Police officers' experiences of social support after traumatic incidents

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Contents

Overview

This volume is in three sections.

The literature review examines the evidence for social support mitigating Post Traumatic Stress Disorder (PTSD) in emergency service personnel. Nineteen studies met the criteria for the review. A negative correlation between social support and PTSD symptoms was consistently reported, but the quality of evidence was variable. Further longitudinal research, and more sophisticated measurement of social support, is needed.

The empirical paper reports on a qualitative study exploring police officers' experiences of supportive and unsupportive interactions following potentially traumatic incidents. Semi-structured interviews were conducted with 19 police officers; transcripts were analysed thematically. A range of supportive interactions were described. Ambivalence about the use of talking was common, especially in the work context. Formal sources of work-based support were viewed sceptically, with a preference for humour and indirect talk with colleagues. Outside work, partners were a central source of support, although concerns that others would not understand the nature of emergency work or required protection from it, acted to constrain these interactions.

The critical appraisal reflects on the process of planning and executing the research presented in the empirical paper, with a focus on recruitment and the interviewing process. The intertwining effects of the researcher on the research, and vice versa, are considered, with reference to epistemological and personal reflexivity.

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Part 1: Literature Review

Does social support mitigate PTSD in the context of emergency service work?

Abstract

Objectives: A lack of social support has been identified as a key risk factor for Post Traumatic Stress Disorder (PTSD). This finding extends to the context of emergency service work, which has inherent high levels of trauma exposure. This review examined the evidence for a link between social support and PTSD symptoms in emergency service personnel, with a focus on how adequately key variables have been measured and the quality of the study designs.

Method: Studies were included if they contained a quantitative measure of social support and PTSD and used a sample of emergency service workers. Nineteen studies were identified that met the criteria.

Results: Most studies reported an association between social support and PTSD, but the quality of evidence was variable. Measurement of social support relied primarily on standardised measures with questionable suitability. The measurement of PTSD was adequate and comparable across studies. The majority of studies employed a cross-sectional design, precluding conclusions about causality. A wide range of other variables were measured as risk or confounding factors, often with a limited rationale for their inclusion.

Conclusions: More longitudinal research is required to assess the relationship between social support and PTSD in this population. Theory and empirical findings in the PTSD literature should be used to inform the selection of other predictor variables, so that the unique contribution of social support can be established. Further research is needed to assess both positive and negative social interactions as well as the role of the source of support.

Introduction

Emergency service personnel are exposed to trauma on a recurrent basis as part of their work. Consequently, it is not surprising that this group has a heightened risk of Post Traumatic Stress Disorder (PTSD) in response to the events they witness. Clohessy and Ehlers (1999) report PTSD lifetime prevalence rates between 10% and 17% from studies conducted with emergency workers responding to disasters. This compares to lifetime prevalence estimates of around 6% in the general population (Frans, Rimmö, Åberg, & Fredrikson, 2005).

However, despite the high level of exposure, many emergency workers do not go on to develop PTSD. There are numerous possible factors and mechanisms that may confer risk and/or resilience to trauma and research investigating these has major clinical implications for this group. Social support is one such factor and is the focus of this review.

Social Support and PTSD

Relationships and interactions with others are important in determining general wellbeing, especially in stressful situations (Agaibi & Wilson, 2005). Indeed, having access to socially supportive relationships is seen as a key resilience factor across the life-span and has been shown to be predictive of good outcomes in a range of domains (Lerias & Byrne, 2003).

Within the field of PTSD, a lack of, or poor quality, social support has been identified as a key risk factor (Brewin, Andrews, & Valentine, 2000; Ozer, Best, Lipsey, & Weiss, 2003). Evidence from longitudinal studies (e.g., Kaniasty & Norris, 2008; North et al., 2002) indicates support for both the hypothesis that social support buffers the effects of trauma exposure (and so reduces the risk of PTSD), and the hypothesis that PTSD symptoms erode social support. However, the majority of

studies in this area are cross-sectional, which leaves open the question of causality and the precise mechanisms and processes underlying these findings remain unclear (Charuvastra & Cloitre, 2008).

Conceptualisation and measurement of social support. Social support refers to a social network's provision of psychological and material resources intended to benefit an individual's ability to cope with stress (Cohen, 2004). Social support is conceptualised in terms of three categories: emotional (e.g., talking over a problem, providing encouragement/positive feedback), instrumental (e.g., help with childcare, provision of transportation or money) and informational support (e.g., advice). Emotional support has been conceptualised as the most relevant type of support for facilitating adjustment to stressful events (Charuvastra & Cloitre, 2008).

Measures typically include the three categories outlined above and have been distinguished on the basis of whether they assess 'perceived' or 'received' social support. The former refers to the perceived availability of support whereas the latter refers to support actually provided (Cohen, Underwood, Gottlieb, & Institute, 2000). A further category of measurement is 'support adequacy', which can be likened to the perceived quality of support or satisfaction with support (Gottlieb & Bergen, 2010). One issue with these definitions is that social support measures are, by their self-report nature, tapping perceptions. Consequently, discrepancies exist in how measures are described across studies. As will be elaborated later, this is an issue given the importance of these distinctions when considering the strength of the relationship between social support and outcome measures (Prati & Pietrantoni, 2010).

A further distinction is sometimes made between different sources of support, e.g., whether it is provided by colleagues or family members, with the assumption

that different types of relationship will confer different types of support. For example, support from a romantic partner has been found to be associated with health benefits, particularly for men (Kiecolt-Glaser & Newton, 2001). In a study of older adults, support from friends was sought in relation to emotional difficulties (e.g., loneliness or social issues) whereas support from family (i.e., children and partners) was preferred for tangible aid (Cantor, 1979). The same distinction has been reported for adolescents with diabetes: friends provided emotional support whereas family members were more important in the delivery of instrumental support (La Greca et al., 1995). In the context of emergency service work, an interesting question is whether different types of support are sought (or provided) from work colleagues or those outside of work.

Theoretical context for the links between social support and PTSD. Cognitive models are widely accepted as providing a strong theoretical basis for understanding the development of PTSD. Variously conceptualise, cognitive models (e.g., Brewin, Dalgleish, & Joseph, 1996; Ehlers & Clark, 2000; Horowitz, 1986) centre on the idea that PTSD arises when individuals process a traumatic event in a way that leads to a sense of serious, current threat. Ongoing extreme negative appraisals of the trauma or its consequences result in cognitive and behavioural avoidance of the trauma memory and associated stimuli. Consequently, the trauma memory fails to be fully processed and is therefore prone to retrieval by sensory cues (as seen in intrusive flashbacks and nightmares). Within the cognitive tradition, a reduction in social support has been framed as a secondary trauma response related to the avoidance of trauma cues – especially in the case of trauma that is interpersonal in nature (Carlson, 1997).

Other models of PTSD such as that by Joseph, Williams and Yule (1997) and Lepore's (2001) social cognitive processing model more explicitly recognise the role of social support. These models are discussed in detail by Guay, Billette and Marchand (2006) who review the theory accounting for the relationship between social support and PTSD along with the empirical evidence. In brief, these models suggest that the interactions related to searching, perceiving, and receiving support can either have a helpful effect on emotional adjustment after trauma or act in a way that induces or maintains more distress.

Lepore (2001) suggests that unsupportive, unreceptive and critical responses from others are unhelpful because they alter the willingness to talk to others and disclose thoughts and feelings about the trauma, which in turn impacts on the level of opportunity to gather information that could facilitate processing and contextualisation of the trauma memory. Furthermore, negative responses from others may lead to the avoidance or suppression of thinking about the trauma which hampers processing. Lepore and Greenberg (2002) summarise the effect of unsupportive reactions as undermining the processes by which a person develops skills to gain control over the negative emotions arising from trauma exposure. Although support for this model has been demonstrated (e.g., Ullman & Filipas, 2001), questions still remain about how these effects operate and whether unsupportive social support is simply the reverse of supportive social support processes or whether there are distinct pathways.

From a different perspective, Charuvastra and Cloitre (2008) integrate findings from developmental psychopathology, attachment theory and social neuroscience to propose that the risk or resilience to PTSD conferred by social relationships evolves from the context of childhood development. Childhood

attachment, which has neurobiological underpinnings, functions to assist emotion regulation. In adulthood, intimate social bonds attenuate fear reactions via reducing activation of fear-related brain circuits and neurochemical reactions (Coan, Schaefer, & Davidson, 2006), consequently promoting resilience to stressful events. Alternatively, social distance can strengthen fear responses (Olsson, Ebert, Banaji, & Phelps, 2005), thus increasing the risk that events will be experienced as traumatic and so increasing the likelihood of PTSD. Furthermore, without a sense of safety conferred by a positive social relationship or bond, the ability to recover from PTSD (as described by the social and/or cognitive theories of PTSD) is reduced (Pearlman & Courtois, 2005).

Social Support in the Context of Emergency Service Work

The nature of their employment requires emergency service personnel to knowingly encounter traumatic events where their own safety may be threatened. Alongside a heightened risk of encountering trauma personally, the work involves witnessing trauma befalling others. The concept of vicarious trauma is of relevance here and has been linked to burnout and fatigue in this population (e.g., Alexander & Klein, 2001). Summarising research in this area, Lerias and Byrne (2003) report that the effects of vicarious trauma often go undetected because people are not directly involved in the events.

Prati and Pietrantoni (2010) reviewed 37 studies to examine the relationship between social support and mental health among ‘first responders’ and other related professionals. Their meta-analysis found an overall weighted mean effect size of medium magnitude ($r = .27$), similar to that reported in Ozer et al.’s (2003) meta-analysis of studies of trauma victims. Prati and Pietrantoni’s (2010) review focused

on the distinction between received (i.e. actual) and perceived (i.e. the availability of) support, reporting the latter to have a larger effect size.

Whilst strong in terms of the fairly substantial body of studies entered into the meta-analysis, there are several limitations to Prati and Pietrantoni's (2010) review. The review considered the effect of trauma exposure on a range of mental health variables, rather than purely PTSD; it also included a large range of professional groups (e.g., emergency dispatchers responsible for taking calls and canine handlers). While this broad focus provides a useful overview of the area, it does not provide a clear picture of the relationship between social support and PTSD among emergency service workers. Furthermore, the review included studies from the grey literature and it is difficult to ascertain the quality of the evidence.

Aims of this Review

This review aims to build on Prati and Piertrantoni's (2010) work, by examining the quality of evidence with a tighter focus in terms of population (emergency service workers only) and outcome variables (PTSD only). The review addresses the following questions:

(1) To what extent does social support mitigate PTSD in emergency service workers?

(2) What is the quality of the evidence? In particular, how adequately have social support and PTSD been measured in these studies, and what is the quality of the study designs?

Method

Inclusion and Exclusion Criteria

Papers were included for review if they:

(1) Used a quantitative measure of social support. A decision was made to exclude studies that used a single item measure or that made inferences about social support based on general coping or work related satisfaction measures. Similarly, studies were excluded if they used indirect measures of social support such as measures of family function, marital satisfaction or personality variables such as attachment. Whilst these concepts relate to social support, they represent separate constructs.

(2) Used a measure of PTSD, either a questionnaire or a semi-structured interview that yielded data that could be quantified.

(3) Examined the relationship between social support and PTSD. Studies were excluded if they measured these variables but did not report on the association in any way, e.g., only considered these measures in relation to a third variable.

(4) Conducted the research with frontline emergency service personnel (fire fighters, police officers and ambulance paramedics) who worked in this role as their main source of employment, in a paid capacity and within a state organisation (rather than a private company). This resulted in the exclusion of studies sampling relief rescue workers or aid workers. Although this population do respond to trauma, it is in the context of disaster, rather than exposure on a prolonged, ongoing and recurrent basis as is the nature of the work done by state-employed frontline emergency service personnel. Studies were excluded where there was insufficient information about the participants to decide if inclusion criteria were met. Studies were also excluded if the participants were not exposed to trauma in the context of frontline work, e.g., forensic technicians.

Search Strategy

The literature search was performed on PsycINFO and PILOTS (Published International Literature on Traumatic Stress) databases, limiting results to English only, peer-reviewed journal articles. A slightly different search strategy was adopted for each database due to their different foci and organisation of thesaurus terms. In addition to using the identified relevant thesaurus terms, a text word search was performed to avoid missing articles which might not yet have been assigned keywords. Developing terms to reflect concepts of interest was informed by reading relevant published papers such as the reviews by Prati and Pietrantoni (2010), Ozer et al. (2003) and Brewin et al. (2000). A wide range of terms was used for emergency service personnel to avoid missing relevant papers.

Search on PsycINFO. A text word search as well as a thesaurus search was performed for each of the three central concepts: social support, emergency service personnel and PTSD. Thesaurus terms were carefully considered before selection and text word terms were designed to reflect those used in published work in the field. A decision was taken to exclude emotional adjustment or mental disorders as thesaurus headings or text word search terms because inclusion of these terms during scoping searches produced an unwieldy amount of literature, most of which was not relevant. The following search strategy was utilised:

Social support: exp Social Support/ or exp Interpersonal Relationships/ or exp Interpersonal Interaction/

OR

interpersonal interact* or interpersonal relation* or social support* or (social resource* or social network*) or (peer support* or peer interact*) or (support* behavio*r* or support* interact*) or family process* or family relation* or family

interact* or family support*) or (colleague* support* or colleague* interact*) or (supervisor* support* or supervisor* interact*)

Emergency service personnel: exp Emergency Services/ or exp Rescue Workers/ or First Responder/

OR

first respon* or disaster work* or (rescue work* or rescue personnel) or fire fight* or firem*n or fire personnel or firefighter) or (police or law enforce*) or (ambulance or paramedic*) or (emergency service* or emergency work* or emergency personnel).

PTSD: exp Posttraumatic Stress Disorder/

OR

(posttraumatic stress disorder or PTSD)

(Note: 'exp' indicates that the term was exploded to include narrower subject headings or descriptors.) Truncated and adapted terms were used to allow for variations in American/English spelling and variations in keywords such as emergency service personnel/disaster workers. Each step of the search was performed separately to minimise error and allow for the search to be edited and run in different combinations if needed in the future. The final step involved combining each of the concepts with 'AND'.

Search on PILOTS. PILOTS is a specialist international database that indexes articles on PTSD and other mental health consequences of traumatic events. During scoping searches it became apparent that including PTSD as a search concept was unnecessary due to the nature of the database. Searching the concepts of social support and emergency service personnel was sufficient to locate relevant studies. The same text word searches were conducted using the terms set out above; however unlike PsycINFO, PILOTS does not have an option to search within the title, abstract

and keywords. The search was performed within keywords and within abstracts separately. As the abstract search consistently identified fewer articles than the keyword search, the latter was used. The thesaurus terms selected to be combined with 'or' text word searches are presented below.

Social support: exp Social Support Networks/ or exp Interpersonal Interaction/

Emergency service personnel: exp Emergency Personnel/ or Paramedical Personnel/

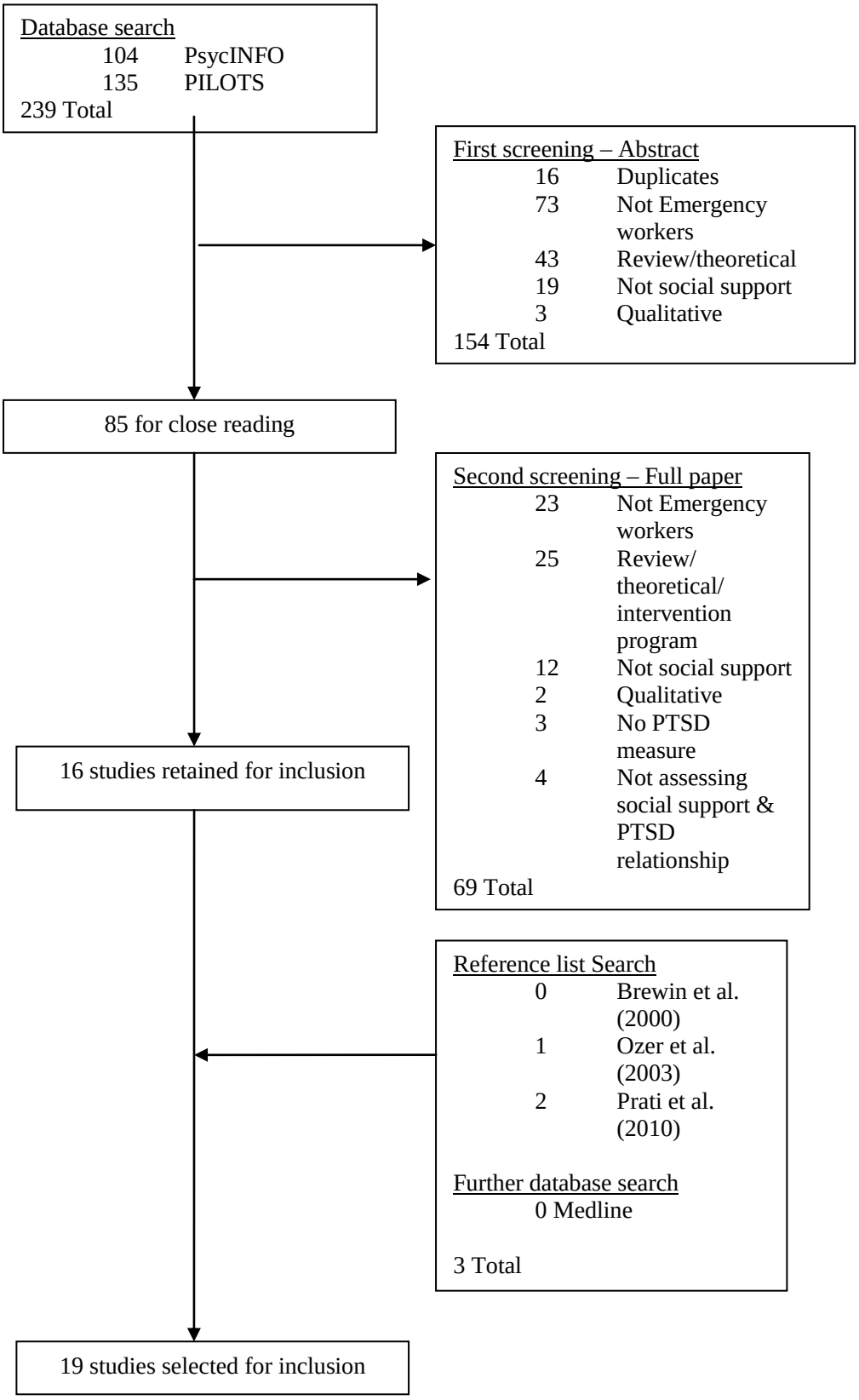
Study Selection

Figure 1 shows the results of the search and study selection. Abstracts of all papers identified by the search were screened for inclusion and exclusion criteria. Potentially eligible papers were then read in full. A hand search of the reference lists from reviews by Brewin et al. (2000), Ozer et al. (2003) and Prati and Piertrantoni (2010) identified a further three studies for inclusion. Finally, to ensure all relevant papers were identified, a text word search was run on Medline.

