2016 Police Officer Welfare, Demand, and Capacity Survey Inferential Results

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Jonathan Houdmont

University of Nottingham

Mary Elliott-Davies

Police Federation of England and Wales

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Section 1: Executive Summary

1.1 Background and Purpose of the Report

In February 2016 officers of the federated ranks were invited to respond to the Police Federation of England and Wales' Officer Demand, Capacity, and Welfare Survey. The online survey assessed officers' views concerning the frequency with which they face demand and capacity pressures, and their welfare. Analyses were conducted on a sample of 16,841 responses drawn from all 43 territorial forces, representing approximately 14% of the workforce. Respondents were broadly representative of the national federated officer population in terms of their socio-demographic composition.

Descriptive findings on officers' experiences of demand and capacity pressures, and welfare, and how these compared to other relevant employee groups, were presented in an initial report (Houdmont & Elliott-Davies, 2017) and summarized in Police Magazine features. In addition, a series of short reports was produced, with each focused on a discrete demand and capacity pressure, or aspect of welfare, and force-level reports were produced for forces that contributed no fewer than 100 survey responses. The current report details linkages between demand and capacity pressures on the one hand and dimensions of welfare on the other. In doing so, the report seeks to shine a light on important aspects of demand and capacity that are linked to welfare and which, by extension, might provide a focus for actions to enhance the welfare of police officers. In this way the report seeks to assess whether demand and capacity pressures are associated with welfare outcomes, and to provide an evidence base to support the Police Federation of England and Wales in its policy development and lobbying activities.

1.2 Key Findings: Links between Demand and Capacity Pressures and Welfare

Key findings on linkages between demand and capacity pressures and welfare are summarized in Figure 1. A total of eleven aspects of demand and capacity pressure were meaningfully linked to welfare. These were:

- Unpaid overtime (reported by 84% of respondents)
- Insufficient officers to do the job properly (reported by 78% of respondents)
- High overall workload (reported by 66% of respondents)
- Inability to meet conflicting demands on time at work (reported by 67% of respondents)
- Insufficient time to do a job to a standard to be proud of (reported by 58% of respondents)
- Frequent single crewing (reported by 57% of respondents)
- Frequent neglect of tasks owing to having too much to do (reported by 43% of respondents)
- Frequent unrealistic time pressures (reported by 35% of respondents)
- Frequent unachievable deadlines (reported by 29% of respondents)
- Frequent refusal of annual leave requests (reported by 27% of respondents)
- Frequent pressure to work long hours (reported by 26% of respondents)

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As shown in Figure 1, these aspects of demand and capacity were variously associated with a host of negative welfare states including being never or rarely relaxed; poor overall mental wellbeing; fatigue that interferes with work duties; fatigue that interferes with home life; low morale; working while on annual leave in order to catch up; taking work home that could not be finished during working hours, and; three forms of violent victimization: verbal insults, verbal threats, and physical attack.

Overall, these findings indicate that demand and capacity pressures have implications for the health and welfare of police officers, contributing to the creation of a workforce that can be characterised as 'tired, tense, and targeted'.

Figure 1 Key Findings: Links Between Demand and Capacity Pressures and Welfare

Demand and Capacity Pressures

Officer Welfare

Insufficient officers to do the job properly

Never or rarely relaxed

Frequent unachievable deadlines

High overall workload

Fatigue that interferes with work duties

Never or rarely relaxed

Frequent neglect of tasks due to having too much to do

Frequent pressure to work long hours

Fatigue that interferes with work duties

Fatigue that interferes with home life

Never or rarely relaxed

Low morale

Fatigue that interferes with work duties

Never or rarely relaxed

Poor overall mental wellbeing

Inability to meet conflicting demands on time at work

Frequent unrealistic time pressures

Fatigue that interferes with work duties

Fatigue that interferes with home life

Never or rarely relaxed

Poor overall mental wellbeing

Low morale

Insufficient time to do job to a standard to be proud of

Unpaid overtime

Worked on annual leave in order to catch up

Taken work home that could not be completed during working hours

Frequently single crewed

Verbally Insulted

Verbally threatened

Physically attacked

Frequent refusal of annual leave requests

1.3 Links between Job Stressfulness and Welfare

Job stressfulness was measured to provide a useful shorthand assessment of the perceived threat to welfare presented by the demand and capacity pressures experienced by officers. A single questionnaire item asked respondents to indicate the degree to which their job is stressful on a 5-point scale of generally *not at all stressful*, *mildly stressful*, *moderately stressful*, *very stressful*, and *extremely stressful*. Responses of *very stressful* and *extremely stressful* were taken to indicate the presence of high job stress. On this basis almost two fifths (39%) of respondents reported high job stress. This rate is consistent with that found in other contemporary policing studies, yet more than double the rate found in the general UK workforce (Health and Safety Executive, 2012).

Analyses revealed that high job stress was meaningfully linked to multiple welfare dimensions, highlighting the usefulness of this measure as an indicator of the challenges facing a workforce that if unmanaged may result in harm to both the workforce and the organisation they serve. As shown in Figure 2, officers that reported high job stress were:

- 11 times more likely than other officers to report poor overall mental wellbeing
- 7 times more likely than other officers to report low morale
- 6 times more likely than other officers to never or rarely feel relaxed
- 5.3 times more likely than other officers to have experienced a mental health or wellbeing difficulty in the last year
- 4.3 times more likely than other officers to attend for work when feeling mentally unwell
- 4.2 times more likely than other officers to never or rarely able to think clearly
- 4.2 times more likely than other officers to never or rarely deal with problems effectively
- 3.9 times more likely than other officers to report fatigue that interferes with home life
- 3.9 times more likely than other officers to report fatigue that interferes with work duties
- 3.1 times more likely than other officers to never or rarely feel optimistic
- 3.1 times more likely than other officers to attend for work when feeling physically unwell
- 2.9 times more likely than other officers to use annual leave or rest days instead of sick leave when experiencing a mental health difficulty

Figure 2 Key Findings: Job Stressfulness and Welfare

Morale

7 X more likely to **report low morale**

39% of Officers Reported High Job Stressfulness
These Officers Were....

11 X more likely to report **poor overall mental wellbeing**

6 X more likely to **never or rarely feel relaxed**

Over 5 X more likely to have **experienced mental health and wellbeing difficulties in last year**

Fatigue

Just under 4 X more likely to **experience fatigue that interferes with work duties**

Just under 4 X more likely to **experience fatigue that interferes with home life**

Just under 3 X more likely to **use annual leave or rest days instead of sick leave when experiencing a mental health difficulty**

Leaveism

Over 4 X more likely to **attend for work when feeling mentally unwell**

Over 3 X more likely to **attend for work when feeling physically unwell**

Presenteeism

Over 4 X more likely to **never or rarely be able to think clearly**

Over 4 X more likely to **never or rarely deal with problems effectively**

Over 3 X more likely to **never or rarely feel optimistic**

Mental Health and Wellbeing

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1.4   Concluding Statement

The findings of the PFEW 2016 Officer Demand, Capacity, and Welfare Survey provide confirmation from the officer perspective that there is a high prevalence of demand and capacity pressure across policing in England and Wales. The findings also highlight a high prevalence of high job stress in policing that is more than double the rate found in the general working population. Moreover, the results of the analyses herein indicate that officers experiencing high demand and capacity pressures are at significantly increased risk for various forms of impaired welfare. Chronic demand and capacity pressures have implications for the health and welfare of police officers, contributing to the creation of a workforce that can be characterized as 'tired, tense, and targeted'.

1.5   Recommendations

Due to the importance of our findings, the PFEW aims to disseminate the results of this report to all relevant stakeholders (and the general public) in order to raise awareness regarding the current demand, capacity, and welfare challenges facing the police service.

The PFEW will also invite key stakeholders to engage with this research stream, and to work in partnership towards resolving the issues highlighted by this report. More specifically, PFEW will contemplate organising a workshop to bring these key stakeholders together in order to gather ideas; develop practical solutions; agree shared recommendations, and; encourage an open and productive inter-organisational dialogue around officer demand, capacity and welfare.

In order to effectively address the issues raised in this report, the workshops will need to a) concentrate on both the causes and effects of a demand and capacity imbalance; paying particular attention to discussions around measuring and balancing demand and capacity, as well as increasing the opportunities for welfare training and support, and b) be developed and delivered by a third-party provider which specialises in multiagency facilitation, to help ensure a balanced, impartial, and collaborative approach.

Section 2: Study Background and Aims of the Report

2 Introduction

2.1 Background to the PFEW 2016 Officer Demand, Capacity, and Welfare Survey

In April 2015 the Police Federation of England and Wales (PFEW) conducted its second Workforce Survey to gather officers' views on pay and conditions as well as attitudes towards work and the police service in general (PFEW, 2015). Alongside this survey, in February of the same year, the PFEW conducted a qualitative focus group study to explore the perceived impacts of officer demand and capacity imbalance on health and safety (Elliott-Davies, Donnelly, Boag-Munroe, & Van Mechelen, 2016). Taken together, the results of these studies suggested that the welfare of officers might be low relative to other occupational groups and pointed towards the possibility of increasing demand allied with decreasing capacity associated with budgetary cuts being contributory factors. These findings highlighted the imperative for further research to generate a contemporary evidence base on demand and capacity pressures and welfare that is representative of policing in England and Wales. It was within this context that the PFEW 2016 Officer Demand, Capacity, and Welfare Survey took place.

2.2 Aims of the Survey

The 2016 Officer Demand, Capacity, and Welfare Survey set out to gather data from serving officers of the federated ranks across the 43 English and Welsh territorial forces in order to:

1. Develop a contemporary description of officers' experiences of demand and capacity pressures and welfare;
2. Benchmark the demand and capacity pressures and welfare profile against previous UK and international policing studies as well as other large-scale UK public sector employee groups such as the armed forces and civil servants;
3. Develop a contemporary description of officers' experiences of help seeking for mental health and wellbeing difficulties and perceptions of the police service's response and attitude towards mental health and wellbeing issues;
4. Explore the contributions of different aspects of demand and capacity pressure to welfare;
5. Provide an evidence base to support the Police Federation of England and Wales in its policy development and lobbying activities.

2.3 Survey Response

Data collection was conducted via an online survey that was available over a four-week period in February 2016. All officers of the federated ranks in England and Wales were eligible to participate. Officers were made aware of the survey through national and local Police Federation of England and Wales social media activity and magazine/newsletter communications. A total of 17,434 questionnaires containing responses were submitted with analyses conducted on a sample of 16,841 responses after deletion of cases that failed to fulfil inclusion criteria. Respondents were broadly representative of the national federated officer population

in terms of their socio-demographic composition. Further details on the survey response rate are given in the initial report on the study (Houdmont & Elliott-Davies, 2017).

2.4   Aims of the Report

The first three of the aforementioned survey aims were addressed in a descriptive overview report published in January 2017 (Houdmont & Elliott-Davies, 2017) and summarised in the February/March 2017[1] and April/May 2017[2] issues of Police Magazine. In addition, a series of short reports was produced, with each focused on a discrete aspect of demand and capacity and welfare, and force-level reports were produced for forces that contributed no fewer than 100 survey responses.

This report addresses the fourth and fifth aims of the survey. Specifically, the report seeks to identify and quantify meaningful associations between demand and capacity pressures on the one hand and dimensions of welfare on the other. In these ways the report seeks to shine a light on important aspects of demand and capacity that are linked to welfare and which, by extension, might reasonably provide a focus for actions to enhance the welfare of police officers. In this way the report seeks to provide an evidence base to support the Police Federation of England and Wales in its policy development and lobbying activities.

The report is structured with key findings on the contribution of demand and capacity pressures to welfare presented in the main body of the report. Participants' responses to the survey questions were first subjected to correlation analyses to identify meaningful associations between aspects of demand and capacity pressures and the welfare dimensions.[3] Meaningful is defined here to mean that the relationship was (a) statistically significant and (b) of at least a moderate effect size, thereby ensuring that the focus is on results that are of both statistical and practical significance. Where an association of at least moderate strength was identified, logistic regression analyses were conducted to quantify the strength of the relationship after controlling for socio-demographic, personal, and occupational-demographic variables and to present these findings in the form of easily interpretable odds ratios. A detailed account of the analytical approach is provided in Appendix A. The full list of demand and capacity pressures and welfare dimensions that were examined in the survey are presented in the report appendices.

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[1] http://www.polfed.org/documents/Police_Magazine_Feb-Mar_2017_-_final.pdf

[2] http://www.polfed.org/documents/Police_Magazine_April-May_2017-with_links.pdf

[3] For a full list of survey questions included in correlations please see Appendix B

Section 3: Demand and Capacity Pressures and Welfare

3   Overall Workload: Links to Welfare

3.1   Measurement of Overall Workload

Overall workload was assessed using a single question developed for surveys of armed forces personnel (Ministry of Defence, 2015). Survey respondents were presented with the question *How would you rate your workload over the previous 12 months* with a 5-point response scale of (i) *much too low*, (ii) *too low*, (iii) *about right*, (iv) *too high*, and (v) *much too high*.

3.2   Data Analysis

Data analysis focused on the comparison of officers who reported high overall workload (responses of *too high* or *much too high*) to those who gave a response in the remaining categories (*much too low*, *too low*, *about right*) in relation to welfare. Results of these analyses are shown in Figure 3. Detailed statistical data on linkages between variables are presented in the appendices.

3.3   Links to Welfare

Two thirds (66%) of officers reported high overall workload. Overall workload was linked to one dimension of fatigue and the relaxation dimension of mental wellbeing (Figure 3). Officers who reported high overall workload had a three-fold (3.5 times) increased likelihood of experiencing fatigue that interfered with work duties (over the last year) and three-fold (3.6 times) increased likelihood of being never or rarely relaxed (over the last two weeks).

