



RESILIENCE AND WELL-BEING IN A SCOTTISH POLICE FORCE

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Introduction

Research conducted within the UK investigating the impact of critical incidents and traumatic workplace experiences on police officers has been predominantly based on a pathological model, in which it was assumed that exposure to potentially disturbing incidents would automatically result in psychopathology and have a detrimental effect on an officer's functioning (Burke and Paton 2006a). More recently there has been a move towards an approach based on the assumption that a response of distress is a normal emotion when it is proportional to the event experienced, and that, whilst exposure can potentially result in psychopathology, it can also result in positive outcomes by acting as a catalyst for growth and change (NATO Joint Medical Committee 2008; Paton and Burke 2007).

There has been an increased focus on protective factors such as resilience in research into police officer well-being, as although resilient individuals usually experience some level of distress after exposure to a 'personally disturbing' incident they maintain the ability to function. Although there is no one definitive definition of resilience it has been proposed that it is a complex concept that extends beyond the intrapersonal level, to an interaction between the characteristics of the individual and the characteristics of the situation. Whilst some experiences are more likely to result in a distress response than others, such as a threat to life, physical injury or exposure to dead bodies; it is how individuals interact with situations, how they deal with them and the meanings that they give to incidents that are the main determining factors on whether exposure results in psychopathology or growth (NATO Joint Medical Committee 2008; Paton and Burke 2007). The 'meaningfulness' of job tasks to officers has been associated with increased job satisfaction, and as this is associated with the manageability and meaningful aspects of resilience, job satisfaction is an important factor to explore with regard to resilience and well-being (Paton et al. 2008 p. 97).

Studies conducted over a decade ago showed that occupational stressors such as management style and the organisation of work are often considered by police officers to be more stressful aspects of their job than operational aspects (Alexander et al. 1993; Biggam et al. 1997). Gist and Woodall (2000) suggest that officers have an expectation of exposure to critical incidents when applying to join the police service, what is less expected is the impact of organisational culture and climate factors on officers (Alexander and Wells 1991; Burke and Paton 2006b). Organisational factors, such as social

support from colleagues and supervisors, have been found to be associated with resilience in police officers, and related psychological syndromes such as burnout (Martinussen, Richardsen and Burke 2007).

Despite these findings many studies have continued to focus on intrapersonal and occupational factors rather than organisational ones, and many have not included a measure of organisational factors to enable an exploration of their impact on police officers (Burke and Paton 2006a; Burke and Paton 2006b; Martin, Marchand and Boyer 2009). Few studies have been conducted with more than one police force or police district to enable a comparative exploration of organisational factors.

A review of the literature pertaining to research exploring resilience and well-being related factors in police officers identified that:

- few studies have been conducted with police officers in the UK.
- research has mostly been conducted on small samples.
- the majority of studies have been cross-sectional which does not enable the range of trajectories that may result from exposure to be fully explored.
- the majority of studies have been conducted using a single method approach.

The findings of this longitudinal study with two comparable Scottish Police Forces adds to the current body of knowledge relating to resilience and well-being in police officers through its ability to explore both positive and negative outcomes over time. The information derived therefrom will have practical applicability to the facilitation of the well-being of police officers, and the reduction of sickness absences, and ill health and other premature retirements.

Aims

To conduct a rigorous longitudinal study informed by questionnaires and semi—structured interviews to identify individual, operational, organisational and environmental factors associated with the well-being and resilience of police officers and their ability to cope with the demands of contemporary policing, and to inform organisational practices that augment the resilience and well-being of police officers. The study's aims are in line with the Association of Chief Police Officers in Scotland's (ACPOS) policing priorities for Scotland (2003-2013) (ACPOS 2003) and Scottish Government policies.

Method

i. Database

Permission was granted by the Chief Constables of the participating Forces and the Scottish Police Services Authority (SPSA) to have access to the database of police officers' e-mail addresses for the electronic distribution of the online questionnaire.

ii. *Study population*

Two thousand three hundred and six sworn police officers below the rank of Deputy Chief Constable from the Grampian Police and the Fife Constabulary were invited to contribute their experiences of operational policing through a confidential online questionnaire, which was administered at baseline and at 12-month follow up. A sub-sample of officers who were exposed to trauma in the 12 months prior to the baseline assessment were interviewed to enable a more in-depth exploration of potential trauma-related factors associated with resilience and well-being. Participation in the study was completely voluntary and the research was conducted independently of the participating Forces.

iii. *Ethics*

The study complied with the Research Ethics and Governance Policy of the Robert Gordon University.

iv. *Data security*

Participating officers were informed that the information they provided would remain confidential; that the findings from the analysis of the data would be anonymised, and that no personally identifying information would be reported in publications and/or presentations. All information provided in the online questionnaires and interviews was coded, stored, and analysed in accordance with RGU policy and the Data Protection Act (1998).

v. *Administration*

Online administration was selected due to the large geographical area that both Forces cover. The questionnaires were designed using Snap Surveys software (versions Professional 9 and 10) which enabled a confidential unique study number to be allocated at baseline assessment for match up at follow-up assessment. The questionnaires were administered using Snap WebHost, with every officer being sent an e-mail containing the link to the questionnaire. In addition to the initial e-mail three reminder e-mails were sent, and participation in the project was promoted through Weekly Orders and Weekly Notices, both participating Forces' Intranets and site visits. Using e-mail hosting to administrate the questionnaires prevented multiple responses and non-intended participants from completing the questionnaire.

vi. *Data analysis*

Data obtained were exported to SPSS version 17. Due to the predominantly categorical nature of the data reported, which do not meet the assumptions of normal distribution, nonparametric statistical methods were employed (Kinnear and Gray 2010). Forward stepwise binary logistic regression analysis was conducted to explore predictors of resilience and well-being related factors. As the study employed a 'salutogenic' approach (Antonovsky 1993 p. 725) positive outcomes were the outcomes of interest: such as job satisfaction, sickness non-absence, and non-consideration of early retirement. However, as the study findings will also be used to inform

policies and practices, the reasons given for job satisfaction, job dissatisfaction, sickness absence, and consideration of early retirement were also explored.

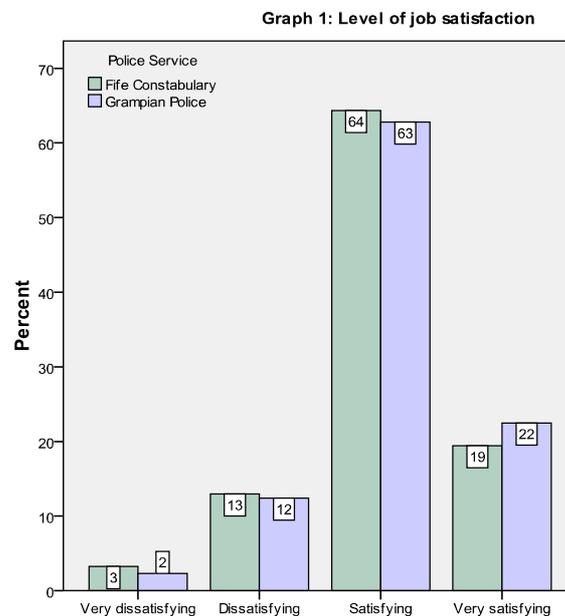
Results

The response rate was 32% (43% Grampian Police (521 officers), 20% Fife Constabulary (222 officers). Sixty percent of officers held the rank of Constable, 23% Sergeant, and 17% the rank of Inspector or above. The following data relate to the 743 police officers who completed the baseline questionnaire and the 366 police officers who completed the follow-up assessment.