Decisions about Whether Inclusion Criteria Were Met

In several instances there was some uncertainty about whether a study met all inclusion criteria. These cases were discussed with a second researcher and a joint decision was reached. For example, Van Der Ploeg and Kleber (2003) used subscales from the Questionnaire on the Experience and Assessment of Work (Van Veldhoven, Meijman, Broersen, & Fortuin, 1997) to measure lack of social support. A decision was made to retain this study because there were multiple items within the subscales which considered two sources of support and were subsequently analysed and reported separately.

Figure 1: Flow diagram of search and selection of studies



Method of Appraising Studies

Critical Appraisal Tools (CATs) have been developed to aid the process of systematic review and the evaluation of the quality of individual research studies. However, there are numerous tools available and no general consensus on the 'gold standard' version. A systematic review of the content of CATs (Katrak, Bialocerkowski, Massy-Westropp, Kumar, & Grimmer, 2004) concludes that CATs should be selected on the basis of suitability to the type of study design, e.g., observational or experimental. Of note, the majority of CATs are designed for the evaluation of the quality of experimentally designed intervention studies.

For this review, several CATs were considered, but none seemed entirely suited to the body of studies being reviewed. Therefore, domains commonly included in CATs (e.g., STARD, Bossuyt et al., 2003) were selected on the basis of their relevance to the aims of the literature review, with a specific focus on the measurement of social support, the measurement of PTSD, and design features such as participant selection and design type.

Results

The results section begins with a description of the body of studies reviewed. Each of the aims of the review are then addressed in turn, beginning with sections examining how social support and PTSD were measured by studies, followed by an examination of relevant design issues. Finally, the main findings are summarised from cross-sectional and longitudinal studies.

Characteristics of the Studies

In total, 19 papers met the inclusion criteria for review: 17 independent studies and two reporting on data from the same sample (Stephens & Long, 1999; Stephens, Long, & Miller, 1997). Studies are described in Table 1.

Table 1: Summary of studies

Study	Design	Setting, participants & sampling method	Variables measured (beyond demographics, including length of service)
Bacharach & Bamberger (2007)	Cross sectional	New York, USA: 1,110 Fire Fighters; Stratified Random Sample	Critical incidents, social support, control at work, PTSD, anxiety & depression
Carlier et al (1997)	Longitudinal	The Netherlands: 262 Police Officers; Volunteer Sample	Critical incidents, trauma related factors (including emotional exhaustion at time of trauma & trauma severity), job features (e.g. rank & length of experience), life events, family history, religion, coping style, neuroticism & introversion, social support, PTSD
Farnsworth & Sewell (2011)	Cross sectional	USA: 225 Fire Fighters; Volunteer Sample	Affective control, social interactions, PTSD
Hoyt et al. (2010)	Cross sectional	USA: 400 participants (3 groups; "at risk group" = 40 first responders & 71 soldiers); Volunteer Sample	Disclosure of emotion, social support, PTSD
Jones & Kagee (2005)	Cross sectional	Cape Town, South Africa: 97 Police Officers; Volunteer Sample	Coping, social support, PTSD
Lowery & Stokes (2005)	Cross sectional	Australia: 42 Student Paramedics; Volunteer Sample	Type of trauma exposure, Attitude towards emotional expression, social support, PTSD
McCaslin et al. (2006)	Longitudinal	USA: 200 Police Officers; Volunteer Sample	Critical incidents, social desirability, work environment factors, peritraumatic dissociation, life stressors, alexithymia, social support, PTSD
Murphy et al. (2004)	Longitudinal	North-West USA: 73 Fire Fighters; Volunteer Sample	Trauma exposure, job concerns (e.g. worries about personal competence & concerns about personal injury), social support, PTSD
Pole et al. (2005)	Cross sectional	USA: 668 Police Officers; Volunteer Sample	Critical incident history, social desirability, peritraumatic dissociation, coping, work related stressors, social support, psychological symptoms, PTSD

Regehr et al. (2002a)	Cross sectional	Toronto, Canada: 86 Paramedics; Volunteer Sample	Trauma exposure, social support, depression, PTSD
Regehr et al. (2003a)	Cross sectional	Toronto, Canada: 264 Fire fighters and paramedics, Volunteer Sample	Critical events, post-mortem review factors, internal control, self-efficacy, social support, PTSD, depression
Regehr et al. (2003b)	Longitudinal	Toronto, Canada: 123 New Recruit Fire Fighters; Volunteer Sample	Self-efficacy, social support, PTSD, depression
Smith et al. (2011)	Cross sectional	USA: 124 Fire Fighters; Volunteer Sample	Duty related incidents, mindfulness, optimism, personal mastery, social support, physical health, alcohol use, depression, PTSD
Stephens et al. (1997)	Cross sectional	New Zealand: 527 Police Officers; Volunteer Sample	Traumatic stress, social support, PTSD
Stephens & Long (1999)	Cross sectional	New Zealand: 527 Police Officers; Representative Volunteer Sample	Traumatic stress, social support, PTSD
Van der Ploeg & Kieber (2003)	Longitudinal	The Netherlands: 123 Ambulance Workers (Drivers and Paramedics); Random Sample	Critical incident exposure, lack of social support, fatigue symptoms, burnout symptoms, PTSD
Weiss et al. (1995)	Cross sectional	USA: 367 Emergency Service Workers (3 groups); Volunteer Sample	Critical incident exposure, Social support, locus of control, dissociative experiences, personality style, global symptoms, PTSD
Wilson et al. (1997)	Cross sectional	Northern Ireland: 95 Police Officers; Volunteer Sample	Injury severity, social support, depression, PTSD
Yuan et al. (2011)	Longitudinal	USA: 233New Recruit Police Officers; Volunteer Sample	Critical incidents, life stressors, personality factors, world assumptions, social support, social functioning, symptoms of psychological disorder, PTSD

Of the 19 studies, nine were conducted in the USA, three in Canada, two in New Zealand, two in the Netherlands, one in Australia, one in South Africa and one in Northern Ireland. Five studies were conducted in response to a specific disaster: three relating to the events of 9/11, one involving police officers who had responded to Northern Ireland related terrorist incidents in a 6 month period from July 1993, and one to the Loma Prieta earthquake in San Francisco 1989. The remaining studies considered the effects of trauma exposure at a more general, ongoing, duty-related level. This information is important to consider when findings are being applied at a population level.

Thirteen studies were cross-sectional in design, six were longitudinal. Participants in the 19 studies were drawn from different emergency services: eight with police officers; six with fire fighters; three with paramedics or ambulance workers; and three with a mixed group of first responders from different emergency services. One of the studies using a mixed first responder group (Hoyt et al., 2010) also included soldiers in their sample, which they labelled "at risk" group; however, the data from these two professions were analysed with no reported differences in any of the key variables. The majority of study samples included a mixture of levels of service experience in terms of both length of time employed and level of position within the service. However, three studies (Lowery & Stokes, 2005; Regehr, Hill, Knott, & Sault, 2003b; Yuan et al., 2011) used new recruit samples.

Social Support Measurement

Of the 19 studies, 18 used standardised social support measures; several of these studies also included a further social support measure designed by the authors. Van der Ploeg and Kleber (2003) utilised two social support subscales embedded in the Questionnaire on the Experience and Assessment of Work (Van Veldhoven et al.,

1997). The remaining study by Murphy, Johnson, & Beaton (2004) relied solely on a non-standardised measure of social support, although the authors report reliability and validity statistics for this measure with their sample.

Eleven standardised measures of social support were used across the studies (some studies used multiple measures). These, as well as the non-standardised measures, are described in Table 2.

Source of social support. Eleven of the 19 studies measured social support from different sources (e.g., asking about support from family and support from colleagues) and the majority (n=9) went on to analyse the individual impact of the identified sources of support. However, in two cases (Jones & Kagee, 2005; Stephens et al., 1997) the analysis used a total score summed across the items in the measure, meaning that data on the impact of the source of social support was unavailable.

Type of social support measured. Of the standardised and commonly recognised measures of social support (listed first in Table 2), seven measured perceived social support and one measured received social support as well as satisfaction with support. In addition, Yuan et al. (2011) included a measure of social adjustment, which assessed satisfaction with support as well as levels of social functioning. Stephens et al. (1999; 1997) included a standardised measure to assess the 'content of communication', as well as non-standardised measures of 'attitudes towards emotional expression' and the 'ease of talking about trauma at work', which they categorise as measures of social support. The latter two measures (although arguably all three) appear to go beyond the definition of social support used by the other studies and as such, they are described in brief as a note but are not included in detail in Table 2.

Table 2: Measures of social support used in studies

Measure N = number of studies using measure	Type of Social Support	No. items	Domains, description and/or example of items	Population on which originally developed	Adaptations
Standardised measures of social support:					
Social Support Scale (Caplan et al., 1975) N = 4	Perceived Social Support	12 (4 items asked 3 times for 3 sources)	3 sources of support: supervisors, co-workers & friends/family. Includes informational/ functional & emotional social support	Occupational/ work field	Variable number of items as some authors use only 1 or 2 of the original 3sources of support
Interpersonal Support Evaluation List (Cohen & Hoberman 1983 & Cohen et al., 1985) N = 3	Perceived Social Support	40	Practical and emotional ("when I feel lonely, there are people I can talk to") social support and self-esteem related to social support ("my friends think highly of me")	General and student population	Carlier et al. (1997) used a "Dutch equivalent"
The unsupportive social interactions inventory (Ingram et al., 2001) N = 1	Received Unsupportive Interactions	24	Unsupportive social interactions rated in response to a specific stressor. Items relate to 4 subscales: Distancing; Bumbling; Minimising; Blaming e.g. " Someone said I should look on the bright side"	College students and applied to Health psychology (chronic illness patients)	Farnsworth & Sewell (2011) asked in response to "stressful experiences"
Modified Social Support Survey (MSSS, Sherbourne & Stewart, 1991) N = 1	Perceived Social support	18 or 5 item version	Practical and emotional Social Support.	Medical setting with chronic illness patient population	Hoyt et al. (2010) used 10 items
Multidimensional scale of perceived social support (MSPSS, Zimet et al., 1988). N = 1	Perceived Social Support	12	Mainly emotional social support. Items divided into factor groups relating to source of social support (family, friends or significant other)	General population	n/a

Crisis Support Scale (Joseph et al., 1992) N = 2	Received Social Support and Satisfaction with support at the time and since	14	Original version asks about support received from friends and family post disaster. The 10-item peer support only version has 5 domains: a) availability of peers; b) confiding in peers; c) emotional support; d) practical support; e) negative response items (e.g. felt worse with support)	Adult trauma field – survivors of a cruise ship disaster	Wilson et al. (1997) asked the questions twice - support received at the time of disaster/ incident and current social support. Lowery & Stokes (2005) used the 10-item peer support only version.
The Sources of Support Scale (SOS; Kulka et al., 1990) N = 4	Perceived social support	10	Multidimensional social support e.g. "there is someone you can turn to in time of need"	National Vietnam Veteran sample from Readjustment study	n/a
Social Provisions Scale (Cutrona & Russell, 1987) N = 3	Perceived social support	24	Multidimensional social support. Index scores can be obtained for 6 domains: Attachment, Social Integration, Reassurance of Worth, Reliable Alliance, Guidance and Opportunity for Nurturance	Student and professional health care/ public sector workers	n/a
Subscales of the Questionnaire on the Experience and Assessment of Work (Van Veldhoven et al., 1997) N = 1	Perceived (lack of) social support	9 items per subscale	The entire version consists of 8 subscales; 2 social support subscales a) lack of supervisor social support b) lack of colleague social support.	Dutch workers	n/a
Social Adjustment Scale-SR (Weissman & Bothwell, 1976; Weissman et al., 1978) N = 1	Perceived social functioning and Satisfaction with support in the last 2 weeks	42 (1976) 40 (1978)	6 domains of social support: work/school; social/leisure; relationship with extended family; marital relationship; parenting role, family unit function	Psychiatric patients	n/a

Content of communication with supervisors and peers (based on Beehr, King & King., 1990) N = 2	Content of communication	Unclear how many items per subscale	4 subsets of items (asked in relation to 2 sources – peers and supervisors): non-job communication; negative communications, positive communications and communications about disturbing experiences	Occupational context	n/a
Non-standardised measures of social support:					
Satisfaction with social support (Murphy et al., 2004) N=1	Satisfaction with social support	2	Satisfaction with 2 sources of support assessed (home and work).	n/a	n/a
Received social support (Regher et al., 2002, 2003a) N = 2	Received social support	5	One item for 5 sources of support. Level of support rated from: spouses, friends, family, colleagues, union and employers	n/a	n/a

Note: Stephens et al (1997, 1999) also describe the 'ease of talking about trauma' at work (2-item, non-standardised measure) and 'attitudes about expressing emotion' at work (4-item, non-standardised measure) as two of four measures of social support, in addition to those listed in table 2. The measure of attitude to emotional expression was designed by the authors and included four scenarios either describing a colleague who is expressing emotion or describing a situation and subsequent emotions e.g., fear. Three possible responses to these scenarios ranged from acceptance of expressing emotion, through avoidance techniques such as humour or changing the subject or expression more acceptable emotions such as generalised anger, to physical avoidance and suppression of feelings (i.e. leaving the room).

Three studies used one of two non-standardised measures of social support: one measured satisfaction with social support and the other measured received social support.

The majority of the standardised measures tap emotional, instrumental, and informational support; however, the scoring on these measures does not differentiate the types. Measurement of the interactive nature of social support was relatively neglected, reflecting the conceptualisation of social support. Only one study (Farnsworth & Sewell, 2011) used a complete measure of the negative aspects of social support, i.e., unsupportive social interactions. Although Stephens et al. (1999; 1997) measure the content of communication with peers and supervisors, which includes one of four subscales labelled "negative communication", there is insufficient information on the items making up this subscale (the content or number of items) and so it is not possible to expand on the definition of "negative communication". All other studies used measures of supportive behaviours.

It is important to consider how relevant the items included in the measures are to assessing the impact of traumatic events. Only two studies used a social support measure designed specifically for use in the aftermath of trauma, with items reflecting this context (Crisis Support Scale; Joseph, Andrews, Williams, & Yule, 1992). All other studies used more general measures of social support, for example the Interpersonal Support Evaluation List (ISEL; Cohen, Mermelstein, Kamarck, & Hoberman, 1985; Cohen & Hoberman, 1983). This measure includes items such as "*If I needed a ride to the airport very early in the morning, I would have a hard time finding someone to take me*" and purports to assess both social support and self-esteem although total scores do not differentiate these. The former type of measure is

more likely to be sensitive to the immediate or proximal effects of social support on PTSD than the latter.

PTSD Measurement

All 19 studies utilised a standardised measure of PTSD symptoms. Two studies used more than one measure of PTSD.

Quality of PTSD measures. In a systematic review of common screening tools for PTSD in adult populations, Brewin (2005) reports that the most highly regarded measures of PTSD are interview assessments using the Structured Clinical Interview for DSM Disorder, PTSD module (19 items, SCID; First, Spitzer, Gibbon, & Williams, 1995) or the Clinical Administered PTSD Scale (CAPS 34 items; Blake et al., 1995). One longitudinal study (McCaslin et al., 2006) used the CAPS interview measure at time one and then the PTSD Checklist (PCL; Blanchard, Jones-Alexander, Buckley, & Forneris, 1996) at time two. One study (Carlier, Lamberts, & Gersons, 1997) used the Structured Interview for PTSD (SIP; Davidson, Smith, & Kudler, 1989); however the authors translated this into Dutch and adapted the measure to be based on DSM-III criteria as DSM-IV had not come out at the time of the study. Consequently, it is not entirely clear how consistent this measure is with the original version.

All other measures were self-rated screening questionnaires, which have been developed as an alternative to clinical interviews. Six of the nine measures used in the reviewed studies are discussed in Brewin's (2005) review of screening tools; the Impact of Event Scale (IES; Horowitz, Wilner, & Alvarez, 1979), along with the Trauma Screening Questionnaire (TSQ; which was not used by studies reviewed here), are reported to consistently perform well. Six of the reviewed studies used the IES (Horowitz et al., 1979) or the revised version (IES-R; Weiss & Marmar, 1997).

One study used the PTSD Symptom Scale – Self-Report version (PSS-SR; Foa, Riggs, Dancu, & Rothbaum, 1993), which forms the basis of the TSQ.

The PTSD measures used in the studies reviewed varied in their length, ranging from 13-49 items. Brewin's (2005) review warns against assuming that more items make for a better PTSD screening measure; measures with fewer items, simpler response scales, and simpler methods of scoring perform as well as, if not better than, longer measures requiring more complex ratings. Consequently, it is reasonable to assume that the measures used in the studies are comparable in their performance.

Other measures of psychological functioning. In addition to measurement of PTSD, 11 studies utilised other mental health symptom measures. The most commonly used (n=5) was the Beck Depression Inventory (BDI; Beck, Ward, Mendelson, Mock, & Erbaugh, 1961). None of the studies assessed the potential for positive change after trauma exposure.

Design

Participants. Sample sizes ranged from 42 to 1,110 participants. All of the studies gave adequate descriptive statistics in relation to the demographics of the participant sample. None of the studies reported power analysis as a mechanism to determine the sample size. Without this, the studies are vulnerable to type 2 errors.

The majority of the studies used a volunteer sample. One study went on to select participants from the volunteer sample who were representative of the population. Only two studies used a higher quality method of random sampling. The majority of studies were therefore open to the effects of sampling biases which could reduce the potential to apply findings from the study at a population level.

Type of design. The majority of the studies (n=13) used a cross-sectional design; six used a longitudinal design. All studies used an observational design. Without experimental design, the studies are unable to provide rigorous evidence to show how social support is causally related to PTSD due to potential confounds. However, this is an issue generally in both the social support and trauma fields of research due to ethical and practical difficulties in manipulating these variables.

Other risk factors and confounding variables. The meta-analytic reviews by Brewin et al. (2000) and Ozer et al. (2003) indicate the importance of several variables in predicting PTSD symptoms. Notably, in addition to social support, peritraumatic dissociation has been found to be highly predictive (Ozer et al., 2003). Characteristics of the trauma are also predictive, such as perceptions of life threat or trauma severity. Less proximal yet still relevant factors include: prior psychological adjustment; previous trauma history, i.e., childhood abuse; family history of psychiatric problems. Brewin et al. (2000) report that education and general childhood adversity show some influence on PTSD symptoms in some studies; however this is not a uniform finding. Finally, and even more variable, is the influence of gender, age at trauma and ethnicity (Brewin et al., 2000).

Three studies (McCaslin et al., 2006; Pole, Best, Metzler, & Marmar, 2005; Weiss, Marmar, Metzler, & Ronfeldt, 1995) included one or more measure of peritraumatic dissociation. Ten studies included a questionnaire to assess critical incident exposure and gather information on the nature and severity of trauma experiences. Many of the studies used a standardised measure to collect this information (e.g., Critical Incident History Questionnaire; Brunet et al., 1998; Critical Incident Inventory; Monnier, Cameron, Hobfoll, & Gribble, 2002; Traumatic Stress Schedule; Norris, 1990); some used a measure designed by the authors. Three

studies used a measure to detect the level of life events (Carlier et al., 1997; McCaslin et al., 2006; Yuan et al., 2011). Many of the studies included other variables which were hypothesised to be related to PTSD or other outcome variables.