Figure 3 High Overall Workload and Welfare

66% of officers reported **high overall workload.**

These officers were…

Over 3 X more likely to **experience fatigue that interferes with work duties**

Over 3 X more likely to report **never or rarely feeling relaxed**

4   Unachievable Deadlines: Links to Welfare

4.1   Measurement of Unachievable Deadlines

The brief version of the UK Health and Safety Executive's Management Standards Indicator Tool (MSIT) (Edwards & Webster, 2012) contains four items that measure job demands. The first of these is a statement, *I have unachievable deadlines*, with which respondents indicate their degree of agreement in relation to the previous 12-month period on a 5-point scale of (i) *never*, (ii) *seldom*, (iii) *sometimes*, (iv) *often*, and (v) *always*.

4.2   Data Analysis

Data analysis focused on the comparison of officers who frequently had unachievable deadlines (responses of *often* or *always*) to those who infrequently had unachievable deadlines (responses of *never* of *seldom*) in relation to welfare. Results of these analyses are shown in Figure 4. Detailed statistical data on linkages between variables are presented in the appendices.

4.3   Links to Welfare

More than one quarter (29%) of officers frequently had unachievable deadlines over the previous year. This was linked to one welfare dimension (Figure 4). Officers who frequently had unachievable deadlines had a four-fold (4.3 times) increased likelihood of being never or rarely relaxed (over the last two weeks).

Figure 4 Frequent Unachievable Deadlines and Welfare

29% of officers reported **often or always having unachievable deadlines.**
These officers were…

Over 4 X more likely to report **never or rarely feeling relaxed**

5   Neglect of Tasks due to Workload: Links to Welfare

5.1   Measurement of Neglect of Tasks due to Workload

The brief version of the UK Health and Safety Executive's Management Standards Indicator Tool (MSIT) (Edwards & Webster, 2012) contains four items that measure job demands. The second of these is a statement, *I have to neglect some tasks because I have too much to do*, with which respondents indicate their degree of agreement in relation to the previous 12-month period on a 5-point scale of (i) *never*, (ii) *seldom*, (iii) *sometimes*, (iv) *often*, and (v) *always*.

5.2   Data Analysis

Data analysis focused on the comparison of officers who frequently had to neglect some tasks because of having too much to do (responses of *often* or *always*) to those who infrequently had to neglect some tasks because of having too much to do (responses of *never* of *seldom*) in relation to welfare. Results of these analyses are shown in Figure 5. Detailed statistical data on linkages between variables are presented in the appendices.

5.3   Links to Welfare

Approximately two fifths (43%) of officers frequently had to neglect tasks because of having too much to do. This was linked to one dimension of fatigue and the relaxation dimension of mental wellbeing (Figure 5). Officers who reported frequently having to neglect tasks had an almost five-fold (4.9 times) increased likelihood of experiencing fatigue that interfered with work duties (over the last year) and a four-fold (4.2 times) increased likelihood of being never or rarely relaxed (over the last two weeks).

Figure 5 Having to Neglect Tasks and Welfare

43% of officers reported **often or always having to neglect tasks because of having too much to do.** These officers were…

Over 4 X more likely to **experience fatigue that interferes with work duties**

Over 4 X more likely to report **never or rarely feeling relaxed**
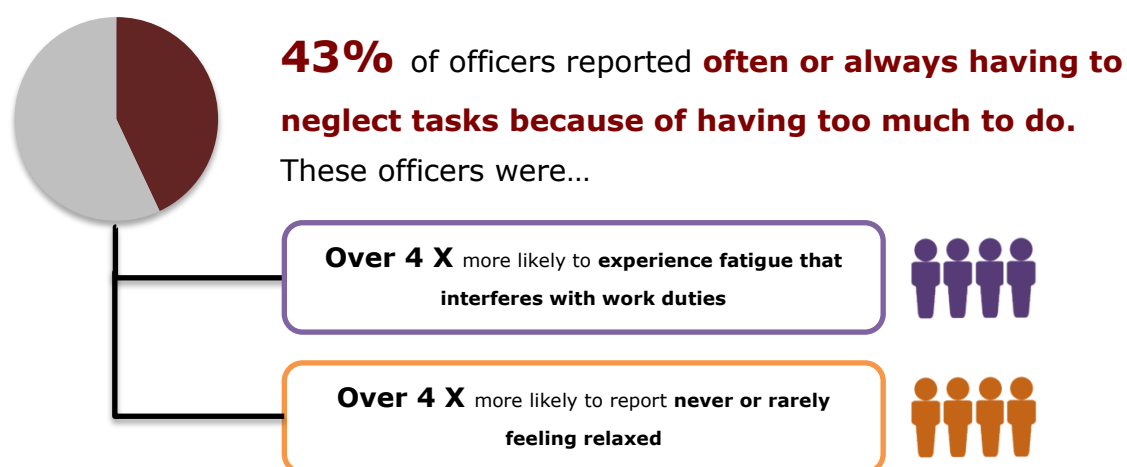
6 Pressure to Work Long Hours: Links to Welfare

6.1 Measurement of Pressure to Work Long Hours

The brief version of the UK Health and Safety Executive's Management Standards Indicator Tool (MSIT) (Edwards & Webster, 2012) contains four items that measure job demands. The third of these is a statement, *I am pressured to work long hours*, with which respondents indicate their degree of agreement in relation to the previous 12 month period on a 5-point scale of (i) *never*, (ii) *seldom*, (iii) *sometimes*, (iv) *often*, and (v) *always*.

6.2 Data Analysis

Data analysis focused on the comparison of officers who frequently felt pressured to work long hours (responses of *often* or *always*) to those who infrequently felt pressured to work long hours (responses of *never* of *seldom*) in relation to welfare. Results of these analyses are shown in Figure 6. Detailed statistical data on linkages between variables are presented in the appendices.

6.3 Links to Welfare

Approximately one quarter (26%) of officers reported frequent pressure to work long hours over the previous year. This was linked to three dimensions of welfare (Figure 6). Officers who reported frequent pressure to work long hours had a four-fold (4.3 times) increased likelihood of reporting fatigue that interfered with work duties (over the last year), four-fold (4.6 times) increased likelihood of reporting fatigue that interfered with home life (over the last year), and almost four-fold (3.8 times) increased likelihood of being never or rarely relaxed (over the last two weeks).

Figure 6 Pressure to Work Long Hours and Welfare

26% of officers reported **often or always experiencing pressure to work long hours.**

These officers were…

Over 4 X more likely to **experience fatigue that interferes with work duties**

Over 4 X more likely to **experience fatigue that interferes with home life**

Over 3 X more likely to report **never or rarely feeling relaxed**
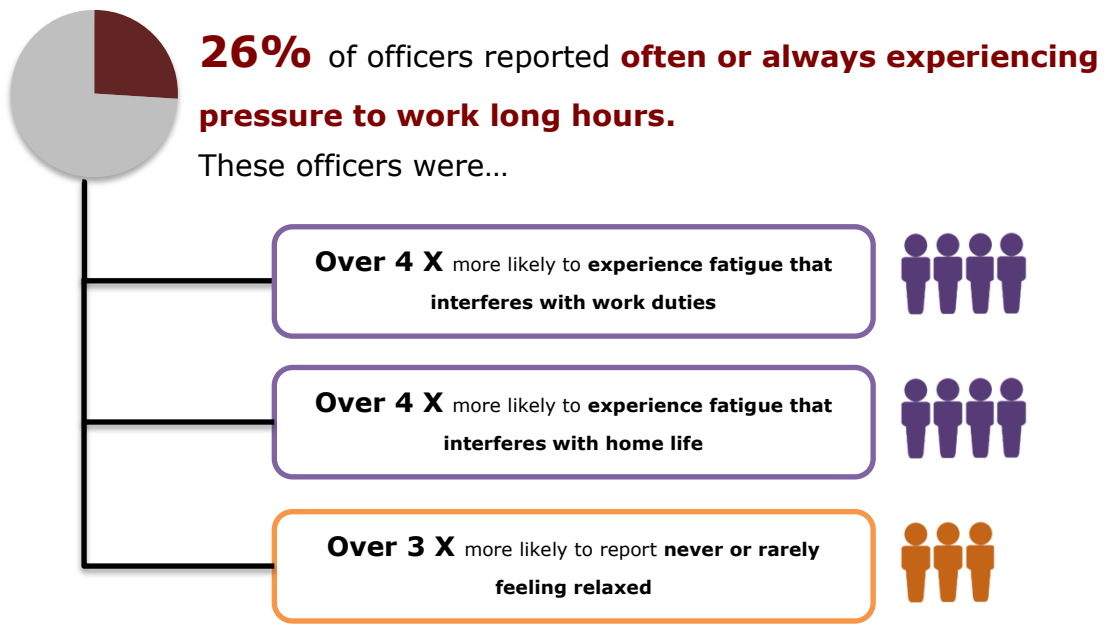
7   Unrealistic Time Pressures: Links to Welfare

7.1   Measurement of Time Pressure

The brief version of the UK Health and Safety Executive's Management Standards Indicator Tool (MSIT) (Edwards & Webster, 2012) contains four items that measure job demands. The fourth of these is a statement, *I have unrealistic time pressures*, with which respondents indicate their degree of agreement in relation to the previous 12 month period on a 5-point scale of (i) *never*, (ii) *seldom*, (iii) *sometimes*, (iv) *often*, and (v) *always*.
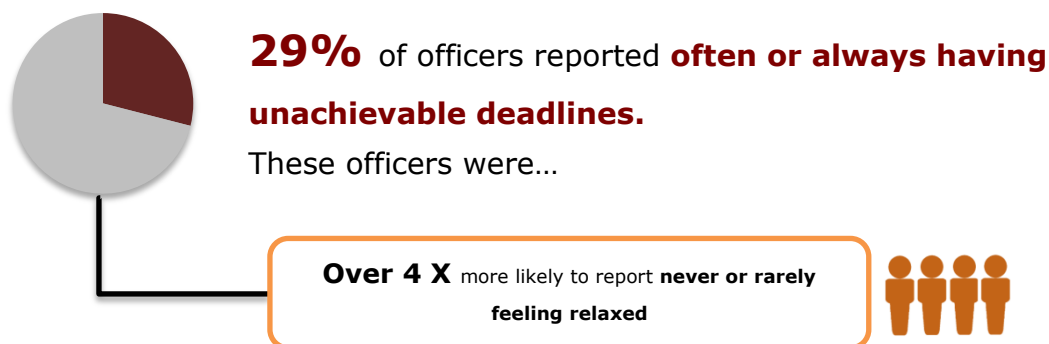
7.2   Data Analysis

Data analysis focused on the comparison of officers who frequently had unrealistic time pressures (responses of *often* or *always*) to those who infrequently had unrealistic time pressures (responses of *never* or *seldom*) in relation to welfare. Results of these analyses are shown in Figure 7. Detailed statistical data on linkages between variables are presented in the appendices.

7.3   Links to Welfare

Approximately one third (35%) of officers reported frequent unrealistic time pressures. This was linked to five dimensions of welfare (Figure 7). Officers who reported frequent unrealistic time pressures had a more than five-fold (5.4 times) increased likelihood of reporting fatigue that interfered with work duties (over the last year), more than five-fold (5.2 times) increased likelihood of reporting fatigue that interfered with home life (over the last year), more than five-fold (5.4 times) increased likelihood of reporting poor overall mental wellbeing, more than five-fold (5.3 times) increased likelihood of reporting being never or rarely relaxed (over the last two weeks), and more than six-fold (6.3 times) increased likelihood of reporting low morale.

Figure 7 Unrealistic Time Pressures and Welfare

35% of officers reported **often or always experiencing unrealistic time pressures.**
These officers were...

Over 6 X more likely to report **low morale**

Over 5 X more likely to **experience fatigue that interferes with work duties**

Over 5 X more likely to **experience fatigue that interferes with home life**

Over 5 X more likely to report **never or rarely feeling relaxed**

Over 5 X more likely to report **poor overall mental wellbeing**

8 Conflicting Demands on Time at Work: Links to Welfare

8.1 Measurement of Conflicting Demands on Time at Work

Survey respondents were asked to indicate their degree of agreement with the statement *I am able to meet all the conflicting demands on my time at work* in relation to the previous 12 month period on a 5-point scale of (i) *strongly disagree*, (ii) *disagree*, (iii) *neither disagree nor agree*, (iv) *agree*, and (v) *strongly agree*.

8.2 Data Analysis

Data analysis focused on the comparison of officers who were unable to meet conflicting demands on time at work (response of *strongly disagree* or *disagree*) to those who were able to meet conflicting demands on time at work (response of *strongly agree* or *agree*) in relation to welfare. Results of these analyses are shown in Figure 8. Detailed statistical data on linkages between variables are presented in the appendices.

8.3 Links to Welfare

Approximately two thirds (67%) of officers reported that they were unable to meet conflicting demands on time at work. This was linked to four dimensions of welfare (Figure 8). Officers who reported inability to meet conflicting demands on their time at work had a four-fold (4.4 times) increased likelihood of reporting fatigue that interfered with work duties (over the last year), three-fold (3.8 times) increased likelihood of reporting poor overall mental wellbeing, almost five-fold (4.9 times) increased likelihood of being never or rarely relaxed (over the last two weeks), and almost six-fold (5.9 times) increased likelihood of reporting low morale.

