘be where your feet are’ practice helped officers feel grounded and able to focus on the situation at hand. Officers had used mindfulness when dealing with a range of traumatic incidents including a near death in custody, a fatal RTC, general policing. Mindfulness was used following a challenging incident by officers who identified that they needed some time to process, and ground themselves before responding to their next call. The benefits of mindfulness in stressful and potentially traumatic situations was expressed by P8.

P 8 (high scorer): "*Mindfulness. I tend to be a bit more real of where I am, of what I've got to do and not overthink the situation. I did use to think too far ahead, think what's going to happen with this, and focus on the 'what if's'; what if the ambulance can't come, what if it's longer than it says. Now I just deal with what I can deal with at the time now. I literally put my feet on the ground and say look, I have to deal with the situation in the here and now, rather than the, if's but's or maybe's. So really being in the moment*".

5.2.2 Talking with others.

All but one officer identified that they utilised their support network following challenging situations. Some identified this as talking with others and some used the term 'processing in dyads'. Officers articulated the importance of processing a shared experience with colleagues. The benefits of this was to be able to process with others who understand what the officer has experienced. Some officers identified that they have spoken to friends and family following incidents, however, there were benefits for processing with a colleague who understands and who may have also experienced the incident. This seemed to be related to the ease with which this could be discussed. One officer suggested a preference for processing in work to allow a separation where work would not pervade their relaxation at home and therefore maintain a work life balance.

P 44 (high scorer): "*Talking to colleagues is second nature. I have talked about things at home as well, sometimes at home I think I've actively not wanted to talk about things because sometimes I almost think I've got home now, and if I've had a bad day, I almost want to shut the door on that day and by talking about it*

almost introduces it … It doesn't depend on the incident, just how tired I am and my mood. The more relaxed I am the more comfortable I am to talk about it … With colleagues, maybe because they're already going through the same situation, it's not an effort you just talk about things. With colleagues, I think we're still in that work environment … so my head is in work, I'm not switching off. When I go home … that's the separation I want. Some days I just want to relax, even when it's not been a particularly relaxing day".

5.2.3 Cognitive restructuring.

Interestingly, even though participants did not utilise a written version of the thought record, most seemed to internalise the process and restructure some unhelpful patterns of thinking. Many suggested that they had internalised this process. Most of the participants described having a range of cognitive distortions prior to dealing with an incident, utilising cognitive elements enabled them to take a more balance perspective.

P 12 (low scorer): "*For me it's changed since the course. I'm an over thinker anyway, I used to beat myself up a lot before the course. Now I think, what evidence have I got for x, y, z rather than thinking the worse in any situation, I think what's realistic and what's the evidence*".

5.2.4 Scenarios: Mental imagery.

Another participant described actively adopting the mental imagery element of the course which he blended with other cognitive elements to support his resilience and improve how he coped in challenging situations.

P 44 (high scorer): "*The visualisation of the scenario we were going to, I was definitely utilising that. Because I'm quite guilty of letting my mind run away, and would beforehand think of the worst case scenario, how is this going to go catastrophically wrong, whereas if I thought through it …I was finding that I had been in similar situations and come out of them ok … and generally, there's been a successful resolution to it. So that's what I try and think of now, as I am generally one for letting worst case scenario happen in my head … so, I definitely found that it I think through what I'm likely to encounter and what I need to do to prepare myself and to remind myself that I've dealt with it before was a good technique to prepare myself for going to situations… and this ties in with 'being where your feet are' and using the breathing exercises to slow yourself down. Because I think it's great to prepare yourself and make some contingencies of how you think it's going to play out and what you'll do in potential scenarios to give yourself that preparation … so now I'll pull myself back in and think ok I've thought about it and when I get there let's just see what's facing me, but in that meantime let's not get too anxious about what is potentially going to happen".*

5.2.5 Some strategies were divisive.

5.2.5.1 Relaxation.

Three officers identified that they had used relaxation and had found this useful, especially the breathing techniques. This had been used to deal with the general pressure of policing and between calls and in high pressured environments such as custody. One participant described how taking a short break to relax helped release the pressure and demands of policing, prior to attending the next call. The

benefit of this seemed to help officers feel more grounded, have the space to process the previous call and take a perspective.

P 14 (low scorer): *"It's not really a specific incident for me. I don't really suffer with stress, but sometimes it can be stressful in work. I find sometimes a lot of pressure come from the control room. I don't know what's happened there lately. You feel like you're being pulled from pillar to post and sometimes you feel like you can't finish one job properly before another one is thrust on you. And they are important jobs you need to finish before starting another. And that's when I take 10 minutes out and relax and breathe and then you can start again…Sometimes you feel like you have the weight of the world on your shoulders and then everything's lifted and it's not as bad as you think and you can carry on".*

Relaxation did not suit everybody. For two participants, relaxation was counter-productive. One suggested that although they tried relaxation, they felt too restless. Another participant did not enjoy the tension-release element of the one-minute relaxation technique.

P 44 (high scorer): "*I couldn't get on with the relaxation where you tense and release, to be honest, it seemed to aggravate me more than relaxed me. I just found that the whole process of tensing my body up was more counter-productive, especially when it got to the bit where I needed to curl my toes, and it just felt like a barrier I had to go through to get to the relaxation at the end which didn't achieve the whole point of it*".

5.2.5.2 Journaling.

Although not widely adopted by the purposive sample, one participant articulated that journaling had been the most useful strategy. Through journaling they had been able to process their thoughts and feelings following incidents including a when they had dealt with serious road traffic collision (RTC).

P7 (high scorer): "*This helped me more than anything, notes helped make sense and to categorise things. We document everything so it's an easy progression to write a journal. We don't normally capture our feelings and emotions and it helped being written down. After I dealt with the car flipping, I wrote down what I was thinking, it was easy to implement and helped me manage my feelings*".

5.3 The Strategies are Transferable

Participants identified that since the course some officers had encountered incidents where they had used the strategies from the training. This included RTC's, fatalities, an attempted suicide in police custody and a baby death. One participant described using cognitive elements to deal with a challenging situation where a pedestrian had been fatally wounded by a vehicle. This seemed to be a protective factor for the officer in mitigating their stress response by acknowledging that they were doing all they could in a very difficult situation.

P 8 (high scorer): … "*Husband's on the floor and he's bleeding out through his brain, and there's parts of his brain all over the tarmac. So me and my colleague are there, and obviously offering support to the gentleman, but obviously considerate that it's a scene as well. Trying to coordinate ambulance, people*

turning up with their grandkids, taking photographs, trying to tell them to leave the scene, you wouldn't believe the amount of people turning up with ice-creams etcetera. Tying to coordinate the air ambulance for a landing area and with a limited number of resources. But I thought at the time, I can't change it. The gentleman's been injured, other than trying to preserve his life, I can't leave him there to try and find a landing spot for the air ambulance and likewise my colleague was helping me".

Some officers had not attended traumatic incidents, but had nonetheless found the strategies applicable to dealing with the stressors of general policing and therefore preserving their wellbeing through resilience. This was described by a participant who had recently changed roles.

P 44 (high scorer): " …*And I definitely think those tools are transferable, it's not a dynamic department here compared with what I was doing out there, but it's still got it's pressures and stresses which are going to play on someone like me. I mean, I've seen plenty of people, that I'd like to put forward who I've worked with, who I think if they were going to the end of the world, they wouldn't be particularly bothered about it, they just seem to coast through, and I'd love to know how they prepare for it because I don't think they've got strategies, I just think whether it's their upbringing or whatever, something's different, but that's not me so I've got to deal with who I am I suppose".*

The interviews identified that there were lots of applications for the strategies both in general policing, when supporting colleagues and for use in officers' personal

life. One participant described two traumatic incidents that he had experienced in his personal life that he successfully applied the principals of processing in dyads with his family following a diving accident and the mindfulness exercise of 'be where your feet are' and approach strategies based on other cognitive elements to help him get back on his motorcycle following a serious accident.