Table 1 includes information on the variables measured in the 19 studies. Of note, only two studies (Bacharach & Bamberger, 2007; Pole et al., 2005) sought to control for the effects of social desirability as a source of potential threat to the validity of participant self-report.

Summary of Findings from Cross-Sectional Studies

Association between social support and PTSD. All studies assessed the correlation between social support and PTSD; with the exception of Smith et al. (2011), all reported a correlation coefficient for this relationship. All except one (Regehr, Goldberg, & Hughes, 2002) of these relationships was reported to be statistically significant, with greater levels of social support associated with lower levels of PTSD. The reported r values ranged from .08 to .49, with the majority falling in the .30-.40 range. These values indicate that social support has an effect size ranging from small to large, with the majority indicating a medium effect size (Cohen, 1992).

Social support as a predictor of PTSD. With the exception of Regher et al. (2002), all of the cross-sectional studies attempted to assess the relative influence of various potential predictors of PTSD using regression analyses. Of these 12 studies, four went on to develop more complex models to examine potential interactions between significant variables.

Of the 12 studies utilising regression analyses, 11 report that social support made an independent contribution to the variance in PTSD symptoms when other

variables were controlled for. Only Regher, Hill, Goldberg and Hughes (2003a) found a non significant effect.

Only three of the studies reported the R squared values for social support, once the effects of trauma variables and other variables of interest (e.g., peritaumatic dissociation and demographic characteristics) were controlled. The R squared values were .05, .14 and .17 (respectively, Pole et al., 2005; Wilson, Poole, & Trew, 1997; Stephens & Long, 1999), indicating small to medium effect sizes (Cohen, 1992). More commonly, studies reported standardised regression coefficients (beta values) to describe the effect of social support in the context of the other predictors. Beta values for social support ranged from 0.09 (Wilson et al., 1997) to 0.59 (Hoyt et al., 2010). However, the utility of beta values is questionable given the influence of other variables entered into the regression model, which are often themselves correlated with social support.

Interactions between social support and other predictor variables. A summary of the findings of the four studies assessing interaction effects follows; these findings are relevant to theoretical accounts of the relationship between social support and PTSD.

Bacharach and Bamberger (2007) utilised hierarchical linear modelling and reported that social support moderates (buffers) the relationship between exposure to trauma and PTSD symptoms. The model also indicated that "control climates" (feeling a sense of control over one's work) subsequently moderated the relationship between PTSD symptoms and distress (anxiety and depression). Of concern, however, is the authors' description of social support and control climates at work as mediating rather than moderating variables. Furthermore, the conclusions require caution; as with all non-experimental designs, it is not possible to infer the direction

of causation and cross-sectional studies are especially ill placed to comment on the relationship between variables over time.

Using multiple regression, Hoyt et al. (2010) report that the negative association between social support and PTSD was no longer significant when disclosure of emotion was included in the model. Greater disclosure of positive emotion to both those with and those without shared experience predicted lower PTSD symptoms. Greater disclosure of negative emotions to people with shared experience was associated with greater levels of PTSD. Subsequent path analysis was used to examine the fit of the model, confirming that the effect of social support on PTSD was mediated by positive disclosure, whilst the pathway predicting PTSD based on disclosure of negative emotions was not significant. Whilst this study highlights the importance of the emotional functions of social support, it is not clear to what extent emotional disclosure and emotional social support differ. Hoyt et al. (2010) report a finding of bi-directionality between social support and PTSD; however it is unclear how this conclusion can be made, given the cross-sectional, observational design of this study.

Before summarising the findings of the two remaining studies by Stephens et al. (1999; 1997), it is important to recognise and consider the effect of the broader conceptualisation of social support, in comparison to the other studies. Stephens et al. (1999; 1997) report the use of four measures of social support: attitude to expressing emotion, peer support, supervisor support, negative support, and non-work social support. Of note, attitudes to the expression of emotion have been conceptualised as a different independent variable in relation to PTSD elsewhere (e.g., Lowery & Stokes, 2005). Stephens et al. (1999; 1997) include a description of the measures they use, however there is insufficient detail of the content of measures to fully

comprehend the nature of the constructs assessed. Furthermore, the use of principal component analysis to group relevant items together in terms of their impact on the variance in PTSD further complicates the results. Consequently, the following findings require careful consideration and perhaps indicate a need for caution when applying the conclusions.

In their initial study, Stephens et al. (1997) report that social support from peers, supervisors and non-work support were all negatively related to PTSD; together contributing 17 percent of the variance in PTSD scores. Peer support, which included the ease of talking about trauma, was reported as showing the strongest impact on PTSD symptoms; the strength of the impact was greater than that of trauma exposure. Negatively expressed support was positively related to PTSD once demographic and other social support and trauma variables were controlled. Without control for these other factors, the relationship was non-significant. The authors interpret this finding as an indication of the need to consider the beneficial and detrimental effects of interactions and communications.

Attitude to emotional expression was reported to moderate the relationship between trauma exposure and PTSD; specifically, that for those higher (more accepting) on attitude to emotional disclosure, the level of trauma exposure (high or low) was less predictive of PTSD symptoms. This was the only social support variable, as construed by the authors, that had this moderating effect; the authors do not expand on why this is the case. However, this finding indicates the importance of beliefs about emotional expression and again highlights the emotional component of socially supportive relationships.

Finally, Stephens and Long (1999) build on the above findings and report that traumatic experiences positively relate to PTSD scores but that this relationship was

significantly weakened if there was greater social support from peers (although not other sources) or, as with the previous study, more positive attitudes towards expressing emotions. The authors conclude that this offers support to Horowitz's (1986) model of PTSD aetiology, which suggests emotional social support moderates traumatic stress and psychological consequences. As might be expected, all of the social support variables were significantly positively correlated apart from attitudes toward expressing emotion and non-work social support. However, each variable independently accounted for a proportion of variance in PTSD scores when entered into the regression model.

Relationships between different types of social support and PTSD. There are several other noteworthy observations across the studies in relation to the source of support, type of support and the interaction with other variables. With one exception (Regehr et al., 2003a), the negative association between work-based/ peer support and PTSD was stronger in comparison to support from sources outside of work. In relation to this finding, Hoyt et al. (2010) report data to show that first responders prefer to seek support from those with shared experience.

Of note, the two studies using more targeted measures of crisis-based social support report correlations between social support and PTSD symptoms in the higher end of the range of values across the studies: r=-.41 (Lowery & Stokes, 2005) and average r=-.40 (r ranged from -.27 to -.46 across several subscales; Wilson et al., 1997). The upper r value reported by Wilson et al. (1997) is between PTSD total scores and frequency scores on the Modified PTSD Symptom Scale (MPSS SR; Falsetti, Resnick, Resick, & Kilpatrick, 1993) and perceptions of social support at the time of the crisis (CSS; Joseph et al., 1992). This is the second highest r value of the

group of studies and the highest value if only measures of social support (rather than unsupportive interactions) are considered.

Farnsworth and Sewell (2011) used a full measure of unsupportive interactions; the fact that this measure had the highest correlation with PTSD symptoms is interesting. Furthermore, when social support and unsupportive interactions were entered into the study regression model, only the latter was reported to be independently predictive of PTSD. Similarly, although measured in a different manner, Stephens et al. (1997) report a relatively high level of PTSD symptom variance accounted for independently by "negative support" (communication with peers about disturbing experiences and negative communication with supervisors). However, this study found "peer support" accounted for an even higher proportion of the variance. Consequently it would appear premature to make conclusions about the relative importance of social support and unsupportive social interactions for PTSD susceptibility within this population.

Summary of Findings from Longitudinal Studies

Six of the 19 studies employed a longitudinal design. Two of these studies collected data at three time points (Carlier et al., 1997; Murphy et al., 2004); the remainder used two. The longest follow-up period was two years (Yuan et al., 2011). All studies were conducted during routine circumstances apart from Murphy et al. (2004) whose study happened to span 9/11 and subsequently they report solely on data pre and post 9/11 (deciding not to use data collected at an earlier time point). Of note, McCaslin et al. (2006) and Yuan et al. (2011) only administered their social support measure at baseline. The remainder administered all measures at all time points. Carlier et al. (1997) report the most rigorous data collection procedures, using 90 minute interviews at each time point where an exhaustive list of variables was

measured. However, the measures used by Carlier et al. (1997) are described in insufficient detail, requiring prior knowledge to understand them (e.g., "*measured in accordance with the Caplan model*").

Association between social support and PTSD. Carlier et al. (1997) report a significant correlation between social support and PTSD; however, coefficients are not reported. Of the remaining five studies reporting correlation coefficients, all except Murphy et al. (2004) found a statistically significant relationship between social support and PTSD. Two of these studies make it clear they were examining the relationship across time (van der Ploeg & Kleber, 2003; Yuan et al., 2011) and one study reports on correlations between measures at baseline (McCaslin et al., 2006). It is less clear what data is being used for the correlations reported by Regher et al. (2003b); this study reports data collected from police recruits at week one and week 10 of training and compares this with data from more experienced police officers at one time point. It is not clear if data were collapsed across new recruit and experienced samples or not. Reported significant correlation coefficients in these four studies range from .13 (Yuan et al., 2011) to .39 (McCaslin et al., 2006). Overall, the effect sizes can be described as small to medium (Cohen, 1992).

Social support as a predictor of PTSD. Five of the six studies employed various forms of regression analysis to assess the independent predictive value of study variables. Of these studies, three (Carlier et al., 1997; McCaslin et al., 2006; Regehr et al., 2003b) report that social support contributed independently to the variance in PTSD scores; Yuan et al. (2011) report social adjustment but not social support as an independent significant predictor, and Van Der Ploeg and Kleber (2003) report that social support was not significant in their regression model. However, as with the cross-sectional studies there is insufficient reporting of R squared values to

comment on the predictive weight of social support. Beta values for the independent variance in PTSD accounted for by social support, in the context of the other model predictors, are reported by three of the four studies utilising multiple regression. Beta values ranged from .17 to .18 (respectively, McCaslin et al., 2006; Yuan et al., 2011).

Using odds ratios, Carlier et al. (1997) report that dissatisfaction with organisational support at baseline increased the risk of PTSD symptoms three months later by 1.77 times (having controlled for the influence of other variables including time one symptoms). At 12 months, lack of social companionship (measured using the IESL; S. Cohen et al., 1985; Sheldon Cohen & Hoberman, 1983) was one of 10 significant predictors, increasing vulnerability to PTSD by 1.04 times. Of note, only Carlier et al. (1997) and Van Der Ploeg and Kleber (2003) make it clear that time one symptoms of PTSD were entered into the model and controlled for.

Relationships between different types of social support and PTSD. It may be of note that the non-significant finding, by Murphy et al. (2004), was based on a measure of satisfaction with social support, whereas all other studies measured perceived social support. However, given the small number of studies in this group, added to the fact that Murphy et al. (2004) used a non-standardised two-item scale, it is difficult to conclude what type of social support is most important. None of these six studies used trauma-specific social support measures.

Source of support was measured by three studies and was considered in regression analyses; a mixed picture emerges as to the relative importance of different sources of support. Calier et al. (1997) report that dissatisfaction with work support made a significant independent contribution to the variance in PTSD scores at three months but not 12 months; the reverse was true of overall, general social support. Regher et al. (2003b) report that perceived social support from friends (but

not spouse, family, colleagues, union or employers) at baseline independently accounted for the variance in PTSD 10 weeks later. However, this study used only one item to assess support from each source. Finally, Van der Ploeg and Kleber (2003) found a significant relationship between a lack of supervisor support and PTSD scores but not colleague support.

Discussion

Summary of the Findings

This review examined the relationship between social support and PTSD reported in 19 studies using samples of frontline emergency service personnel. The majority of the studies were conducted with a specific group e.g., police officers, although some used a mixed sample. The effect of exposure to trauma was mainly examined in the context of routine work. Some studies were conducted in the aftermath of a crisis or specific disaster such as the terrorist attacks of 9/11.

Thirteen studies were cross-sectional in their design and six were longitudinal. Across the studies, 17 reported a significant negative association between social support and PTSD. Seventeen studies went on to examine the relationship whilst controlling for the influence of other variables: 11 of the 12 cross-sectional studies and three of the five longitudinal studies that did so, report that social support was independently predictive of PTSD. In summary, and replicating the findings of previous researchers (Brewin et al., 2000; Ozer et al., 2003; Prati & Pietrantoni, 2010), social support appears to be an important variable in predicting PTSD after trauma exposure. However, this review was conducted with the aim of going beyond this finding to assess the quality of the evidence, in particular with an examination of study design and measurement.

Measurement of Social Support

All studies but one used a standardised measure of social support. These mainly measured perceived social support, although some examined received social support. Several studies assessed satisfaction with social support, often using a non-standardised measure. Although the distinction between received and perceived social support is important (Prati & Pietrantoni, 2010), the description of the same social support measures varied amongst the studies, indicating confusion about what is being assessed.

The majority of studies used measures designed and developed for the general assessment of social support, often including emotional, instrumental and informational support. Only two studies used a measure of social support designed for use in the context of trauma exposure. The studies that used the latter measure found correlations in the upper range; however, the small number of these studies limits conclusions.

The source of support was assessed by 11 studies and where analysed separately, the relationship between work-based support and PTSD tended to be stronger than support outside work. However, talking to those with shared experience may not always result in a positive effect; Hoyt et al. (2010) reported that sharing positive emotions with similar others is protective, whereas talking and expressing negative emotions is akin to rumination and increases the risk of PTSD. Ultimately, understanding the effects of the source of support is limited by the measures used in the reviewed studies, which comprise a small number of items for each source of support and tend to repeat the same basic questions asked in relation to different sources.

A major issue highlighted in this review is the absence of measures that capture the dynamic, interactional nature of social support. This relates to issues of conceptualisation; in the PTSD literature, social support has tended to be classed as a risk factor and assessed using static, one-dimensional measures. The problem with this simplistic conceptualisation is that it misses the importance of the quality of relationships. Social interactions can be supportive or unsupportive and this is likely to represent a continuum with individual and environmental influences on perceptions of what is supportive at a given time and in a given situation.

Farnsworth and Sewell (2011) used a measure of unsupportive social interactions and reported one of the highest correlation coefficients with PTSD in the studies reviewed. This is consistent with reports that unsupportive social interactions are more influential than social support in relation to PTSD (e.g., Ullman, 1996, 1999); however it could reflect the more sensitive nature of the former measure. For example, measures of social support do not tend to capture the process and content of communication. Furthermore, Guay and Billette (2006) argue that it is premature to conclude what type of communication is helpful or unhelpful at this stage.

A measure of the content of communication (along with other more diverse measures of social support) was used by Stephens et al. (1999; 1997). However, the difference between this measure and the social support measures used in the other studies is great and as such, it is unclear how comparable the results are and whether these measures tap the same construct.

In summary, the sophistication of the social support measures used by the reviewed studies is limited and as such, this affects the ability to understand the nature of the relationship between social support and PTSD.

Other Measurement and Design Issues

Some of the measures (both social support and PTSD) used were adjusted by study authors to better fit the population assessed. Whilst this makes the measure more relevant, some of the assumptions about the reliability and validity of standardised measures cannot be applied and would require further assessment. In contrast to social support, there was less variability in the measurement of PTSD used in the reviewed studies. Most studies used well established measures that assessed diagnostic symptoms of PTSD.

Many of the studies sought to control for the effects of other variables when examining social support as a predictor of PTSD. However, there was a large range in the type of other variables assessed, often with a limited rationale for selection. Brewin et al. (2000) distinguish between variables that are proximal in their influence on PTSD (e.g., trauma-related factors), and those that are more distal (e.g., personality factors). However, this information does not appear to have been synthesised into the design of many of the reviewed studies. For example, not all studies controlled for exposure to trauma and where they did, this took various forms, e.g., length of experience/exposure or severity of event exposure. Ozer et al. (2003) report a stronger predictive relationship between peritraumatic dissociation and PTSD than social support. However, very few studies measured this variable (which would be especially relevant when examining the effects of a specific trauma event such as 9/11).

The body of studies reviewed indicates that other variables such as control (at work and in relation to personal factors, e.g., control of emotions, locus of control and/or self-efficacy) are important alongside social support in predicting PTSD. Furthermore, attitudes, either at a global level (e.g., beliefs about the world), or more

specifically, beliefs and attitudes towards emotional expression, were reported to be significant alone and in combination with social support. Some of the reviewed studies represented such beliefs as a separate variable, e.g., moderating the relationship between social support and PTSD, whereas others conceptualised attitudes to emotional expression as a measure of social support. This variety in classifying study variables may reflect the inadequacy of the construct of social support and its measurement. Either way, the studies highlight the importance of perceptions, processes and experiences relating to emotional expression as a function of social support.

Given that all reviewed studies relied on self-report measures, it is surprising that so few included a measure of social desirability. In one study where this was included, it accounted for a large proportion of the variance in PTSD symptoms and social support (Pole et al., 2005). This is clearly something that needs considering as it may represent a confounding variable which requires control.

The majority of the studies reviewed employed a cross-sectional design, precluding conclusions about causality of the relationship between variables. Yet, this was not always fully considered in the interpretation of findings, increasing the risk of premature conclusions. In this respect, it is interesting to note that fewer of the studies employing a longitudinal design found that social support independently predicted variance in PTSD. However, more longitudinal research is needed to make representative comparisons. Furthermore, not all of the longitudinal studies reviewed controlled for the effect of time one symptoms on PTSD at subsequent measurement periods, which is a major limitation. Many studies repeated only a subset of measures post-baseline and PTSD symptoms were not always assessed using the same measure,

which may threaten the validity of the design and confound the findings of a relationship between social support and PTSD.

Limitations of this Review

This review was limited by the focus on PTSD, rather than broader measures of well-being and positive effects of emergency work, which have been observed in other studies (Pietrantoni & Prati, 2009; Shakespeare-Finch, Smith, Gow, Embelton, & Baird, 2003) . This may have excluded studies measuring post traumatic growth and conceptualising social support in relation to resilience, which may be especially relevant given that emergency service personnel are not necessarily a traumatised population. Furthermore, this review excluded qualitative studies which may address some of the concerns already noted about quantitative measurement of social support.

Recommendations for future research

Although the design (cross-sectional or longitudinal) of studies has not been identified as a significant influence on the effect size for the relationship between social support and PTSD (Brewin et al., 2000; Prati & Pietrantoni, 2010), there is a need for more high quality longitudinal research. This research is important in order to examine the relationship over time.

Theory and existing research findings need to be incorporated into the design of future studies. In particular, this could inform the rationale for including certain other variables, such as peritraumatic dissociation (where relevant) and social desirability.

Greater attention needs to be paid to the conceptualisation and measurement of social support. In particular, the effect of both positive and negative social interactions is worthy of measurement in future research, as is the effect of different

sources of support and the relationship between these and PTSD. Developing an understanding of the role of beliefs about emotional expression, as a facet of social support or as a separate variable, is both theoretically and empirically indicated.

Current measures of social support are failing to adequately capture the nature of interactions and what is perceived as helpful or unhelpful during stressful situations. It may be appropriate to shift the focus from outcome to process based research to examine the effects of social support in the context of emergency work. Qualitative methods may be better placed to capture the interactive nature of social support (Guay et al., 2006) and warrant consideration in the design of future research.