Figure 8 Inability to Meet Conflicting Demands on Time at Work and Welfare

67% of officers reported **inability to meet conflicting demands on time at work.**

These officers were…

Over 5 X more likely to report **low morale**

Over 4 X more likely to **experience fatigue that interferes with work duties**

Over 4 X more likely to report **never or rarely feeling relaxed**

Over 3 X more likely to report **poor overall mental wellbeing**

9   Insufficient time to do a Job to a Standard to be Proud of: Links to Welfare

9.1   *Measurement of Insufficient Time to do a Job to a Standard to be Proud of*

Survey respondents were asked to indicate their degree of agreement with the statement *I have enough time to do my job to a standard I can be proud of* in relation to the previous 12 month period on a 5-point scale of (i) *strongly disagree*, (ii) *disagree*, (iii) *neither disagree nor agree*, (iv) *agree*, and (v) *strongly agree*.

9.2   *Data Analysis*

Data analysis focused on the comparison of officers who reported that they did not have enough time to do their job to a standard they could be proud of (response of *strongly disagree* or *disagree*) to those who reported that they did have enough time to do their job to a standard they could be proud of (response of *strongly agree* or *agree*). Results of these analyses are shown in Figure 9. Detailed statistical data on linkages between variables are presented in the appendices.

9.3   *Links to Welfare*

More than half (58%) of officers reported that they did not have enough time to do their job to a standard they could be proud of. This was linked to five dimensions of welfare (Figure 9). Officers who reported insufficient time to do their job to a standard to be proud of had a five-fold (5.1 times) increased likelihood of reporting fatigue that interfered with work duties (over the last year) and fatigue that interfered with home life (over the last year) (5.2 times), almost six-fold (5.7 times) increased likelihood of reporting poor overall mental wellbeing, a six-fold (6.0 times) increased likelihood of being never or rarely relaxed (over the last two weeks), and almost eight-fold (7.9 times) increased likelihood of reporting low morale.

Figure 9 Insufficient Time to do Job to a Standard to be Proud of and Welfare
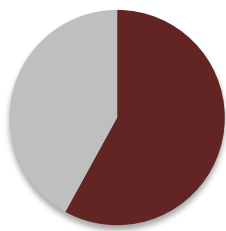
58% of officers reported **insufficient time to do their job to a standard to be proud of.**
These officers were…

Over 7 X more likely to report **low morale**

6 X more likely to report **never or rarely feeling relaxed**

Over 5 X more likely to report **poor overall mental wellbeing**

Over 5 X more likely to **experience fatigue that interferes with work duties**

Over 5 X more likely to **experience fatigue that interferes with home life**

10 Unpaid Overtime: Links to Welfare

10.1 Measurement of Unpaid Overtime

Survey respondents were asked to indicate the number of hours of unpaid overtime (including the 'Queen's half hour') worked during a typical four-week period. Responses were given to the nearest hour.

10.2 Data Analysis

Data analysis focused on the comparison of officers who reported that they worked one or more hours of unpaid overtime in a typical four-week period to those who reported zero hours of unpaid overtime. Results of these analyses are shown in Figure 10. Detailed statistical data on linkages between variables are presented in the appendices.

10.3 Links to Welfare

More than four fifths (84%) of officers reported that they worked one or more hours of unpaid overtime in a typical four-week period. This was linked to two welfare dimensions (Figure 10). Officers who worked one or more hours of unpaid overtime had an almost three-fold (2.8 times) increased likelihood of having taken work home that could not be completed during normal working hours and three-fold (3.1 times) increased likelihood of having worked while on annual leave in order to catch up with work.

Figure 10 Unpaid Overtime and Welfare

84% of officers reported **working one or more hours of unpaid overtime in a typical four-week period.**
These officers were…

Over 3 X more likely to **work while on annual leave in order to catch up**

Over 2 X more likely to **take work home that could not be completed during working hours**
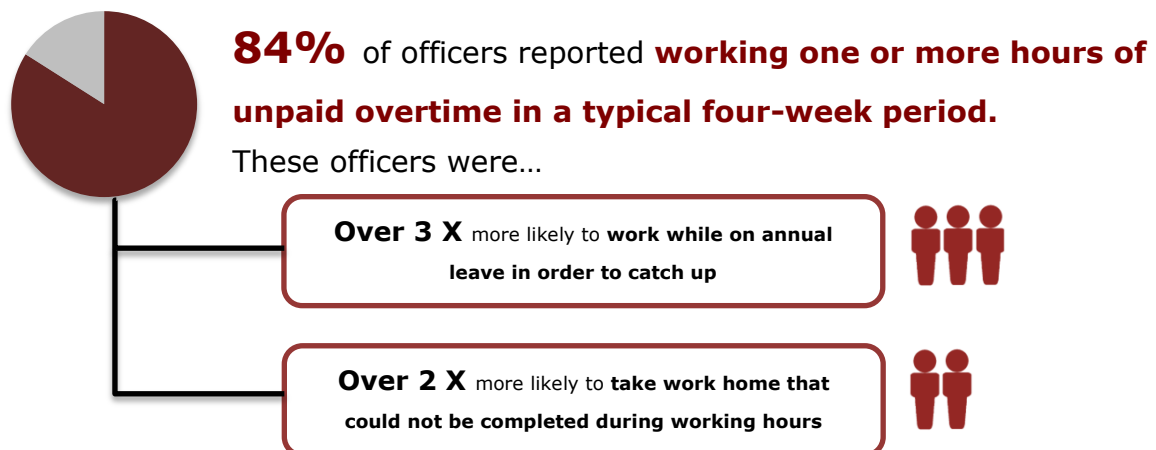
11 Insufficient Officers to do Job Properly: Links to Welfare

11.1 Measurement of Insufficient Officers to do Job Properly

Respondents indicated their strength of agreement with the statement *there are enough officers in my team/unit for me to do my job properly* in relation to the preceding 12-month period on a 5-point scale of (i) *strongly disagree*, (ii) *disagree*, (iii) *neither disagree nor agree*, (iv) *agree*, and (v) *strongly agree*.
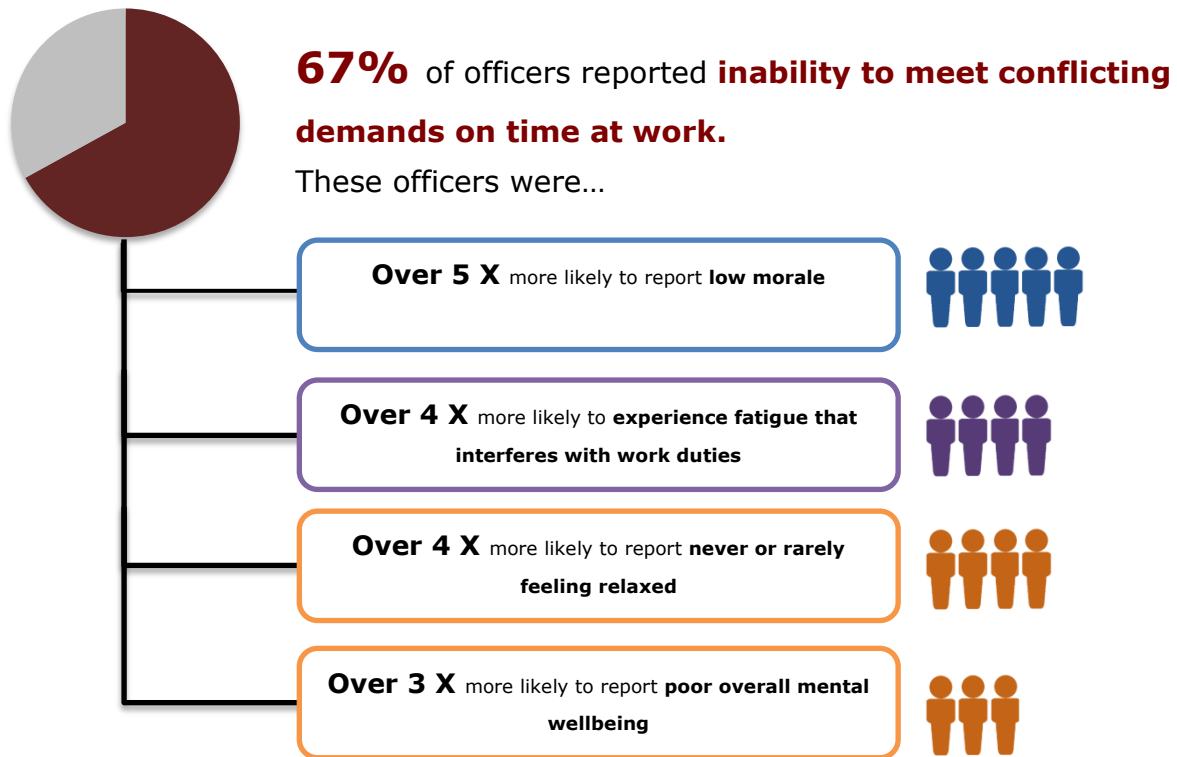
11.2 Data Analysis

Data analysis focused on the comparison of officers who reported insufficient officers to do the job properly (responses of *strongly disagree* or *disagree*) to those who reported having sufficient officers to do the job properly (responses of *agree* or *strongly agree*) in relation to welfare. Results of these analyses are shown in Figure 11. Detailed statistical data on linkages between variables are presented in the appendices.

11.3 Links to Welfare

Approximately four fifths (78%) of officers reported insufficient officers in their team/unit to enable them to do their job properly. This was linked to one welfare dimension (Figure 11). Officers who reported insufficient officers in their team/unit to enable them to do their job properly had a more than three-fold (3.5 times) increased likelihood of never or rarely being relaxed (over the last two weeks).

Figure 11 Insufficient Officers in Team/Unit to Enable Job to be Done Properly and Welfare

78% of officers reported **having insufficient officers to do the job properly.**
These officers were…

Over 3 X more likely to report **never or rarely feeling relaxed**

12 Refusal of Requests for Annual Leave: Links to Welfare

12.1 Measurement of Refusal of Requests for Annual Leave

Respondents were asked *How often have you had a request for annual leave refused in the last 12 months?* with responses given on a 5-point scale of (i) *never*, (ii) *rarely*, (iii) *sometimes*, (iv) *often*, and (v) *always*.

12.2 Data Analysis

Data analysis focused on the comparison of officers who reported that they had frequently had requests for annual leave refused (responses of *often* and *always*) to those who gave a response of *never* or *rarely* in relation to their welfare. Results of these analyses are shown in Figure 12. Detailed statistical data on linkages between variables are presented in the appendices.
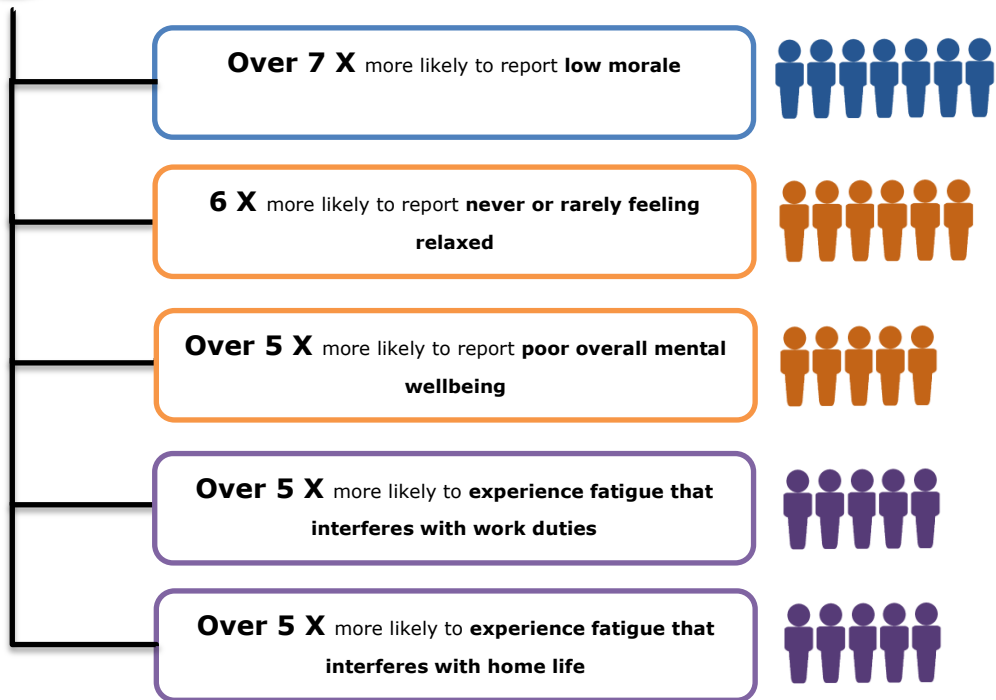
12.3 Links to Welfare

Approximately one quarter (27%) of officers reported frequent refusal of requests for annual leave. This was linked to three forms of violent victimisation: verbal insults, verbal threats, and physical attack (Figure 12). Officers who reported frequent refusal of requests for annual leave had a three-fold increased likelihood of experiencing each of these forms of violent victimisation at least once per month over the preceding 12-month period. Specifically, officers who reported frequent refusal of requests for annual leave were 2.9 times more likely to be verbally insulted, 3.2 times more likely to be verbally threatened, and 3.0 times more likely to be physically attacked.

Further research is required in order to draw definitive conclusions on the mechanisms linking frequency of refusal of requests for annual leave to violent victimisation. One possible explanation, among others, is that refusal of requests for annual leave might be more likely during periods of social disorder or other extraordinary events, the policing of which may be associated with increased risk of violent victimisation.