P 38 (low scorer): *"Processing in Dyads. Me and my kids had a mishap diving and we used that. So that's something I've taken home. And the whole mindfulness thing as well. I've found a lot of applications outside of the police. And a lot of the time talking to colleagues when they've come back from an incident, asking them if they're alright – having the strategy of how to go about it.*

Back last January when I crashed my motor cycle. I did quite a bit of damage to myself and didn't get back on a bike for three months, mainly because I couldn't. But then looking at it and thinking Christ, I've got to get back on it to come to work again. It was a bit, 'I don't know whether I want to do this'. I've been a biker for a long time, so it was a bit [anxiety provoking]… So I thought, just sit on it and do the whole, 'it's all been alright before, so it will be again'.

Me and my sons are fairly avid divers. We were diving in Scotland and had a bit of a dive accident up there and spent 6 hours in a decompression chamber. So we have a good talk whilst we were sat there waiting for the time to tick by, as to what had gone wrong, what should we have done differently, and what could we have done differently. So I used the time to help them more than anything to want

to go diving. I found as many applications that are personal to me outside of work to have a strategy to do stuff with".

5.4 All Strategies Should be Included in Future Training

Participants identified useful strategies for inclusion in future training. Interestingly, participants suggested that all of the strategies should be included in future training, even those they did not use personally. The widely expressed view was that it would be beneficial for officers to experience the range of strategies within the training course to identify their best fit. Whilst inputs on Post Incident Management and Independent Office of Police Conduct were deemed important to include, participants suggested that this need not be as lengthy for future training. Some participants suggested that it would be useful to be able to access information and course materials via their mobile device.

P9 (high scorer): *"All of them, so they can try out and see which ones suit them".*

P 12 (low scorer): *"… I didn't have a clue until it happened, then when it did happen, I was like, what's happening, and it was out of my hands, I didn't know what was happening. So I think it is important to cover it [PIM and IPCC], not necessarily have a speaker …"*

5.5 The Scenarios Were Appropriate to Policing.

Participants considered the choice of scenarios as appropriate to their role as response officers and acknowledge that not traumatic incidents could be captured due to the diverse nature of their role. The inclusion of additional or different

themes was not suggested. Three participants identified that a visual element would have been useful and one suggested the use of body worn video of traumatic incidents. However, another identified the benefit of the imaginal component of the audio based scenarios. All officers agreed that attending the call of a baby death is particularly challenging when they have children of the same age. Some participants had listened to the scenarios following the training however, lack of time was cited as a barrier.

P9 (high scorer): *"I think you included a wide range of more minor incidents going right up. From my perspective there were a good range of incidents included. You're never going to catch everything, because they're so different and each person sees that incident in a different way anyway".*

P 12 (low scorer): *"No, I think everyone's different, so it's good to have a range. I remember the one with the CD's, I don't think that's practical. I don't think you've got time to sit there and do that. But I'd like it to happen of course. But with calls and low numbers, I don't think it's practical to have an hour in a room to listen to them. I don't think that's going to happen. But I'd like to see it happen, of course, because everyone's different".*

CHAPTER 6: DISCUSSION

6.1 Is a Further Trial Feasible?

The overarching concept for this study was to examine the acceptability of the ReTraIn Programme and the feasibility of conducting a further trial. This has resulted in an exploration of methodological and retention issues. This investigation has enabled tentative conclusions regarding the Programme's effectiveness to be drawn as well as indicate further refinements of the intervention and to future research trials.

Undertaking this study has been a developmental learning process. The retention rate of participants (60%) were lower that the accepted criteria (65%) (Courtier, *et al.*, 2017). In this chapter, methodological improvements and refinements to the Programme will be identified and considered. Tentative observations based on a synthesis of quantitative and qualitative findings will be discussed in the context of the literature. This will facilitate a considered reflection regarding the research questions.

6.2 Observations for Improving the Methodology

6.2.1 Recruiting participants.

There were challenges associated with recruiting participants via the Force Intranet alone, as submissions are continually superseded by newer posts. Consequently, if an officer is absent for any length of time, due to rest days, leave entitlement or sickness, the study information may be missed. Further, not all officers will access the news section. Following conclusion of the ReTraIn

intervention, the author was contacted by several officers who had learned about the study through colleagues who had attended. The officers had not seen the initial recruitment information on the Intranet and expressed an interest in attending future training. This suggests the need for improved communication to recruit a larger sample of response officer.

It is evident that a number of communication routes should be used to augment the recruitment process and achieve the sample requirements for a randomised control trial (RCT). In the first instance, emails should be sent to all response officers. The messages should contain participant information and joining instructions as well as a letter of endorsement from the Chief Constable and Federation. A news entry on the Intranet system would be more impactful if it were supplemented by a brief video presentation by a Chief Officer outlining the study. This video presentation could then be shared during morning briefing. It is anticipated that through targeted invitations, augmented by communication streams, a larger sample of participants would be recruited.

6.2.2 Retaining participants.

Whilst all participants completed the trauma resilience training, a total of 18 participants did not complete follow-up measures when contacted 12 months after attending the ReTraIn programme. During this time, the organisation had undergone a significant restructure. A substantial number of officers had elected to take voluntary redundancy, including two participants from the study. Changes to the organisation's operational model and depleted front-line resources may have contributed to the insufficient time and competing demands that was cited as

the primary reason for not completing measures. Indeed, such depleted personal, physical and emotional resources can impact one's ability to cope and can result in burnout and sickness absence (Hesketh & Tehrani, 2018). Interestingly, three participants were on long-term sick leave at follow-up, although unrelated to trauma.

The sample composition of men and women during the intervention was largely comparable to the organisations' establishment figures. At follow-up a higher attrition rate was observed in female participants when compared with male participants. Of the nine women who did not provide follow-up data, long-term absence (including maternity leave and voluntary redundancy) accounted for 6 participants. The higher sickness absence among women police officers is consistent with research. However, there is a paucity of studies that draw conclusions about possible gender differences (Korlin, Alexanderson, & Svedberg, 2009).

The ages of the participants ranged from 30 to 53 years and the mean age of the sample was 42 years. At follow-up, the average age of the sample had increased to 44 years of age, suggesting a greater attrition of younger participants at follow-up. Although it is important to note that only 35 participants indicated length of service, the majority had served between 11 and 20 years. There was no identifiable demographic pattern that explained the attrition rate, although one may consider the impact of family commitments and career aspirations as a possible factor.

A recent prospective study also identified a higher attrition rate among younger officers and in those who have experienced less re-organisational consequences (Van der Meulena, Bosmans, Lens, Lahlah, Van der Velden, 2017).
From this perspective, the concept of police complex spiral trauma (Papazoglou, 2013), may provide explanation into the attrition in younger officers. Police complex spiral trauma, conceptualises the insidious nature of repeated exposure and occupational demands. Consequently, older and more experienced officers may be at more risk and therefore more motivated to participate in the study. This may also explain why this group of experienced officers chose to participate. This was certainly supported during training, when participants shared a range of traumatic incidents they had dealt with during their service, as well as and their psychological impact.