Due to the large volume of data collected the results presented in this report are a selection of the findings obtained with particular relevance to the Fife Constabulary Force Executive and the Grampian Police Force Executive. Comprehensive findings will be made available in the study thesis.

- *Job Satisfaction*

Graph 1 depicts the level of job satisfaction that officers feel towards their current/previous posting (if they had had a change in posting during the prior eight weeks to the baseline assessment). Overall 85% reported 'job satisfaction'; [combined responses of 'satisfying' and 'very satisfying']. Chi-square analysis found a significant association between job satisfaction and type of work ($\chi^2(4) = 34.72$, $p < 0.001$, 2-tailed, $V = .22$) (Puri 2002). Ninety four percent of officers in CID reported job satisfaction compared to 75% in Response Policing; 98% in Road Traffic/Road Policing; 84% in Community/ Neighbourhood Policing, and 88% responding 'other' to type of work. No associations were found with the Force the officer serves in, gender, marital status, age, rank, or total number of service years.



Eighty five percent of officers in the follow-up assessment reported 'job satisfaction'. A McNemar Test was conducted to examine any change in level of job satisfaction by pairing officers' responses in the baseline assessment with those in the follow-up assessment. No significant change was found ($\chi^2(1) = 0.05$, $p > 0.05$, 2-tailed).

Every officer was asked to provide three reasons for their response to level of job satisfaction. Officers were not asked to rate their responses in any particular order. Responses were analysed using thematic analysis (Braun and Clarke 2006). Some responses were very detailed and were

allocated to more than one category and theme. The main themes and the main categories in each theme for 'job satisfaction' in the baseline assessment were:

- 'nature of the work' (variety/diversity, specific type of work, and interesting/enjoyable).
- 'work relationships' (work colleagues, team working, and working with other agencies).
- 'meaningfulness of work' (helping the public, a sense of achievement, and making a difference).
- 'working conditions' (regular hours/suitable hours for family, proximity to home, and general work environment).

In the follow-up assessment the main themes given were again 'work relationships', 'nature of the work', 'working conditions', and 'meaningfulness of work'.

The main themes given for 'job dissatisfaction' were

- 'working conditions' (lack of staff/resources, workload, and working hours/shift patterns).
- 'management/leadership' (lack of support, ineffective management/supervision, and lack of appreciation).
- 'nature of the work' (volume of paperwork/administration, repetitive/mundane work, and abstraction).
- 'meaningfulness of work' (disappointment with role/posting, lack of recognition for their role, and nature of enquiries).

In the follow-up assessment the main themes given were again 'working conditions', 'management/leadership', 'meaningfulness of work', and 'nature of the work'.

- *Attendance*

Fifty seven percent of officers had not been away from work due to their own sickness or injury in the prior 12 months to baseline assessment, 43% had been absent.

Chi-square analysis found a significant association between the Force the officer serves in and non-absence ($\chi^2 (1) = 4.37, p < 0.05, 2\text{-tailed}, \Phi = .08$), with 54% of Grampian Police officers reporting that they had not been away from work compared to 62% of Fife Constabulary Officers. A significant association was also found with type of work ($\chi^2 (4) = 15.03, p < 0.01, 2\text{-tailed}, V = .14$), with 66% of officers in CID not having been away from work compared to 52% of Response Policing officers; 75% of Road Traffic/Road Policing officers; 55% of Community/Neighbourhood Policing officers, and 52% who responded 'other' to type of work. No associations were found with gender, marital status, age, rank, or total number of service years.

Seventy five percent of officers responded in the follow-up assessment that they had not been away from work due to sickness or injury since completing the baseline questionnaire, 25% responded that they had been absent. A McNemar Test pairing officers' responses in the baseline and follow-up assessments found a significant change ($\chi^2 (1) = 22.24, p < 0.01, 2\text{-tailed}$). The percentage of officers who completed both assessments who had not been absent was 60% in the baseline assessment

(40% had been absent) compared to 75% in the follow-up assessment (25% had been absent) (Green, Salkind and Akey 2000).

Fifty nine percent of officers who reported 'job satisfaction' had had no absence in the prior 12 months to baseline assessment compared to 46% of officers who reported 'job dissatisfaction'; [combined responses of 'dissatisfying' and 'very dissatisfying']. Chi-square analysis confirmed that the association between 'job satisfaction' and non-absence was significant ($\chi^2 (1) = 7.94, p < 0.01, 2\text{-tailed}, \Phi = .10$).

Every officer was asked to provide the three leading reasons for absence in their unit. The main themes and categories were:

- 'general ill-health' (viral infections, digestive disorders, and ongoing medical conditions).
- 'emotional ill-health' (stress, depression, and pressure of work).
- 'family issues/personal issues' (childcare, family ill-health, and bereavement/compassionate leave).
- 'injury/muscular skeletal disorders' (back pain/injury, and on-duty/off-duty/sports injury).

- *Absence Management*

Overall forty one percent of officers responded that the Force is sympathetic to work related illness; [combining 'agree' and 'strongly agree' responses]. Fifty five percent responded that their manager is sympathetic if they are off sick. Thirty eight percent of officers did not find return to work interviews worthwhile. Seventy three percent of officers responded that they often come to work when they should be off sick and 82% feel guilty about taking time off even when they are sick. The responses in the follow-up assessment were comparable: the Force is sympathetic to work related illness (43%); their manager is sympathetic if they are off sick (56%), and they do not find return to work interviews worthwhile (36%). Seventy two percent of officers responded that they often come to work when they should be off sick and 79% feel guilty about taking time off even when they are sick.

Responding to a list of items as to what actions could be taken to improve the officers' own attendance and the attendance in their unit, the three actions most reported for both the officers and their unit were 'workplace recreational or other facilities' (17% self, 44% unit); 'encourage employees to spend time improving their health' (15% self, 40% unit), and 'stress management training' (13% self, 33% unit). The responses from each Force were comparable: 'workplace recreational or other facilities' (17% Grampian Police, 16% Fife Constabulary); 'encouraging employees to spend time improving their health' (15% Grampian Police, 14% Fife Constabulary), and 'stress management training' (12% Grampian Police, 13% Fife Constabulary).

- *Early Retiral*

Fewer than one percent of officers (three officers) responded that they had asked for early retiral in the prior 12 months to baseline assessment all of whom had 21 or more years service. Again in the

follow-up assessment fewer than one percent of officers (two officers) had asked for early retirement both with more than 11 years service. Eighty two percent of officers in the baseline assessment responded that they had not considered early retirement, 18% responded that they had. Chi-square analysis found a significant association between non-consideration and type of work ($\chi^2 (4) = 11.13, p < 0.05, 2\text{-tailed}, V = .03$), with 88% of officers in CID not having considered early retirement compared to 84% of Response Policing officers; 80% in Road Traffic/Road Policing; 84% in Community/Neighbourhood Policing, and 75% who responded 'other' to type of work. A significant association was also found with the age of the officer ($\chi^2 (3) = 58.58, p < 0.001, 2\text{-tailed}, V = .28$), with 100% of officers in the 18-27 age group not having considered early retirement compared to 95% percent in the 28-37 age group; 77% in the 38-47 age group, and 63% in the 48 and over age group. Ninety six percent of officers with 1-5 service years compared to 94% with 6-10 years, 84% with 11-20 years and 67% with 21 or more service years reported that they had not considered early retirement. This was a significant association with number of service years ($\chi^2 (3) = 61.55, p < 0.001, 2\text{-tailed}, V = .29$). No association was found with the Force the officer serves in, gender, marital status or rank.