Figure 12 Refusal of Annual Leave Requests and Welfare

27% of officers reported **frequent refusal of requests for annual leave.**

These officers were…

Over 3 X more likely to be **verbally threatened.**

3 X more likely to be **physically attacked.**

Over 2 X more likely to be **verbally insulted.**
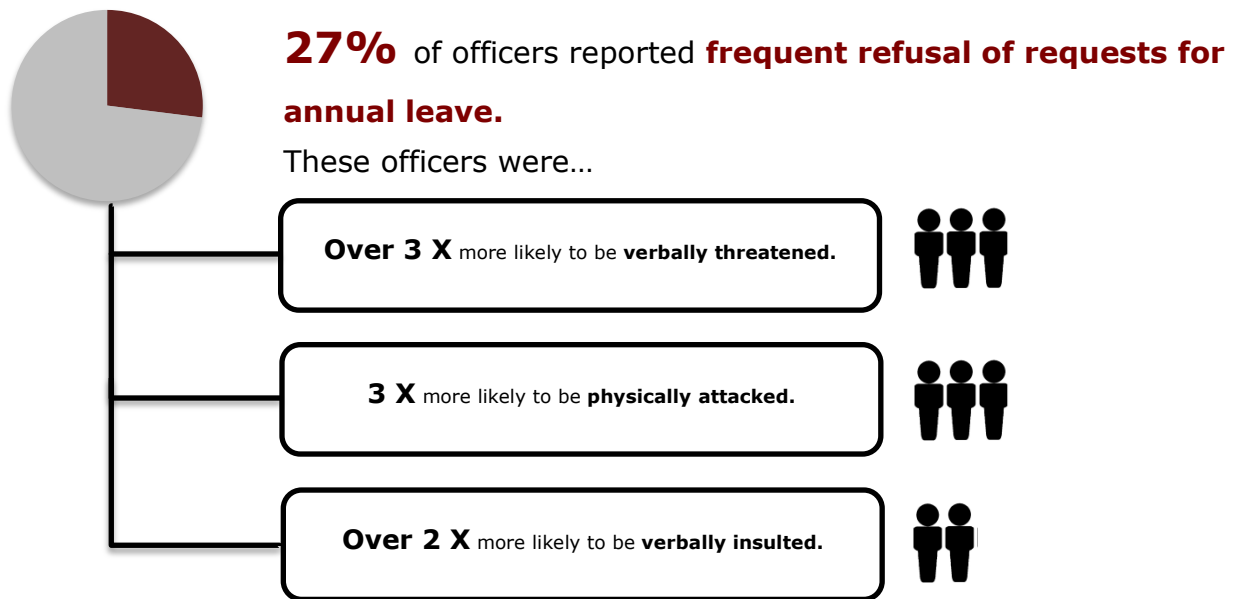
13 Single Crewing: Links to Welfare

13.1 Measurement of Single Crewing Frequency

Respondents were asked *In the last 12 months how frequently have you been single crewed?* with responses given on a 6-point scale of (i) *not applicable to me*, (ii) *never*, (iii) *rarely*, (iv) *sometimes*, (v) *often*, and (vi) *always*.

13.2 Data Analysis

Data analysis focused on the comparison of officers who reported that they had frequently been single crewed (responses of *often* and *always*) to those who gave a response of *never* or *rarely* in relation to their welfare. Results of these analyses are shown in Figure 13. Detailed statistical data on linkages between variables are presented in the appendices.

13.3 Links to Welfare

More than half (57%) of officers reported being frequently single crewed. Frequent single crewing was linked to three forms of violent victimisation: verbal insults, verbal threats, and physical attack (Figure 13). Officers who reported being frequently single crewed had an elevated likelihood of experiencing each of these forms of violent victimisation at least once per month over the preceding 12-month period. Specifically, officers who reported frequent single crewing were 1.4 times more likely to be verbally insulted, 1.4 times more likely to be verbally threatened, and 1.2 times more likely to be physically attacked.

Figure 13 Single Crewing and Welfare

57% of officers reported **frequent single crewing.**

These officers were…

Over 1 X more likely to be **verbally insulted.**

Over 1 X more likely to be **verbally threatened.**

Over 1 X more likely to be **physically attacked.**
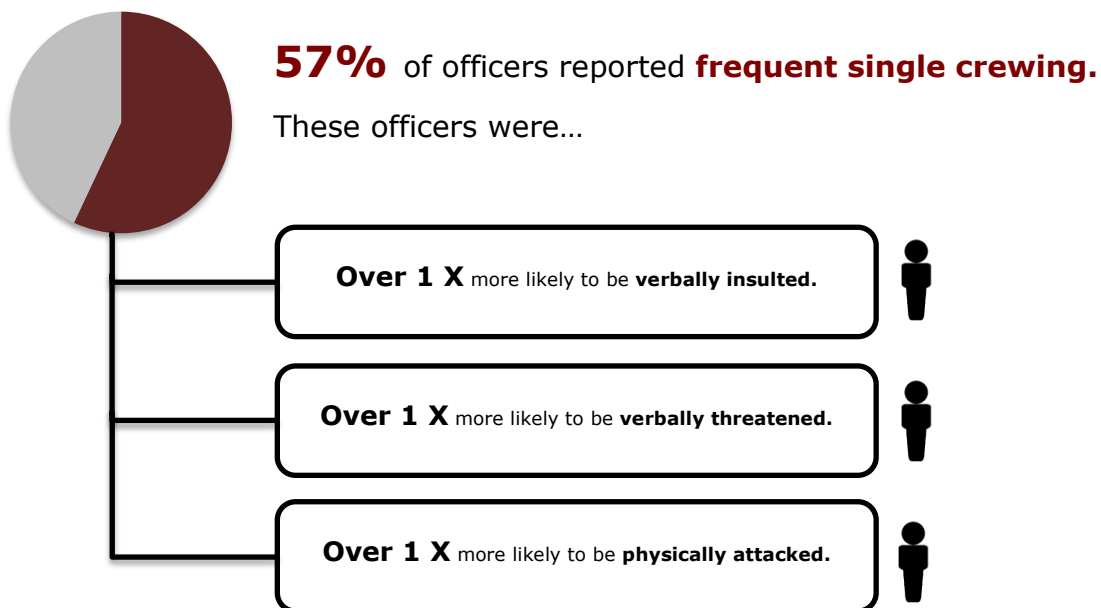
Section 4: Job Stressfulness and Welfare

14 Job Stressfulness: Links to Welfare

14.1 Measurement of Job Stressfulness

Job stressfulness was assessed using the question *In general, how do you find your job?* with a 5-point scale of (i) *not at all stressful*, (ii) *mildly stressful*, (iii) *moderately stressful*, (iv) *very stressful*, and (v) *extremely stressful*. This question provides a shorthand assessment of the perceived threat to welfare presented by the demand and capacity pressures experienced by officers as it allows respondents to consider all personally relevant work-related factors that might cause them problems, and to use this information to generate an overall level of job stressfulness. Findings on job stressfulness are presented here in a discrete section, separate to findings on demand and capacity pressures, so as to draw a distinction between identifiable and specific demand and capacity pressures and the overall indication of the extent to which all personally relevant demand and capacity pressures are problematic. This single-item approach to the overall assessment of job stressfulness has proven popular and effective in police welfare research (e.g., Houdmont, Kerr, & Randall, 2012; Nelson & Smith, 2016).

14.2 Data Analysis

Data analysis focused on the comparison of officers who reported high job stress (responses of *very stressful* or *extremely stressful*) to those who indicated that their job was *not at all stressful*, *mildly stressful*, or *moderately stressful*. Results of these analyses are shown in Figure 14. Detailed statistical data on linkages between variables are presented in the appendices.

14.3 Links to Welfare

Approximately two fifths (39%) of officers reported high job stress. High job stress was linked to 12 welfare dimensions (Figure 14). High job stress was linked particularly strongly to low morale and poor overall mental wellbeing.

Figure 14 Job Stressfulness and Welfare

39% of Officers Reported High Job Stressfulness
These Officers Were….

Morale

7 X more likely to **report low morale**

11 X more likely to report **poor overall mental wellbeing**

6 X more likely to **never or rarely feel relaxed**

Over 5 X more likely to have **experienced mental health and wellbeing difficulties in last year**

Over 4 X more likely to **never or rarely be able to think clearly**

Over 4 X more likely to **never or rarely deal with problems effectively**

Over 3 X more likely to **never or rarely feel optimistic**

Fatigue

Just under 4 X more likely to **experience fatigue that interferes with work duties**

Just under 4 X more likely to **experience fatigue that interferes with home life**

Just under 3 X more likely to **use annual leave or rest days instead of sick leave when experiencing a mental health difficulty**

Leaveism

Over 4 X more likely to **attend for work when feeling mentally unwell**

Over 3 X more likely to **attend for work when feeling physically unwell**

Presenteeism

Mental Health and Wellbeing

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Section 5: Conclusions and Recommendations

15 Conclusions and Recommendations

15.1 Links between Demand and Capacity Pressures and Welfare

Key findings on linkages between demand and capacity pressures and welfare are summarized in Figure 15. From the analyses a picture has emerged of demand and capacity pressures pressing down on welfare.

Analyses indicated that a total of eleven aspects of demand and capacity pressure were meaningfully linked to welfare. In the context of the current study 'meaningfully' is taken to mean that linkages were of both statistical and practical significance after controlling for the possible confounding influence of socio-demographic, personal, and occupational-demographic variables. The eleven demand and capacity pressures were:

- Unpaid overtime (reported by 84% of respondents)
- Insufficient officers to do the job properly (reported by 78% of respondents)
- Inability to meet conflicting demands on time at work (reported by 67% of respondents)
- High overall workload (reported by 66% of respondents)
- Insufficient time to do a job to a standard to be proud of (reported by 58% of respondents)
- Frequent single crewing (reported by 57% of respondents)
- Frequent neglect of tasks owing to having too much to do (reported by 43% of respondents)
- Frequent unrealistic time pressures (reported by 35% of respondents)
- Frequent unachievable deadlines (reported by 29% of respondents)
- Frequent refusal of annual leave requests (reported by 27% of respondents)
- Frequent pressure to work long hours (reported by 26% of respondents)

As shown in Figure 15, these aspects of demand and capacity were variously associated with a host of negative welfare states including being never or rarely relaxed; poor overall mental wellbeing; fatigue that interferes with work duties, fatigue that interferes with home life; low morale; working while on annual leave in order to catch up; taking work home that could not be finished during working hours, and; three forms of violent victimization: verbal insults, verbal threats, and physical attack. The strength of associations between demand and welfare dimensions varied. For instance, officers who reported an inability to meet conflicting demands on their time at work were 3.8 times more likely to report poor overall mental wellbeing, while officers who reported having insufficient time to do the job to a standard to be proud of were 7.9 times more likely to report low morale.

Figure 15 Links Between Demand and Capacity Pressures and Welfare

Demand and Capacity Pressures

Officer Welfare

Insufficient officers to do the job properly

Never or rarely relaxed

Frequent unachievable deadlines

High overall workload

Fatigue that interferes with work duties

Never or rarely relaxed

Frequent neglect of tasks due to having too much to do

Frequent pressure to work long hours

Fatigue that interferes with work duties

Fatigue that interferes with home life

Never or rarely relaxed

Low morale

Fatigue that interferes with work duties

Never or rarely relaxed

Poor overall mental wellbeing

Inability to meet conflicting demands on time at work

Fatigue that interferes with work duties

Fatigue that interferes with home life

Frequent unrealistic time pressures

Never or rarely relaxed

Poor overall mental wellbeing

Low morale

Insufficient time to do job to a standard to be proud of

Unpaid overtime

Worked on annual leave in order to catch up

Taken work home that could not be completed during working hours

Frequently single crewed

Verbally Insulted

Verbally threatened

Physically attacked

Frequent refusal of annual leave requests

15.2 *Links between Job Stressfulness and Welfare*

Job stressfulness was measured in order to provide a useful shorthand assessment of the perceived threat to welfare presented by the demand and capacity pressures experienced by officers. A single questionnaire item asked respondents to indicate the degree to which their job is stressful on a 5-point scale of generally *not at all stressful*, *mildly stressful*, *moderately stressful*, *very stressful*, and *extremely stressful*. Responses of *very stressful* and *extremely stressful* were taken to indicate the presence of high job stress.

Almost two fifths (39%) of respondents reported high job stress. This rate is consistent with that found in other contemporary policing studies, yet more than double the rate of 16% found in the general UK workforce (Health and Safety Executive, 2012).

Analyses revealed that high job stress was meaningfully linked to multiple welfare dimensions, highlighting the usefulness of this measure as an indicator of the challenges facing a workforce that if unmanaged may result in harm to both the workforce and the organisation they serve. As described previously, in the context of the current study 'meaningfully' is taken to mean that linkages were of both statistical and practical significance after controlling for the possible confounding influence of socio-demographic, personal, and occupational-demographic variables. Specifically, as shown in Figure 16, officers that reported high job stress were:

- 11 times more likely than other officers to report poor overall mental wellbeing
- 7 times more likely than other officers to report low morale
- 6 times more likely than other officers to never or rarely feel relaxed
- 5.3 times more likely than other officers to have experienced a mental health or wellbeing difficulty in the last year
- 4.3 times more likely than other officers to attend for work when feeling mentally unwell
- 4.2 times more likely than other officers to never or rarely able to think clearly
- 4.2 times more likely than other officers to never or rarely deal with problems effectively
- 3.9 times more likely than other officers to report fatigue that interferes with home life
- 3.9 times more likely than other officers to report fatigue that interferes with work duties
- 3.1 times more likely than other officers to never or rarely feel optimistic
- 3.1 times more likely than other officers to attend for work when feeling physically unwell
- 2.9 times more likely than other officers to use annual leave or rest days instead of sick leave when experiencing a mental health difficulty

Figure 16 Job Stressfulness and Welfare

Morale

7 X more likely to **report low morale**

39% of Officers Reported High Job Stressfulness
These Officers Were....