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Part 2: Empirical Paper

Police officers' experiences of social support after traumatic incidents

Abstract

Aims

Police officers are routinely exposed to potentially traumatic incidents during day-to-day work, yet the majority do not go on to develop Post Traumatic Stress Disorder (PTSD). Social support has been identified as one factor which may maintain wellbeing in this population, although what constitutes 'supportive' interactions with others is unclear. This study explored police officers' experiences of supportive and unsupportive interactions following potentially traumatic incidents.

Method

Semi-structured interviews were conducted with 19 police officers. Transcripts were analysed thematically using Braun and Clarke's (2006) approach.

Results

Officers described a range of socially supportive interactions which helped them to manage the impact of events that affected them personally. Ambivalence about the use of talking was common, especially in the work context. Formal sources of work-based support were viewed sceptically, with a preference for humour and indirect talk with colleagues. Outside work, partners were a central source of support, although concerns that others would not understand the nature of emergency work or required protection from it, acted to constrain these interactions.

Conclusions

More research is required to understand the short-term and long-term nature of both supportive and unsupportive interactions; observational methods may be of particular use. The application of theoretical models of PTSD to the context of emergency service work may be inappropriate. Informal social interactions in the workplace, including the use of humour, require further research attention.

Introduction

Emergency service work, undertaken by police officers, fire-fighters and ambulance paramedics, carries an inherent risk of exposure to situations that many would find traumatic. It is not surprising therefore that this population has been considered psychologically 'at risk' with higher lifetime prevalence rates of mental health difficulties such as Posttraumatic Stress Disorder (PTSD) than the general population (Clohessy & Ehlers, 1999). However, despite exposure to numerous potentially traumatic events, the majority of emergency service personnel do not show signs of psychological distress and, in fact, some have reported positive effects of emergency work (e.g., Moran & Colless, 1995; Shakespeare-Finch, Smith, Gow, Embelton, & Baird, 2003). To date, however, much less research attention has been paid to factors promoting resilience amongst 'at risk' populations, compared to the attention paid to risk factors.

Little can be definitively concluded as to what protects emergency service personnel from psychological distress, due to limited and mixed research findings. Similar to the general population (Brewin, Andrews, & Valentine, 2000; Ozer, Best, Lipsey, & Weiss, 2003), increased risk of PTSD in this group seems to be associated with ethnicity (Pole, Best, Metzler, & Marmar, 2005; Yuan et al., 2011), heightened perceptions of threat and severity at the time of the event (e.g., Carlier, Lamberts, & Gersons, 1997), and dissociative reactions to it (a reaction associated with feeling numb and a sense of unreality; e.g., Hodgins, Creamer, & Bell, 2001; McCaslin et al., 2006).Whether exposure to potentially traumatic events increases risk or not is unclear in this group; a curvilinear relationship may exist whereby extremes of low and high levels of exposure to disturbing events carry heightened risk (Alexander & Klein, 2001). High levels of self efficacy and perceived control over one's role

within the work environment seem to be protective against maladaptive psychological reactions to potentially traumatic events (Bacharach & Bamberger, 2007; Regehr, Hill, Knott, & Sault, 2003).

One factor which has received particular interest as a potential risk/ protective factor in the PTSD literature is social support; a low level of social support has been found to account for the highest proportion of variance in PTSD symptoms (Brewin et al., 2000). Despite widespread acceptance that poor social support correlates with PTSD, dominant psychological theories of PTSD (e.g., Brewin, Dalgleish, & Joseph, 1996; Ehlers & Clark, 2000; Foa, Steketee, & Rothbaum, 1989) do not explicitly include social support, or indeed any social factors, in their clinical models. In contrast, the social cognitive processing model (Lepore, 2001) highlights the importance of a socially supportive environment to enable talking about a traumatic event, which can facilitate cognitive processing and adaptive appraisals about the event and one's emotional reaction to it.

The importance of social support in relation to PTSD has been consistently replicated in research with emergency service populations (Prati & Pietrantoni, 2010). In Prati and Pietrantoni's (2010) meta-analysis, the type of social support measure used in the studies was found to be important in determining the strength of the relationship (effect size) between social support and PTSD. Social support measures were categorized into 'perceived' support (i.e., what support people thought would be available should they need it) and received support (i.e., what support was actually received in a given situation); it was found that measures of 'perceived' support most strongly related to PTSD. This is a curious finding which is not readily explained by the social cognitive processing model (Lepore, 2001), which suggests

that talking (rather than the knowledge that one could talk) is the mechanism of change in reducing the risk of PTSD.

Research with emergency service personnel has begun to consider how specific factors may mediate the relationship between social support and PTSD. As predicted by Lepore (2001), it appears that the disclosure of emotion is a significant variable in the relationship between social support and PTSD in this population (Stephens, Long, & Miller, 1997). However, it seems important that the type of emotional disclosure is considered: disclosures of positive emotion may be protective whereas disclosures of negative emotion may actually increase the risk of PTSD (Hoyt et al., 2010). In addition to the complexities surrounding the role of emotional disclosure, attitudes towards emotional expression held by the individual making a disclosure also appear important: where a positive attitude towards emotional expression may enable social support to fulfil a protective function, a negative attitude towards emotional expression may reduce the effectiveness of social support, in terms of reductions in symptoms of PTSD (Lowery & Stokes, 2005; Stephens & Long, 1999). This finding seems logical as those fearing emotion (e.g., as a sign of weakness) may avoid making emotional disclosures and therefore not use support to talk frankly in a way that would aid cognitive processing.

A growing body of research in the social support field indicates the need to take account of not only interactions that are supportive, but also those that are unsupportive. For example, critical, minimising or dismissive reactions may result in 'social constraints' (Lepore, 2001) that deter talking, or may lead to talking that actually increases the likelihood of PTSD (Stephens & Long, 1999). Indeed, the detrimental effect of unsupportive interactions is thought to outweigh the beneficial effects of social support on PTSD rates in the general population (Ullman, 1996,

1999), and there are early indications that this finding also applies to the context of emergency work (Farnsworth & Sewell, 2011). In a review of the links between social support and PTSD, Guay, Billette and Marchand (2006) argue that it is premature to conclude what is 'supportive'; this is particularly relevant to research with the emergency service population where scant attention has been given to unsupportive interactions.

In addition to questions about the process of support, the role of the source of support requires research attention. Few studies assess the source of support as a factor influencing the relationship between social support and PTSD; those that do suggest that different sources of support will be sought at different times and support from peers with shared experience may be preferred initially (Hoyt et al., 2010). Low satisfaction and low perceived levels of support from peers may also be more strongly correlated to PTSD symptoms than other sources of support (e.g., Murphy, Johnson, & Beaton, 2004; Stephens & Long, 1999) although it is unclear why. It is possible that speaking to someone with shared experience is easier in the first instance because there is a common understanding and experience of difficult events. However, peer support may not be just about one individual providing support to another but may operate at a wider group level, in terms of work-based unit support (Bacharach & Bamberger, 2007). Another way to think about this is to consider the culture operating within teams, as well as the culture of professional groups. In particular, workers within the fire service and police service may be constrained in talking about their emotions due to the 'macho' image attached to their professions (e.g., Haslam & Mallon, 2003; Koch, 2010; Tracy & Scott, 2006). Furthermore, some studies report the reverse finding and suggest that low levels of support from people outside work (e.g., friends and family), rather than levels of work-based

support, correlate most strongly to PTSD symptoms (e.g., Carlier et al., 1997; Hoyt et al., 2010).

So, whilst it is widely accepted that social support can act to confer risk or resilience in the aftermath of potentially traumatic situations, no consensus has been reached on the explanatory mechanisms or the process of interactions underlying this finding (Guay et al., 2006). In part, this position may reflect an over-reliance on quantitative measures of social support, which reflect a basic conceptualisation of social support as something that is given and received; these fail to capture the dynamic process of social interactions which give rise to the experience of being 'supported'. Studies conducted with emergency service workers have utilised a range of social support measures, rendering comparison between study findings difficult. Whilst categorising measures aids comparison, distinctions between measures of 'perceived' and 'received' support may be flawed as both types of measure, by their self-report nature, tap perceptions (i.e., measures of 'received' support cannot be considered 'objective' indications of actual provisions of support). Consequently, the finding that perceived support has a stronger association with PTSD than does received support (Prati & Pietrantoni, 2010) may be a measurement artefact.

In summary, whilst a link between social support and PTSD in emergency service workers has been established, the interactional nature of social support has been largely neglected, as has the role of contextual factors, including the source of support. Qualitative research is well suited to a detailed exploration of the nature of social interactions and is advocated by Guay et al. (2006) as an avenue for future research in this area. In particular, in-depth interviews focus on how people make sense of certain experiences and permit exploration of issues that may be too

complex to investigate through quantitative means (Pistrang & Barker, 2010; Willig, 2008).

The present study used a qualitative approach to explore the nature of social support interactions from the perspective of police officers. The decision to focus on a single professional group of emergency workers was taken so that the culture of one organisation could be explored in order to aid understanding of contextual factors that might influence interactions. Although there may be some overlapping features, the culture of each emergency service profession (and perhaps arguably, each work-unit) is likely to have distinct features. The culture of the police service has received particular research attention and is thought to exert a strong influence on shaping behaviour and attitudes of those within it (Kiely & Peek, 2002; Pogrebin & Poole, 1991).

The present study addressed the following research questions:

(1) What are police officers' experiences of supportive and unsupportive interactions following potentially traumatic incidents?

(2) How, if at all, do interactions differ on the basis of the context and source of support (i.e., whether at work with colleagues and/or supervisors, or outside of work with family and friends)?

Method

Ethical Approval

Ethical approval was granted for this study, as part of a larger research project, by South West London and St George's Mental Health NHS Service and The Wandsworth Research Ethics Committee (Appendix 1).

Participants

Recruitment and eligibility criteria. The initial strategy was to recruit participants via publicising the study in several police stations in London and the Midlands. However, there were extensive obstacles and delays in gaining regional organisational approval (despite the interest of the local services), which led to this strategy being unfeasible within the timescale of the project. Therefore, a second strategy was initiated which used a snowballing sampling approach (Patton, 2002; Rossi, Freeman, & Lipsey, 1999). Two police officers (one in London and one in the Midlands), with whom the researcher had personal contacts, were invited to participate and to circulate study information to officers they knew; participating officers subsequently passed on the information to colleagues who were invited to contact the researcher if they wished to take part.

Prior to arranging to meet, participants were screened for eligibility. Eligibility criteria were: (1) a minimum of two year's experience, and (2) no current or prior history of PTSD. The rationale for criterion one was that this would provide sufficient exposure to 'traumatic' incidents. The rationale for criterion two stemmed from the study's focus on resilience and adaptive coping in the aftermath of trauma exposure. It can be argued that resilience is more than an absence of psychiatric symptoms and that the absence of a diagnosis does not preclude the possibility of symptoms. Nevertheless, criterion two was used as a crude measure to rule out those with PTSD and also served to protect officers who might be more vulnerable and who would perhaps find it distressing to participate in the study.

Participant characteristics. Nineteen police officers took part in the study. A pilot interview was completed with a female police officer who had recently left full-time police service as a detective sergeant to pursue an alternative career; she

had been in the police service for 6.5 years at the point of leaving. The decision was made to include this interview in the analysis and results, as the issues discussed resonated with several of the other interviews.

Participants were 13 men and six women with a mean age of 36 years (range: 25-50 years). The proportion of women was substantially higher than nationally, where female officers represent approximately 15% of the workforce (Dhani & Kaiza, 2011). The majority of participants (N=16) described their ethnicity as 'White British'; two described themselves as 'White European'; and one as 'Mixed Heritage'. Ten officers worked in the Midlands area and nine were based in the greater London area. All but four were married or living with a partner. Three husband and wife couples participated in the study (i.e. three men and three women, each interviewed separately).

All police officers begin their career with a block of classroom-based police training, followed by a period on probation in a first response team which responds to 999 calls. There is then a diversity of roles that can be occupied within the police service at varying levels of seniority. The median length of experience participants held was 7 years (range: 2.5 – 28 years). Participants varied in the rank of their current position from police constable (N = 9) to detective constable (N = 2) to police sergeant (N=5) and detective inspector (N=3). The teams officers worked in included first response teams, safer neighbourhood teams and specialised departments such as murder investigation teams or road policing teams. All were employed on a full-time basis with no additional employment.

Procedure

Once interest was expressed by individual police officers getting in touch with the researcher, a brief telephone conversation or email exchange was had to

provide additional study information and to screen for eligibility. Arrangements were made to meet eligible participants at the University or a place of their choice (e.g., work or home). Upon meeting, participants were given an information sheet (Appendix 2) to read with time for questions, and then completed a consent form (Appendix 3).

Semi-structured interview

A semi-structured interview schedule was designed specifically for the study (Appendix 4). It began with broad questions to elicit information from participants about their current policing role, their views on preparation and training, and their observations of the norms for talking about incidents at work. The next section focused on the individual experience of difficult events and the subsequent support received. Questions were designed to understand participants' experience of talking to others in the work context and outside of work, with an emphasis on exploring both interactions that felt helpful as well as those that felt unhelpful. Participants were prompted to describe the support they received in the context of a specific event that had affected them personally. This was designed to gather information and beliefs about actual, real-life interactions rather than beliefs that might be held solely at a hypothetical level; the aim was to elicit personally meaningful information that could be important in shaping whether or not interactions felt supportive. A set of questions was also designed for use with participants who might respond that they "don't talk to people", including questions to explore their experience of providing support to colleagues. A final section of the schedule invited participants to reflect on their views about the type of support that they found helpful to manage the effects of difficult events, and to summarise these in terms of advice they might give to a junior colleague and to the police service at an organisational level. The focus on work-

based support at this point was intended to gather information that might be of practical use to services.

Careful consideration was given to the wording of questions following feedback from the pilot interview. For example, the phrases ‘difficult situations’ or ‘ones that stick with you’ were used in place of ‘traumatic situations’(which was the term initially employed) on the basis of feedback that officers might struggle to identify with the latter term, reserving this description for major, catastrophic, nationally known events (such as 9/11). Feedback from the pilot interview also indicated a need for the section of questions to tap the experience of those who did not typically talk to others.

The interview schedule functioned as a guide, but was employed flexibly in order to allow any points raised by participants to be explored (Smith, Flowers, & Larkin, 2009). All interviews began with a question about participants’ current role and ended with summarising questions from the final section of the schedule. The arrangement of questions of a broader, less emotionally charged nature at the beginning and end of the interview was intended both to make the interview experience more comfortable for participants and to provide contextual information that could aid understanding of individual differences. The order of questions about different sources of support and experiences of providing support was flexible and led by participant material. For example, where participants began describing support from a partner, this was explored initially, followed by questions about other sources of support. This approach was taken to facilitate a natural flow to the interview process, to encourage participants to feel at ease whilst describing their experience, and to ensure a focus on the areas that were personally relevant and meaningful.

Interviews lasted between one to two hours; they were audio recorded and transcribed verbatim.

Qualitative data analysis

The transcripts of the interviews were analysed thematically (Braun & Clarke, 2006). The first stage involved reading each transcript several times, identifying the ideas and meanings expressed in sections of text and generating tentative labels to capture their essence; a summary sheet was produced for each transcript. The second stage involved clustering similar ideas and themes across transcripts; this was done by comparing the summary sheets and then re-reading transcript sections to check the meaning. The third stage involved grouping related themes into clusters, or domains, in order to provide an organising structure for the themes. Each transcript was re-visited to check the analysis was true to individual accounts and to cluster quotes to support or challenge themes. The third stage of analysis was re-visited in light of the final review of the transcripts. An illustration of some of the steps of analysis is presented in Appendix 5.

The analysis was guided by the project aims of understanding the role of social support in the aftermath of a traumatic event from the perspective of police officers. Particular attention was paid to understanding processes underlying interactions that were experienced as helpful or unhelpful, and how these may have varied according to the source of support.

Credibility checks. Credibility checks were employed to enhance the quality of the research process (Elliott, Fischer, & Rennie, 1999; Yardley, 2000). This included several transcripts being read and coded by one of the study supervisors, followed by discussion about the best way of labelling and organising themes; a consensus approach was then taken to deciding on the final labels. An audit trail

(Shenton, 2004) was also developed to illustrate and make transparent the process by which these conclusions were generated.

Researcher's perspective

Before starting this study, I had no experience working with police officers or other front line emergency service workers. I had some experience applying psychological models (including cognitive behavioural and cognitive analytic therapy) to work with individuals diagnosed with PTSD within the context of general mental health placements. Perhaps partly owing to my training and theoretical understanding of PTSD, I came to this study aware of my assumption that talking about traumatic events would be a helpful thing to do. I had heard about the use of humour by emergency service workers and whilst I was open to alternative explanations, I generally assumed this was a defence against talking about difficulties which was perhaps not overly helpful in the long-term.

Results

The analysis generated nine key themes (see Table 1). These were organised into three domains, which were informed by both the research questions and participant accounts. The first domain refers to broad issues about whether to talk or not that pertained to both support inside and outside work. However, it was clear that the nature of interactions differed depending on the source of support, and the second and third domains reflect this. The second domain considers issues related to talking to others in the work context and the third relates to supportive interactions outside of work. Before describing the results in detail, a brief section follows to provide some context to the interviews.

Table 1: Summary of Domains, Themes, and Sub themes

Domain	Themes	Subthemes
1. Dilemmas of talking	1.1 We don't need to talk	"You just get used to it" – hardened by exposure
		Talking about it isn't going to help
	1.2 Talking is risky	Emotion as a sign of weakness
		The importance of reputation
	1.3 Don't bottle up: "talk, talk, talk"	Talking helps
		But be careful who you talk to
2. The work context: informal interactions with colleagues and formal sources of support	2.1 Humour and banter	Helpful coping strategy
		Group process: saving face and gaining respect
		Sensitive use of humour - humour has its limitations
	2.2 "Dip in and out of chat"	Recognising signals of distress and requests to talk
		Selecting the person, time and place to talk
	2.3 Formal opportunities to talk	Ambivalence about formal services
		Importance of supervisors
3. Support outside work	3.1 A close relationship with someone who cares	Importance of partners
		"Selfless listening" and acceptance
	3.2 Protecting others	"Don't put that heartache on them"
		You need time off from work
	3.3 Difficulty leaving the professional role	They won't understand
		Confidentiality concerns
		Risks of revealing you're police officer

Context

Types of event that had an emotional impact. Participants described a range of incidents as having impacted them personally, with a tendency to recount events that occurred early on in their careers. Events that might be expected by the public to be 'traumatic' were not usually experienced as such; in fact, the adrenaline and excitement surrounding 'major incidents' was described as an enjoyable feature of the job (in contrast to paperwork or other work activities which were depicted as more stress inducing). Most of the situations that were described as having affected participants involved death. It was not the sight of a dead body that caused distress, rather the scenario either having had personal relevance or involving features that were particularly disturbing (e.g., where there was a perception of a vulnerable victim, such as children or elderly people). A few participants described violent scenarios which had led to serious risks to their own safety.

None of the participants described symptoms of trauma; however they did report events 'playing on their mind', sometimes leading to difficulty sleeping, with clear memories of the incident which included disturbing sensory features.