Eighty nine percent of officers in the follow-up assessment had not considered early retirement and 11% had. A McNemar Test pairing the responses of officers in the baseline and follow-up assessments found a significant change ($\chi^2 (1) = 10.30, p < 0.01, 2\text{-tailed}$). The percentage of officers who completed both the baseline and follow-up assessments who had not considered early retirement was 83% in the baseline assessment (17% had considered early retirement) compared to 89% in the follow-up assessment (11% had considered early retirement) (Green, Salkind and Akey 2000).

Eighty four percent of officers who reported 'job satisfaction' responded that they had not considered early retirement compared to 68% of officers who reported 'job dissatisfaction'. Chi-square analysis found this to be a significant association ($\chi^2 (1) = 17.75, p < 0.001, 2\text{-tailed}, \Phi = .16$).

Every officer who responded that they had considered early retirement was asked the reason as to why they had made this consideration. The main themes and categories were:

- 'disillusionment/dissatisfaction' (disillusionment/dissatisfaction with the job/role, dissatisfaction working in the police environment, and disillusionment with the Force).
- 'general ill-health' (injury and personal ill-health).
- 'other challenges/opportunities' (other career opportunities and other challenges).
- 'pressure of work' (stress, tiredness, and depression).

In the follow-up assessment the main theme was 'restructuring' with regard to the future of the Scottish Police Service, with the main category 'financial and structural uncertainties (including pension entitlements)'. Other main themes were 'management/leadership' (management/leadership style and lack of support); 'disillusionment/ dissatisfaction', and 'pressure of work'.

- *Aspects of Work*

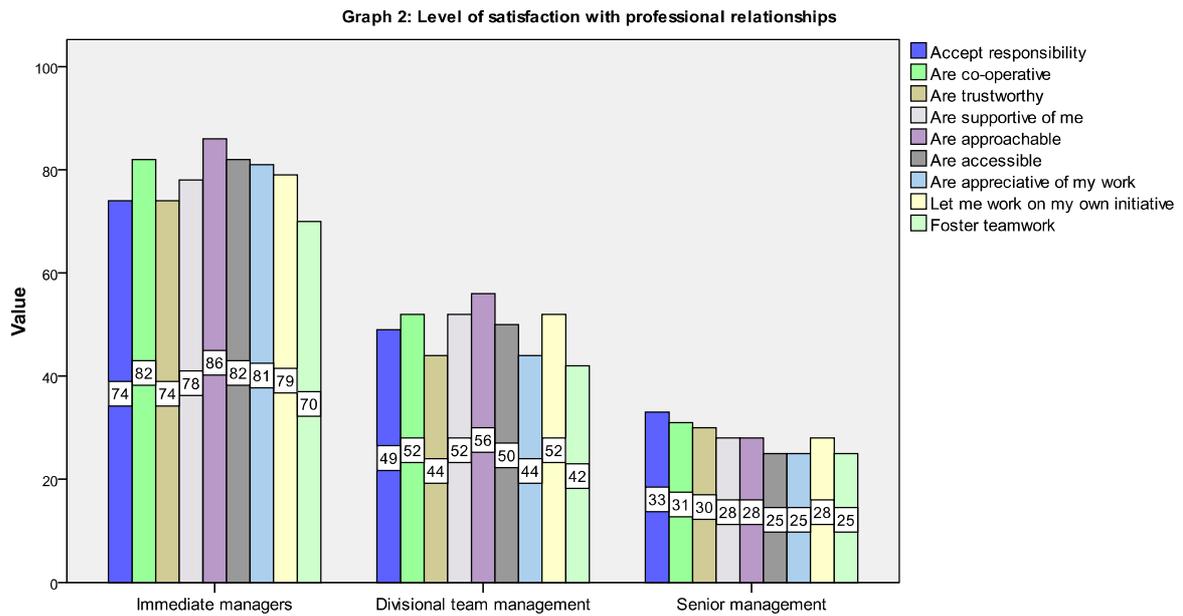
The three most frequently reported 'major' aspects of officers' current postings were 'being under pressure to get results', with 42% of officers responding that it is a 'major' aspect (41% of officers who reported it as an aspect of their posting finding it 'stressful'); [combined responses of 'considerably' and 'extremely' stressful]. 'Having to attend to paperwork' with 39% reporting this as a 'major' aspect (29% finding this 'stressful'), and 'having to meet deadlines' with 38% reporting this as a 'major' aspect (37% finding this 'stressful'). The three most frequently reported 'stressful' aspects were: 'the possibility of being the subject of a complaints investigation' with 45% of officers finding it 'stressful' (30% reporting it as a 'major' aspect); 'being under pressure to get results' with 41% finding it 'stressful' (the most reported 'major' aspect), and 'being scrutinised by senior police officers' with 41% finding it 'stressful' (33% reporting it as a 'major' aspect).

Table 1 details the significant differences between the participating Forces with regard to those officers who reported the aspect of work as a 'major' aspect, and the 'stressfulness' of the aspect to those officers who reported it as an aspect of their posting.

Table 1: Aspects of work and their 'stressfulness'			
Aspect of work 'a major aspect'	% who consider it a major aspect (number of officers in brackets)		Significance (2-tailed)
	Fife Constabulary	Grampian Police	
Uncertainty as to the possibility of having to move house as a result of work	6 (14)	20 (104)	$\chi^2(2) = 65.51, p < 0.001, V = .30$
Being responsible for the work of junior police officers	13 (29)	24 (126)	$\chi^2(2) = 11.67, p < 0.01, V = .13$
Being at risk of contracting AIDS	16 (36)	9 (48)	$\chi^2(2) = 10.73, p < 0.01, V = .12$
Being at risk of contracting hepatitis	20 (45)	14 (7)	$\chi^2(2) = 7.89, p < 0.05, V = .10$
Stressfulness of aspects	% who find it 'considerably' or 'extremely' stressful		Significance (2-tailed)
	Fife Constabulary	Grampian Police	
Having to attend to paperwork	22% (38)	31% (131)	$\chi^2(1) = 5.44, p < 0.01, \Phi = .11$
Being given inadequate scope to show initiative	17% (21)	27% (78)	$\chi^2(1) = 5.22, p < 0.05, \Phi = .11$

In the follow-up assessment 'being under pressure to get results' was again the most reported 'major' aspect (37%) and was reported as the most 'stressful' aspect (41%). 'Having to attend to paperwork' was again the second most reported 'major' aspect (35%) with 25% finding this 'stressful', Thirty one percent reported finding 'the possibility of being the subject of a complaints investigation' as 'stressful', with 27% reporting it as a 'major' aspect.

- Professional Relationships



Graph 2 details the level of satisfaction that officers have with their immediate supervisors, divisional team management, and senior management in terms of their helping the officer to cope with their general operational duties; [combined responses of 'satisfied' and 'very satisfied'].

The aspects that officers were most dissatisfied with were: immediate managers 'foster teamwork' (11%), 'accept responsibility' (10%), and 'are appreciative of my work' (10%); divisional team management 'are appreciative of my work' (22%) and 'are accessible' (21%), and senior management 'are accessible' (26%) and 'are approachable' (24%); [combined responses of 'dissatisfied' and 'very dissatisfied']. In the follow-up assessment levels of satisfaction were comparable with immediate supervisors and with divisional team management. Response rates for levels of satisfaction with senior management were lower for all aspects, but McNemar Tests found no significant changes. The aspects that officers were most satisfied with remained the same across the assessments, as did the aspects that they were least satisfied with. Chi-square analysis was conducted to examine associations between levels of satisfaction ('satisfied' and 'dissatisfied' responses) between the two Forces (responses of 'not applicable' and 'neutral' were excluded). Table 2 details significant differences with professional relationships between the two Forces. No significant associations were found with level of satisfaction with professional relationships with Divisional Team Management.