11 X more likely to report **poor overall mental wellbeing**

6 X more likely to **never or rarely feel relaxed**

Over 5 X more likely to have **experienced mental health and wellbeing difficulties in last year**

Fatigue

Just under 4 X more likely to **experience fatigue that interferes with work duties**

Just under 4 X more likely to **experience fatigue that interferes with home life**

Over 4 X more likely to **attend for work when feeling mentally unwell**

Over 4 X more likely to **never or rarely be able to think clearly**

Over 4 X more likely to **never or rarely deal with problems effectively**

Just under 3 X more likely to **use annual leave or rest days instead of sick leave when experiencing a mental health difficulty**

Over 3 X more likely to **attend for work when feeling physically unwell**

Over 3 X more likely to **never or rarely feel optimistic**

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Leaveism

Presenteeism

Mental Health and Wellbeing

15.3 Concluding Statement

The findings of the PFEW 2016 Officer Demand, Capacity, and Welfare Survey confirm - from the officer perspective - that there is a high prevalence of demand and capacity pressure across policing in England and Wales. The findings also highlight a high prevalence of high job stress in policing that is more than double the rate found in the general working population. Moreover, the results of the analyses herein indicate that officers experiencing demand and capacity pressures are at significantly increased risk for various manifestations of impaired welfare. Chronic demand and capacity pressures have implications for the health and welfare of police officers, contributing to the creation of a workforce that can be characterized as 'tired, tense, and targeted'.

15.4 Recommendations

Due to the importance of our findings, the PFEW aims to disseminate the results of this report to all relevant stakeholders (and the general public) in order to raise awareness regarding the current demand, capacity, and welfare challenges facing the police service.

As part of the ongoing work-stream relating to demand, capacity and welfare, the PFEW will also invite key stakeholders to engage with this research stream, and to work in partnership towards resolving the issues highlighted by this report. More specifically, PFEW will contemplate organising a series of workshops to bring these key stakeholders together in order to gather ideas; develop practical solutions; agree shared recommendations, and; encourage an open and productive inter-organisational dialogue around officer demand, capacity and welfare.

In order to effectively address the issues raised in this report, the workshops would need to concentrate on both the **causes** and **effects** of a demand and capacity imbalance; paying particular attention to discussions around measuring and balancing demand and capacity, as well as increasing the opportunities for welfare training and support. The two main aims of such a workshop would be to a) engender a sense of shared responsibility and ownership over the challenges raised in this report by agreeing a shared destination across all key stakeholders in attendance, and b) create a set of recommended actions which are tangible, accountable, and accepted by all key stakeholders in attendance.

To achieve these outcomes and enable open and honest communication, the workshops would need to be developed and delivered by a third-party provider which specialises in multi-agency facilitation. This would help ensure a balanced, impartial, and collaborative approach across all stakeholders in attendance.

The lead officer (Mental Health Lead) and the Head of Research at the PFEW have already successfully presented some of these findings to the National Police Chiefs Council, generating a substantial amount of interest in attendance at such a workshop. Other key policing organisations that the PFEW will encourage attendance from includes;

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- The College of Policing;
- The Home Office;
- The Association of Police Crime Commissioners;
- Her Majesties Inspectorate of Constabulary and Fire & Rescue Services;
- Police Superintendents' Association of England and Wales;
- Chief Constables;
- Police Mutual, and;
- The Police Foundation.

The PFEW appreciates the insight and knowledge of these expert practitioners, and as such would value their contributions to the workshops. By bringing these skilled professionals together and drawing on such a broad base of expertise, the PFEW hope to facilitate the development of a set of recommended actions that are both practical, and highly respected.

Ultimately, the PFEW hopes that these workshops will help to create a corner stone for progress, providing a solid foundation from which the project can continue to gain momentum and work towards improving outcomes for police officers, partner agencies, and the general public alike.

Section 6: Appendices

16 Appendix A: Analytic Approach

16.1 Analytic objectives

The purpose of the analyses presented in this report is to identify and quantify the risk presented to welfare by specific dimensions of demand and capacity. In this way the findings serve to highlight demand and capacity issues warranting priority attention from those tasked with the design, management, and organisation of policing work. The approach to data analysis adopted by the report authors is described in the following sections.

16.2 Statistical significance and effect sizes

The term 'significant' is used in this report to refer to statistical significance and is not intended to imply practical significance or importance. We have applied a 0.1% probability threshold for the identification of statistical significance. This means that only results for which the probability of the result having occurred by chance or due to extraneous factors is less than one tenth of one percent ($p < .001$) are considered to be statistically significant. A 5% alpha value ($p < .05$) is conventionally applied in employee survey research; however, this value is dependent on sample size, resulting in very small relationships between variables potentially being identified as statistically significant when the sample size is large. As such, in studies involving large samples it is common practice to apply the 1% value (e.g., van den Bossche, Taris, Houtman, Smulders, & Kompier, 2013) or the yet more stringent 0.1% value (e.g., Harju, Hakanen, & Schaufeli, 2014) to help ensure that significant effects are also of practical relevance. In light of the limitations of significance testing, consideration is also given to effect size, i.e., the strength of relationship between variables, using the Pearson's product moment correlation coefficient (r). This application is described in the following section.

16.3 Correlation analyses

The survey responses were first analysed using descriptive statistics that were presented in the initial report on this study (Houdmont & Elliott-Davies, 2017). Subsequently, responses were analysed using bivariate correlations, specifically the Pearson's product moment correlation coefficient (r). This served two purposes.

First, correlation analyses facilitated the identification of associations between predictor variables (aspects of demand and capacity) and outcome variables (welfare indices), thereby guiding the direction of subsequent inferential analyses. In the same way, these analyses facilitated the identification of socio-demographic, personal, and occupational-demographic characteristics that were associated with the outcome variables and therefore warranted being statistically controlled for in subsequent analyses. Cohen (1988) proposed guidelines for the interpretation of the strength of correlation coefficients that have become the accepted norm in the behavioural sciences (Morgan et al., 2013). These state that a coefficient of $r = .1$-$.29$ indicates a weak correlation, $r = 3$-$.49$ indicates a moderate correlation, and $r = >.5$ indicates a strong correlation. Socio-demographic, personal, and occupational-demographic characteristics that demonstrated a coefficient of ($r = \geq .1$) when correlated against the outcome variables were controlled for in subsequent regression analyses.

Demand and capacity constructs that produced a coefficient of at least moderate strength ($r = .3$-$.49$) when correlated against a welfare variable were regressed upon those welfare variables in subsequent regression analyses. Precedent for the $r = \geq .3$ threshold can be found in analyses of other large datasets; for instance, this coefficient was applied as a so-called 'relevance criterion' in analyses of pan-European data on occupational health risks (European Agency for Safety and Health at Work, 2017). In sum, these thresholds ensured that only predictor and control variables demonstrating a meaningful relationship with outcome variables were included in inferential analyses.

Second, the correlation analyses served to identify the presence of multicollinearity. This phenomenon occurs when two predictor variables (such as two questions on job demands) essentially measure the same construct. In applied research this can be problematic because it makes it difficult to explore the individual importance of a predictor variable. Multicollinearity was considered to be present where two predictor variables were strongly correlated with one another producing a correlation coefficient of $r = > .8$ (Field, 2009). Where multicollinearity is present it is recommended that the two variables are combined into a single variable or just one is used. In the current study all bivariate correlations between predictor variables produced a coefficient of $r = \leq .8$ indicating the absence of multicollinearity.

16.4 Regression analyses

Regression is important because it allows the relative strength of the relationships between demand and capacity on the one hand and welfare on the other to be assessed after statistically controlling for the possible influence of socio-demographic, personal, and occupational-demographic characteristics on those relationships. The current analyses involve a form of regression known as bivariate logistic regression, which possesses the key advantage of allowing for the presentation of statistical data in the form of odds ratios that can be interpreted by end users with no knowledge of statistics. As previously mentioned, socio-demographic, personal, and occupational-demographic variables were controlled for in regression analyses where they produced a coefficient of at least weak strength ($r = \geq .1$) when correlated against the welfare variable. The requirement for a predictor variable to correlate with an outcome variable at $r = \geq .3$ in order for it to be included in regression analyses helped to ensure a focus on aspects of demand and capacity most strongly related to welfare constructs and by extension most likely to have practical significance, i.e., an observable real-world effect.

16.5 Interpretation of Results

Data collection for the current study was conducted via a single self-report questionnaire that gathered the views of officers. This is a commonly used study design in applied research concerning relations between work characteristics and welfare. It does, however, have some limitations that ought to be considered in view of their possible influence on the findings.

Cross-sectional study design: The cross-sectional survey design, whereby all data were collected at a single point in time, prevents the drawing of definitive conclusions on direction of causation. For example, while

high job demands are a credible source of poor wellbeing, we cannot exclude the possibility that poor wellbeing may have influenced some respondents' perceptions of their job demands. In the same way, exposure to violence may lead to poor wellbeing but, likewise, those with poor wellbeing might be more prone to exposure to violent victimisation. Such relationships might also be bi-directional, influencing one another. This limitation does not undermine the value of cross-sectional studies, not least because they help to identify hypotheses to be tested in future longitudinal studies.

Personality factors: The current study focused on the dimensions of demand and capacity that were associated with welfare, while statistically controlling for a host of socio-demographic, personal, and occupational-demographic variables. However, we did not measure individual personality attributes that might influence these associations. We chose not to measure these attributes because we (i) wanted to keep the focus of the investigation on work characteristics and (ii) had concerns that questions about officers' personality contained within a survey on demand, capacity, and welfare might lack obvious relevance (face validity) and potentially inhibit the response rate. Nevertheless, we accept that individual attributes such as personality might contribute to welfare and should, where deemed acceptable and appropriate, be considered in future research.

Self-reports: All data in the current study were collected by means of self-reports from serving officers. It might be suggested that such reports are subjective and don't necessarily reflect the objective state of affairs. We, however, would argue that self-reports in a study of this type hold immense value because they offer an insight into the lived experience of police officers in terms of the demand and capacity pressures that they face, which is unlikely to be reflected in organisational data. In relation to welfare, most of the dimensions examined in the current study, such as mental wellbeing and fatigue, require the view of the individual and are not receptive to objective measurement. Moreover, there is extensive scientific evidence to demonstrate that self-reported welfare states correlate strongly with biological markers (e.g., Marchand, Durand, Juster, & Lupien, 2014), which serves to highlight their validity in studies of this type.

17 Appendix B: List of Items Included in Correlation Analyses

The table below lists all the questionnaire items that were included in the analysis. Please note that other research practitioners created some of these items and thus require citation or approval for use. For full details please see the body of the report.

	Item wording	*Response scale*
Demand and capacity characteristics		
Ability to meet conflicting demands on time at work	I am able to meet all the conflicting demands on my time at work	Strongly disagree, disagree, neither disagree nor agree, agree, strongly agree
Ability to take full annual leave entitlement	Have you been able to take all of the annual leave that you are entitled to in the last 12 months?	Yes, no, don't know
Availability of officers from other teams/units when struggling to meet demand	We can get help from officers in other teams/units if we are struggling to meet the demands placed on us	Strongly disagree, disagree, neither disagree nor agree, agree, strongly agree
Availability of police staff from other teams/units if struggling to meet demand	We can get help from police staff in other teams/units if we are struggling to meet the demands placed on us	Strongly disagree, disagree, neither disagree nor agree, agree, strongly agree
Availability of police staff to manage demands made upon the team/unit	In my experience we generally have enough police staff to manage all the demands made on us as a team/unit	Strongly disagree, disagree, neither disagree nor agree, agree, strongly agree
Awareness of how officer staffing levels are determined	I have been told how our officer staffing levels are determined	Strongly disagree, disagree, neither disagree nor agree, agree, strongly agree
Effectiveness of approach to determination of officer staffing levels	The way officer staffing levels are determined in my team/unit seems to be effective	Strongly disagree, disagree, neither disagree nor agree, agree, strongly agree
Expectation that as pressure builds officers will work faster, even if it means taking shortcuts	Whenever the pressure builds up we are expected to work faster, even if it means taking shortcuts	Strongly disagree, disagree, neither disagree nor agree, agree, strongly agree
Frequency of working in crisis mode, trying to do too much, too quickly	We often work in crisis mode trying to do too much too quickly	Strongly disagree, disagree, neither disagree nor agree, agree, strongly agree
Have to neglect tasks because of too much to do	I have to neglect some tasks because I have too much to do	Never, seldom, sometimes, often, always
Impact of failure to achieve minimum staffing levels on ability to meet demand	If minimum staffing levels are not met, what effect does this have on your ability to meet demand?	No effect, minor effect, moderate effect, major effect

	Item wording	Response scale
Job stressfulness	In general, how do you find your job?	Not at all stressful, mildly stressful, moderately stressful, very stressful, extremely stressful
Minimum staffing	Does your team/unit have a minimum officer staffing level?	Yes, no, don't know
Minimum staffing levels achieved	In the last 12 months how often have these minimum staffing levels been met?	Never, rarely, sometimes, often, always, don't know
Officers brought in due to shortages	In the last 12 months how frequently have officers been brought in from another team/unit because there aren't enough officers to meet the demands being placed on the team/unit?	Never, rarely, sometimes, often, always,
Officers unavailable due to annual leave impacts upon staffing	To what extent does officer unavailability due to annul leave typically affect the officer staffing levels in your team/unit?	No effect, minor effect, moderate effect, major effect
Officers unavailable due to being placed on limited duty impacts upon staffing	To what extent does officer unavailability due to being placed on limited duties typically affect the officer staffing levels in your team/unit?	No effect, minor effect, moderate effect, major effect
Officers unavailable due to filling gaps elsewhere impacts upon staffing	To what extent does officer unavailability due to filling in gaps in other teams/units typically affect the officer staffing levels in your team/unit?	No effect, minor effect, moderate effect, major effect
Officers unavailable due to sickness impacts upon staffing	To what extent does officer unavailability due to sickness absence typically affect the officer staffing levels in your team/unit?	No effect, minor effect, moderate effect, major effect
Officers unavailable due to training impacts upon staffing	To what extent does officer unavailability due to training typically affect the officer staffing levels in your team/unit?	No effect, minor effect, moderate effect, major effect
Overall workload	How would you rate your workload over the previous 12 months?	Much too low, too low, about right, too high, much too high