From this perspective, the acceptability of trauma resilience training for seasoned police officers is encouraging. However, there was an overwhelming response that the course should be mandatory and that student officers and those young in service should be prioritised. This emanated from a sense of prevention, one participant articulated “I wish I had received this training as a probationer, as it could have prevented me from being damaged”. Consequently, a focus on recruitment of student officers and probationers in a future study should be included.

The scope of this feasibility study precludes definitive conclusions regarding demographics and attrition rate. However, in a future study it would be beneficial to adjust for demographics including health-related variables when examining the

predictive value of psychological resilience on subsequent mental health disturbances (Van der Meulena, et al. 2017). This would allow the potential efficacy of the ReTraIn Programme to be investigated as well as any limitations for specific demographics.

6.2.3 Follow-up phase.

The increased participant response to the reminder emails indicated that sending reminders was a positive incentive in the feasibility study. This suggests that using reminder emails would not have an adverse effect in the main study. However, participant feedback suggested that lack of time due to organisational demand was a contributing factor to non-completion of follow-up measures. Therefore, a potential refinement of the methodology would be to arrange for officers to attend a session in which they could complete measures at each data collection phase of the study. This would allow them to be physically abstracted from their duties and could be incorporated as part of a refresher session. Additional benefits would include researcher presence. This would enable participants to clarify questions regarding measures. In this study, three participants did not complete the Coping Strategies Inventory (CSI; Tobin et al., 1984, 1989) because they were unable to identify a stressful or traumatic situation.

6.2.4 Length of protocol.

The time it takes to complete a survey affects response rates (Cook, Heath, & Thompson, 2000; Walston, Lissitz, & Rudner, 2006). Respondents are more likely to complete a survey that takes less than 10 minutes and are unlikely to complete measures that take over 30 minutes (Koskey, Cain, Sondergeld, Alvim, and Slager

(2015). Therefore, it is advantageous for the protocol in the future study not to exceed 20 minutes.

The tentative results obtained in the current study support the future inclusion of a protocol that provides outcome measures of trauma symptomology, coping strategies and an evaluation of the ReTraIn Programme. On average, participants completed the 54 items of the Impact of Events Scale-Revised (IES-R; Weiss & Marmar, 1997) and the Coping Strategies Inventory Short 32 (CSI-S; Tobin, 1984, 1995) in 13 minutes at baseline. It is estimated that completing the additional 13 items and providing qualitative feedback on the ReTraIn measure, would have resulted in an average completion time of 20 minutes at follow-up. This suggests that to garner an acceptable response rate in the future study, no further self-reported measures should be used. If additional measures are warranted, alternative data collection methods should be investigated. Potential measures could include, heart rate variability (Minassian, Maihofer, Baker, Nievergelt, Geyer, Risbrough, 2015) and a clinician administered survey such as the Clinician Administered PTSD Scale (CAPS-5; Blake, Weathers, Nagy, & Kaloupek, 1995).

6.3 Increase in Engagement Coping Strategies

The development of the ReTraIn Programme was based on cognitive and behavioural theories that have been influential in explaining the development and maintenance of post-traumatic stress disorder (PTSD). Thus, the coping strategies in the Programme are predominantly cognitive-behavioural, including third-wave mindfulness practice.

During qualitative interviews, participants indicated that they have used more engagement coping strategies since attending ReTraIn. In addition, some participants indicated that the Programme demonstrated further application of strategies that they had previously used. The qualitative data indicated that the most consistently accepted strategies at the 12 and 18-month time points were cognitive restructuring and mindfulness.

P 12: *"For me it's changed since the course. I'm an over thinker anyway, I used to beat myself up a lot before the course. Now …rather than thinking the worse in any situation, I think what's realistic and what's the evidence".*

P 8 "*I did used to think too far ahead, … and focus on the 'what if's'; what if the ambulance can't come, what if it's longer … Now … I literally put my feet on the ground and say look, I have to deal with the situation in the here and now … So really being in the moment".*

This increase of adaptive coping was supported by the quantitative findings of this study. During stressful or traumatic situations, participants used more problem-focused engagement coping strategies and particularly cognitive restructuring. These are coping efforts based on cognitive and behavioural strategies that are focused on changing the actual stressful situation itself or meaning of the situation for individual (Tobin, 1984, 1995). While these results are tentative, they suggest an acceptability of the Programme and support the feasibility of undertaking further research.

6.4 Increase in Psychological Preparedness

Response officers deal with highly emotive, horrific, threatening or dangerous incidents (Arnetz, et al., 2010). The nature of these periods of high demand mean that officers have very little control over their daily activities and a lack of psychological preparedness (Hesketh & Tehrani, 2018). These challenges were illustrated by P8 during their qualitative interview.

"…he's bleeding out through his brain, and there's parts of his brain all over the tarmac. So me and my colleague are there, and obviously offering support to the gentleman, but obviously considerate that it's a scene as well… Tying to coordinate the air ambulance for a landing area and with a limited number of resources….other than trying to preserve his life, I can't leave him there to try and find a landing spot for the air ambulance…"

Lack of psychological preparation when dealing with potentially traumatic situations has been identified as a contributing factor to traumatic stress (Arnetz et al., 2008). In the ReTraIn Programme, psycho-education about trauma was introduced to increase psychological preparedness. In the 12-months since the Programme, participants had drawn on psycho-education more than any other component of psychological preparedness and was rated second highest element of the Programme overall.

The nature of policing requires a thorough assimilation of evidential material. It is likely that the scientific basis of trauma, with a focus on neuroscience, enabled officers to be more receptive to the information conveyed. Knowledge about

trauma, its impact on the brain and neuroplasticity, enabled officers to understand their reactions post-trauma and seemed to increase self-compassion. Psycho-education has been successfully integrated in programmes of trauma and loss for police officers (Manzella & Papazoglou, 2014), meaning reconstruction (Chan, Chan, & Ng, 2006), and in trauma resilience for student officers (Arnetz, Nevedal, Lumley, Backman, & Lublin, 2008). The results of the ReTraIn Evaluation (Appendix A) showed that most participants agreed that they have drawn on their knowledge of psycho-education. This indicates that psycho-education was acceptable to the sample.

Since the training, participants felt more psychologically prepared to cope with traumatic incidents, indicated by their level of agreement on the ReTraIn Evaluation. This element referred to the scenario mental imagery component of the Programme. The primary benefit of this element was composure during potentially traumatic situations. Officers described how taking a moment to ground themselves and assess the situation had a positive effect on their ability to perform their duties challenging circumstances. This is essential for trauma resilience. Arnetz and colleagues (2008), have identified that poor tactical decisions can result in guilt and shame, which is considered a risk factor for PTSD (Hesketh & Tehrani, 2018).

The results of the current study suggested that the more psychologically prepared participants felt in dealing with traumatic incidents, the less trauma symptomology they experienced. This was particularly evident in the avoidance symptom cluster. These results support the literature that that psychological

preparation may render a potentially traumatic incident less threatening (Arnetz, et al., 2008; 2010). This can be explained through the activation of brain systems which are thought to be activated by peri- and post-traumatic fear following critical incident exposure. The amygdala and hypothalamic–pituitary–adrenal axis have a role in triggering and regulating peripheral physiological activation. The prolonged or intense activation of these symptoms appear to contribute to the psychophysiological, cognitive, and behavioural abnormalities associated with PTSD. Therefore, if peri-traumatic distress and dissociation were mitigated through psychological preparation, trauma symptoms would be less likely to persist (Arnetz et al., 2008, 2010).