Table 2: Professional relationships			
Aspect of relationship	% who are 'satisfied' (number of officers in brackets)		Significance (2-tailed)
	Grampian Police	Fife Constabulary	
Immediate supervisors			
Are trustworthy	93 (394)	86 (153)	$\chi^2(1) = 5.91, p < 0.05, \Phi = -.10$
Are supportive of me	94 (420)	86 (162)	$\chi^2(1) = 10.50, p < 0.01, \Phi = -.13$
Are approachable	97 (464)	93 (178)	$\chi^2(1) = 5.30, p < 0.05, \Phi = -.09$
Are appreciative of my work	90 (388)	83 (145)	$\chi^2(1) = 6.45, p < 0.05, \Phi = -.10$
Foster team work	89 (387)	81 (136)	$\chi^2(1) = 7.56, p < 0.01, \Phi = -.11$
Senior management			
Are co-operative	72 (165)	59 (68)	$\chi^2(1) = 5.56, p < 0.05, \Phi = -.13$
Are trustworthy	66 (162)	52 (60)	$\chi^2(1) = 6.64, p < 0.05, \Phi = -.14$
Are supportive of me	64 (147)	48 (57)	$\chi^2(1) = 7.56, p < 0.01, \Phi = -.15$
Are approachable	58 (153)	44 (57)	$\chi^2(1) = 7.02, p < 0.01, \Phi = -.13$
Are accessible	53 (135)	40 (48)	$\chi^2(1) = 4.84, p < 0.05, \Phi = -.11$
Are appreciative of my work	59 (135)	46 (53)	$\chi^2(1) = 5.11, p < 0.05, \Phi = -.12$
Let me act on my own initiative	71 (156)	59 (54)	$\chi^2(1) = 8.56, p < 0.01, \Phi = -.12$
Foster teamwork	64 (140)	47 (46)	$\chi^2(1) = 7.56, p < 0.01, \Phi = -.16$

- *Methods of Coping*

Thirty two percent of officers found in general their on-duty methods of coping with work-induced stress 'effective'; [combined responses of 'very' (27%) or 'completely' (five percent)]. Sixty eight percent reported them as 'not effective'; [combined responses of 'not at all' (17%) and 'slightly' (51%)]. A significant association was found between 'effectiveness' of on-duty methods of coping with rank ($\chi^2(2) = 8.51, p < 0.05, 2\text{-tailed}, V = .11$), with 28% of officers of Constable rank reporting their methods as 'effective' compared to 37% of Sergeants, and 39% of officers of Inspector rank and above. A significant association was also found with number of service years ($\chi^2(3) = 8.70, p < 0.05, 2\text{-tailed}, V = .11$), with 21% of officers with 1-5 service years reporting their on-duty coping methods as 'effective' compared to 29% with 6-10 years; 34% with 11-20 years, and 36% with 21 or more service years. No associations were found with the Force the officer works for, gender, marital status, type of work or age.

Thirty five percent of officers in the follow-up assessment reported their on-duty coping methods as 'effective' ('completely' seven percent) and 65% reported them as 'not effective' ('not at all' 12%). A McNemar Test pairing officers' responses in the baseline and follow-up assessments found no significant change ($\chi^2(1) = .28, p > 0.05, 2\text{-tailed}$).

The most frequently reported on-duty coping methods were 'I work harder' (88% of officers); 'I talk things over with my colleagues' (87%), and 'I keep things to myself' (84%); [combined responses of 'sometimes' or 'frequently']. In the follow-up assessment the same three methods were the most frequently reported: 'I talk things over with my colleagues' (89%), 'I work harder' (88%), and 'I keep things to myself' (81%).

Forty two percent of officers found in general their off-duty methods of coping with work-induced stress 'effective'; [combined responses of 'very' (37%) or 'completely' (six percent)]. Fifty eight percent of officers reported them as 'not effective'; [combined responses of 'not at all' (seven percent) and 'slightly' (50%)]. A significant association was found between 'effectiveness' of off-duty coping methods and gender ($\chi^2 (1) = 11.70, p < 0.01, 2\text{-tailed}, \Phi = .13$), with 39% of male officers finding their ways of coping off-duty 'effective' compared to 54% of female officers. A significant association was found with rank ($\chi^2 (2) = 6.16, p < 0.05, 2\text{-tailed}, V = .09$), with 39% of Constables finding their off-duty coping methods 'effective' compared to 46% of Sergeants, and 50% of officers of Inspector rank and above. A significant association was also found with number of service years ($\chi^2 (3) = 12.10, p < 0.01, 2\text{-tailed}, V = .13$), with 28% of officers with 1-5 service years finding their ways 'effective' compared to 44% with 6-10 years; 47% with 11-20 years, and 43% with 21 or more service years. No associations were found with the Force the officer works for, marital status, type of work or age.

Forty five percent of officers in the follow-up assessment reported their off-duty coping methods as 'effective' ('completely' nine percent) and 55% reported them as 'not effective' ('not at all' eight percent). A McNemar Test pairing officers' responses in the baseline and follow-up assessments found no significant change ($\chi^2 (1) = .10, p > 0.05, 2\text{-tailed}$).

The most frequently reported off-duty coping methods were 'I keep things to myself' (82% of officers); 'I take work home or think about work when at home' (81%), and 'I talk things over with family/friends' (77%); [combined responses of 'sometimes' or 'frequently']. In the follow-up assessment the same three methods were the most frequently reported: 'I take work home or think about work when at home' (81%); 'I keep things to myself' (80%), and 'I talk things over with family/friends' (75%).

- *Incidents and circumstances*

Eighty four percent of officers responded that they had experience of one or more of the listed incidents or circumstances in the questionnaire in the 12 months prior to baseline assessment. The most experienced incidents were 'having face to face contact with a drunk person' (87% Grampian Police, 85% Fife Constabulary); 'having face to face contact with a drug addict' (85% Grampian Police, 86% Fife Constabulary), and 'having face to face contact with an adult victim of violence' (70% Grampian Police, 75% Fife Constabulary). Table 3 details the significant differences between the Forces with regard to experience of incidents and circumstances.

The three incidents reported as most stressful were 'presenting evidence in person at a High Court', with 46% of the 16% of officers who had experienced this type of incident finding it 'highly stressful'; [combined responses of 'considerably' and 'extremely' stressful]. Forty five percent reported finding 'presenting evidence in person in a Sheriff Court' as 'highly stressful' (40% of officers having experience), and 38% reported finding 'having to tell a relative of a death' as 'highly stressful' (38% of officers having experience). In the follow-up assessment 'presenting evidence in person at a High

Court' was again the most 'highly stressful' experience with 52% of the 13% of officers who had experienced this type of incident finding it 'highly stressful'. The second most 'highly stressful' experience was again 'presenting evidence in person in a Sheriff Court' with 42% of the 32% of officers who had experience finding it 'highly stressful'. Table 3 details the significant differences between the Forces with regard to the 'stressfulness' of incidents and circumstances.