Level of experience, gender and locality. Across accounts, participants' views on the usefulness of talking about difficult events, and the likelihood of their doing so, did not appear linked to their gender, level of experience and/or where they worked (Midlands or London). This was despite assumptions held by some participants that women talk more than men and officers newer in service talk more than experienced officers.

Domain 1: Dilemmas of talking

Ambivalent attitudes to talking were expressed across and within participant accounts. There were some individual differences in general attitudes towards talking;

individual views fell on a spectrum from those who liked to talk to those who described themselves as 'insular' people who disliked sharing personal information. However, more striking were the mixed views about the value of talking within participant accounts and an expression of seemingly discrepant views.

Theme 1.1. We don't need to talk. There was a strong sense from most participants that they did not tend to talk about difficult events because they were 'used to' them and preferred to just get on with the job, perceiving talking to be an unhelpful activity. Participants described a 'hardening' to the effects of witnessing traumatic incidents so that they were less affected over time as a result of continuous exposure. This related to a change in their perception of 'normality' whereby it became 'routine' to deal with incidents the general public would find distressing.

> "We're so used to dealing with stuff like that day in day out that it's part of the norm really" [P12]

There were variations in how the process of hardening came about; some participants described this as part of a deliberate 'mind set' or strategy to avoid being personally affected. Others felt it was a natural effect of exposure. Either way, attending events without being affected was highlighted as crucial to the police role because without this it would be impossible to do the job.

> "I think after a while it just gets uh, not immune, but obviously, you just tend to erect sort of a wall in front of you, with the emotions and feelings of disgust, or whatever you feel at the time. Just so it doesn't get through to you." [P14]

> "It's that's armour and I don't know how else you would deal with it, you've got to...it sounds so callous but you've so got to detach yourself. [Talking about an infant post mortem] You couldn't allow that to be a baby that you would nurture, that you would love because it would just break your heart. All it was, it was a dead body that you had to deal with." [P10]

Consequently, many participants believed that there was nothing to talk about or certainly no 'need' to talk about it. In addition to this, several felt that it would

actually be counterproductive to talk because they needed to just 'get on with the job'. Thinking and talking about events and the possible personal impact was described by some as 'dwelling on it' and was seen as something that would do no good as it would make them vulnerable.

> "…you just deal with it and you move on because otherwise you would crumble completely." [P10]

Theme 1.2. Talking is risky. All participants could identify at least one scenario or type of incident that had affected them personally; however, there was a general reluctance to share this with others. Several participants even commented that they had talked more about events with the interviewer than they had with anyone else. Talking was described as a risky activity because it would be deviating from 'norms' of British culture (about keeping a 'stiff upper lip') and the 'macho' culture of the police service, both of which emphasise 'getting on with it' over talking.

> "I think there's a real element of machismo and masculinity in the police force and it's a bit, sort of a faux pas to admit that things have really affected you." [P3]

Participants had concerns that revealing they had been affected by events at work would be abnormal and could result in them appearing 'weak'. Some described talking as 'pink and fluffy' and others used this term to describe the organisational attitude towards talking about difficulties or initiatives to encourage this (e.g., counselling or training in stress management). An awareness of this seemed to modify the way participants approached interactions:

> "If I'd have come out and said "ah you know, that really affected me badly, let's go and sit down and have a cup of tea and talk about it" I think you're straying into pink and fluffy territory there…it's almost like admitting your feelings. Whereas if you just sort of empathise rather than admit you're feelings, it's ok but sort of saying "that made me feel sad" is a bit too far. [P3]

In the work context, participants also described a fear that saying they were affected by an event could damage their reputation. A commonly held belief was that admitting to being affected could cause others to question their capacity to manage subsequent incidents in a calm, dispassionate manner. Subsequently, the respect of colleagues could be jeopardised as well as future career prospects. Indeed, participants described dreading a shift if they were 'partnered up' with an officer who had a 'bad reputation' as it indicated an increased risk to their safety. Such officers tended to be those who had responded to situations in a confrontational or passive manner, which was attributed to their having been emotionally affected.

> "There have been officers that are doing the shift that have shown that they can't deal with situations like that, and been very open about it – and they haven't got the respect from the shift, because the colleagues go 'well, you're on your own if you're working with her, because she'd back away' or whatever. So you, sort of, don't want to be considered as one of those." [P7]

Participants were aware of their own reactions towards those who admitted to being affected. Talking about an officer who had said "that is the most scary thing that I've ever been through in my life", one participant described his own reaction:

> "This will give you an idea why people don't talk about it. I felt a bit of contempt for him to be honest…I didn't say anything to him, I think I said something fairly non-committal like 'there's more people coming up now, so it's fine' or something like that… And it's like, mate, you shouldn't really be here." [P17]

Theme 1.3. Don't bottle up: "talk, talk, talk". When asked in the interview what advice they would give to a new recruit, almost all participants warned against bottling things up by not talking about the impact of events. Despite perceptions that talking was unnecessary and risky, many participants strongly endorsed the view that talking helps. Talking was depicted by many as a crucial activity in order for the maintenance and development of relationships (especially close relationships outside work). Talking (especially with colleagues) was also described as a means by which

officers realised they were ‘not alone’ which could lessen the shame or self criticism that might otherwise arise. Talking was also seen as an outlet for emotion and a vital means of processing ‘traumatic’ events.

> “The quickest piece of personal advice is for people to talk about it…Talk talk talk – get it out and speak to people!” [P18]

As with many of the participants’ accounts, the following quotation contains a view of talking that differs to another view expressed by the same participant that talking is unhelpful. Both views were expressed at several, different points during the interview.

> “…the more you talk about something, the more it dilutes and becomes less real and becomes more of a story in your own head…the more you talk about something, the more it becomes something you’ve told and your telling becomes part of the memory, as opposed to it being a really shiny, vivid thing inside your head - those images.” [P17]

The consequence of not talking about the impact of events was described in highly negative terms with immediate, short-term and long-term effects. In addition to reactive talking, in order to cope with a particular event, several participants described talking as a preventative step to increase their reserves to cope with a more traumatic event, should one occur.

> “If you didn’t talk about everything, even the smaller things, it would ruin you. You need to talk about the smaller things to make way for the bigger things because when those bigger things come it will be like a tidal wave and it will knock you for six and it will take a long time to get that totally out of your head.” [P4]

Having the option to talk was therefore highly valued; however, as a result of the perceived risks of talking, participants unanimously spoke about needing to feel in control of the decision to talk. One participant also related this to their view that a felt loss of control was the most disabling feature of having been personally affected by an event. In both the work and non-work contexts, it was essential that the

confidant was chosen carefully; they would need to be reliable, trustworthy and well known.

> "…don't be shy in coming forward but also, be careful about who you do speak to, make sure that you choose to speak to the right person, the person who's going to react in a helpful way to you and also who's going to treat what you tell them in confidence, that's the advice I'd give them." [P9]

Domain 2. The work context: informal interactions with colleagues and formal sources of support

Participants described ways in which they interacted with colleagues in an informal manner. Across all interviews, humour was emphasised as a central means for diffusing emotion and providing support in the aftermath of difficult events. However, informal 'chat' with colleagues and formal opportunities to talk were also discussed. All forms of talk carried their own set of perceived risks and benefits.

Theme 2.1. Humour and banter. Humour was universally described as a helpful means of interacting with colleagues and talking about difficult events. The term 'banter' was used interchangeably with humour and tended to denote interactions with the presence of more than two colleagues. Jokes about a comical aspect of an otherwise disturbing situation (e.g., dead bodies) were used as an 'outlet' for awkward or uncomfortable emotions. Humour also acted to alter perceptions of an event to change the emotional response at the time and influence the memory of the situation in order to limit negative consequences.

> "Being miserable and laughing are two sort of incompatible things really, so I'd rather be laughing than being miserable. I think that lightened the mood to be honest." (P3)

> "If you, at the end of your shift can have a laugh, that's what you go home thinking about you don't go home thinking about Mrs B whose been run over, you think about the laugh you've had with your mates, 'Oh, we had such a laugh this afternoon'…. it does stick in your mind and does make you unwind otherwise you'd go home and drink yourself silly because that's the only other way to forget about stuff." [P12]

Humour was compared to talking 'more seriously' and was described as the preferable initial option that would be adopted in most circumstances. This was both in order to maintain reputation and because talking could have a detrimental effect.

> "[humour] makes the incident feel less serious, I suppose. (later in interview)…if I'd come away from it and someone was just humorous about it, because you, kind of, just diffuse from it, have a little joke about it and then you're on to the next one. Whereas we probably prolong it a little bit more, talking about it more seriously, maybe more than it needed to be. [P7]

Humour was described as a group process which fostered team spirit and camaraderie amongst colleagues. Humorous interactions were also described as fulfilling a supportive function to indicate to another that they were being accepted. If a colleague was upset, several participants described 'taking the mick' out of them as a way of showing them that they were not being 'singled out' and treated differently.

> "The camaraderie I suppose comes into it, you think, you're all in it together, you've all been through the same experience and you're reacting in roughly the same way which is cracking a joke or laughing at someone's joke. You bounce off each other, you feel the kind of camaraderie that you're not alone in experiencing events." [P2]

> "Everyone sits there and they're taking the piss…and the more the piss is taken out of you the more confident and more relaxed you become because then you start doing the same to them… it ends up in laughter everyone takes the mick out of each other and it becomes a bit of a laugh and a joke and it's not until afterwards you think shit that was pretty close." [P15]

The use of humour by female officers was described by some in strategic terms to 'give as good as they get' to demonstrate 'fitting in' to the masculine environment of the police service. How an officer responded to quips, jokes and banter was also perceived as an indication of their ability to cope. For example, one participant described leaving a briefing session upset and how he responded to colleagues' subsequent use of humour:

> "I went back and everyone knew I'd been crying and stuff and walking back in front of a load of...and I know it shouldn't be like that but I felt embarrassed, anyway, and no one said anything and totally ignored me and

> carried on with briefing and just joking around but ignored me, which was the best thing they could have done. And the shift after, that's when the jokes started, and everyone went 'ohhh' [intake of breath] and then cos I didn't react to it, I answered back, that was sort of their way of knowing that I was ok and then more jokes started and now it's just a running thing, five and a half years later!" [P4]

Despite the prevalence of humour, there were clear indications of sensitivity to when and where it was used. Participants stressed that humour would never be used in front of members of the public and would be used cautiously if there was a police officer who was not well known in case they took offence and made a complaint.

> "It depends who was in the group and if there was someone you didn't know or didn't trust…it's the uncertainty I suppose of how they'll react…it could come back to bite you so certainly yeah, you wouldn't do it in front of members of the public." [P2]

Humour was avoided in particularly upsetting or sad situations (e.g., those involving child victims) or situations with a known personal relevance to a colleague.

> "I mean people wouldn't make jokes about a child death... it's never really around a child. People are generally quite serious if it's to do with a child. [Also] I think if it's something that I refer to personally, like I put back to my own life, if somebody laughed at that I probably wouldn't find that very funny." [P11]

Sensitivity to the timing of humour was also evident, depending on the severity of the event and whether or not there was a need for active management. Humour was deemed appropriate at the scene in prolonged situations requiring no active intervention (e.g., waiting for other professionals to arrive). Conversely, for certain types of event, humour was reserved for the car journey back to the station or at a later point in time.

> "Really soon after something like that's happened, I'd probably find it quite inappropriate if someone made a humorous remark." [P2]

> "You obviously never make light of a situation where one of your colleagues has been injured or something, but sometimes after you do, but not at the time." [P7]

Several participants described sensitivity to the reactions of colleagues, being aware that they might be seen as ‘juvenile’ or ‘offensive’ if they used humour inappropriately. Therefore, while humour could enhance reputation, it also had the potential to damage it.

Theme 2.2. “Dip in and out of chat”. Participants recognised that there were times when humour ‘wasn’t appropriate’ or ‘wasn’t enough’ and they wanted to talk more seriously about the impact of events. However, a variety of strategies were employed to avoid going ‘too deep’ into the emotional impact of events and participants described these interactions as brief ‘chats’.

‘Matter of fact talk’ (rather than talk about emotions) and mixing humour into conversations acted to keep ‘chat’ at a comfortable level. The context in which talk occurred, alongside time pressures, also limited the depth of conversations with colleagues; these limitations were not necessarily viewed in negative terms.

> “…sometimes it will be serious and nine times out of ten it's jokes but it's a mixture, like a joke and then you'll say something and be kind of like ‘yeah yeah’ and then it will get a bit serious and one of you will realise what's going on and then you'll be back, crack a joke again and then you’ll be back to jokes and it's a way of getting it out. It gets to that point where it probably hits a boundary where it's slowly becoming very real and you’re realising what you're dealing with and then it sort of all goes quiet and that's awkward or you know...someone might have seen where it's going and crack a joke straight out of that.” [P4]

> “It would have been something along the lines of us driving back to the station having been at the scene and saying, either of us, bouncing off each other, saying how sad it was, you know. We wouldn’t necessarily talk about how we were feeling.” [P2]

Participants described subtle signs of distress that would be noticed and certain signals that would be given off to indicate whether or not a colleague wanted to talk. Often the option to talk was given by commenting “You alright?”; if a colleague responded by saying “yes” and moving the conversation onto another topic, participants would assume that they did not want to talk.

> "You've got to know them as individuals, so is somebody acting out of character? Are they, for them, unusually quiet? Or, for them, unusually vocal? You know, because generally, it's not obvious, you won't see them as a crying, gibbering wreck in the corner …so signs for picking it up in general would be fairly subtle, and you have to be mindful of it. [P9]

Especially relevant to participants working in response teams, the radio was described as a key source to pick up signals of distress from colleagues that might indicate the need for support. For example, a change in tone of voice or even a change in the pattern of white noise in between radio communications was described as a signal the need for support.

> "I generally send them, like just my radio to theirs and say "Oh you alright?" and say "Oh yeah, we'll have a chat when you get back to the nick". [P11]

The majority of participants preferred indirect opportunities to talk rather than directly approaching colleagues to talk. Opportunities to talk were described when colleagues commented on events they had heard about over the radio (e.g., "What was the crack with that?" or "That sounded a bit ridiculous!"), when viewing crime scene photographs in meetings or when television programs or other events evoked memories of similar incidents.

> "It needs to come out, generally outside of work or as a result of seeing something - people will take that opportunity to talk about things…when a sudden death call comes out, it's an instant trigger, people talk about a sudden death…or once someone's dealt with a sudden death quite often you have to take pictures….you can guarantee that it will surface, it will circulate and people will have a look at it, and again, it gives you an opportunity to say, I went to this one once, it was so horrible…and that's acceptable and you can do that". [P17]

A subset of participants reported occasions when they had directly approached a colleague to talk about the impact of an event (albeit a short interaction). They described carefully choosing that person to ensure they would respond by listening to their experience and normalising and empathising with their emotional reactions. Colleagues who might respond in a disinterested, dismissive or

insensitive way were avoided. Again, signals would be used to detect who would be a receptive listener.

> "I think most people choose the person they want to share things with quite carefully because there are those who will just stand back and take the mickey out of you or they're like 'Oh grow up we've all been there, just get on with it!'" [P15]

> "[If colleagues spoke to me] it would probably drain me completely to be honest. Again maybe it's a way of protecting yourself, you know we deal with so many problems at work, other people's problems…maybe my body language just tells to people, 'don't give me anymore of your worries, I've got enough worries!'" [P10]

Theme 2.3. Formal opportunities to talk. In the aftermath of difficult incidents, participants described a number of formal opportunities to talk: group 'debriefing' sessions, individual and group conversations with a 'diffuser', individual counselling, and individual Trauma Risk Management (TRiM) sessions. Many viewed these formal services with ambivalence, both in terms of the rationale for their provision and the utility of the services. Conversely, participants emphasised the importance of supervisors as a source of support.

There was widespread concern that using formal sources of support (particularly counselling) would indicate 'weakness' and damage an officer's reputation and future job prospects.

> "I still think it's a little bit of a taboo to admit that something's affected you enough to sort of seek professional help about things in the police whereas perhaps it shouldn't be, you know, some of the things we do have to deal with are pretty awful." [P3]

Underlying these concerns was ambivalence about the role of the organisation in supporting individual officers; several participants expressed scepticism about the rationale for formal services, leading to further reluctance to use them.

> "The organisation is now very good at saying, we provide this type of service for you to come, you know there are welfare departments, there are different counselling departments. Are they doing it, for the individual? If I'm honest,

> I don't think they are, I think they know, as an organisation it's expected of them and they're doing it to protect themselves, is my cynical view of it." [P6]

Participants gave mixed views about whether or not the organisation should be responsible for the welfare of individual officers and whether or not formal services should be optional. Whilst personal choice was essential to some, others believed that leaving the choice to individuals further stigmatised service use. One participant who had worked in a specialist team gave the following account, emphasising the value of mandatory counselling whilst also highlighting the discrepancy between public and private beliefs:

> "We had counselling every six months…and everybody used to go 'Oh I've got to see the counsellor this week', but I tell you what…we all quite enjoyed it…I was so much calmer after speaking to her but it's something I'd never have done had I not been made to do it." [P12]

Indeed, participants who had attended counselling were unanimous in reporting that it was helpful to talk to a neutral, non-judgemental person who facilitated understanding of their emotional reaction to events. The following comes from an account of a one-off counselling session:

> "It played on my mind but once I'd gone and spoke to the counsellor, spoken to someone at length about it, it just sort of cleared the air, if you know what I mean. And I felt, because I'd told somebody about it and they listened, afterwards I just kind of got used to it you know." [P13]

Perhaps due to terminology and acceptability of the role within the organisation, participants typically described positive attitudes towards debriefing and diffusing services and generally felt that it would be helpful to have these on a more routine basis. However, in practice, the function of these sessions varied depending on the team involved and the skill of the person facilitating them (e.g., whether it felt like a safe environment to discuss feelings). Owing to time pressures and the reliance on supervisors deciding when to employ these services, many felt that they were under-used.

> "It [diffusing] just gets forgotten about because you just kind of accept that it's the norm and I suppose if you were being diffused every two minutes, you'd never get anywhere but I think it would be nice if it were offered." [P12]

Typically supervisors were described as a key source of support both in terms of their role in facilitating access to formal support structures, and their influence on the culture of the team and individual attitudes towards talking about difficult events. There was a distinction between supervisors who were approachable, down-to-earth people and those who were not.

> "I have always had really good supervisors and they've always said, you know - doors open." [P13]

> "I know in our team he's quite austere…he wouldn't be the bloke you would want to talk about something like that. He's quite an old fashioned sort of police officer, not the bloke you would sort of want to go in and have a chat with about a sudden death you'd just been to…If I went in and said 'Governor, can I have a chat about the sudden death?', he'd look at me as if I'd just asked to kill one of his children!" [P3]

Enhancing support at the supervisory level was generally seen as the change that would be most beneficial to the welfare of officers and their perception of being supported at work.

> "The amount of times I've been approached by senior officers to enquire about my wellbeing in a non-structured way – it just doesn't happen. It's easy to do and could be helpful to encourage actively communicating to identify what things help these sort of welfare problems." [P17]

Domain three: Support outside work

In the majority of cases, support from a close other outside of work was highly valued. Most participants felt they would be more likely to speak to people at home, rather than at work, if they were personally affected by an event. However, perceived differences between those in and out of the police service led to concerns about being understood and a felt need to protect others, both of which moderated the way participants talked.