Additionally, for participants who expressed an increased sense of psychological preparedness in dealing with psychological trauma, there was a corresponding decrease problem-focused disengagement and emotion-focused disengagement coping strategies. This suggests that the more psychologically prepared officers felt since ReTraIn, the less they used wishful thinking, problem avoidance, social withdrawal and self-criticism to cope with stressful or traumatic events. These results support the continuum of a 'risk-factor malleability' continuum as a conceptualisation of PTSD predictors (DiGangi, et al., 2013). The malleable predictors include coping strategies (Pineles et al., 2011) which may be manipulated to provide trauma resilience.

6.5 Disengagement Coping and Trauma Symptomology

Disengagement coping is problematic as it interferes with the successful processing of the trauma memory. Consequently, reliance on avoidant coping may

be result in a strong association between physiological reactivity to trauma reminders and PTSD symptom maintenance. (Pineles et al., 2011). This positive association between disengagement coping strategies and trauma symptomology was observed in the current study.

The symptom of avoidance was strongly correlated with problem avoidance, wishful thinking, social withdrawal and self-criticism. This suggests that the more disengagement coping participants use, the more likely they will experience trauma symptomology form the avoidance subscale. For counselling psychologists working in the field of PTSD, this finding is particularly noteworthy as avoidance is theorised as the central precept of evidence-based PTSD treatment.

6.6 Refinements to the ReTraIn Programme

There is a potential dichotomy between the acceptability of the scenario based mental imagery and the practicality of re-listening to the scenarios. The activation of neural pathways as psychological preparation for real-life trauma exposure, is the premise for the trauma scenarios. According to the literature, repetition is required (Arnetz, et al., 2010). However, when asked if participants had re-listened to the trauma scenarios, the average response was neutral to re-listening to the scenarios. This was further explored during the qualitative interviews. Some of the participants had re-listened to the scenarios following the course, but had not continued. This was despite all participants from the purposive sample identifying that the scenarios were appropriate to their roles.

A lack of time and operational demands was the primary reason for this. However, of interest was the suggestion that the mental imagery process was internalised and could be accessed on route to a call. There are two considerations for future research. The first is whether officers should have protective time to re-listen to the scenarios. Due to operational demands, it is unlikely that this could be arranged. However, a compromise may be the accessibility of the scenarios on officers' mobile devices. The second consideration for future research is to question at what point is repetition sufficient to proffer resilience?

Due to insufficient power, the findings of the inferential statistics must be tentative. Nonetheless, the combination of quantitative and qualitative findings suggest that the psychological preparedness elements of psycho-education and mental imagery are acceptable components of the ReTraIn Programme.

The two lowest rated preparedness components of the ReTraIn Programme were the demystification of the Post Incident Management (PIM) and Independent Office of Police Conduct (IOPC). These are two processes that occur following a high level critical incident and under exceptionally challenging circumstances. Response officers are not routinely exposed to these processes. Consequently, the lack of knowledge and rumour surrounding these processes can further anxiety in an officer who has already been exposed to a traumatic experience.

The qualitative feedback was more positive that the neutral score on the Evaluation measure suggested. The question format on the ReTraIn Evaluation may explain this discrepancy. Participants were asked if since the training, they had used their knowledge. Therefore, some participants may not have felt able to

response, as they may not have experienced these processes since ReTraIn. These processes occur only following the most challenging of critical incidents, such as a death following police contact. Therefore, the processes occur infrequently in the police service. Consequently, the question may have precluded responses and an accurate reflection of the input. This assertion is supported by the observation that six participants did not respond to these questions.

A further exploration during qualitative interviews supported the acceptability of the training input to demystify the processes. However, refinements to the delivery of this information were suggested. The future variant of the ReTraIn Programme will include a five minute pre-recorded video of a field expert answering the most frequently asked questions. Reference information will be accessible to officers on their mobile devices.

6.7 The Implications of ReTraIn for the Discipline of Counselling Psychology

Counselling psychologists bring a unique skill-set into the organisations that employ them. Therefore, it is incumbent upon counselling psychologists to not only provide appropriate psychological treatment for clients, but that we seek to identify the wider challenges that impact the psychological health of all potential service users and attempt to mitigate them. This can be achieved by identifying hotspots within an organisation, implementing targeted initiatives and testing their efficacy. In developing the Resilience to traumatic Incidents Programme (ReTraIn) for police constables, the author has attempted to realise this goal.

To the author's knowledge, ReTraIn is the first trauma resilience programme of its kind that has been implemented and tested in a UK police service. The

promising results obtained through the feasibility study has resulted in funding being secured to undertake a force-wide randomised control trial encompassing student officers, probationers, front-line officers, sergeants and inspectors.

This feasibility study and further research into the efficacy of ReTraIn has positive implications for front-line police officers as well as the demand on psychological services and counselling psychologists who work in this area. This research has helped to guide strategic decision on mental health and PTSD within the Police Force, as well as guide policy and procedure. There is also further scope to develop ReTraIn to support those in specialist roles and other blue light services.

The potential of providing positive change on both a strategic and local level is critical for our discipline. Many organisations are subject to budgetary restrictions and increasing demands on services. This can affect the ability to meet client needs and maintain a quality service while safeguarding the wellbeing of clinicians working in psychological services.

The police service is subject to the same challenges, and these must be met if positive change is to be affected. Indeed, approximately half of the author's clinical work undertaken in 2014/15 was trauma related. This is likely to increase in-line with Home Office cuts and increasing demands placed on police officers, unless research at a strategic level is conducted.

Recent research commission by the Police dependents' trust (2018) identifies that 1 in 6 police officers experience PTSD and four out of five officers are assaulted on duty. The resulting psychological and physical injuries are so severe that a third of these officers will require sickness absence. The implications of these figures allude to the significant psychological support that officers require, the subsequent pressure on in-house psychology services, and the potential demands on the practitioners who work within them.

The author acknowledges the importance of providing effective psychological treatment for police personnel experiencing PTSD. However, to focus solely on treatment is akin to fire-fighting. Conversely, it is hoped that this research may help reduce the number of officers requiring psychological support for trauma symptomology. The potential consequences are a reduction in service demand of the service and on practitioners.

6.8 Limitations of the Study

Whilst the data generated produced interesting findings about the possible outcomes of the ReTraIn programme. Due to the small sample size, these cannot be accepted with confidence. However, these findings will be explored in the future trial with a sample based on the power calculation for the primary outcome measure of this study.

Multiple analyses of the data were conducted at random. This increased the chance of finding some statistical significance within the data. A full trial would

correct for multiple comparison. However, given the fact that this is the initial study, preliminary analyses are justifiable to explore the data.

The author is employed as the Psychological Therapies and Research Manager in the organisation where the study was conducted. Occupying dual roles of the facilitator and practitioner many been a confounding variable in the study. This potential confound would be mitigated by separate these roles through training an alternative facilitator. This would remove potential bias in cases where a prior therapeutic relationship with the author may have influenced participants' acceptability of the Programme.

6.9 Directions for Future Research

The author has secured funding from the police force where she is employed and the Police Dependants' Trust to conduct a randomised control trial (RCT). The RCT will draw on the methodological issues of recruitment, retention, attrition, and acceptability of the trauma resilience training programme that have been assessed by the current feasibility findings.

The RCT will comprise around 400 police constables. Stratified sampling of frontline officers will balance gender, length of service and LPAs (Local Policing Area). These strata will be assigned to the trauma resilience training (TRT) or wait-list control (WLC) conditions using standard randomisation procedures. The RCT will assess the efficacy of the training programme for front-line police officers routinely exposed to traumatic incidents.

Data will be collected over four domains:

- Subjective reports relating to mental health, coping strategies, and resilience
- Psychophysiological measure of well-being and stress (Heart rate variability)
- Clinical diagnosis of PTSD
- Work-related data (e.g., number of days absent).