Table 3: Incidence and circumstances and their stressfulness			
Experience of incident or circumstances	% within police service who have experience (number of officers in brackets)		Significance (2-tailed)
	Grampian Police	Fife Constabulary	
Having to tell a relative of a death	48 (211)	38 (71)	$\chi^2 (1) = 5.16, p < 0.05, \Phi = -.09$
Being on crowd control at a major sporting event	58 (253)	43 (80)	$\chi^2 (1) = 11.22, p < 0.01, \Phi = -.13$
Stressfulness of incident across Force	% who find it 'considerably' or 'extremely' stressful		Significance (2-tailed)
	Grampian Police	Fife Constabulary	
Presenting evidence in person in a Sherriff Court	37 (87)	49 (48)	$\chi^2 (1) = 3.91, p < 0.05, \Phi = -.11^{***}$
Having face to face contact with a child victim of violence	10 (17)	22 (14)	$\chi^2 (1) = 5.51, p < 0.05, \Phi = -.16^{***}$
Having face to face contact with an adult victim of violence	3 (10)	9 (13)	$\chi^2 (1) = 7.22, p < 0.01, \Phi = -.13^{**}$
Having face to face contact with a drug addict	4 (14)	9 (14)	$\chi^2 (1) = 5.63, p < 0.05, \Phi = -.10^{***}$
Being on points duty	5 (10)	0 (0)	$\chi^2 (1) = 4.20, p < 0.05, \Phi = .12^{***}$
Attending a domestic dispute	7 (19)	14 (15)	$\chi^2 (1) = 4.16, p < 0.05, \Phi = -.11^{***}$

Seventeen percent of officers who had experience of 'having to tell a relative of a death' reported it as the 'most personally disturbing' incident; 15% responded 'having to look at a mutilated body', and 13% 'having to present evidence in person in a Sheriff Court'. In the follow-up assessment the same three incidents were reported as the 'most personally disturbing'; having to tell a relative of a death' (17%); 'having to present evidence in person in a Sheriff Court' (13%), and 'having to look at a mutilated body' (nine percent).

Eighty nine percent of officers reported 'talking with colleagues' as 'helpful' when dealing with that 'most personally disturbing' incident; 84% 'looking forward to off-duty', and 77% 'black humour'; [combined responses of 'helpful' or 'very helpful']. In the follow-up assessment the same three coping methods were reported as most 'helpful'; 86% 'talking with colleagues'; 86% 'looking forward to off-duty', and 77% 'black humour'.

Eighty four percent of officers responded that the 'personally disturbing' incident had disturbed them for about one week or less. Chi-square analysis found a significant association between the rank of the officer and duration of disturbance ($\chi^2 (2) = 9.67, p < 0.01, 2\text{-tailed}, V = .14$). Eighty one percent of officers of Constable rank reported the incident disturbed them for one week or less compared to

93% of Sergeants and 83% of officers of Inspector rank and above. In the follow-up assessment 84% of officers reported that the incident had disturbed them for about one week or less. A McNemar Test pairing officers' responses in the baseline and follow-up assessments found no significant change in duration of disturbance ($\chi^2 (3) = .37, p > 0.05, 2\text{-tailed}$). Thirty nine percent of officers who had been exposed to personal injury, and 20% of officers who had had to look at a mutilated body reported that it had disturbed them for one month or longer.

- *Sources of support*

Eighty seven percent of officers who had experienced an incident which they had found 'stressful' responded that, in general terms, they find their peer colleagues sufficiently supportive of them after such 'personally disturbing' incidents. Chi-square analysis found a significant association between finding peer colleagues supportive and marital status ($\chi^2 (1) = 7.05, p < 0.05, 2\text{-tailed}, V = .12$). Eighty five percent of single officers found their peer colleagues sufficiently supportive compared to 88% of married or cohabiting officers, and 72% of separated, divorced or widowed officers. No association was found with the Force the officer serves in, gender, type of work, rank, age or total number of service years.

In the follow-up assessment 87% of officers responded that they find their peer colleagues sufficiently supportive. A McNemar Test pairing officers' responses in the baseline and follow-up assessments found no significant change ($\chi^2 (1) = .11, p > 0.05, 2\text{-tailed}$). Chi-square analysis found no significant association between officers finding their peer colleagues sufficiently supportive and 'job satisfaction' ($\chi^2 (1) = .86, p > 0.05, 2\text{-tailed}$).

Seventy four percent of officers responded that, in general terms, they find their immediate managers sufficiently supportive of them after such 'personally disturbing' incidents. A significant association was found with the Force the officer serves in ($\chi^2 (1) = 9.12, p < 0.01, 2\text{-tailed}, \Phi = .13$), with 78% of Grampian Police officers finding their immediate managers sufficiently supportive compared to 65% of Fife Constabulary officers. No association was found with gender, marital status, type of work, rank, age or total number of service years.

In the follow-up assessment 77% of officers responded that they find their immediate managers sufficiently supportive. A McNemar Test pairing officers' responses in the baseline and follow-up assessments found no significant change ($\chi^2 (1) = .27, p > 0.05, 2\text{-tailed}$). Chi-square analysis found a significant association between officers finding their immediate managers sufficiently supportive and 'job satisfaction' ($\chi^2 (1) = .86, p > 0.05, 2\text{-tailed}$). Eighty five percent of officers who found their managers supportive reported 'job satisfaction' compared to 71% who do not find their managers supportive.

- *Performance*

Seventy two percent of officers rated their performance as 'good' when dealing with the 'most personally disturbing' incident: [combined responses of 'good' (48%) and 'very good' (24%)]. Twenty eight percent rated it as 'average/poor'; [combined responses of 'average' (25%), 'poor' (three percent), and 'very poor' (fewer than one percent)]. Chi-square analysis found a significant association between performance rating and the Force the officer serves in ($\chi^2 (1) = 5.29, p < 0.05, 2\text{-tailed}, \Phi = -.10$), with 75% of Grampian Police officers rating their performance as 'good' compared to 65% of Fife Constabulary officers. A significant association was also found between performance rating and number of service years ($\chi^2 (3) = 9.70, p < 0.05, 2\text{-tailed}, V = .14$). Sixty three percent of officers with 1-5 service years rated their performance as 'good' compared to 76% of officers with 6-10 years; 68% with 11-20 years, and 79% with 21 or more service years. No associations were found with gender, marital status, type of work, rank or age.

In the follow-up assessment 77% of officers rated their performance as 'good' ('very good' 26%) and 23% as 'average/poor' ('very poor' three percent). A McNemar test pairing the responses of officers who had experienced a 'stressful' incident in both the baseline and follow-up assessments found no significant change in performance rating ($\chi^2 (1) = .00, p > 0.05, 2\text{-tailed}$). In response to what extent any factors could have improved their performance, 22% of officers responded better training; 20% better information/briefing, and 10% better equipment; [combined responses of 'to some extent' and 'a great deal']. In the follow-up assessment 19% responded better training; 19% better information/briefing, and five percent better equipment.

- *Emotional Well-being*

Emotional well-being (anxiety and depression) was measured using the Hospital Anxiety and Depression Scale (HADS; Snaith and Zigmond 1994). Eighty eight percent of officers were categorised as 'normal/mild anxiety'; [comprising the scoring bands of 'normal' (72%) and 'mild' (16%)]. Twelve percent were categorised as 'pathological anxiety'; [comprising the scoring bands of 'moderate' (eight percent) and 'severe' (three percent)]. A significant association was found with number of service years ($\chi^2 (3) = 11.21, p < 0.05, 2\text{-tailed}, V = .12$), with 88% of officers with 1-5 service years reporting 'normal/mild anxiety', compared to 80% with 6-10 years, 91% with 11-20 years, and 90% with 21 or more service years. No associations were found with the Force the officer serves in, gender, marital status, type of work, age or rank.

In the follow-up assessment 95% of officers were categorised as 'normal/mild anxiety' ('normal' 85%), and five percent as 'pathological anxiety' ('severe' fewer than one percent). A McNemar Test pairing the responses of officers in the baseline and follow-up assessments found the change in level of anxiety to be significant ($\chi^2 (1) = 12.02, p < 0.001, 2\text{-tailed}$). The percentage of officers who completed both assessments who reported a 'normal/mild' level of anxiety was 88% (12% 'pathological anxiety') in the baseline assessment compared to 95% (five percent 'pathological anxiety') in the follow-up assessment (Green, Salkind and Akey 2000).