	Item wording	Response scale
Overtime hours (unpaid)	How many hours of unpaid overtime do you work during a four week period on average, including the "Queen's Half Hour"?	Responses to the nearest hour
Overtime hours (overall)	How many hours of PAID overtime do you work during a four week period on average? plus How many hours of unpaid overtime do you work during a four week period on average, including the "Queen's Half Hour"?	Responses to the nearest hour
Pressure to work long hours	I am pressured to work long hours	Never, seldom, sometimes, often, always
Refusal of annual leave requests	How often have you had a request for annual leave refused in the last 12 months?	Never, rarely, sometimes, often, always
Rest break entitlement	How often have you been able to take your full rest break entitlement?	Never, rarely, sometimes, often, always
Rest day cancellations (a)	How often have your rest days been cancelled in the last 12 months?	Never, rarely, sometimes, often, always
Rest day cancellations (b)	How many of your rest days have been cancelled over the last 12 months?	Numerical response
Single crewing	In the last 12 months how frequently have you been single crewed?	Never, rarely, sometimes, often, always
Sufficient officers in team/unit to do job properly	There are enough officers in my team/unit for me to do my job properly	Strongly disagree, disagree, neither disagree nor agree, agree, strongly agree
Sufficient officers to manage demands made on team/unit	We generally have enough officers to manage all the demands made on us as a team/unit	Strongly disagree, Disagree, Neither disagree nor agree, Agree, Strongly agree
Sufficient officers working in team/unit	I think we have enough officers working in our team/unit	Strongly disagree, disagree, neither disagree nor agree, agree, strongly agree
Sufficient police staff in team/unit for job to be done properly	There are enough police staff in my team/unit for me to do my job properly	Strongly disagree, disagree, neither disagree nor agree, agree, strongly agree
Time to do job to a standard to be proud of	I have enough time to do my job to a standard that I can be proud of	Strongly disagree, disagree, neither disagree nor agree, agree, strongly agree

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	Item wording	Response scale
Time to engage in proactive policing	We have time to engage in proactive policing in my team/unit	Strongly disagree, disagree, neither disagree nor agree, agree, strongly agree
Unachievable deadlines	I have unachievable deadlines	Never, seldom, sometimes, often, always
Unrealistic time pressures	I have unrealistic time pressures	Never, seldom, sometimes, often, always
Work hours	Excluding overtime, how many hours do you work over a four-week period on average?	Numerical response
Socio-demographic and personal characteristics		
Age	What is your age?	Numerical response
Carer responsibility	Are you the main carer, or joint main carer, for any of the following?	A child or children under 16, a child or children over 16, partner, elderly relations, other
Ethnicity	What is your ethnic background?	White, mixed / multiple ethnic groups, Asian / Asian British, Black / African / Caribbean / Black British, other
Gender	Do you identify as…?	Male/female
Marital status	Are you…?	Single (never married or formed a civil partnership), in a long term / established relationship (but not married or in a civil partnership), married / in a civil partnership, divorced / formerly in a civil partnership which is now legally dissolved, widowed/ the surviving partner from a civil partnership
Stress outside of work	In general, how do you find your life outside of work?	Not at all stressful, mildly stressful, moderately stressful, very stressful, extremely stressful
Occupational-demographic characteristics		
Commute duration	How many minutes is your commute on a typical day (one way only)?	Numerical response
Force	Which police force do you serve in?	Select from list of 43 territorial forces
Rank	What is your current rank?	Constable, sergeant, inspector, chief inspector

	Item wording	*Response scale*
Role	Please select the role which best describes the duties you perform in a typical working week	Neighbourhood policing, operational support, response, intelligence, central communications unit, investigations, custody, national policing, criminal justice, training, road policing, administrative support, PFEW representative, mixed role
Shift pattern	Which of the following best describes the shift pattern you typically work?	Rotating shift pattern including nights, rotating shift pattern excluding nights, fixed day shifts (between 6am and 6pm), fixed overnight/evening shifts (between 6pm and 6am), other
Shift duration	To the nearest hour my usual shifts are meant to last…	7 hours or less, 8 hours, 9 hours, 10 hours, 12 hours or more, my working pattern includes variable shift lengths
Years in current role	How long have you been in your current role (to the nearest full year)?	Numerical response
Years of service	How long have you been a police officer (to nearest full year)?	Numerical response
Welfare characteristics		
Fatigue interfering with domestic life	I have been so fatigued it has interfered with my family or social life	Strongly disagree, disagree, slightly disagree, neither disagree nor agree, slightly agree, agree, strongly agree.
Fatigue interfering with work duties	I have found it difficult to carry out certain duties and responsibilities at work because I have been too fatigued	Strongly disagree, disagree, slightly disagree, neither disagree nor agree, slightly agree, agree, strongly agree.
Fear of future violence	How strongly does fear of future violence from members of the public concern you?	Not a lot, a little, somewhat, a lot, very much.
Injuries (arising from accidents)	How many times have you suffered an injury that required medical attention as a result of work-related accidents in the last year?	Never, once, twice, three times, four times, five times, more than five times.
Injuries (arising from violence)	How many times have you suffered an injury that required medical attention as a result of work-related violence in the last year?	Never, once, twice, three times, four times, five times, more than five times.

	Item wording	Response scale
Leaveism (dimension 1)	"In the last 12 months have you used annual leave or rest days to take time off due to your state of physical health?"	No, never; yes, once; yes, 2-5 times; yes, more than five times.
Leaveism (dimension 1)	"In the last 12 months have you used annual leave or rest days to take time off when you really should have taken sick leave due to stress, low mood, anxiety, or other problems with your mental health and wellbeing?"	No, never; yes, once; yes, 2-5 times; yes, more than five times.
Leaveism (dimension 2)	In the last 12 months have you taken work home that cannot be completed in normal working hours	Never, seldom, sometimes, often, always.
Leaveism (dimension 3)	In the last 12 months have you worked whilst on annual leave in order to catch up with work	Never, seldom, sometimes, often, always.
Mental wellbeing (single-item measure)	Have you experienced feelings of stress, low mood, anxiety, or other difficulties with your mental health and wellbeing within the last 12 months?	Yes, no, prefer not to say, can't recall
Mental Wellbeing (7-item SWEMWBS scale)	I've been feeling optimistic about the future; I've been feeling useful; I've been feeling relaxed; I've been dealing with problems well; I've been thinking clearly; I've been feeling close to other people; I've been able to make up my mind about thing	None of the time, rarely, some of the time, often, all of the time.
Morale	Overall, how would you rate your own morale?	Very low, low, neither high nor low, high, very high.
Physical attacks (unarmed)	How often have citizens directed unarmed physical attacks (e.g., struggling to get free, wrestling, hitting, kicking) towards you in the last 12 months?	Never, once or twice, more than twice, once a month, once a week, daily.
Physical attacks with a weapon	How often have citizens used a deadly weapon (e.g., stick, bottle, axe, firearm) towards you in the last 12 months?	Never, once or twice, more than twice, once a month, once a week, daily.

	Item wording	*Response scale*
Presenteeism (physical health)	[In the last 12 months] have you gone to work despite feeling that you really should have taken sick leave due to your state of physical health?	No, never; yes, once; yes, 2-5 times; yes, more than five times.
Presenteeism (psychological health)	[In the last 12 months] have you gone to work despite feeling that you really should have taken sick leave due to stress, low mood, anxiety, or other problems with your mental health and wellbeing?	No, never; yes, once; yes, 2-5 times; yes, more than five times.
Sickness absence (overall)	In total, how many days sickness absence have you taken in the last 12 months?	Number of days of sick leave in preceding 12-month period
Sickness Absence (Attributable to Stress, Depression, or Anxiety)	How many of these absences were due to stress, depression, or anxiety?	Number of days of sick leave in the preceding 12-month period attributable to stress, depression, or anxiety
Verbal insults	How often have citizens directed verbal insults (e.g., swearing, shouting, abuse) towards you in the last 12 months?	Never, once or twice, more than twice, once a month, once a week, daily.
Verbal threats	How often have citizens directed verbal threats (e.g., threat of hitting, threat of kicking) towards you in the last 12 months?	Never, once or twice, more than twice, once a month, once a week, daily.

18 Appendix C: Mental Wellbeing (Single-Item Measure)

18.1 Measurement and Analytical Approach

A top-level overview of mental wellbeing was established using the question *Have you experienced feelings of stress, low mood, anxiety, or other difficulties with your mental health and wellbeing within the last 12 months?* with responses given on a forced choice format (*yes/no/prefer not to say or can't recall*). To facilitate analysis responses of *prefer not to say or can't recall* were discarded.

18.2 Correlation Results

Socio-demographic, personal, and occupational characteristics plus demand and capacity dimensions that demonstrated a coefficient of ($r = \geq .1$) when correlated against the mental wellbeing measure are shown in Table 1. The magnitude of the effect in most cases was small ($r = .1$-$.29$); only one work characteristic – job stressfulness - produced a coefficient of moderate strength ($r = .3$-$.49$).

Table 1 Associations with Mental Wellbeing Difficulties

	r
Socio-demographic and personal characteristics	
Stress outside of work	.23
Occupational-demographic characteristics	
Force	.11
Demand and capacity characteristics	
Job stressfulness	**.32**
Overall workload	.17
Unachievable deadlines	-.17
Have to neglect tasks because of too much to do	-.19
Pressured to work long hours	-.16
Unrealistic time pressures	-.20
Sufficient officers to manage demands made on team/unit	-.12
Sufficient officers in team/unit to do job properly	-.13
Sufficient officers working in team/unit	-.13
Ability to meet conflicting demands on time at work	-.17
Time to engage in proactive policing	-.11
Expectation that as pressure builds officers will work faster, even if it means taking shortcuts	-.12
Time to do job to a standard to be proud of	-.20
Effectiveness of approach to determination of officer staffing levels	-.11
Impact of failure to achieve minimum staffing levels on ability to meet demand	.11
Officers unavailable due to sickness impacts upon staffing	.11

Availability of police staff to manage demands made upon the team/unit	-.10
Sufficient police staff in team/unit for job to be done properly	-.12

All coefficients significant at *p* < .001.

18.3 Regression Results

Demand and capacity constructs that produced a coefficient of at least moderate strength (r = .3-.49) when correlated against morale (Table 1) were regressed onto this variable in a logistic regression model. Analyses were adjusted for socio-demographic, personal, and occupational-demographic variables that produced a coefficient of at least weak strength (r = .1-.29) when correlated against the criterion variable. Logistic regression results for mental wellbeing difficulties are shown in Table 2.

Table 2 Logistic Regression Analyses for Mental Wellbeing Difficulties

Demand/Capacity Characteristic	OR (95% CI)
High job stress	5.26 (4.51-6.14)

Adjusted for socio-demographic and personal factors (stress outside of work) plus occupational-demographic factors (force)

OR, odds ratio; CI, confidence interval.

19 Appendix D: Mental Wellbeing (SWEMWBS)

19.1 Mental Wellbeing Defined

Mental wellbeing can be broadly conceptualized as having two dimensions. The first concerns positive affect (i.e. pleasurable - hedonic - aspects of wellbeing such as feelings of optimism, cheerfulness, and relaxation). The second concerns psychological functioning (i.e. eudaemonic aspects of wellbeing concerned with striving towards meaning and purpose such as energy, clear thinking, self-acceptance, personal development, competence, and autonomy). Growing awareness that mental wellbeing has important implications for workers and their organisations has stimulated considerable research activity exploring the prevalence, causes, and consequences of mental wellbeing among working populations.

19.2 Measurement and Analytical Approach

The two-dimensional structure of mental wellbeing described above was assessed using the Short Warwick-Edinburgh Mental Wellbeing Scale (SWEMWBS: Stewart-Brown et al., 2009). The scale asks individuals to rate their experience during the last two weeks for seven positively framed items, the majority of which represent aspects of psychological and eudaemonic wellbeing, while the remainder address hedonic wellbeing or affect: *I've been feeling optimistic about the future*; *I've been feeling useful*; *I've been feeling relaxed*; *I've been dealing with problems well; I've been thinking clearly*; *I've been feeling close to other people*; *I've been able to make up my mind about things*. Responses are given on a 5-point scale of (i) *none of the time*, (ii) *rarely*, (iii) *some of the time*, (iv) *often*, and (v) *all of the time*. Scale reliability was assessed using Cronbach's Alpha, producing a coefficient of .86, indicating good internal consistency.

To facilitate item-level analyses each of the seven individual SWEMWBS components was dichotomized to indicate poor wellbeing (responses of *none of the time* or *rarely* in the last two weeks) and good wellbeing (responses of *some of the time*, *often*, or *all of the time* in the last two weeks). This approach enabled direct comparison of findings against two large-scale studies. First, the 2012-13 North West Mental Wellbeing Survey, a contemporary large-scale (*N*=11,157) household survey of adults in the North West Region of England (Bellis et al., 2013). Second, a large-scale unpublished study of UK veterinary surgeons conducted by a multi-institutional team that included academics from the University of Nottingham. Veterinary surgeons represent an occupational group of relevance here given the evidence of numerous studies concerning a high prevalence of common mental health disorders and suicidal ideation within the profession (Platt, Hawton, Simkin, & Mellanby, 2012).