CHAPTER 7: CONCLUSION

To the author's knowledge, ReTraIn is the first trauma resilience programme to be implemented and tested with a police cohort in the UK. The primary focus of this study was to ascertain the acceptability of the ReTraIn Programme and the feasibility of a future trial. The promising results obtained through the feasibility study has resulted in funding being secured to undertake a force-wide randomised control trial. Methodological improvements to increase the recruitment and retention rate have been identified. The primary considerations are restricting the length of outcome measures and protecting time for officers to complete outcome measures. These suggestions will be incorporated and reviewed in the future RCT.

Quantitative and qualitative data have supported the acceptability of the Programme. Since attending ReTraIn, participants have adopted more problem-focused engagement coping strategies to cope with stressful or traumatic situations. This was observed particularly for cognitive restructuring. Findings also suggested that the more disengagement coping participants use, the more likely they will experience trauma symptomology form the avoidance subscale.

Participants also felt more psychologically prepared to cope with traumatic incidents since ReTraIn. This was associated with experiencing less trauma symptomology, especially avoidance. As a counselling psychologist in training working in the field of PTSD, this finding is particularly noteworthy as avoidance is theorised as the central precept of evidence-based PTSD treatment. For those participants who felt more psychologically prepared, there was a corresponding

decrease in problem-focused disengagement and emotion-focused disengagement coping strategies. These results support the continuum of 'risk-factor malleability' continuum as a conceptualisation of PTSD predictors (DiGangi, et al., 2013). The malleable predictors include coping styles (Pineles et al., 2011) which may be manipulated to provide trauma resilience.

This feasibility study and further research into the efficacy of ReTraIn has positive implications for front-line police officers as well as the demand on psychological services and counselling psychologists who work in this area. This research has helped to guide strategic decision on mental health and PTSD within the author's organisation, as well as guide policy and procedure. There is also further scope to develop ReTraIn to support those in specialist roles and other blue light services.

The nature of response policing means that officers are exposed to potentially traumatic incidents that can cause serious risk serious to their psychological and physical health. They do this willingly to serve their communities and protect members of the public. The findings of the feasibility study has suggested the acceptability of the ReTraIn Programme and has indicated tentative benefits. Above all, this Programme has been developed to offer much needed psychological resilience to these brave men and women, whom the author is privileged to support. This feasibility study may be the first step in achieving this.

P32: *I wish I had received this training as a probationer, as it could have prevented me from being damaged.*

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Part 2:

Article for Counselling Psychology Review

4,453 words

Abstract

Background: A range of potentially traumatic horrific, threatening or dangerous critical incidents can be encountered by police officers (Arnetz, Nevedal, Lumley, Backman, & Lublin, 2008). In U.K policing, reactive approaches to deal with traumatic exposure is the norm. However, the impact of these incidents is not ameliorate by debriefings and other short-term interventions (Violanti, 2006). Whilst trauma-focused therapies are available, the complex nature of the trauma history and co-morbidity of conditions presented by police officers, often result in a lengthy treatment process and period of recovery. Some officers may never return to frontline duties due to the severity of the psychological impact.

Aims: In recent years, there has been interest in developing trauma resilience for high-risk cohorts. However, none have been implemented in a U.K police service. The author has developed the Resilience to Traumatic Incidents (ReTraIn) Programme for frontline police, which has been adapted from efficacious interventions (Arnetz, Lumley, Pole, Blessman, & Arble, 2010; Manzella and Papazoglou, 2014). The aim of the Programme is to reduce unpredictability of an incident through imaginal exposure and build resilience to identified predictors of PTSD through an increase of engagement coping strategies.

Methods: The Programme was delivered to 45 frontline officers. Twenty-seven officers completed outcome measures 12 months following the intervention, and after 18 months eight officers attended acceptability interviews. The outcomes of the study were positive, although they must be considered tentative until replicated by a larger scale study. Since attending ReTraIn, participants used more engagement coping strategies (problem-focused), and felt more psychologically prepared to cope with traumatic incidents. There was an observed association

between psychological preparedness and a decrease in disengagement coping strategies. A positive association between disengagement coping and trauma symptomology supported the literature. Further, a non-significant reduction was observed in trauma symptomology.

Results: The findings of the feasibility study has suggested the acceptability of the ReTraIn Programme and has indicated tentative benefits which merit further research.

Conclusions: Research into the efficacy of ReTraIn has positive implications for front-line police officers as well as the demand on psychological services and counselling psychologists who work in this area.

Purpose

“Victim in South Wales ‘cannibal attack’ met her alleged killer hours earlier” (The Guardian, 2014).

“He's eating her: 999 phone call about 'cannibal killer' attack at Welsh hotel. 'There was screaming and screaming,’ [she] told the 999 operator. 'Oh my God. It's awful' A hotel owner cried out “he’s eating her” in a frantic 999 call after seeing a “cannibal” killer mauling the face of his victim, an inquest has heard”. (The Independent, 2017).

A range of horrific, threatening or dangerous critical incidents can be encountered by police officers working on the frontline. These are potentially traumatic as they can compromise police officers’ psychological and physical integrity (Arnetz, Nevedal, Lumley, Backman, & Lublin, 2008). There is also the risk for police

officers to be seriously assaulted, injured or killed (Halpern, Maunder, Schwartz, & Gurevich, 2012).

Police officers who are frequently exposed to occupationally-derived trauma have an elevated risk of adverse mental health outcomes (Prati & Pietrantoni, 2010). Police Complex Spiral Trauma (PCST) conceptualises the unique form of trauma within the police culture. The complex and cumulative trauma experienced by officers can form and expand through time, tension, and frequency of multiple and potentially traumatic exposure during years of police service (Papazoglou, 2013). The result of such exposure can result in police officers suffering with post-trauma stress disorder (PTSD). Indeed, during the last 5 years one in six police officers in the U.K have been absent for a week or more due to PTSD (Police Dependants' Trust, 2018). The psychological impact of PTSD on the individual can be devastating, but also has repercussions in the wider familial, organisational and societal context; including in services where counselling psychologists provide much needed therapeutic treatment.

The author has developed the Resilience to Traumatic Incidents (ReTraIn) Programme for frontline police constables. The essence of this programme is to adequately prepare officers prior to trauma exposure. The aim is to reduce unpredictability of the incident and to specifically build resilience to identified predictors of PTSD (Maia et al., 2011). This could enable officers to proffer adaptive coping in place of maladaptive strategies (Ciarrochi, Deane, & Williams, 2010; Howard, Tuffin, & Stephens, 2000; Koch, 2010), increasing a sense of peri-trauma and post-trauma control.

The implementation of this trauma resilience programme could psychologically prepare officers for exposure to threatening critical incidents. Preparation could render the event less traumatic, rather than waiting until the officer has been exposed and disturbed by the incident (Arnetz, Lumley, Pole, Blessman & Arble, 2010). To the author's knowledge this proactive programme is the first of its kind in the U.K. The aim of the current study is to identify the acceptability of the ReTraIn Programme and explore the feasibility of conducting a larger scale study.

Methods

The two-day Resilience to Traumatic Incidents programme (ReTraIn) was delivered to a sample of 45 front-line police officers from a U.K police force. Measures were taken at base-line and 12 months following their attendance. This feasibility study explored methodological issues of recruitment, retention, attrition, and acceptability. Additionally, the outcome measures provided tentative findings pertaining to the successful application of the ReTraIn Programme and its components. In the absence of a control group, these findings provide a necessary basis from which to develop further research with a larger sample.