Ninety seven percent of officers were categorised as 'normal/mild depression; [comprising the scoring bands of 'normal' (88%) and 'mild' (nine percent)]. Three percent were categorised as 'pathological depression' [comprising the scoring bands of 'moderate' (two percent) and 'severe' (fewer than one percent)]. Chi-square analysis found no significant associations with the Force the officer works for ($\chi^2(1) = .70, p > 0.05, 2\text{-tailed}$) or gender (Fisher's Exact, $p > 0.05$). Chi-square analysis could not be conducted with marital status, type of work, rank, age or service years due to multiple cells with expected counts of less than five.

In the follow-up assessment 88% of officers were categorised as 'normal/mild depression' ('normal' 68%), and 12% as 'pathological depression' ('severe' three percent). A McNemar Test pairing the responses of officers in the baseline and follow-up assessments found the change in level of depression to be significant ($\chi^2(1) = 17.52, p < 0.001, 2\text{-tailed}$). The percentage of officers who completed both assessments who reported a 'normal/mild' level of depression was 96% (four percent 'pathological depression') in the baseline assessment compared to 88% (12% 'pathological depression') in the follow-up assessment (Green, Salkind and Akey 2000).

- *Predictors of factors associated with resilience and well-being*
 - Type of work was the only significant predictor of job satisfaction ($p < 0.001$). Officers in Response Policing were nearly six times less likely to report 'job satisfaction' (i.e., more likely to report 'job dissatisfaction') than officers in CID, and officers in Community/Neighbourhood Policing were more than three times less likely to report 'job satisfaction' (more likely to report 'job dissatisfaction') than officers in CID.
 - Type of work was the most significant predictor of sickness non-absence ($p < 0.01$). Officers in Response Policing were less likely to report non-absence (i.e., more likely to report absence) than officers in CID, and those responding 'other' to type of work were also less likely to report non-absence (more likely to report absence) than officers in CID. The Force in which the officer serves was also a significant predictor ($p < 0.05$), with Fife Constabulary officers more likely to report non-absence than Grampian Police officers; [Non-absence was the outcome of interest].
 - Number of service years was the most significant predictor of non-consideration of early retiral ($p < 0.01$). Officers with 21 or more service years were 4 times less likely not to have considered early retiral (i.e., more likely to have considered early retiral) than those with 1-5 service years. Age was also identified as a significant predictor ($p < 0.01$). However, it was not indicated which age groups were significantly different, which may have been due to small sample sizes in some of the age groups; [Non-consideration was the outcome of interest].
 - Only the rank of the officer was found to be a significant predictor of 'effectiveness' of on-duty coping methods ($p < 0.05$). Officers of Sergeant rank and Inspector rank and above were more likely to rate their methods as 'effective' than those of Constable rank.
 - The gender of the officer was the most significant predictor of 'effectiveness' of off-duty coping methods ($p < 0.001$). Female officers were more than twice as likely as male officers to report

their off-duty coping methods as 'effective'. Number of service years was also found to be a predictor ($p < 0.01$), with officers with 6-10 service years, 11-20 service years, and 21 or more service years more than twice as likely to rate their off-duty coping methods as 'effective' than officers with 1-5 service years.

- Marital status was found to be the only significant predictor of perception of sufficient support from peer colleagues after 'personally disturbing' incidents ($p < 0.05$). However, it was not indicated which statuses were significantly different, which may have been due to small sample sizes in some of the marital groups.
- The Force in which the officer serves was the only significant predictor of perception of sufficient support from immediate managers ($p < 0.01$). Fife Constabulary officers were less likely than Grampian Police officers to report their immediate managers as sufficiently supportive after 'personally disturbing' incidents.
- The Force in which the officer serves was the most significant predictor of performance rating ($p < 0.01$). Fife Constabulary officers were less likely to report their performance as 'good/very good' than Grampian Police officers. Number of service years was also found to be a predictor ($p < 0.05$), with officers with 6-10 service years more likely, and those officers with 21 or more service years more than twice as likely, to rate their performance as 'good/very good' than those with 1-5 service years.
- Number of service years was found to be a significant predictor of level of anxiety ($p < 0.05$). However, it was not indicated which service year groups were significantly different, which may have been due to the small number of officers reporting 'pathological anxiety'.
- Logistic regression was not conducted with level of depression as univariate analysis found no significant associations with the demographic sub-groups, which may have been due to the small number of officers reporting 'pathological depression'.

Follow-up Interviews

To enable exploration of the relationship between high and low resilience and outcomes of exposure to 'personally disturbing' incidents, officers' levels of resilience as measured by the Connor-Davidson Resilience Scale 10 (CD-RISC 10; Connor and Davidson 2003; Campbell-Sills and Stein 2007) were categorised into high, average and low resilience scoring bands. High resilience was categorised as one standard deviation above the overall mean score and low resilience as one standard deviation below the overall mean score (Holmbeck 1998). The impact of incidents on officers, as measured by the Impact of Event Scale-Revised (IES-R; Weiss and Marmar 1996), were categorised into high and low scoring bands using the same criteria.

To ensure that the interview sub-sample was representative of officers who had experienced a 'personally disturbing' incident, crosstabulation analysis was undertaken with gender, total number of service years, type of 'most personally disturbing' incident, and the extent to which they had found it stressful. Total number of service years was found to be significantly associated with rank ($\chi^2 (6) = 257.21, p < 0.001, 2\text{-tailed}, V = .42$) and age ($\chi^2 (9) = 456.32, p < 0.001, 2\text{-tailed}, V = .45$). After

removing duplications fifty six officers, who were comparable to the sample of officers who had experienced one or more incidents or circumstances in the prior 12 months and had found it or them stressful, were invited to participate in the follow-up interviews. Thirty officers participated in the semi-structured interviews, a number of officers were unable to participate due to extenuating circumstances.

The interview sample comprised of:

- 22 male officers and eight female officers.
- 24 constables, two sergeants and two inspectors.
- Four officers in the 1-5 total years service group, nine in the 6-10 service years group, 10 in the 21-30 service years group, and seven in the 11-20 service years group.

The interviews were analysed using a thematic analysis approach (Braun and Clark 2006). For the purpose of this report the findings of the interviews have been presented in the format of the framework used in the semi-structured interviews (Ritchie, Spender and O'Connor 2003).

- *Characteristics of the incident*

Many officers had previously been deployed to incidents of the type that they had identified as the 'most personally disturbing' and had not found them stressful, and some advised that they had experienced more challenging incidents. However, it was certain factors specific to this incident that had made this incident the 'most personally disturbing'. These factors included the age of the deceased, the volume of bodies, feelings of being unprepared, the unpredictability of situations, first experiences, personalisation of the situation, or a combination of factors. A number of officers had stipulated the incident that was freshest in their mind, some officers' responses were an amalgamation of experiences of a particular type of incident that they always find stressful; whilst some officers expressed that they had completed the questionnaire due to the strong feelings they had regarding the incident at the time. A small number of officers had identified an incident which had occurred before the prior 12 month timeline and were still able to recall the incident in great detail. Many of these incidents had occurred when the officer was new in service. Where the same type of incident was indicated the circumstances of the incident varied greatly among the interviewees. For example, experiences of 'having to tell a relative of a death' included those relating to a major incident with multiple fatalities and suicides involving children. There was recognition of the fact that each incident is unique in terms of its characteristics, the impact on the individual officer, and the reaction of the public and other individuals which has implications for training and support provision.