To examine relations between demand and capacity and overall mental wellbeing the scale sum score was dichotomized on the basis that scores of <12.18 indicate poor mental wellbeing, while scores of 16.82 indicate good mental wellbeing. These cut off points were arrived at via a two-stage process. First, an initial dichotomization was made whereby scores of ≤14 indicate poor mental wellbeing, while scores of ≥15 indicate good mental wellbeing. This split ensures that the poor mental wellbeing group comprises participants that *never* or *rarely* experienced most of the seven positively framed mental wellbeing states.

Precedent for this approach can be found in the work of Randall, Griffiths, and Cox (2002) who similarly explored relations between work characteristics and wellbeing. These authors measured wellbeing (defined in terms of exhaustion) using a 12-item scale comprising negatively framed questions (e.g., over the last six months how often have you found things getting on your nerves and wearing you out?) that invited responses on a 5-point scale of (0) *never*, (1) *rarely*, (2) *sometimes*, (3) *often*, and (4) *always*. The authors described their approach to dichotomization as follows: "Those participants with symptom scores of 25 or over (maximum score = 48) were assigned to the 'poor wellbeing' group. Those with a score of 24 or under were assigned to the 'good wellbeing' group. The data were dichotomized for two reasons. First, scores of 25 and over logically indicate unacceptable levels of exhaustion (feeling worn out) with respondents *sometimes*, *often*, or *always* experiencing most of the listed symptoms. Second, the relationship between wellbeing and the experience of stress is unlikely to be complete, linear and exact. Therefore, dichotomization was used in order to avoid making the possibly erroneous assumption that there is some precise (e.g., linear) relationship between work and wellbeing. Dichotomization of the worn-out score provided the necessary broad indication of the likely impact of stress on wellbeing" (p. 19). Accordingly, in the current study *never* or *rarely* experiencing most of the positively framed states was taken to indicate unacceptable (poor) mental wellbeing. Second, the standard error of measurement was calculated to take into account the possible misallocation of cases located close to the cut-off point. The SEM was 1.82, resulting in the threshold for the identification of poor mental wellbeing being 1.82 points below the initial cut-off point of 14, namely 12.18. Because the SWEMWBS sum score involves whole numbers only, without a decimal point, in practical terms this meant that scores of ≤12 were taken to indicate poor mental wellbeing. For good mental wellbeing the resulting threshold was 16.82, meaning that scores of ≥17 fell into this category.

19.3 Correlation Results

Socio-demographic, personal, and occupational characteristics plus demand and capacity dimensions that demonstrated a coefficient of ($r = \geq.1$) when correlated against the SWEMWBS overall scale variable are shown in Table 3. The magnitude of the effect in most cases was small ($r = .1$-.29); however, four coefficients were notable for being of moderate strength ($r = .3$-.49). Among these were overall job stressfulness ($r = -.45$), unrealistic time pressures ($r = .32$), ability to meet conflicting demands on time at work ($r = .31$), and time available to do the job to a standard to be proud of ($r = .37$).

Table 3 Correlations with SWEMWBS

	Item 1	Item 2	Item 3	Item 4	Item 5	Item 6	Item 7	Overall Scale
					r			
Socio-demographic and personal characteristics								
Gender[a]	-.12	--	--	--	--	--	--	--
Stress outside of work	-.13	-.13	-.21	-.24	-.25	-.19	-.18	-.25
Occupational-demographic								

characteristics

Rank	.10	.12	--	--	--	--	--	.10

Demand and capacity characteristics

Job stressfulness	**-.32**	-.27	**-.50**	**-.39**	**-.37**	-.28	-.28	**-.45**
Frequency of being able to take full rest break entitlement	.13	--	.26	.13	.13	.12	.11	.18
Frequency of having had requests for annual leave refused	-.19	-.19	-.20	-.15	-.14	-.12	-.13	-.21
Frequency of having had rest days cancelled	-.13	-.11	-.14	--	--	--	--	-.13
Ability to take full annual leave entitlement[b]	-.11	-.11	-.15	-.11	-.11	-.11	-.11	-.15
Frequency of being single crewed	--	-.10	-.12	--	--	--	--	-.12
Overall workload	-.21	-.14	**-.34**	-.22	-.22	-.17	-.15	-.27
Unachievable deadlines	.19	.17	**.30**	.23	.23	.16	.19	.28
Have to neglect tasks because of too much to do	.20	.15	**.32**	.24	.24	.15	.19	.28
Pressured to work long hours	.20	.19	**.30**	.22	.21	.17	.20	.28
Unrealistic time pressures	.22	.21	**.36**	.25	.25	.19	.22	**.32**
Sufficient officers to manage demands made on team/unit	.20	.18	.27	.16	.16	.14	.11	.23
Sufficient officers in team/unit to do job properly	.21	.20	**.30**	.19	.18	.14	.14	.26
Sufficient officers working in team/unit	.22	.19	.29	.18	.17	.14	.13	.25
Availability of officers from other teams/units when struggling to meet demand	.20	.20	.20	.16	.15	.15	.13	.22
Ability to meet conflicting demands on time at work	.23	.21	**.35**	.25	.24	.18	.19	**.31**
Frequency of working in 'crisis mode', trying to do too much, too quickly	.21	--	.18	.10	.10	--	--	.14
Time to engage in proactive policing	.16	.16	.22	.14	.14	.12	.11	.20
Expectation that as pressure builds officers will work faster, even if it means taking shortcuts	.18	.15	.20	.14	.15	.13	.13	.21
Time to do job to a standard to be proud of	.28	.28	**.39**	.27	.28	.21	.22	**.37**
Effectiveness of approach to	.21	.19	.26	.17	.16	.14	.12	.24

determination of officer staffing levels								
Awareness of how officer staffing levels are determined	.16	.16	.15	.14	.12	.12	.12	.18
Frequency of achievement of minimum staffing levels	.12	.16	.18	.15	.14	11	.12	.18
Impact of failure to achieve minimum staffing levels on ability to meet demand	-.16	-.11	-.21	-.12	-.12	--	--	-.17
Officers unavailable due to sickness impacts upon staffing	-.15	-.14	-.19	-.14	-.15	-.12	-.12	-.19
Officers unavailable due to annual leave impacts upon staffing	-.12	-.12	-.16	-.14	-.14	--	-.11	-.17
Officers unavailable due to training impacts upon staffing	-.11	-.11	-.14	-.12	-.12	--	-.11	-.15
Officers unavailable due to being placed on limited duty impacts upon staffing	-.12	-.12	-.15	-.12	-.13	--	-.10	-.16
Officers unavailable due to filling gaps elsewhere impacts upon staffing	-.10	-.11	-.15	-.11	-.12	--	-.11	-.15
Availability of police staff to manage demands made upon the team/unit	.17	.15	.21	.15	.14	.11	.12	.20
Sufficient police staff in team/unit for job to be done properly	.19	.17	.23	.17	.16	.13	.14	.22
Availability of police staff from other teams/units if struggling to meet demand	.19	.16	.21	.15	.14	.14	.13	.21

All coefficients significant at $p < .001$.

[a]Gender was coded "1" for female and "2" for male.

[b]Ability to take full annual leave entitlement was coded "1" for yes and "2" for no.

19.4 Regression Results

Demand and capacity constructs that produced a coefficient of at least moderate strength ($r = .3-.49$) when correlated against each of the seven mental wellbeing dimensions plus the overall scale variable (Table 3) were regressed onto these variables in a logistic regression model. Analyses were adjusted for socio-demographic, personal, and occupational-demographic variables that produced a coefficient of at least weak strength ($r = .1-.29$) when correlated against the criterion variable. Logistic regression results for the mental wellbeing dimensions are shown in Tables 4-8.

The first mental wellbeing dimension concerned optimism about the future. Three covariates (gender, stress outside of work, rank) fulfilled the condition for inclusion as control variables, while one demand and capacity characteristic – perceived job stressfulness – fulfilled the condition for inclusion as a predictor variable in regression analyses. Logistic regression results are shown in Table 4.

Table 4 Logistic Regression Analyses for Never/Rarely Optimistic About the Future

Demand/Capacity Characteristic	OR (95% CI)
High job stress	3.14 (2.91-3.40)

Adjusted for socio-demographic and personal factors (gender, stress outside of work) plus occupational-demographic factors (rank)

OR, odds ratio; CI, confidence interval.

The second mental wellbeing dimension concerned feelings of being useful. Two covariates (stress outside of work, rank) fulfilled the condition for inclusion as control variables, while no demand and capacity characteristics fulfilled the criterion for inclusion as a predictor variable in regression analyses. Thus, regression analysis was not performed on this criterion variable.

The third mental wellbeing dimension concerned feelings of being relaxed. One covariate (stress outside of work) fulfilled the condition for inclusion as a control variable, while nine demand and capacity characteristics – perceived job stressfulness, overall workload, unachievable deadlines, having to neglect tasks because of too much to do, pressure to work long hours, unrealistic time pressures, insufficient officers available in the team/unit to do the job properly, ability to meet conflicting demands on time, time to do job to a standard to be proud of – fulfilled the condition for inclusion as a predictor variable in regression analyses. Logistic regression results are shown in Table 5.

Table 5 Logistic Regression Analyses for Never/Rarely Relaxed

Demand/Capacity Characteristic	OR (95% CI)
High job stress	6.03 (5.55-6.55)
Overall workload	3.59 (3.33-3.86)
Unachievable deadlines	4.28 (3.89-4.71)
Frequent need to neglect tasks because of too much to do	4.23 (3.85-4.65)
Frequent pressure to work long hours	3.82 (3.48-4.20)
Frequent unrealistic time pressures	5.29 (4.82-5.81)
Insufficient officers to do job properly	3.49 (3.12-3.91)
Inability to meet conflicting demands on time	4.85 (4,36-5.40)
Insufficient time to do job to a standard to be proud of	6.02 (5.44-6.67)

Adjusted for socio-demographic and personal factors (stress outside of work)

OR, odds ratio; CI, confidence interval.

The fourth mental wellbeing dimension concerned the extent to which problems were dealt with effectively. One covariate (stress outside of work) fulfilled the condition for inclusion as a control variable, while one demand and capacity characteristic – perceived job stressfulness – fulfilled the condition for inclusion as a predictor variable in regression analyses. Logistic regression results are shown in Table 6.

Table 6 Logistic Regression Analyses for Never/Rarely Deal with Problems Effectively

Demand/Capacity Characteristic	OR (95% CI)
High job stress	4.18 (3.83-4.57)

Adjusted for socio-demographic and personal factors (stress outside of work)

OR, odds ratio; CI, confidence interval.

The fifth mental wellbeing dimension concerned clarity of thought. One covariate (stress outside of work) fulfilled the condition for inclusion as a control variable, while one demand and capacity characteristic – perceived job stressfulness – fulfilled the condition for inclusion as a predictor variable in regression analyses. Logistic regression results are shown in Table 7.

Table 7 Logistic Regression Analyses for Never/Rarely Think Clearly

Demand/Capacity Characteristic	OR (95% CI)
High job stress	4.19 (3.81-4.62)

Adjusted for socio-demographic and personal factors (stress outside of work)

OR, odds ratio; CI, confidence interval.

The sixth mental wellbeing dimension concerned closeness to other people. One covariate (stress outside of work) fulfilled the condition for inclusion as a control variable, while no demand and capacity characteristics fulfilled the criterion for inclusion as a predictor variable in regression analyses. Thus, regression analysis was not performed on this criterion variable.

The seventh mental wellbeing dimension concerned ability to make up one's mind. One covariate (stress outside of work) fulfilled the condition for inclusion as a control variable, while no demand and capacity characteristics fulfilled the criterion for inclusion as a predictor variable in regression analyses. Thus, regression analysis was not performed on this criterion variable.

For the overall SWEMWBS scale, based on the sum score of the seven items, two covariates (stress outside of work, rank) fulfilled the condition for inclusion as a control variable, while four demand and capacity characteristics – perceived job stressfulness, unrealistic time pressures, inability to meet conflicting demands on time at work, insufficient time to do the job to a standard to be proud of - fulfilled the criterion for inclusion as a predictor variable in regression analyses. Logistic regression results are shown in Table 8.

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Table 8 Logistic Regression Analyses for Poor Mental Wellbeing (SWEMWBS sum)

Demand/Capacity Characteristic	OR (95% CI)
High job stress	10.95 (8.95-13.39)
Frequent unrealistic time pressures	5.42 (4.31-6.82)
Inability to meet conflicting demands on time at work	3.81 (2.77-5.25)
Insufficient time to do job to a standard to be proud of	5.65 (4.05-7.89)

Adjusted for socio-demographic and personal factors (stress outside of work) plus occupational-demographic factors (rank)

OR, odds ratio; CI, confidence interval.

20 Appendix E: Fatigue

20.1 *Measurement and Analytical Approach*

Officer fatigue was assessed using two items developed for the current study. The first item explored the extent to which fatigue had interfered with work activities. Respondents indicated the strength of their agreement with the statement *I have found it difficult to carry out certain duties and responsibilities at work because I have been too fatigued* on a 7-point response scale of (i) *strongly disagree*, (ii) *disagree*, (iii) *slightly disagree*, (iv) *neither disagree nor agree*, (v) *slightly agree*, (vi) *agree*, and (vii) *strongly agree*. The second item examined the extent to which fatigue had interfered with domestic life. Respondents indicated the strength of their agreement with the statement *I have been so fatigued it has interfered with my family or social life* on the same response scale as above. For purposes of logistic regression analysis, responses on each item were dichotomized to indicate fatigued (*slightly agree, agree, strongly agree*) and non-fatigued (*strongly disagree, disagree, slightly disagree,*), while neutral responses of *neither disagree nor agree* were discarded.