Development of the ReTraIn Programme

The author scripted ten trauma scenarios based on an amalgam of the five most frequently presented themes presented to the in-house counselling service. Clients gave their permission for their experiences to be incorporated into the scenarios. These experiences were anonymised and no identifiable information was used.

The inclusion of these themes in the Critical Incident History Questionnaire (Weiss, *et. al.,* 2010) suggested the universality of their potential psychological impact. The author collaborated with a sergeant and inspector who provided additional policing details and tactics and co-facilitated the delivery of the Programme.

The scenarios that were developed for ReTraIn were: 1) assault on duty; 2) witnessing an injury to a colleague; 3) the death of a baby; 4) fatal road traffic collision; and 5) completed suicide. Two versions of each scenario were scripted, standard and enhanced. The enhanced scenarios were based on their corresponding standard versions, but incorporated additional mindfulness and policing prompts. Additionally, there were different outcomes in the enhanced versions of the assault on duty and witnessing an injury to a colleague, compared with the standard versions.

To aid participants' ability to visualise the critical incidents and increase authenticity, the scripts were narrated by police personnel who had acting experience. Policing and mindfulness prompts in the enhanced scenarios were voiced by the sergeant and author respectively. The author narrated the additional relaxation, mindfulness and safe-place exercises. The audio recordings were produced in-house by the Organisation's Corporate Communications department. Each scenario included sound effects to facilitate participants' visualisation and engagement in the exercise.

A PowerPoint presentation that had been embedded with video and audio files was delivered to participants using a computer linked to a projector. QuickTime 7 was installed on the computer to allow the audio and video files to be played. Participant packs containing PowerPoint hand-outs, supplementary exercises and a bibliography were provided. The supplementary exercises section contained information on challenging unhelpful thoughts, a template and an example of a thought record, a grounding exercise and self-talk skills. Each pack contained a password-protected CD-ROM. This contained audio files of the standard and enhanced trauma scenarios used during the Programme. Additionally, adapted versions of the relaxation, mindfulness and safe-place exercises for home use were included.

The Programme was facilitated by the author and was co-facilitated by an experienced police officer. Uniformed co-facilitation by an experienced officer who has an interest in support mental health, provides an important addition to training. Such co-facilitators can draw on their policing experience and speak to the compatibility of trauma resilience strategies with operational demands.

Measures

PTSD Checklist for Screening.

The Post-traumatic Stress Disorder Checklist – Civilian Version (PCL-C; Weathers, Litz, Huska, & Keane, 1993) was used to supplement clinical interviews with officers who had answered the questions of the screening checklist affirmatively. The PCL-C is a standardized self-report rating scale for PTSD which is applied generally to any traumatic event. The scale comprises 17

items that correspond to the key symptoms of PTSD. Respondents rate how much they have been bothered by a symptom over the past month on a 5-point Likert format, ranging from 1‘not at all’ to 5 ‘extremely’. Response categories 3–5 (moderately or above) were treated as symptomatic and responses 1–2 (below moderately) as non-symptomatic. The PCL-C has demonstrated good internal consistency and retest reliability. In addition, favourable patterns of convergent and discriminant validity have been observed.

Traumatic symptomology.

The Impact of Event Scale—Revised (IES-R; Weiss & Marmar, 1996) was the primary study outcome measure of trauma resilience. This is a self-report measure of traumatic stress composed of 22 items. The intensity of distress associated with a chosen event was measured on a five-point scale ranging from 0–4, with labels of ‘Not at all’ to ‘Extremely’. The scale assessed PTSD symptomatology during the past 7 days.

There are three subscales: avoidance, intrusion and hyperarousal; and a total score. The three subscales have strong internal consistency and satisfactory test–retest reliability (Weiss & Marmar, 1996). The internal consistency reliability of the subscales has been found to be high, with avoidance alphas ranging from .84 to .86, intrusion alphas ranging from .87 to .92, and hyperarousal alphas ranging from .79 to .90 (Morris et al., 2005) .

Coping.

The Coping Strategies Inventory Short 32 (CSI-S; Tobin, Holroyd, Reynolds & Wigal, 1989; Tobin, Holroyd, & Reynolds, 1984) was the primary outcome measure for assessing engagement and disengagement coping. The 32-item scale assessed the coping thoughts and behaviours in response to a traumatic or challenging situation stressor of respondents' choosing. The extent to which participants performed a particular coping response was indicated on a 5-item Likert scale, ranging from 'not at all' to 'very much'.

The CSI-S incorporates primary and higher order subscales relating to engagement and disengagement coping strategies. Engagement coping reflects the participants' on-going negotiation with the stressful environment. The Engagement Tertiary Subscale includes Primary Subscale items of problem solving, cognitive restructuring, social support and express emotions. Primary items are combined to reflect Problem Focused and Emotion Focused Secondary Subscale items.

In contrast, disengagement coping refers to strategies that result in withdrawing from the person/environment transaction. Consequently, behaviours that might improve the situation are not initiated, thoughts about the situation are avoided and feelings are not shared. The Disengagement Tertiary Subscale includes, problem avoidance, wishful thinking, self-criticism and social withdrawal items from the Primary Subscale. Primary items are combined to produce the Secondary

Subscales of Problem Focused Disengagement and Emotion Focused Disengagement (Tobin, et al., 1984, Tobin, et al., 1995).

Results

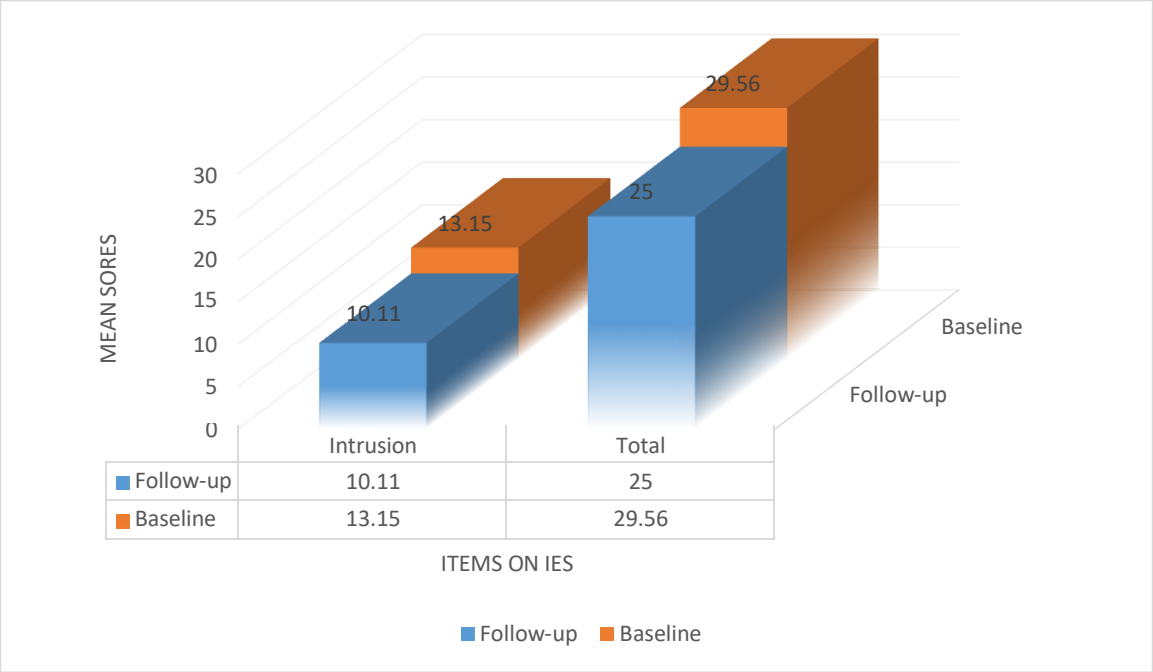
Changes in trauma symptomology.