Theme 3.1. A close relationship with someone who cares. The majority of participants reported that they would want to talk in-depth to a loved one if they had been affected by an event at work and many described having the option to do so as vital.

> "I don't think talking about it to people at work is the release, the escape I need… Speaking to people at work, they are work colleagues, they're friends but they are not the same kind of relationship I have with my family or my friends at home. And it's speaking to people who I care about and who care for me and just having that comfort zone, that's what's important to me." [P16]

> "The only way I can deal with things in relation to work, is to come home and have a talk about it." [P6]

The importance of having someone to come home to was highlighted by many as it allowed them to feel contained, safe and supported. For those in relationships, partners were often described as the main source of support and the person participants felt closest to and most comfortable with. Conversely, two participants avoided talking to partners for fear they would be more likely to 'let go' and become emotional.

> "I'm quite happy to talk about it anecdotally…I don't sit with my wife and talk about it…perhaps because you can objectify it and talk about it more remotely rather than being in the circumstance where you're perhaps letting go…to talk about it as though it's an incident that has happened to somebody else, to talk about it as a story…I think it is an issue of control and an issue of self control and not wanting to let go." [P1]

Seven of the participants were in a relationship with a partner in the police service; this was essential to some as it allowed them to talk frankly, openly and with the option for reassurance about work-based decisions. However, participants in police partnerships varied in the degree to which they spoke about work events at home, both within and across couples. Even though they valued talking to their partner, some actively limited the amount of time talking about work to avoid it 'taking over'.

> "I'm married now to a police officer so it's much easier to talk and relate to things with her." [P18]

> "I find quite a lot of comfort in the fact that we're both in the job and I can talk to him in as much detail as I want. (later in the interview)…We make a conscious effort not to talk about it too much…just to switch off because doing the same job, you could end up talking about it an awful lot." [P7]

For many, being able to talk to their partner was not only about receiving or providing support but was also motivated by a belief that this sharing was essential for the relationship. Moreover, not feeling comfortable to share this type of information was a source of relationship strain, and in a few cases, separation.

> "…even if she wasn't doing the job, I would still talk, if it was affecting me, I would still talk about it. Because it would just not be healthy for our marriage, if I kept those, if there was something that was happening that was having a manifest effect on me and I was just keeping it to myself, that just wouldn't be helpful for the marriage". [P9]

The benefit of a close relationship (whether with partners or family members) was often described in terms of the other knowing the participant well and therefore noticing the signs that they were upset and knowing what support to offer. Often it was not talking but other acts of support that were perceived as being most helpful.

> "…she knows when I'm upset or when I'm angry about something, she can just tell and she supports me in the sense that she'll go and get me some beers from the supermarket or she might cook me my favourite dinner or something like that and it's not um, 'Let's sit down and talk about this and get it all out in the open and make you feel better about it'. She's there if I want to speak to her about it and we'll just talk about things." [P12]

Further benefits of a close relationship included carry-over effects into the work-place. For example, one participant recalled their partner's comments to 'be safe and be careful' and felt this gave the rationale and reassurance he needed to avoid putting himself in danger at work. Several participants described calling their partners during a situation at work either for advice (if in the police service) or to provide distraction when alone in a particularly disturbing situation.

When participants did speak about experiences at work that had affected them personally, all emphasised the importance of the other person sitting back and listening and being accepting of their reactions. This was described by some as 'selfless listening' as it involved the other person putting aside their questions or assumptions and truly listening and detecting what they needed in way of support.

> "They'll just listen, they won't judge, they won't question, they'll just listen and go, 'Are you alright?' And that's what you need, isn't it? You just need that, that offload." [P8]

The ability to listen in this way contrasted with occasions when participants spoke to others who diverted the conversation via questions or responses in a way that left them feeling as though their needs were not met.

> "I'm not so close to my mum…she's the sort of person, as an individual, you will tell her about something and she'll always tell you about something that she's had…you know, 'I'm not interested in your experience I'm just telling you what happened to me' and so I didn't think she was the right person." [P18]

> "I didn't really get the reaction I wanted, she said 'Oh terribly sad, what do you want for dinner?' I was just sort of a bit stopped in my tracks." [P3]

Theme 3.2. Protecting others. Almost all participants described concerns about talking to those outside work in case they said too much and upset the other person. Participants felt that those who had not signed up to be in the police service had not given their consent to hear about the events police officers encounter. Some thought it would therefore be selfish for them to talk about their experiences because while it might unburden them, it would mean putting the burden on another. This concern was also present during the interviews when several officers expressed concern about the impact of their stories on the interviewer. As a result of these concerns, participants described 'vetting' the details of their accounts to avoid shocking or upsetting others.

> "…I never tell my wife that, I would never tell her that because I just think that would have really put the scares, really put the frighteners on her." [P15]

In addition to a desire to protect others, many participants also described protecting themselves as a result of limiting disclosure to others. This was so that they could have 'time off' to separate from their police identity and duties as well as retaining access to a 'normal' perspective, one that hadn't been altered by exposure to police work.

> "You've got to cut off from it…work's work and home's home… I won't bring stuff home, or very rarely bring work home or talk about it. Let's be honest, we don't deal with the nicest things in the world, or the nicest people, so why do you want to bring it home?" [P5]

> "It's almost like, because it's [the bad side of society] all we ever see when we're at work, you sometimes lose, like the light in your eyes, whereas when you go out with your friends or you see your family, they've still got that light because they haven't been blinded, they haven't been affected by it and that's quite refreshing, that's quite nice and I wouldn't want it to be any other way." [P6]

Related to this was a general view that it was important to maintain friendships outside of the police service. However, there were exceptions, with one officer finding it particularly helpful to have a 'police centric' circle of social supports as it allowed her to relate better and so feel closer.

> "Absolutely everything I've done has been the police, all of my adult life, all of my friends outside of work are generally police related um within my family, I've got family members that are police related or you know, other organisations that deal with the police… so I'm very fortunate that I've got a massive bank of people I can talk to about anything and we all talk to each other about each other's jobs because it's a safe environment to talk about it." [P12]

Theme 3.3. Difficulty leaving the professional role. Many participants expressed the view that their perspective on life was altered as a result of exposure to the 'bad half of society' and events encountered at work. Furthermore, being a police officer was described as an identity carrying a set of strong expectations, which constrained officers in talking to those outside the service. There was a feeling that

those outside the police service did not understand the nature of police work; consequently, participants described reading the reactions of others to gauge whether or not they were understanding and then weighing up whether to talk more or not.

> "A lot of people don't talk to people outside work…For someone to understand the emotional impact you have to understand the context." [P1]

> "I can distinctly remember thinking, this is going nowhere because she's got a different outlook on life to what I've got as an outlook on life". [P10]

Some participants described a reluctance to share information with non-police officers in case they were breaking confidentiality and preferred not to say anything work-related so they could have 'peace of mind'.

> "If you don't say anything, if there's ever a leak, you can always put your hand on your heart and say, 'Well that didn't come from me because I don't talk about my job outside of work.'" [P6]

Most participants made reference to the general public holding misconceptions about police work as a result of television and press coverage. For some officers, television portrayals of officers as always 'being in control' added to concerns about expressing emotion as a sign of weakness. Participants described being affected when 'bad press' was published (e.g., about excessive use of force), and for some, fears about misinterpretation or criticisms of their actions acted to constrain talking to people outside the police service.

> "It seems a bit hard to talk because people expect like me to deal with it…You don't see an officer crying or 'I can't deal with this' or being emotional, you just don't see things like this on telly… if people don't expect you to show your emotional side, then you wouldn't do it." [P14]

Discussion

Police officers described a range of experiences of supportive interactions with colleagues, friends and family, as well as a number of social constraints which hindered interactions. Although officers described rarely being affected by events at

work, they all experienced some events that had been upsetting or distressing to them. Ambivalence about talking about the impact of such events was striking throughout the accounts. The context and source of support, as well as beliefs about talking, influenced interactions. Indirect banter and humour were central features of interactions with colleagues, connected to concerns about preserving reputation; more emotional talk occurred with partners and close family, albeit with officers limiting details in order to 'protect' others.

Ambivalence about talking was evident both within and across participants' accounts. On the one hand, there was a strong sense that talking would do no good and carried risks of dwelling on events and damage to professional reputation. On the other hand, talking was described as a helpful and necessary means to cope with police work and not doing so was predicted to have a negative effect on individual wellbeing and relationships, especially in the home context. Underlying this ambivalence appeared to be a discrepancy between the 'official line' that officers have access to services that facilitate talking which should be used, and an alternative implicit expectation, tied to the culture of the police service, that officers *should* cope with difficult events and, therefore, talking about emotions is 'taboo'. There was a sense that emotions were 'unspeakable', an idea also referred to in another qualitative study of police officers (Howard, Tuffin, & Stephens, 2000).

In the work context, participants described minimal 'talking' in the conventional sense; they were more likely to communicate with colleagues using humour, a finding echoed in other studies of police officers (e.g., Pogrebin & Poole, 1991; Roth & Vivona, 2010; Tracy & Scott, 2006; Wright, Powell, & Ridge, 2006). They described these interactions in a manner consistent with what Martin (2007) terms 'affiliative humour' (banter that enhances social cohesion) and 'self enhancing

humour' (maintaining a humorous outlook on life). Humour appeared to have a positive function, providing distance from uncomfortable emotions and promoting the reappraisal of events as non-threatening. Moran and Massam (1997) suggest that conversations with colleagues can emphasise humorous details of an otherwise unamusing event and help the development of adaptive appraisals and memories of events. The accounts of participants in the present study map on to research findings that humour diverts attention away from negative emotional processing and can evoke positive emotions that 'undo' negative emotions (Samson & Gross, 2012). Humour was also described as a means of preserving masculine self identity and a communication tool to broach difficult topics and implicitly acknowledge the emotionally difficult nature of events without explicitly saying so; both of these have been noted in other contexts, such as men talking about testicular cancer (Chapple & Ziebland, 2004). Whilst the use of humour featured in participants' accounts irrespective of gender, there was some suggestion of gender influences. Several female officers depicted their male colleagues as more reliant on humour (in order to appear 'macho') and several male officers suggested that female colleagues used humour to demonstrate their ability to cope in the wider masculine culture of the police service.

Although generally viewed as a helpful coping strategy, the majority of participants voiced concerns about the insensitive use of humour and some described times when they had felt guilty and questioned whether it conflicted with codes of professional conduct. This is a finding echoed in other interviews with police officers (e.g., Scott, 2007) and is arguably exacerbated by the lack of a formal position on the use of humour by the police service (Moran & Massam, 1997). Other potential negative consequences and concerns about 'over-use' of humour have been noted in

studies of police officers and include reduced empathy for victims (Pogrebin & Poole, 1991) and possible 'spill-over' effects, in terms of a reliance on distance coping which may damage interpersonal relationships (Regehr, Dimitropoulos, Bright, George, & Henderson, 2005; Violanti & Marshall, 1983). However, in the present study, there was no explicit reference to, or evidence of, these additional concerns and negative consequences of humour.

In addition to humour, participants in this study described 'hardening' to difficult events, depersonalisation (e.g., seeing bodies as objects) and emotional numbing (e.g., deliberately shutting off emotional reactions) as adaptive strategies that were often preferable to talking. However, within the literature on emergency service work, there are mixed views about the effectiveness of these strategies, particularly in the long-term. 'Hardening' can be likened in some ways to habituation, which is in fact a therapeutic goal of some therapies (e.g., prolonged exposure therapy; Foa, Hembree, & Rothbaum, 2007) and may be a protective factor against vicarious trauma (Pearlman & Saakvitne, 1995). However, depersonalisation and emotional numbing bear resemblance to descriptions of dissociation (Brewin & Holmes, 2003), which is indicative of poorer outcomes post-trauma (Ozer et al., 2003). Perhaps a distinction is needed between what is adaptive in the professional work context, and what is functional for individual/ personal wellbeing.

Participants tended to seek opportunities to talk more seriously with people outside of work. In particular, partners were described as a key source of support, a finding common to the general population in relation to help seeking during times of stress (e.g., Barker, Pistrang, Shapiro, & Shaw, 1990; Veroff, Kulka, & Douvan, 1981). However, similar to other research with police officers (e.g., Freedman, 2004), participants described concerns about non-police officers' capacity to understand and

cope with information about difficult events, which constrained talking. This illustrates some of the difficulties of helping interactions in the context of close relationships. In comparison to 'formal' sources of support, such as counselling, in close relationships it is difficult for the person providing support to do so from a neutral position. Consequently, with or without awareness, interactions will be influenced by the reactions and needs of the person providing support (Rusbult & Van Lange, 2003). Indeed, some participants noted that some friends or family members did 'not want to know' about events at work because it made them worry about the other's safety or made them feel uncomfortable in some other way.

In keeping with Lepore's (2001) social cognitive processing model, it appeared that participants' social environment (both in and outside of the work context) could act to promote or deter talking as a means of processing information about difficult events. Similar to the core conditions for formal helping relationships (Rogers, 1957), supportive interactions with others were those where the other person listened non-judgementally and offered empathic, validating responses. In contrast, unsupportive interactions included inhibiting, invalidating and critical reactions from the other. However, in many cases participants chose not to talk to others in any great detail (in part due to habituation to events and in part through social constraints), yet the perception that they could was what seemed crucial to feeling supported. This is consistent with previous quantitative research findings indicating the importance of 'perceived', rather than 'received', social support in relation to PTSD (Prati & Pietrantoni, 2010), although it is not readily explained by existing models of adjustment to trauma (e.g., Lepore, 2001).

The application of psychological theories of PTSD (and literature from this field) to the context of emergency service work may be of limited use, in terms of

understanding what promotes risk or resilience in this population. It is clear that the routine exposure to stressful events during police work is different to the experience of 'traumatic' events as conceptualised in the PTSD field. In fact, with few exceptions, officers in the present study did not appraise events they encountered at work as 'traumatic' or 'threatening', and in the majority of cases, they felt they had control over the subsequent necessary procedures and did not feel 'helpless'; this suggests a divergence from the key psychological processes evident in the development of PTSD (Brewin & Holmes, 2003). Consequently, cognitive processing of events is unlikely to be disrupted, thus reducing the role of social support outlined by Lepore's (2001) model of PTSD which emphasises talking in a supportive environment as a means to facilitate processing. A broader consideration of the processes underlying supportive interactions is perhaps needed at this stage.

Limitations of the present study

The sample of participants in this study may have been unrepresentative or atypical of the wider police organisation. As noted, compared to UK estimates, the study sample included a higher proportion of female officers. Given that the sample was drawn from busy urban areas, the policing culture may differ from other parts of the UK. The transferability of the study findings may have been further affected by the use of a snowballing sampling approach; it is possible there were similarities between participants by virtue of the common connection via the initial contact points, which could have restricted the range of views.

Although officers appeared to talk candidly about their experiences, as with all self-report methods, it possible that officers were responding in a socially desirable manner. The influence of the interviewer and the interview context on the research findings is impossible to 'neutralise' (Smith et al., 2009). For example, in

relation to participants' ambivalence about the usefulness of talking, the format of questions appeared to be influential: when participants were asked to give advice to a hypothetical 'new recruit', talking was almost unanimously advocated, but when asked about their own actual means of coping, many officers took a less favourable view of talking. It is likely that the professional context was highly salient given that participants were taking part in research on the basis of their role as police officers. Asking about others may have provided the necessary distance from the professional context for participants to offer a different perspective on attitudes towards emotional expression.

Asking participants to retrospectively recall complex social interactions is a difficult task and may have led to an incomplete picture of interactions due to the reliance on participants' memory of interactions and the inherently one-sided nature of these accounts (taken from the perception of participants). However, despite the aforementioned limitations, this study demonstrated the value of in-depth qualitative interviews to aid understanding of the process of interactions and the findings give rise to several research and practice implications.

Research and practice implications

Given the limits of self-report methods, observational methods could be particularly useful for studying the complex, dynamic nature of social support interactions, especially in group contexts such as the humorous group interactions described in this study. Tape-assisted recall (Pistrang & Barker, 2005) is one approach that utilises both self-report and observational data. It involves tape recording a conversation between two or more people; the recording is then played back and stopped at certain points so the researcher can ask about the intention, and actual impact, of particular comments, from the perspectives of both the 'provider'

and ‘receiver’ of support. This method could provide a means to further our understanding of the value of partner support or other important one-to-one interactions. Further research into ‘non conventional’ forms of social support is clearly required and a move away from PTSD models may benefit the field. Finally, further research into the long-term impact of different types of social interaction is also warranted.

The findings of this study have a number of practice implications at an organisational level. Despite awareness of a range of formal services available to support officers, participants described a reluctance to use these. The setup of such services could be improved to encourage access (in terms of promoting service information and acceptable terminology); more importantly, negative attitudes towards emotional expression perhaps need addressing in order to de-stigmatise counselling and other psychological services. The study findings indicate that supervisors may be particularly well placed to shape the culture of work-units and influence attitudes towards emotional expression. Given that partners were described as a key source of support, and in light of findings that this relationship is susceptible to damage arising from ‘spill over’ effects of police work and subsequent coping strategies (Regehr et al., 2005; Violanti & Marshall, 1983), it also seems appropriate for the police service to consider interventions aimed at supporting officers’ partners and families.

Informal interactions with colleagues were clearly important to officers and could be supported by ensuring time for these to occur, for example, by prioritising time at the end of shifts for officers to get together informally. Explicit recognition of the utility of humour may also be helpful to address feelings of guilt arising from concerns that humour conflicts with professional codes of conduct. However, a need

would clearly remain for the organisation to address the inappropriate use of humour; guidelines supporting the sensitive use of humour may be of use to officers.

There is some recognition from the police service that the culture of the organisation is powerful and can obstruct interventions aimed at reform (Kiely & Peek, 2002). The police organisation itself may benefit from thinking about larger issues, such as its position on attitudes towards emotional expression and the extent to which the organisation (or individuals themselves) are responsible for officer wellbeing. Reflecting on these issues could lead to a more unified stance on the desirability (or not) of cultural change; without this, it seems likely that formal initiatives to encourage officers to talk about difficult events will continue to be viewed with ambivalence and scepticism.

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Part 3: Critical Appraisal

Introduction

This critical appraisal considers the process of planning and executing the research presented in Part two. Firstly, the challenges of access and recruitment of participants from a 'closed' organisation are discussed. Secondly, the process of conducting interviews will be considered. In the final section, I will expand on the impact of the researcher upon the research process, and reflect on the ways the research has in turn influenced me, personally and as a researcher.

Process of conducting research with a 'closed' organisation: access and recruitment

Conducting research with the police service is notoriously challenging (e.g., Dawson & Williams, 2009). Wise (2011) reflects on her own research with criminal justice organisations, and notes that there are two gateways that a researcher must negotiate: first, they must gain access to the population via a gateway controlled by top-down organisational administrators; second, there is the gateway controlled by individuals who are asked to participate.