- *Training*

A number of officers stated that they did not get training for that particular type of incident; however, there was also a view that training cannot be provided for certain types of incidents, such as dealing with multiple fatalities and telling relatives of a death. There was awareness that one of the difficulties of training provision is that it has to cover the whole role of the police officer. Training for specialist units was identified as being good and could be applied to other areas of policing. One issue that was

highlighted was a lack of realism in the training, though it was acknowledged that it was difficult to simulate realistic situations and circumstances, such as dealing with multiple fatalities. Overall, a common view was that learning through experience was the best training and that dealing with incidents was a continual learning process. Officers used previous experiences of dealing with incidents of a similar nature to police other similar incidents, and general policing experience was also drawn upon. Officers with experience of policing in rural areas found that this had given them experience of policing a wide range of incidents. Learning from colleagues was highlighted as a form of training, and participating officers also endeavoured to pass their experiences onto lesser experienced officers. Some officers felt that training provision had improved, but another issue identified was the time between training received and their actual experience of policing that type of incident. Personal experiences such as family bereavement and family health issues could be drawn upon, whilst general life experience, maturity, and public speaking helped them to communicate with the public, to pass on information, and to present evidence. Officers made reference to the 'personality' of an officer as a factor in aiding interactions with the public. However, a general view was that nothing could prepare you for working in the police service.

- *Support available*

There was a mixed response as to whether the Forces are sufficiently concerned about the impact of 'personally disturbing' incidents on their personnel. Some officers felt that the Forces are sufficiently concerned, that support available has improved since their experience of the incident, and that there are more referrals to support services now. In contrast, other officers felt that there is insufficient support and that there is an attitude of you just having to get on with it. It was also expressed that there is a 'tick box' approach to support provision, that the improvement of the welfare of officers is not the main objective for provision, and that current processes in place could be improved. The majority of officers recognised that support services are available and did respond that they felt that support would have been available if they needed it. Some had been directly offered support but had decided that they did not need it, or had sought support from other sources such as personal social networks. A number responded that support needed to be 'pushed more' rather than just receiving an e-mail advising them support was available. Where officers had received automatic referrals to the Welfare Officer, and the officer had made contact with them, this had been found to be beneficial. There was a view that support provision is very much dependant on the individual supervisor, with some supervisors still having an 'old school' attitude. Supervisors spending time with their officers to discuss possible impacts of incidents was seen as a potential improvement, but there was acknowledgement that Sergeants' workloads did not allow for this. It was perceived by a number of officers that there is lack of awareness by some senior officers of the impact that incidents can have on officers, particularly those perceived as 'minor' incidents: such as having to tell a relative of a death and presenting evidence. Issues were also identified with the time taken for the referral process and having to travel to access support services such as Occupational Health.

- *Confidentiality*

Concerns about confidentiality when seeking support were identified as an issue by a number of officers. It was felt that there is still very much a 'stigma' surrounding stress-related or mental health issues, and that seeking support goes very much against the police culture of 'getting on with it'. Breaches of confidence at organisation level were less of a concern; however, there was concern that in small Forces confidentiality can only be maintained to a certain degree. The 'rumour mill' was identified as an issue as were issues of trust, and it was highlighted that absences can be seen on the resource system or duty sheets. There were concerns regarding support services reporting back to management, and many officers stated that in the first instance their preference for support would be from their supervisor or the Welfare Officer rather than Occupational Health. There was awareness that the climate was changing and that the Forces had put processes in to protect confidentiality. A number of officers indicated that confidentiality was not a concern for them, but many of these were not seeking promotion in the near future.

- *Career prospects*

There was a marked perception that seeking support after 'personally disturbing' incidents could affect career prospects. There was a concern regarding access to medical and attendance records and that these would be taken into account in the selection process, and that officers who had sought support would be seen as weak and unable to cope. There was a perception that it might be a barrier to getting into certain units if officers had sought support for stress-related or mental health issues. A number of officers stated that it would be a personal concern but few had sought promotion. However, some had known officers who had sought support and had been promoted subsequently. Some officers felt that it was less of a 'stigma' than it used to be, whilst it was also expressed that it could be seen as a positive and that there could be implications for career prospects if a health issue was not disclosed.

- *Recovery time*

There was a mixed response as to whether officers get sufficient time to recover from 'personally disturbing' incidents and if having more time would help them to deal better with the next incident. A number of officers felt that they did not get sufficient time and that more time after dealing with 'personally disturbing' incidents might be beneficial. Other officers were not sure if more time would be beneficial or if they would just dwell on the incident. It was commented that sufficient time is subjective, and that it may depend on the individual officer, the incident characteristics, personal circumstances at the time, and that less experienced officers may benefit from more time. It was recognised and very much accepted that with the nature of the job and staffing levels that having more time was practically impossible, and it very much depended on luck if you did get time between incidents. It was very much felt that circumstances dictate and that if a call comes in someone has to deal with it regardless of how they feel. Lack of understanding from supervisors was highlighted as an issue. Though it was acknowledged that as an officer cannot predict the potential impact of an incident, unless they are willing to disclose the subsequent impact on them, their supervisor may not be aware that the officer requires more time before responding to the next incident. It was perceived

that certain roles and departments do get sufficient time to recover whilst others, such as Response Policing, do not. However, officers deployed in specialist roles in addition to their regular posts advised that they do not always get sufficient time. Some officers expressed concern about the impact of one incident affecting their performance on the next incident and the possible implications of providing a poor service.

Conclusions

- i. The findings of earlier studies (Alexander et al. 1993; Biggam et al. 1997) which found that organisational factors can be significant stressors for police officers are supported. The comparison of responses of the two participating Scottish Police Forces shows that certain organisational factors, such as being under pressure to get results, are consistent stressors.
- ii. Job satisfaction is supported as an important factor with regard to the resilience and well-being of police officers (Paton et al, 2008), with significant relationships found with sickness non-absence, non- consideration of early retiral, and support from immediate managers.
- iii. The nature of incidents as determinants of the likelihood of a stress response is also supported (NATO Joint Medical Committee 2008); with those relating to physical injury and exposure to dead bodies being reported as 'stressful' by a substantial number of officers who had experienced incidents of these types, with a number of these officers indicating that the incident disturbed them for a considerable period of time.
- iv. The stigma surrounding stress-related and mental health issues continues to be a significant barrier to officers seeking support after 'personally disturbing' incidents.
- v. The findings support the stability of factors such as job satisfaction, methods of coping, 'disturbing' types of incidents, and the 'stressfulness' of aspects of work over time.
- vi. The varying predictors of outcomes, and responses given in the interviews, indicate that police officers cannot necessarily be assumed to be a homogeneous group.

References

- ACPOS, 2003. *Fit for Duty: Strategy for a Healthy Police Service 2003-2013*. [Available online].
- Alexander DA et al., 1993. *Police Stress at Work*. London: The Police Foundation.
- Alexander DA and Wells A, 1991. Reactions of police officers to body handling after a major disaster: a before and after comparison. *British Journal of Psychiatry*, **159(4)**, 517-555.
- Antonovsky A, 1993. The structure and properties of the sense of coherence scale. *Social Science and Medicine*, **36(6)**, 725-733.
- Biggam FH et al, 2007. Self-perceived occupational stress and distress in a Scottish police force. *Work and Stress*, **11(2)**, 118-133.
- Braun V and Clarke V, 2006. Using thematic analysis in psychology. *Qualitative Research in Psychology*, **3(2)**, 77-101.
- Burke KJ and Paton D, 2006a. Well-being in protective services personnel: organisational influences. *The Australasian Journal of Disaster and Trauma Studies*. **2006(2)**. [Available online].
- Burke KJ and Paton D, 2006b. Predicting police officer job satisfaction: traditional versus contemporary models of trauma in occupational experience. *Traumatology*, **12(3)**, 189-197.