A comparison of total scores for participants at baseline and follow-up, was conducted using a paired samples t-test. The follow-up means for the Impact of Events Scale-Revised (IES-R; Weiss & Marmar, 1997) total score was lower (M = 25.00, SD = 21.54) compared with base-line mean scores (M = 29.56, SD = 21.20), although there was no statistically significant change ($t(26) = 1.359$, p = 0.186, d = 0.261.

A paired samples t-test was used to compare pre-training and follow-up outcomes of the IES subscales of intrusion, avoidance and hyperarousal. Changes were observed between the means on the intrusion subscale. The outcomes of intrusion were lower 12-months after completing ReTraIn (M = 10.11, SD = 9.08) than measures taken before the intervention (M = 13.15, SD = 8.75). Although this change was not statistically significant, $t(26) = 2.005$, p=0.055, d =0.385, it suggests a trend toward a reduction of intrusive thoughts and images. The means for the avoidance subscale were lower at follow-up (M = 8.63, SD = 7.36), however there was no statistically significant change compared with baseline (M = 9.44, SD = 7.63) measures, $t(26) = 0.546$, p =0.590, d = 0.104. For the measure of hyperarousal, baseline measures were marginally lower (M = 6.96, SD = 6.60) than observed at follow up (M = 6.26, SD = 6.41), although this was not statistically significant $t(26) = 0.704$, p =0.488, d= 0.135.

Figure 1

Illustrating comparison of mean IES scores



Trauma symptomology and disengagement coping strategies.

Statistically significant, positive correlations were observed between the disengagement coping subscale of problem avoidance and the IES-R trauma subscales of avoidance $r(21) = .55$, $p = .007$ and the IES-R composite score $r(21) = .42$, $p = .047$. The strength of these associations were strong and moderate respectively.

The strongest positive associations were between CSI-S primary disengagement subscale of self-criticism with the total IES-R score $r(21) = .71$, $p < .001$ and its three subscales: intrusion $r(21) = .66$, $p = .001$; avoidance $r(21) = .69$, $p < .001$ and hyperarousal $r(21) = .70$, $p < .001$. Large, positive and significant associations were found between CSI-S primary subscale of social withdrawal, the IES-R total

score $r(21) = .59$, $p = .003$, and its subscales of intrusion $r(21) = .55$, $p = .007$, avoidance $r(21) = .54$, $p = .009$, and hyperarousal $r(21) = .62$, $p = .002$.

There were large statistically significant, positive correlations with IES-R avoidance subscale and the CSI-S disengagement subscale of wishful thinking $r(21) = .58$, $p = .004$. The remaining subscales of intrusion $r(21) = .41$, $p = .049$, hyperarousal $r(21) = .51$, $p = .013$, and IES-R total follow-up scores $r(21) = .52$, $p = .011$, were moderately associated with wishful thinking. These data suggest that disengagement strategies are associated with higher IES scores. There were no statistically significant correlations problem avoidance and the symptom of intrusion r(21) =-.30, p =.159 and hyperarousal r(21) =.35, p =.104.

Table 1

Table showing correlations between IES subscales and total scores with CSI primary disengagement subscales.

CSI-S primary disengagement subscales				
IES-R symptoms	**Problem avoidance**	**Wishful thinking**	**Self-criticism**	**Social withdrawal**
Intrusion	.304	.414*	.664**	.547**
Avoidance	.547**	.576**	.687**	.535**
Hyperarousal	.348	.509*	.699**	.622**
Total score	.418*	.519*	.712**	. 588**

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

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

Psychological preparedness and trauma symptomology.

A statically significant, negative correlation of moderate strength was observed between the IES total score and participants' assertion that since attending the ReTraIn Programme 'I feel more psychologically prepared to cope with traumatic incidents' $r(25) = . -.39$, $p = 0.04$. This statement was significantly, negatively correlation with the avoidance symptoms $r(21) = -.48 p = 0.01$. There was a statistically significant negative correlation of moderate strength between participants' evaluation of their psychological preparedness to deal with traumatic situations and problem focused disengagement $r(21) = -.42$, $p = 0.05$, and emotion focused disengagement $r(25) = -.51$, $p = 0.01$ on the CSI.

Table 2

Table showing negative correlations between participants' self-reported psychological preparedness with follow-up measures

ReTraIn Follow-up	IES global score	IES avoidance	CSI problem focused disengagement	CSI emotion focused disengagement
Psychological preparedness	-.393*	-.484*	-.415*	-.513*

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

Coping strategies.

Engagement coping.

Baseline and follow-up changes in participants' problem-focused engagement as determined by the CSI, were analysed using a paired-samples t-test. When coping with a stressful or traumatic situation, participants' used more problem focussed engagement following ReTraIn (M = 25.71; *SD* = 6.09) than before the

intervention (*M* = 20.60; *SD*= 6.92), (*t*(16) = 2.686, *p* =.*016*, *d*= .65). When comparing baseline (*M* = 9.80; *SD* = 3.70) and follow-up (*M* = 13.00; *SD* =3.61) means for the cognitive restructuring subscale, a statistically significant change was observed, *t*(16) = -3.084, *p* = 0.007, *d*=-.747. This suggests that following ReTraIn participants utilised more cognitive restructuring when coping with stressful situations.

A non-significant change between baseline (*M*=10.29; *SD*= 4.12) and follow-up (*M*=12.77; *SD*=2.97) was observed on the problem solving subscale, *t*(16) = -1.983, *p* = 0.065. *d*= -.480. A non-significant change was observed between follow-up (*M*=10.18; *SD* = 3.03) and baseline *(M* = 9.94; *SD* =5.64) measures of social support, *t*(16) = -0.194, *p* = .849, *d*=-.046.

Figure 2.

Illustrating significant changes in problem focused engagement and cognitive restructuring