In the present study, difficulties were experienced in navigating the organisational gateway. Although local services showed interest in the research, the organisational hierarchy for gaining regional approval led to prohibitive time delays. In contrast to the difficulties at an organisational level, individual police officers seemed keen to participate in the present study. Participants appeared to value the opportunity to talk about their experiences, perhaps indicating an absence or lack of such opportunities elsewhere. The discrepancy between these two gateways, in terms of receptivity to research is of note. There is an understandable need for organisations such as the police service to control research activity in order to protect confidential data or information that could compromise investigations from entering

the public domain. However, Wise (2011) suggests that the need to manage these processes also serves to highlight the closed nature of such organisations and their resistance to externally-based researchers for fear of criticism from outsiders. Indeed, Dawson and Williams (2009) suggest that previous research taking a critical look at policing practice, alongside the tendency for research to focus on sensitive topics (including mental health), has led to the organisation viewing 'outside' researchers suspiciously.

The process of conducting interviews

There were several sources of potential influence upon the process of interviewing police officers in the present study. In particular, the cultural context, my own characteristics and those of participants, alongside a need to balance the goals of maintaining rapport and gathering information, presented certain dilemmas which required negotiation. The experience of managing and negotiating these issues highlights the complexity of conducting qualitative interviews.

The influence of cultural values on individual accounts

The organisational culture of the police service often encourages denial of the psychological impact of 'traumatic' incidents resulting in stereotypes which are then transmitted and continued in stories told by police officers (Young, 1995). This is especially relevant when considering sources of influence upon interview data, and may account for the observation from Alexander and Wells (1991) that police officers taking part in their interviews "wished to present themselves in a deceptively favourable light" (P. 553). Wise (2011) suggests that higher-level, cultural attitudes and expectations may present a barrier to collecting 'accurate' and 'meaningful' data from individual officers (Wise, 2011). For example, commonly valued police characteristics (and 'masculine' virtues) include: expectations of courage,

resourcefulness, loyalty to the group and action-orientated work; these are likely to shape and perhaps constrain the accounts of individual officers taking part in research. (Dawson & Williams, 2009)

Whilst the officers who took part in the present study appeared to be giving candid accounts of their experiences, the presence of the police culture was evident and seemed to underpin ambivalent attitudes about talking and the description of talking as an unvalued and unhelpful activity. Using questions that were framed to elicit multiple perspectives (e.g., from the position of being the 'supporter' as well as the 'receiver' of support) and considering support in different contexts was helpful in understanding nuances and exceptions to the rules of police culture, something echoed by other researchers in this area (Howard, Tuffin, & Stephens, 2000).

The influence of researcher characteristics

A researcher's sex, age, ethnicity and life experience can affect his/ her ability to establish rapport with research participants and will exert an influence on the data collected (Smith, Flowers & Larkin, 2009) . Indeed, given that I am a young woman from outside the police service, these characteristics are likely to have been relevant when conducting research in a 'macho' environment (Horn, 1997). I made several observations during the interviews which suggested participants' awareness of my characteristics and their influence on their accounts. These included: apologies for 'bad language' (perhaps owing to beliefs about age or gender); concerns that I might become upset or shocked by events (perhaps on account of gender expectations and 'outsider' status); and detailed accounts of scenarios, which seemed to be driven by a need to give me sufficient exposure to police work to aid my understanding as an 'outsider'.

Whilst conducting research from outside the police service may hamper access and recruitment (Dawson & Williams, 2009), several participants in the present study remarked on the benefits afforded by my 'outsider' status: it helped them to feel more at ease, worrying less that taking part could negatively affect their reputation or career prospects. However, a degree of suspicion was displayed by some participants who (laughingly) voiced fears that the research findings could end up in the newspaper and result in bad press. Alongside standard consent and confidentiality information, participants were reassured that the study did not employ deception and would only be used for the stated purposes. To address these concerns, I also invited participants to ask questions and emphasised that they could 'pass' on any questions and withdraw consent at any point; they were also invited to review the results.

Horn (1997) describes several advantages of being viewed by officers as a naive, benign 'female', which were also evident in the present study, although not necessarily confined to gender related expectations. Being able to ask 'obvious' questions without arousing suspicion or frustration from participants allowed me to ascertain individual meanings and views behind explicit statements; this was perhaps afforded by not only my gender but also my age and lack of police experience. Furthermore, not having police experience helped me to elicit and experience concerns pertinent to interactions with friends and family outside the police service (e.g., a desire to protect 'outsiders' and concern about being misunderstood). On the other hand, it is possible that these 'outsider'-related concerns acted to constrain or limit participants' accounts in the interview. Indeed, at times, participants made comments to the effect that I would not be able to comprehend or manage the complexities of police work; sometimes I experienced these as patronising (e.g., one

participant commented on how an inexperienced colleague "froze, they didn't react…like how you would probably react if you were there").

One dilemma arising from the awareness of my 'outsider' status was whether or not I should make reference to my own (anonymous) personal contacts in the police service, as a way to overcome the negative effects of perceptions of being an 'outsider' and lessen the insider/outside divide. This was a case of judgement given that there was a risk of eliciting concerns about confidentiality which could remove the positive effects of being an 'outsider'. However, at times, making a comment of this nature (e.g., 'I've heard similar things about how difficult shift work can be from family in the service') seemed to helpfully reassure participants of my credibility and seemed to help them feel less worried about a need to 'protect' me from the details of difficult events.

Balancing rapport building and information gathering

The present study was not initiated by the police service and participants were volunteering in their own time to take part, with no guarantees that doing so would have a beneficial effect on them or their work environment. Consequently, there was little obvious gain for individual participants and so establishing and maintaining rapport was a salient goal. Balancing this goal against the goals of data collection and weighing up ethical considerations as well as keeping in mind the dangers of 'over rapport' (Horn, 1997), was a complex task during interviews. For example, on several occasions, it seemed that participants were telling a story in order to gain my approval or validation of their ability to cope with dramatic events. On some of these occasions I responded in an 'impressed' manner or displayed shock in line with my perceptions that this was what participants desired. However, such reactions were employed in a sensitive manner (e.g., with authenticity in mind) and

were balanced against a desire to appear competent and professional and to avoid eliciting concerns about my welfare. For example, a 'neutral' reaction was used at times when sufficient rapport had been established and I was looking to move the conversation on from the factual details of an account to understand the meaning of it to the individual and how this informed their reactions to it.

There were occasions when the goals of maintaining rapport and eliciting information that would help answer the research questions appeared to conflict; in these cases, a decision about which goal to prioritise was required and was made on the basis of non-verbal and verbal interactions with participants. On several occasions, participants gave signals that they did not want to talk about certain topics and a decision to respect these signals was taken in the interest of maintaining rapport. For example, one participant described his awareness that he did not feel supported by his wife; this was clearly distressing to him and although questions to explore this may have benefited the research (in terms of understanding the components of unsupportive/ supportive interactions), it seemed unethical to pursue this topic given the research (rather than therapeutic) context and the fact that the participant seemed reluctant to say more.

On the other hand, there were occasions when sensitive issues were touched on and followed up. For example, one participant described her mother as having been a great source of support and how her death had been extremely difficult; questions were asked to understand the nature of interactions that led to her feeling so supported and the difference this had made. Another participant implied that he had received counselling and I explicitly enquired about this in order to understand his experience of this formal source of support. In these cases, rapport was maintained by sensitive questioning and making explicit the option not to answer.

Epistemological and personal reflexivity

Willig (2008) describes two types of reflexivity in qualitative research: epistemological reflexivity and personal reflexivity. Epistemological reflexivity concerns the way in which knowledge is constructed and considers how ideas at this level can influence the way a research question is defined and a study designed. It involves reflecting on the assumptions that have been made during the research process and the implications of these on the study findings. Personal reflexivity involves reflecting upon the ways in which the researcher's own values, experiences and interests (alongside other pertinent personal qualities) have shaped the research. It also involves how the research has affected the researcher and potentially changed them, as people and researchers. Both of these types of reflexivity will be considered in turn and applied to the present study. Notably, however, it is difficult to bracket the separate influences, given that personal factors influence epistemological beliefs and vice versa; consequently there are some overlaps between these.

Epistemological reflexivity

There is a common belief, and certainly one that I ascribed to as a trainee clinical psychologist, that 'talking helps'. Accessing social support and talking with others about stressful or traumatic experiences is thought to be psychologically and physically beneficial (Agaibi & Wilson, 2005; Lepore, 2001; Lerias & Byrne, 2003). This relates to notions of catharsis whereby the release of emotions enables processing and ‘working through’ difficult material (Scheff, 2007). Social cognitive processing theory (Lepore, 2001) suggests that talking with others provides the opportunity for emotional support, including a chance for cognitive reframing and encouragement of adaptive appraisals of a traumatic situation and one’s own reaction

to this. These ideas can be seen to have influenced the present study in terms of the research questions as well as the interview schedule questions.

My awareness of the assumption that talking helps arose during the pilot interview when I noticed myself feeling frustrated and confused when the participant did not answer questions in the way I expected. The fact that events were not being described as 'traumatic' and talking was not being endorsed as a helpful means to cope was unexpected. At the time, I recall assuming that the interviewee was either an exception to the norm or was somehow repressing, suppressing or otherwise minimising the level of emotional distress arising from difficult events. However, suspending these judgements and accepting the possibility that talking may not be helpful to some people was important to avoid limiting what could be 'found' in subsequent interviews. Consequently, I made efforts to monitor and contain these assumptions during interviews. Amendments were also made to the interview schedule to limit assumptions that social support was analogous to talking, and that this would be a helpful activity (e.g., by asking participants themselves to describe helpful and unhelpful aspects of interactions). Yet, looking back with the benefit of hindsight (and having been influenced by the number of accounts that echoed the sentiments of the initial pilot interview), the interview schedule can be critiqued on the basis that it remained largely focused on 'talking' as a form of support, which may have limited the research findings.

I am aware that I broadly adopt a social constructionist (Willig, 2008) view of the world and the construction of knowledge, which has perhaps been strengthened by my training in systemic approaches during the course of the doctorate in clinical psychology. Consequently, the role of the context in which social interactions take place was something that was of interest to me. Whilst I approached the design of

this study with the limitations of the existing body of research in mind, it is possible that my own assumptions about the construction of individual attitudes and behaviours guided the focus of the study (on the importance of the source of support) and the interpretation of the data.

On the other hand, I also believe in the value of reflexivity and was mindful not to 'over-interpret', the data in a way which could too heavily impose my ideas onto the participants' accounts. Consequently, in presenting the findings, I did not want to obscure the belief expressed by participants that indirect talk and humour were helpful (rather than 'conventional' talk). For example, the idea that humour is a maladaptive defence mechanism has long been documented (Joyce, 1989; Kubie, 1971; Mitchell, 1988) and whilst it is possible to view it as such, I felt that to highlight this interpretation could undermine the views of participants. As a result, my desire to be reflective and to do justice to participants' accounts undoubtedly shaped the analysis of the data and how the findings were presented and interpreted.

Personal reflexivity: the influence of the research on the researcher

As a result of the aforementioned factors, it is hard for me to take a realist stance (Willig, 2008) towards research findings; consequently, the findings of the present study cannot be taken as 'fact'. However, these concerns and limitations aside, what seemed to come out of the interviews with officers was the attitude that talking does not always help. This has led me to reflect on the social support literature as well as my experiences of offering 'talking therapy' (and its mixed effectiveness in different settings, from different perspectives) over the course of training.

An emerging field of interest is arising from the awareness that social interactions can feel 'unsupportive' to the receiver in some instances (e.g., when

there is a minimisation of the person's suffering; Lepore, 2001). It is also relevant to reflect on the mixed evidence for debriefing, as one of the formal sources of support available to police officers, that is based on the notion that talking helps. Crisis debriefing groups can enhance perceptions of social support from the organisation and benefit individuals via increasing their sense of control as a result of psychoeductaion components (Regehr, 2001). Yet, there is also a risk of PTSD through exposure to others' memories and suffering (Regehr, 2001) which can constitute vicarious trauma (McCann & Pearlman, 1990).

Participants in the present study described the beneficial effects of 'hardening', or emotional numbing, that they employed (consciously or not) in order to cope with exposure to traumatic incidents. This is a finding cited by other researchers in this field (e.g. Freedman, 2004) and appears to run contrary to the view that emotional expression helps. However, there is scepticism about the value of this strategy and questions remain about its long term effectiveness. Furthermore, it is unclear to what extent this strategy is dictated by cultural norms, rather than being employed on the basis of it being a helpful way to manage the impact of difficult events. Ultimately, the relative utility of indirect and direct forms of talking, as well as other non-verbal means of social support (e.g., a hug or a nice meal), remains unclear.

Overall, at a personal level, this research has shaped my attitudes towards talking in a direct and indirect manner. My conviction that 'talking helps' has lessened and I am more accepting of alternative, indirect forms of talking (such as the use of humour), questioning my assumption that this is pathological or defensive in some way. This position of uncertainty is anxiety provoking and can cause some discomfort to me personally, although it hopefully benefits my personal and

professional relationships through a genuine openness to others' experiences and an ability to comfortably (or not!) adopt a ‘not knowing’ stance.

As a researcher, the process of conducting research using qualitative methods has furthered my belief in a pragmatic approach to research design which values both quantitative and qualitative methods of inquiry. The findings of this study (and other qualitative studies with emergency service workers) challenge the idea that high levels of social support reduce PTSD risk via promoting talking and emotional disclosure to facilitate cognitive processing (Lepore, 2001). This illustrates the value of qualitative research in exploring the processes behind quantitative research findings and to highlight contextual influences on these processes. It is possible to conceive humour as an adaptive coping mechanism which alters perceptions or appraisals and aids some emotional expression (Moran & Massam, 1997). However, making such links to fit this form of interaction within existing models of PTSD seems spurious and premature. At this stage, it seems that clinical models of PTSD may be of limited use in understanding risk/ resilience factors in the emergency service worker population.

Conclusions

Conducting research with police officers has developed my awareness of the role of organisational and cultural factors that shape the research process. The ability to flexibly adapt to research challenges was essential. The process of conducting interviews provided an opportunity to experience the complex dynamics of adopting the researcher role (in contrast to a clinical role) and increased my awareness of the socially constructed nature of the research process, and the inescapable influence the researcher has on the data collected. Ultimately, the findings of the present study challenged my views about the utility of ‘talking’, in a conventional sense, and raised

questions about the individualistic focus of research and clinical models of PTSD and the appropriateness of these in the context of emergency work. There is a continuing need for research to understand the processes which confer resilience in this context.

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Appendices

Appendix 1: Letter of ethical approval

NHS
National Research Ethics Service

South West London REC 3
Room 4W/12 4 Floor West
Charing Cross Hospital
Fulham Palace Road
London W6 8RF

Telephone: 020 331 17251
Facsimile: 020 331 17280

07 April 2010

Dr Jo Billings
Traumatic Stress Service
Building 2
Springfield University Hospital
61 Glenburnie Road,
Tooting
SW17 7DJ

Dear Dr Billings

Study Title: **How do emergency service workers cope with the traumatic events that they are exposed to in the line of routine work and what might help to protect them from developing PTSD?**
REC reference number: **10/H0803/8**
Protocol number: **3**
The Research Ethics Committee reviewed the above application at the meeting held week commencing 5 April 2010.

Ethical opinion

The members of the Committee present gave a **favourable ethical opinion** of the above research on the basis described in the application form, protocol and supporting documentation, subject to the conditions specified below.

Ethical review of research sites

The favourable opinion applies to all NHS sites taking part in the study, subject to management permission being obtained from the NHS/HSC R&D office prior to the start of the study (see "Conditions of the favourable opinion" below).

Conditions of the favourable opinion

The favourable opinion is subject to the following conditions being met prior to the start of the study.
Management permission or approval must be obtained from each host organisation prior to the start of the study at the site concerned.
For NHS research sites only, management permission for research ("R&D approval") should be obtained from the relevant care organisation(s) in accordance with NHS research governance arrangements. Guidance on applying for NHS permission for research is available in the Integrated Research Application System or at http://www.rdforum.nhs.uk. Where the only involvement of the NHS organisation is as a Participant Identification Centre, management permission for research is not required but the R&D office should be notified of the study.

Guidance should be sought from the R&D office where necessary.
Sponsors are not required to notify the Committee of approvals from host organisations.

It is responsibility of the sponsor to ensure that all the conditions are complied with before the start of the study or its initiation at a particular site (as applicable).

Approved documents

The documents reviewed and approved at the meeting were:

Document	*Version*	*Date*
Covering Letter		16 December 2009
REC application	2.5	16 December 2009
Protocol	3	16 December 2009
Investigator CV	Dr Joanne Billings	16 December 2009
Referees or other scientific critique report		
Summary/Synopsis	1	16 December 2009
CV for Freda McManus		
Demographic Information	1	16 December 2009
Letter from Southwark Police		16 December 2009
Covering Letter	From Dr Billings	15 March 2010
Participant Information Sheet	2	15 March 2010
Participant Consent Form	2	15 March 2010
Questionnaire: Trauma Screening Questionnaire		
Response to Request for Further Information	Included in CI letter	15 April 2010

Membership of the Committee

The members of the Ethics Committee who were present at the meeting are listed below.

Statement of compliance

The Committee is constituted in accordance with the Governance Arrangements for Research Ethics Committees (July 2001) and complies fully with the Standard Operating Procedures for Research Ethics Committees in the UK.

After ethical review

Now that you have completed the application process please visit the National Research Ethics Service website > After Review

You are invited to give your view of the service that you have received from the National Research Ethics Service and the application procedure. If you wish to make your views known please use the feedback form available on the website.

The attached document "After ethical review – guidance for researchers" gives detailed guidance on reporting requirements for studies with a favourable opinion, including:

- Notifying substantial amendments
- Adding new sites and investigators
- Progress and safety reports
- Notifying the end of the study

The NRES website also provides guidance on these topics, which is updated in the light of changes in reporting requirements or procedures.

We would also like to inform you that we consult regularly with stakeholders to improve our service. If you would like to join our Reference Group please email referencegroup@nres.npsa.nhs.uk.

10/H0803/8	**Please quote this number on all correspondence**

With the Committee's best wishes for the success of this project

Yours sincerely

pp. Dr Christine Heron
Chair

Email: Rosalind.Cooke@imperial.nhs.uk

Copy to: *Ms Enitan Eboda*

South West London REC 3
Attendance at Sub-Committee of the REC meeting on 09 April 2010

Committee Members:

Name	*Profession*	*Present*	*Notes*
Miss Ruth Gerrard	Clinical Nurse Specialist	Yes	
Dr Christine Heron	Consultant Radiologist	Yes	

Appendix 2: Participant information

Resilience to Trauma in Emergency Service Workers

Participant Information Sheet

We would like to invite you to take part in a research study. Before you decide you need to understand why the research is being done and what it would involve for you. Please take the time to read the following information carefully. Talk to others about the research if you wish. Please ask us if there is anything that is not clear or if you would like more information. Take time to decide whether or not you wish to take part.

What is the purpose of the study?