- Campbell-Sills L and Stein M, 2007. Psychometric analysis and refinement of the Connor–Davidson Resilience Scale (CD-RISC): validation of a 10-item measure of resilience. *Journal of Traumatic Stress*, **20(6)**, 1019–1028.
- Connor KM and Davidson JRT, 2003. Development of a new resilience scale: The Connor-Davidson Resilience Scale (CD-RISC). *Depression and Anxiety*, **18(2)**, 76-82.
- Gist R and Woodall SJ, 2000. Cited in Burke KJ and Paton D, 2006b. Predicting police officer job satisfaction: traditional versus contemporary models of trauma in occupational experience. *Traumatology*, **12(3)**, 189-197.
- Green SB, Salkind NJ and Akey TM, 2000. Using SPSS for Windows: Analyzing and Understanding Data. New Jersey: Prentice-Hall Inc.
- Holmbeck GN, 1998. Cited in Campbell-Sills L and Stein M, 2007. Psychometric analysis and refinement of the Connor–Davidson Resilience Scale (CD-RISC): validation of a 10-item measure of resilience. *Journal of Traumatic Stress*, **20(6)**, 1019–1028.
- Kinnear PR and Gray CD, 2010. PASW 17 Statistics Made Simple. Hove: Psychology Press.
- Martin M, Marchand A and Boyer R, 2009. Traumatic events in the workplace: impact on psychopathology and healthcare use of police officers. *International Journal of Emergency Mental Health*, **11(3)**, 165-176.
- Martinussen M, Richardsen AM and Burke RJ, 2007. Job demands, job resources and burnout among police officers. *Journal of Criminal Justice*, **35(3)**, 239-249.
- NATO Joint Medical Committee, 2008. *Psychosocial care for people affected by disasters and major incidents: A Model for Designing, Delivering and Managing Psychosocial Services for People Involved in Major Incidents, Conflict, Disasters and Terrorism*. Brussels: NATO.
- Paton D and Burke KY, 2007. Personal and organizational predictors of posttraumatic adaptation and growth in police officers. *The Australasian Journal of Disaster and Trauma Studies*. **2007(1)**. [Available online].
- Paton D et al., 2008. Stress shield: a model of police resiliency. *International Journal of Emergency mental health*, **10(2)**, 95-108.
- Puri, BK, 2002. *SPSS in Practice: An Illustrated Guide*. London: Arnold Publishers.
- Ritchie J, Spencer L and O'Connor W, 2003. Carrying out Qualitative Analysis. In J Ritchie and J Lewis, eds. *Qualitative Research Practice: A Guide for Social Science Students and Researchers*. London: SAGE Publications Ltd.
- Snaith RP and Zigmond AS 1994, *The Hospital Anxiety and Depression Scale Manual*. London: nferNelson Publishing Company Ltd.
- Weiss DS and Marmar CR, 1996. The Impact of Event Scale - Revised. In J Wilson and TM Keane, eds. *Assessing psychological trauma and PTSD*. New York: Guilford Press. 399-441.

Knowledge Transfer

- i. The data from this survey will provide the basis for the thesis of Ms Falconer in part fulfilment of the requirements for her PhD.
- ii. The study has attracted the attention of police forces and police personnel well-being services throughout the UK, and in Canada and Australia, and from correctional services in Australia.

- iii. Support for the project was a listed priority in the Grampian Joint Branch Board's 'Our Priorities 2009-2012'.
- iv. Feedback from a sub-sample of police officers has found the questionnaire to be a valid measurement of contemporary operational policing.
- v. A number of officers who have participated in this study have offered to participate in further studies conducted by the Aberdeen Centre for Trauma Research.

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	% within Police Force (number of officers in brackets)		Significance (2-tailed)
	Fife Constabulary ¹	Grampian Police ²	
Job satisfaction: [‘satisfying’ and ‘very satisfying’ responses combined]	84 (181)	85 (440)	$\chi^2(1) = .26, p > 0.05$
Attendance: non-absence	62 (138)	54 (282)	$\chi^2(1) = 4.37, p < 0.05, \phi = .08$
Early retirement: non-consideration	79 (174)	83 (433)	$\chi^2(1) = 1.69, p > 0.05$
Effectiveness of methods of coping on-duty: [‘very’ and ‘completely’ effective responses combined]	33 (72)	31 (158)	$\chi^2(1) = .30, p > 0.05$
Effectiveness of methods of coping off-duty: [‘very’ and ‘completely’ effective responses combined]	40 (89)	43 (218)	$\chi^2(1) = .56, p > 0.05$
Level of anxiety: [‘normal’ and ‘mild’ combined]	87 (192)	89 (464)	$\chi^2(1) = 1.00, p > 0.05$
Level of depression: [‘normal’ and ‘mild’ combined]	96 (214)	98 (508)	$\chi^2(1) = .70, p > 0.05,$
Find peer colleagues supportive after ‘personally disturbing’ incidents ³	83 (123)	89 (327)	$\chi^2(1) = 3.74, p > 0.05$
Find immediate managers supportive after ‘personally disturbing’ incidents ³	65 (97)	78 (286)	$\chi^2(1) = 9.12, p < 0.01, \phi = .13$
Performance rating dealing with the most ‘personally disturbing’ incident ³ : [‘good’ and ‘very good’ responses combined]	65 (99)	75 (280)	$\chi^2(1) = 5.29, p < 0.05, \phi = -.10$

¹222 officers / ²521 officers / ³Officers who reported experience of a ‘personally disturbing’ incident. Valid percentages reported.

	% within assessment (number of officers in brackets)		Significance (2-tailed)
	Baseline Assessment ¹	Follow-up Assessment ²	
Job satisfaction: [‘satisfying’ and ‘very satisfying’ responses combined]	85 (621)	85 (310)	$\chi^2(1) = 0.05, p > 0.05$
Attendance: non-absence	57 (420)	75 (274)	$\chi^2(1) = 22.24, p < 0.01$
Early retirement: non-consideration	82 (607)	89 (325)	$\chi^2(1) = 10.30, p < 0.01$
Effectiveness of methods of coping on-duty: [‘very’ and ‘completely’ effective responses combined]	32 (230)	35 (120)	$\chi^2(1) = .28, p > 0.05$
Effectiveness of methods of coping off-duty: [‘very’ and ‘completely’ effective responses combined]	42 (307)	45 (155)	$\chi^2(1) = .10, p > 0.05$
Level of anxiety: [‘normal’ and ‘mild’ combined]	88 (656)	95 (349)	$\chi^2(1) = 12.02, p < 0.001$
Level of depression: [‘normal’ and ‘mild’ combined]	97 (722)	88 (323)	$\chi^2(1) = 17.52, p < 0.001$
Find peer colleagues supportive after ‘personally disturbing’ incidents ³	87 (450)	87 (203)	$\chi^2(1) = .11, p > 0.05$
Find immediate managers supportive after ‘personally disturbing’ incidents ³	74 (383)	77 (181)	$\chi^2(1) = .27, p > 0.05$
Performance rating dealing with the most ‘personally disturbing’ incident ³ : [‘good’ and ‘very good’ responses combined]	72 (375)	77 (183)	$\chi^2(1) = .00, p > 0.05$

¹743 officers / ²366 officers / ³Officers who reported experience of a ‘personally disturbing’ incident. Valid percentages reported.