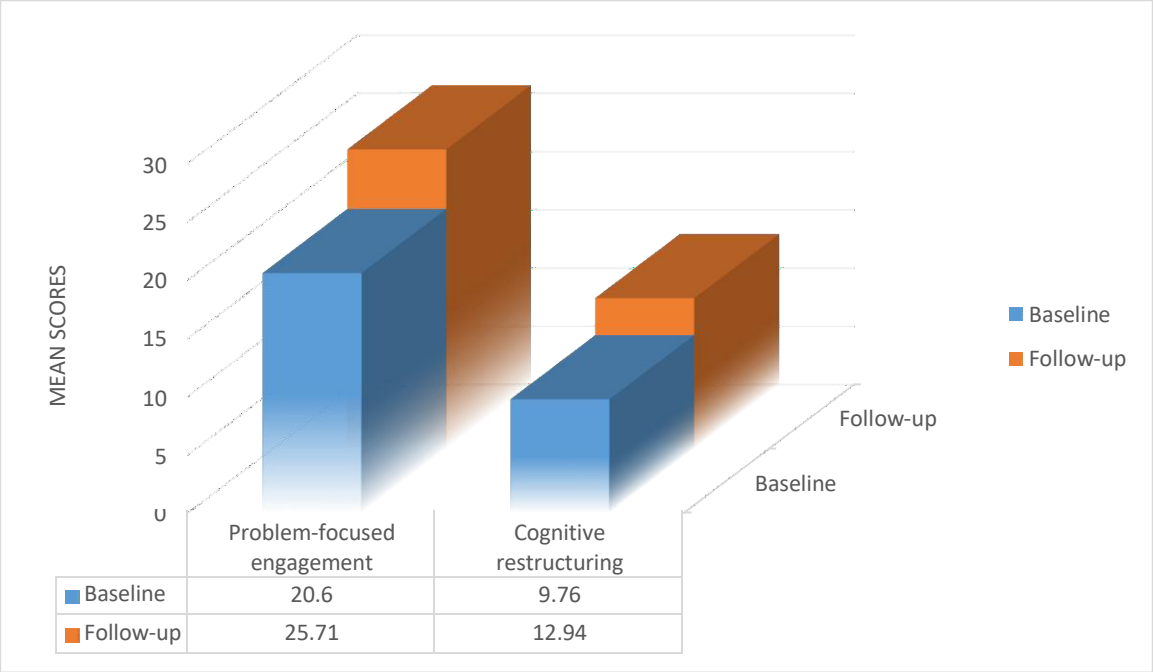


Table 3

Illustrating comparison of mean and statistical analyses of CSI subscales

	Baseline		Follow Up		Sig (2-tailed)
	Mean	SD	Mean	SD	
Primary Scales					
Engagement					
Problem Solving	10.29	4.12	12.76	2.97	.065
Cognitive Restructuring	9.76	3.70	12.94	3.61	.007
Express Emotions	10.83	5.21	12.06	3.45	.338
Social Support	9.94	5.64	10.18	3.03	.849
Disengagement					
Problem Avoidance	8.65	2.87	7.71	3.67	.247
Wishful Thinking	20.41	32.14	7.65	3.37	.127
Self-Criticism	7.53	4.19	7.59	2.65	.954
Social Withdrawal	7.71	5.23	9.06	4.16	.222
Secondary Scales					
Engagement					

Problem Focused Engagement	20.06	6.92	25.71	6.09	.016
Emotion Focused Engagement	21.28	10.48	22.06	5.58	.736
Disengagement					
Problem Focused Disengagement	17.73	6.44	15.46	7.18	.263
Emotion Focused Disengagement	16.20	7.75	17.13	6.61	.596
Tertiary Scales					
Engagement	40.82	14.61	47.94	10.70	.206
Disengagement	31.61	12.86	31.56	11.24	.984

Power calculation.

Drawing on the effect size (d = 0.261) achieved in the total change of IES between baseline and follow-up, a power calculation was carried out. With standard parameters (α =.05, β = .20), a slightly more conservative effect size of 0.25 suggests that a future randomised-control trial will need to have a sample size of 200 in each arm in order to find a statistically significant result. There was a 40% attrition rate observed in this study. On this basis, a total sample of 667 participants will need to be recruited to achieve follow-up retention of 400 participants.

Discussion

Increase in engagement coping strategies.

Since attending ReTraIn, participants used more self-reported problem-focused engagement coping strategies and particularly cognitive restructuring during stressful or traumatic situations. These are coping efforts based on cognitive and behavioural strategies that are focused on changing the actual stressful situation

itself or meaning of the situation for individual (Tobin, et al., 1984, Tobin, et al., 1995). The ReTraIn Programme is based on cognitive and behavioural theories that have been influential in explaining the development and maintenance of post-traumatic stress disorder (PTSD). Thus, the coping strategies in the Programme are predominantly cognitive-behavioural and includes third-wave mindfulness practice. While these results are tentative, they suggest an acceptability of the Programme and support the feasibility of undertaking further research.

Psychological preparedness negatively correlated with trauma symptomology

Response officers deal with highly emotive, horrific, threatening or dangerous incidents (Arnetz, et al., 2010). The nature of these periods of high demand mean that officers have very little control over their daily activities and a lack of psychological preparedness (Hesketh & Tehrani, 2018).

The results of the current study suggested that the more psychologically prepared participants felt in dealing with traumatic incidents, the less trauma symptomology they experienced. This was particularly evident in the avoidance symptom cluster. These results support the literature that that psychological preparation may render a potentially traumatic incident less threatening (Arnetz, et al., 2008; 2010). This can be explained through the activation of brain systems which are thought to be activated by peri- and post-traumatic fear following critical incident exposure. The amygdala and hypothalamic–pituitary–adrenal axis have a role in triggering and regulating peripheral physiological activation. The prolonged or intense activation of these symptoms appear to contribute to the

psychophysiological, cognitive, and behavioural abnormalities associated with PTSD. Therefore, if peri-traumatic distress and dissociation were mitigated through psychological preparation, trauma symptoms would be less likely to persist (Arnetz et al., 2008, 2010).

Psychological preparedness negatively correlated with engagement coping strategies

The results of the current study identified that participants who felt more psychologically prepared in dealing with traumatic incidents, there was a corresponding decrease in using problem-focused disengagement and emotion-focused disengagement coping strategies. This suggests that the more psychologically prepared officers felt since ReTraIn, they were less likely to rely on wishful thinking, problem avoidance, social withdrawal and self-criticism to cope with stressful or traumatic events. These results support the continuum of 'risk-factor malleability' continuum as a conceptualisation of PTSD predictors (DiGangi, et al., 2013). The malleable predictors include coping styles (Pineles et al., 2011) which may be manipulated to provide trauma resilience.

Disengagement coping positively correlated with trauma symptomology

Disengagement coping is problematic as it interferes with the successful processing of the trauma memory. Consequently, reliance on avoidant coping may be result in a strong association between physiological reactivity to trauma reminders and PTSD symptom maintenance. (Pineles et al., 2011). This positive

association between disengagement coping strategies and trauma symptomology was observed in the current study.

The symptom of avoidance was strongly correlated with problem avoidance, wishful thinking, social withdrawal and self-criticism. This suggests that the more disengagement coping participants use, the more likely they will experience trauma symptomology form the avoidance subscale. As a counselling psychologist working in the field of PTSD, this finding is particularly noteworthy as avoidance is theorised as the central precept of evidence-based PTSD treatment.

Limitations of the study

Due to the small sample size, these cannot be accepted with confidence. However, these findings will be explored in the future trial with a sample based on the power calculation for the primary outcome measure of this study.

Multiple analyses of the data were conducted at random. This increased the chance of finding some statistical significance within the data. A full trial would correct for multiple comparison. However, given the fact that this is the initial study, preliminary analyses are justifiable to explore the data.

The author is employed as the psychological therapies and research manager in the organisation where the study was conducted. Occupying roles of the Programme facilitator and counsellor practitioner may have been a confounding variable in the study. This potential confound would be mitigated by separating

the roles of the facilitator and researcher. This would lessen the visible connection between the author and the Programme and the potential impact on participants with whom a prior therapeutic relationship has been formed.

Directions for future research

The author has secured funding from her organisation and the Police Dependants' Trust to conduct a randomised control trial (RCT). The RCT will draw on the methodological issues of recruitment, retention, attrition, and acceptability of the trauma resilience training programme that have been assessed by the current feasibility findings.

Conclusion

To the author's knowledge, ReTraIn is the first trauma resilience programme that has been implemented and tested with a U.K police force. The primary focus of this study was to ascertain the acceptability of the Programme and the feasibility of a future trial.

The nature of response policing means that officers are exposed to potentially traumatic incidents that can cause serious risk serious to their psychological and physical health. They do this willingly to serve their communities and protect members of the public. The findings of the feasibility study has suggested the acceptability of the ReTraIn Programme and has indicated tentative benefits. Above all, this Programme has been developed to offer much needed psychological resilience to these brave men and women, whom the author is privileged to support. This feasibility study may be the first step in achieving this.

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