We are interested in talking to emergency service workers about their experiences of traumatic events that they have been faced with in their day to day work and how they cope with these experiences. We are doing this research for a number of reasons:

- So far most research with emergency service workers has taken place in the USA, with little research taking place here, in the UK.
- Most research which has been done has focused on the impact of major events, such as 9/11, and no research has been done on the impact of more routine work
- Most research done so far has involved researchers making predictions about what they think will influence how emergency service workers deal with the events that they are exposed to. No one has previously asked emergency service workers themselves what they think
- Previous research has focused on what might lead emergency service workers to develop problems. No one has looked at factors which help people to cope with the work that they do
- This study is therefore intended to fill these gaps. In so doing, it is hoped that we will be able to generate some ideas and suggestions for how emergency service workers can best be trained and supported to do the jobs that they do.

Who is being invited to take part?

We are interested in hearing about the experiences and opinions of emergency service workers from the Police, Fire and Ambulance Services. We will be interviewing people from the three emergency services. We would like to hear from you if:

- You have been working in the police, fire or ambulance service for at least two years
- You have experienced events that could be considered traumatic in the line of your routine, day to day work
- You do not currently, nor have previously, been diagnosed with post traumatic stress disorder (PTSD).

Do I have to take part?

It is up to you to decide. After reading this information sheet you can decide whether you would like take part or not. If you decide to take part, you will be asked to sign a consent form to show you have agreed to take part. You are free to withdraw at any time, without giving a reason. This will not affect any aspect of your work or your entitlement to NHS services.

What will I have to do if I take part?

A researcher will arrange to meet you, at a time and place most convenient to you, to conduct an interview. You will be asked to sign a consent form, which you will be able to keep a copy of. The interview will be with the researcher who will ask you questions about your experiences of traumatic events in the line of your routine work and how you cope with these. You will also be asked for your ideas on what training and organisations could do to help emergency service workers cope with traumatic experiences that they are exposed to at work. The interview will last up to about an hour. The interview will be audio recorded and transcribed, word for word, afterwards.

Will my responses by confidential?

Your involvement in the study will be completely confidential and anonymous. We will follow ethical and legal practice and all the information about you will be handled in confidence. After the interview has been transcribed the audio recording will be deleted. Only the Chief Investigator and supervisor will have access to the information collected during the study. The data will be kept until the end of the study in a locked NHS setting. The only circumstance in which the researcher would need to share personal information about you with any other professional is if they have reason to believe that you, or any other individual, is at risk of harm. Transcripts of the interview will not contain any identifying details of you or your organisation. Direct quotes from the interviews may be used, but these will be anonymous, and any identifying details (i.e. names or places) will be changed in order to preserve confidentiality.

What happens after the interview?

After the interview has finished, the audio recording of the interview will be transcribed and any identifying details of you, or your organisation, removed. The transcript of all of the interviews will then be analysed to look for themes. This analysis will then be written up in a full report.

What will happen to the results of the study?

The results of this study will be written up and summarised in the following documents:

- A brief summary report will be provided for the participating emergency services and study participants.

- An article will be written and submitted to a peer reviewed academic journal for publication
- Finally, as this research is also being conducted in part fulfilment of a doctoral degree at the University College London, a copy of the final dissertation will be made available to the University Library.

You will not be personally identified in any report or document resulting from this study.

What are the possible benefits of taking part?

We cannot promise the study will help you but the information we get from this study might help to improve support and training for emergency service workers.

What are the possible risks of taking part?

There are no anticipated risks involved in taking part in this study. It is possible that talking about your experiences of traumatic events at work could cause you distress. In this case you would be invited to pause, stop or withdraw from the research at any time, without having to give a reason. You will also be able to speak with the Chief Investigator about any issues arising either during or after the interview, which would not be recorded.

Who is sponsoring the research?

The research is being sponsored by South West London and St George's Mental Health NHS Trust and is supported by the Metropolitan Police Service.

Who has reviewed the study?

This research has been approved by the University of Oxford, University College London and the South West London and St George's Mental Health NHS Service. All research conducted by, or on behalf of, the NHS is also looked at by an independent group of people, called a Research Ethics Committee to protect your safety, rights, wellbeing and dignity. This study has been reviewed and given a favourable opinion by the Wandsworth Research Ethics Committee.

Who do I contact if I would like more information?

If you would like more information about any aspect of the research, please feel to contact the **Chief Investigator**:

Dr Jo Billings
Traumatic Stress Service
Springfield University Hospital
61 Glenburnie Road
Tooting London SW17 7DJ
Tel: 020 8682 6911.
E-mail: jo.billings@swlstg-tr.nhs.uk

Interviews with police officers are being conducted by Rachel Evans, under the supervision of Nancy Pistrang, both of whom can be contacted directly:

Rachel Evans
University College London
1-19 Torrington Place
London
WC1E 7HB
Tel: 07811024306
E-mail: rachel.eliza.evans@gmail.com

Prof. Nancy Pistrang
University College London
1-19 Torrington Place
London
WC1E 7HB
Tel: 020 7676 5962 (x45962)
E-mail: n.pistrang@ucl.ac.uk

Who do I speak to if problems arise?

If you have any concerns about any aspect of the research please contact the Chief Investigator or study supervisor on the details above. Normal NHS complaints procedures will also be open to you. Details can be obtained from the South West London and St George's Mental Health NHS Trust website.

Appendix 3: Participant consent form

Date: February 1st 2012

Participant Consent Form

Project title:	Resilience to Trauma in Emergency Service Workers (Study title: Police officers' experiences of social support after traumatic incidents)
Lead researcher:	Rachel Evans
Project supervisors:	Professor Nancy Pistrang and Dr. Jo Billings.

By completing and returning this form, you are giving us your consent that the personal information you provide will only be used for the purpose of this project and not transferred to an organisation outside of University College London. The information will be treated as strictly confidential and handled in accordance with the provisions of the Data Protection Act 1998.

I understand that:

- My participation is voluntary and that I am free to withdraw at any time without giving a reason. I understand that taking part will not disadvantage me in any way.
- Any notes and audio recordings made during my interview with the researcher Rachel Evans (Doctoral student at University College London), may be used and included in the writing up of a research project.
- My identity will be protected and not revealed throughout the production of the research project write up or any sub sequent related publications.
- The whole interview itself will not be included in the actual research project write up only the relevant extracted information.
- Once the research project is completed the transcripts and recordings will be destroyed and only parts of the data will be included in any publication.

I agree and consent to the use of interview material and audio recordings made during my interview, for the purposes outlined above.

Signed: ..... Date: .....

Name (print): .....

To be completed by the lead researcher:-

I Rachel Evans confirm that I have carefully explained the purpose of the study to the participant and outlined any reasonably foreseeable benefits and risks to taking part (where applicable).

Signed: ……Date: …….

Appendix 4: Interview schedule

Interview schedule

Introduction

Thank you for taking part in the study

- We know from past research that working in the police service can be stressful. I'm really interested to know about the difficult situations officers get called out to and how they cope with these. I'm particularly interested in whether officers talk to each other or anyone else about the calls they find personally difficult.

- Some of the questions I ask may seem a bit daft, I'm just trying to really understand things from you're point of view - in this sense, there are certainly no right/ wrong answers.

- Discuss confidentiality and how data will be stored and used. Give info sheet and consent form to sign).

If I ask you about anything that you don't feel comfortable discussing then please let me know. If any of the questions seem silly then also, please let me know!
Do you have any questions or comments before we start?

- Test equipment

1. Context and background

- To help me get an overview, could you tell me a bit about the sort of things you do as part of your job?

- I suspect you get called out to all sorts of situations in your work, what are some of the types of more difficult situations?

2. Training & preparation/ culture

- How does the service train/ prepare police officers to cope with difficult situations?

  (Helpful? How?) (Does anyone ever mention the emotional side of the job?)
- Do police officers ever talk to each other about things that are tough? / What happens when people get back to the station?

- If someone talks about a difficult situation, what responses have they had from colleagues and or managers?

3. Individual experience

- I wonder if you could say a bit about the situations you find the hardest?

- Do you tend to talk to anyone about these?

…….

(If very general talk:

- Could you describe a recent example or one that stick outs in your mind?

GENERIC PROMPTS:
What's that like/ How does that work? I'm curious about that, can you say more?

Source of support

a) Colleagues

- How much do police officers tend to talk about things to do with work?
- Do they talk about things that have upset them or about the things they find difficult? (how formal/ informal)
- What's it like when someone talks about difficulties? (what are you thinking?)
- What's it like when (if) you talk to other officers about things you've found difficult? (thoughts, feelings)
- What difference did it make talking to them? What's helpful or unhelpful?
- What do you think made it easier to talk to this person?
- Were there people that you chose not to speak to? - What made it less likely you'd speak to them?

b) Home life

- Outside work, are there people you talk to about this? (partner, friends, family , kids?)
- What's similar or different about talking with people at work vs. out of work? Are there things you wouldn't talk about outside of work?
- How did people out of work react when you spoke to them? What did it mean to you that they did this?

  (Prompt: Why do you think they did/ said that? What difference did this make to how you felt?)
- Were there particular things about what this person did or said that helped? What made it helpful? What difference did this make?
- Was anything unhelpful? What made it unhelpful? What difference did this make?
- In what ways does being an officer change your relationships outside of work?

c) Don't talk

- Has there been a time when you have talked about things?
- What things make talking difficult? / What keeps you from talking?

  (What is it about you or others around you that makes you not talk? If 'Macho culture' hinted at - Where does that come from – is it stated or assumed?)
- How else do you cope with call outs that have been upsetting?
- What do you think it would be like if you did talk about difficult things?

- Would you like to be able to talk about these things?

- Are there any colleagues who do talk about things – what do you think makes it easier for them or more likely they'll talk?

Experience of helping colleagues / if they don't talk themselves

Given that you could find yourself in the position of supporting colleagues who are finding things difficult, I wanted to ask a bit about this side of your experience….

- How would you know if a colleague was struggling after a difficult call out?

- What might you do if you noticed this?

  (Prompt: at the time, afterwards)

  - What makes talking to colleagues easier, or more difficult?

  - How would you know if talking about things was helpful? What difference would you observe?

Ideas about helping

Just to draw everything together….

- In an ideal world, how would you like your colleagues/ partner/ friend/ family to respond when you've been affected by events at work? What difference would it have made if you had got this reaction at the time of X (*the event)*?) (What do you think the key ingredients are to make talking helpful?)

- In managing difficult situations, does what helps change over time? (Course of career or time since difficult call out)/ is how you manage now different from before?

- If you were to give advice to a colleague just starting out now about how to cope with difficult call outs, what would you say to them?

- (If you were to give advice to the service…)What sort of things do you think the service does / could do to help people manage difficult call outs (is there anything that would make talking easier)?

Debrief

- Thank you for answering those questions
- Is there anything else you'd like to say? Any questions or further comments?
- Normalise responses
- Address any strong feelings or distress evoked
- Offer suggestions for additional support if necessary
- Reminder of how interview data will be used
- How to contact researcher
- Thank participant

Appendix 5: Illustration of the stages of analysis

Example of the initial stage of analysis: annotations on the interview transcript of Participant 3

This excerpt follows on from the participant having described a difficult incident where he had been told to restrain a grieving mother from the scene of her son's death. This decision was taken by his supervisor; there were suspicious circumstances to the death and the scene required preserving. The participant described conflict between his professional and personal feelings about this action. The thought that this mother would forever remember him being the officer holding her back from her son had caused some sleepless nights.

P3	We got outside and we had a chat about it and sort of had a laugh and a joke about it really, which is what you do a lot of the time, I think after something like that because, well they always say it in the job, they say, you know, you need a bit of a dark sense of humour sometimes, to get through these things and I think it's true. Because if you can't laugh and joke about it, you'll just dwell on it a bit too much and that, I don't think is particularly helpful for anyone.	*Outside: chat and laugh = common after something difficult* *Dark sense of humour = gets you through. Otherwise dwell too much = not helpful*
I	What do you think the consequence of dwelling on it would be?	
P3	Well I think there's a real danger of over thinking these things isn't there. And you can sort of, you can second guess your own decisions a lot of the time, and think about the what-ifs and the where-fors. And I think if I got chatting to my colleague and we'd have debated whether we'd done the right thing, then potentially that could have led to a bit of conflict between us, which wouldn't have necessarily been helpful on top of what we'd just been to.	*Danger of over thinking/ second guessing decisions* *Chatting to colleague could = conflict (risk) = not helpful/ adds to problems*
I	And what kind of form did the laugh and the joke take at the time?	
P3	It's just one of those things, but I can't really remember to be honest. Um…..I'm not sure….	
I	Do you remember how it felt…if it felt helpful?	
P3	It did. It did yeah. I mean, obviously, sort of being miserable and laughing are two sort of incompatible things really, so I'd rather be laughing than being miserable. So I think it helped...	*Laughing and feeling miserable incompatible*

Example of the second stage of analysis: clustering the data into tentative themes/ code labels across the transcript for Participant 3

For this participant, the source of support seemed particularly important and humour was a main type of support from colleagues. Page numbers indicate where the ideas came from.

Colleagues

Laugh and a joke helps:	Stops dwelling (danger of over thinking) (p4, p6)
	Laughing and misery are incompatible (p4)
	Lightens mood (p5)
But judge when to use:	If it could have happened to you, it's not funny – don't joke (p6)
	Judge colleagues' reactions to check if ok to use humour p6 (although if you found it offensive, don't say as their way of dealing with it) (p6, p14)
	The long running jokes are the about the less serious events (p15)
Mixed views about 'serious' talk at work:	It's not how police deal with things, just get on with it (p8, p16)
	Admitting feelings = going too far 'pink and fluffy' (p7, p14)
	Could lead to conflict with colleagues/ dwelling p4 Matter of fact chat is ok "God, that's awful" happens (p6, p11)
	Can help to talk, if you've been through the same thing, it can help to share the emotions (p6)
	But, colleagues don't have the emotional investment like close family (p14).

Example of later stage of analysis: clustering the data into tentative themes/ code labels across the set of interview transcripts

Under the heading of social interactions at work, it was clear that one of the common forms of interaction with colleagues involved humour/ banter. Across the transcripts, example quotes were collated and grouped under two initial theme labels. A subset of the quotes is presented below:

Humour with colleagues helps – it changes the emotion, prevents dwelling and helps you get on with the job (i.e., humour is used strategically):

Pilot: "[At a death] it was grim…we said, right 'We're just going to need to have a laugh'…it might sound really terrible…but it's not, you know it's not being disrespectful, actually, you are being really professional in this situation" (p5)

"[Going to give a death message] someone just got on the radio who knew I was doing this and said 'Whatever you do, don't laugh'…so now I'm walking up to this front door laughing because my colleagues told me not to laugh…so now I'm not nervous anymore… I'm really grateful to him for diffusing that, because it was the first body I'd gone to." (p17)

P2: "Dark humour - it's the most common way police officers deal with those types of incidents [difficult ones] because it's almost as though, when it happens, there has to be some sort of outlet…it feels like the only way of dealing with that kind of situation and maybe it's a pride thing as well because people don't feel like they can talk about how it affected them mentally or emotionally. They feel like the easiest thing to do is just to laugh and joke about it, and then someone else might make a joke and then another starts laughing…I guess it's a natural kind of pick-you-up after experiencing something traumatic or sad…it's the easiest way of making yourself feel better really – laughing." (p3-4)

"It [humour] lightens the mood." (p10)

P3: "If you can't laugh and joke about it, you'll just dwell on it a bit too much and that I don't think is particularly helpful to anyone." (p 4)

"Being miserable and laughing are two sort of incompatible things really, so I'd rather be laughing than being miserable…I think that lightened the mood to be honest." (p4-5)

"It's a natural reaction just to have a bit of a laugh and a joke, you know, on most jobs you go to." (p6)

P7: "[Humour] makes the incident feel less serious, I suppose if I'd come away from it and someone was just humorous about it, because you, kind of, just diffuse from it, have a little joke about it and then you're on to the next one. Whereas we probably prolong it a little bit more, talking about it more seriously maybe, more than it maybe needed to be." (p10)

P8: "The banter is the offloading, you know. And it is a de-stressing and you do feel, you know, you might be in a situation and you'll offload and you can almost feel yourself just relaxing again, coming back to normality and it is just a way of getting that stress out, and getting all that pent up aggression, sadness, whatever the emotions you're feeling, just released out of your body and I suppose that's how it, how it feels…What you tend to find sometimes is that you'll have the banter and stuff while you're dealing with whatever you're dealing with because that's something that, you know, and the laughter sort of like passes the time." (p4-5)

P10: "Police humour is another way of getting through it [difficult situations]…I think it sort of takes you out I suppose." (p7)

P12: "If you, at the end of your shift can have a laugh, that's what you go home thinking about you don't go home thinking about Mrs B whose been run over, you think about the laugh you've had with your mates, oh we had such a laugh this afternoon." (p9)

P14: "It's [police humour] not something you get taught at police school. It's just something that just comes, you just get made aware that there is something like police humour, but what it actually is, you just have to sort out and uh, figure it out yourself and then you start using it yourself to the way you need it." (p14)

P15: "Everyone sits there and they're taking the piss…and the more the piss is taken out of you the more confident and more relaxed you become because then you start doing the same to them… it ends up in laughter everyone takes the mick out of each other and it becomes a bit of a laugh and a joke and it's not until afterwards you think shit that was pretty close." (p13)

P17: "If you can laugh at a situation, it can, it does actually mentally change your mental approach to a situation. It does truly change things." (p6)

But...Humour has limitations/ needs to be used sensitively:

Pilot: "I think humour can go so far and then too far… We're very careful about what we say, what we look like, what we do." (p5)

P1: "If it's a sensitive situation that's gone on in your life and amplifies what you're having to deal with...I think you'd be less sympathetic to people who treated it as a joke." (p5)

P2: "It depends who was in the group and if there was someone you didn't know or didn't trust…it's the uncertainty I suppose of how they'll react…it could come back to bite you so certainly yeah, you wouldn't do it in front of members of the public. You probably wouldn't do it straight away after the incident but sometimes it happens out at the incident itself…Really soon after something like that's happened I'd probably find it quite inappropriate if someone made a humorous remark." (p10)

P3: "It's difficult to sort of say to someone in that situation 'that's inappropriate'…because that's how they're dealing with it." (p6)

"I think you can have longer running jokes on maybe the less serious jobs. I think on the more serious jobs, you can have the jokes but they soon wear a little bit thin because it's not really that funny." (p15)

P4: "It depends who you're with um. I think a lot of the time, if with a student constable I won't necessarily crack humour." (p12)

P7: "You obviously never make light of a situation where one of your colleague's has been injured or something, but sometimes after you do, but not at the time." (p10)

P11: "I think if it's something that I refer to personally, like I put back to my own life, if somebody laughed at that I probably wouldn't find that very funny. But then I would understand that it's how they cope with it." (p9)

"I mean people wouldn't be, make jokes about a child death and that's not really like banter and like everyone tries to deal with things but it's never really around a child. People are generally quite serious if it's to do with a child." (p3)

P14: "If they [colleagues] knew it was relevant to someone's past or sort of a recent experience then obviously they wouldn't make a joke about it." (p16)

P17: "I just don't think that the really upsetting things are banterable... you can't confuse black humour with an ability to deal with every scenario you come across. It has its place and it's useful for certain scenarios, um, but it's just inappropriate, not inappropriate for me but from a PC point of view. Just, it doesn't fit the bill for that type of incident." (p14)

"I don't take the piss out of people when they've dropped the ball…I don't banter about that."(p18)