20.2 *Correlation Results*

Socio-demographic, personal, and occupational characteristics plus demand and capacity dimensions that demonstrated a coefficient of ($r = \geq .1$) when correlated against the fatigue measures are shown in Table 9. For 'fatigue interfering with work duties' the magnitude of the effect in most cases was small ($r = .1$-$.29$); however, seven coefficients were notable for being of moderate strength ($r = .3$-$.49$). Among these were overall job stressfulness ($r = .40$) and a further six demand and capacity dimensions: overall workload ($r = .40$), need to neglect tasks because of excessive work ($r = -.31$), pressure to work long hours ($r = -.31$), unrealistic time pressures ($r = -.34$), ability to meet conflicting demands on time at work ($r = -.30$), and time available to do the job to a standard to be proud of ($r = -.33$). For 'fatigue interfering with domestic life' the magnitude of the effect was again small in most cases; however, four coefficients reached moderate strength. Among these were overall job stressfulness ($r = .39$) and a further three demand and capacity dimensions: pressure to work long hours ($r = -.33$), unrealistic time pressures ($r = -.33$), and time available to do the job to a standard to be proud of ($r = -.32$).

Table 9 Correlations with Fatigue Dimensions

	Fatigue interfering with work duties	Fatigue interfering with domestic life
	r	
Socio-demographic and personal characteristics		
Stress outside of work	.17	.19

Occupational-demographic characteristics

Shift pattern	--	-.13

Demand and Capacity characteristics

Job stressfulness	**.40**	**.39**
Frequency of being able to take full rest break entitlement	-.19	-.23
Frequency of having had requests for annual leave refused	.21	.26
Frequency of having had rest days cancelled	.12	.16
Ability to take full annual leave entitlement[a]	.12	.15
Frequency of being single crewed	.11	.14
Overall workload	**.30**	.29
Unachievable deadlines	-.27	-.25
Have to neglect tasks because of too much to do	**-.31**	-.29
Pressured to work long hours	**-.31**	**-.33**
Unrealistic time pressures	**-.34**	**-.33**
Sufficient officers to manage demands made on team/unit	-.23	-.25
Sufficient officers in team/unit to do job properly	-.26	-.27
Sufficient officers working in team/unit	-.27	-.28
Availability of officers from other teams/units when struggling to meet demand	-.16	-.17
Ability to meet conflicting demands on time at work	**-.30**	-.29
Frequency of working in 'crisis mode', trying to do too much, too quickly	-.19	-.21
Time to engage in proactive policing	-.18	-.18
Expectation that as pressure builds officers will work faster, even if it means taking shortcuts	-.22	-.22
Time to do job to a standard to be proud of	**-.33**	**-.32**
Effectiveness of approach to determination of officer staffing levels	-.23	-.25
Awareness of how officer staffing levels are determined	-.12	-.13
Frequency of achievement of minimum staffing levels	-.14	-.13
Impact of failure to achieve minimum staffing levels on ability to meet demand	.21	.23
Officers unavailable due to sickness impacts upon staffing	.19	.18
Officers unavailable due to annual leave impacts upon staffing	.17	.16
Officers unavailable due to training impacts upon staffing	.15	.15
Officers unavailable due to being placed on limited duty impacts upon staffing	.16	.15
Officers unavailable due to filling gaps elsewhere impacts upon staffing	.15	.15
Availability of police staff to manage demands made upon the team/unit	-.18	-.19

Sufficient police staff in team/unit for job to be done properly	-.20	-.20
Availability of police staff from other teams/units if struggling to meet demand	-.16	-.17

All coefficients significant at $p < .001$.

[a]Ability to take full annual leave entitlement was coded "1" for yes and "2" for no.

20.3 Regression Results

Demand and capacity constructs that produced a coefficient of at least moderate strength ($r = .3-.49$) when correlated against the fatigue measures (Table 9) were regressed onto these variables in a logistic regression model. Analyses were adjusted for socio-demographic, personal, and occupational-demographic variables that produced a coefficient of at least weak strength ($r = .1-.29$) when correlated against the criterion variables. Logistic regression results for 'fatigue interfering with work duties' are shown in Table 10.

Table 10 Logistic Regression Analyses for Fatigue Interfering With Work Duties

Demand/Capacity Characteristic	OR (95% CI)
High job stress	3.86 (3.49-4.27)
High overall workload	3.50 (3.21-3.81)
Frequent need to neglect tasks because of excessive workload	4.94 (4.42-5.51)
Frequent pressure to work long hours	4.27 (3.80-4.80)
Frequent unrealistic time pressures	5.44 (4.87-6.08)
Inability to meet conflicting demands on time at work	4.43 (3.97-4.95)
Insufficient time to do job to a standard to be proud of	5.09 (4.58-5.67)

Adjusted for socio-demographic and personal factors (stress outside of work)

OR, odds ratio; CI, confidence interval.

Logistic regression results for 'fatigue interfering with domestic life' are shown in Table 11.

Table 11 Logistic Regression Analyses for Fatigue Interfering With Domestic Life

Demand/Capacity Characteristic	OR (95% CI)
High job stress	3.85 (3.40-4.36)
Frequent pressure to work long hours	4.61 (3.98-5.33)
Frequent unrealistic time pressures	5.23 (4.58-5.97)
Insufficient time to do job to a standard to be proud of	5.16 (4.58-5.81)

Adjusted for socio-demographic and personal factors (stress outside of work) plus occupational-demographic factors (shift pattern)

OR, odds ratio; CI, confidence interval.

21 Appendix F: Morale

21.1 Measurement and Analytical Approach

Morale was assessed in the current study as it may be linked to exposure to stressful aspects of work. We used a single item adopted from the Armed Forces Continuous Attitude Survey (Ministry of Defence, 2015) and previously applied in the PFEW 2015 and 2014 Workforce Surveys (PFEW, 2014, 2015). Participants were presented with the stem question *Overall, how would you rate your own morale?* with a 5-point response scale of (i) *very low*, (ii) *low*, (iii) *neither high nor low*, (iv) *high*, and (v) *very high*. For purposes of logistic regression analysis, responses were dichotomized to indicate low morale (*very low, low*) and high morale (*high, very high*), while neutral responses of *neither high nor low* were discarded.

21.2 Correlation Results

Socio-demographic, personal, and occupational characteristics plus demand and capacity dimensions that demonstrated a coefficient of ($r = \geq.1$) when correlated against morale scores are shown in Table 12. The magnitude of the effect in most cases was small ($r = .1-.29$); however, four coefficients were notable for being of moderate strength ($r = .3-.49$). Among these were overall job stressfulness ($r = -.45$), unrealistic time pressures ($r = .31$), ability to meet conflicting demands on time at work ($r = .30$), and time available to do the job to a standard to be proud of ($r = .36$).

Table 12 Correlations with Morale

	r
Socio-demographic and personal characteristics	
Gender[b]	-.10
Stress outside of work	-.21
Occupational-demographic characteristics	
Rank	.14
Years in current role	-.11
Demand and capacity characteristics	
Job stressfulness	**-.45**
Frequency of being able to take full rest break entitlement	.14
Frequency of having had requests for annual leave refused	-.24
Frequency of having had rest days cancelled	-.17
Ability to take full annual leave entitlement[a]	-.14
Frequency of being single crewed	-.11
Overall workload	-.28
Unachievable deadlines	.24
Have to neglect tasks because of too much to do	.24
Pressured to work long hours	.27

Unrealistic time pressures	**.31**
Sufficient officers to manage demands made on team/unit	.25
Sufficient officers in team/unit to do job properly	.28
Sufficient officers working in team/unit	.29
Availability of officers from other teams/units when struggling to meet demand	.23
Ability to meet conflicting demands on time at work	**.30**
Frequency of working in 'crisis mode', trying to do too much, too quickly	.16
Time to engage in proactive policing	.20
Expectation that as pressure builds officers will work faster, even if it means taking shortcuts	.22
Time to do job to a standard to be proud of	**.36**
Effectiveness of approach to determination of officer staffing levels	.27
Awareness of how officer staffing levels are determined	.19
Frequency of achievement of minimum staffing levels	.16
Impact of failure to achieve minimum staffing levels on ability to meet demand	-.20
Officers unavailable due to sickness impacts upon staffing	-.18
Officers unavailable due to annual leave impacts upon staffing	-.15
Officers unavailable due to training impacts upon staffing	-.13
Officers unavailable due to being placed on limited duty impacts upon staffing	-.13
Officers unavailable due to filling gaps elsewhere impacts upon staffing	-.13
Availability of police staff to manage demands made upon the team/unit	.22
Sufficient police staff in team/unit for job to be done properly	.23
Availability of police staff from other teams/units if struggling to meet demand	.22

All coefficients significant at $p < .001$.

[a]Ability to take full annual leave entitlement was coded "1" for yes and "2" for no.

[b]Gender was coded "1" for female and "2" for male.

21.3 Regression Results

Demand and capacity constructs that produced a coefficient of at least moderate strength ($r = .3$-$.49$) when correlated against morale (Table 12) were regressed onto this variable in a logistic regression model. Analyses were adjusted for socio-demographic, personal, and occupational-demographic variables that produced a coefficient of at least weak strength ($r = .1$-$.29$) when correlated against the criterion variable. Logistic regression results for morale are shown in Table 13.

Table 13 Logistic Regression Analyses for Low Morale

Demand/Capacity Characteristic	OR (95% CI)
High job stress	6.98 (6.03-8.08)
Frequent unrealistic time pressures	6.33 (5.46-7.33)

| Inability to meet conflicting demands on time at work | 5.90 (5.13-6.78) |
| Insufficient time to do job to a standard to be proud of | 7.91 (6.88-9.08) |

Adjusted for socio-demographic and personal factors (gender, stress outside of work) plus occupational-demographic factors (rank, years in current role)

OR, odds ratio; CI, confidence interval.

22 Appendix G: Sickness Absence

22.1 Measurement and Analytical Approach

Two items assessed sickness absence. The first asked respondents to indicate the total number of days off sick leave taken in the preceding 12-month period. The second required respondents to indicate how many of these absences were due to stress, depression, or anxiety. For purposes of logistic regression analysis responses on each item were dichotomized to indicate sickness absence (*one or more days*) and no sickness absence (*no days*).

22.2 Correlation Results

Socio-demographic, personal, and occupational characteristics plus demand and capacity dimensions that demonstrated a coefficient of ($r = \geq .1$) when correlated against the sickness absence variables are shown in Table 14. The magnitude of the effect in all cases was small ($r = .1-.29$).

Table 14 Correlations with Sickness Absence Measures

	Sickness Absence Frequency	Sickness Absence Frequency Attributable to Stress, Depression, or Anxiety
	r	
Socio-demographic and personal characteristics		
Stress outside of work	--	.17
Occupational-demographic characteristics		
Rank	-.12	
Demand and capacity characteristics		
Job stressfulness	.13	.26
Frequency of having had requests for annual leave refused	--	.11
Overall workload	--	.14
Unachievable deadlines	--	-.13
Have to neglect tasks because of too much to do	--	-.11
Pressured to work long hours	--	-.11
Unrealistic time pressures	--	-.14
Sufficient officers in team/unit to do job properly	--	-.11
Sufficient officers working in team/unit	--	-.10
Ability to meet conflicting demands on time at work	--	-.12

Time to do job to a standard to be proud of	--	-.15
Effectiveness of approach to determination of officer staffing levels	--	-.10
Frequency of achievement of minimum staffing levels	--	-.11
Officers unavailable due to sickness impacts upon staffing	.11	.14
Sufficient police staff in team/unit for job to be done properly	--	-.10

All coefficients significant at *p* < .001.

22.3 Regression Results

No relationships between demand and capacity constructs and the sickness absence measures produced a correlation coefficient of at least moderate strength (r = .3-.49) that was required as a threshold for the subsequent application of regression analyses.

23 Appendix H: Presenteeism

23.1 Measurement and Analytical Approach

Presenteeism is the act of attending for work while ill. This was measured using an adapted version of the item applied by Aronsson, Gustafsson, and Dallner (2000) in their early influential study of the phenomenon. Aronsson et al. posed the question *Has it happened over the previous 12 months that you have gone to work despite feeling that you really should have taken sick leave due to your state of health?* For the current study we modified Aronsson's measure by creating two questions in order to distinguish between presenteeism associated with physical ill health and that associated with psychological ill health. The former was assessed with the item *[In the last 12 months] have you gone to work despite feeling that you really should have taken sick leave due to your state of physical health?* Presenteeism associated with psychological ill health was assessed with the item *[In the last 12 months] have you gone to work despite feeling that you really should have taken sick leave due to stress, low mood, anxiety, or other problems with your mental health and wellbeing?* Consistent with Aronsson et al. (2000), responses to both items were given on a 4-point scale of (i) *No, never*, (ii) *Yes, once*, (iii) *Yes, 2-5 times*, and (iv) *Yes, more than five times*. For purposes of logistic regression analysis responses on each item were dichotomized to indicate presenteeism (*yes, once; yes, 2-5 times; yes, more than five times*) and no presenteeism (*no, never*).

23.2 Correlation Results

Socio-demographic, personal, and occupational characteristics plus demand and capacity dimensions that demonstrated a coefficient of ($r = \geq .1$) when correlated against the presenteeism measures are shown in Table 15. For both forms of presenteeism the magnitude of the effect in almost every case was small ($r = .1$-.29), with only overall job stressfulness demonstrating an association of moderate strength ($r = .3$-.49).

Table 15 Correlations with Presenteeism Dimensions

	Presenteeism associated with physical ill health	Presenteeism associated with psychological ill health
	r	
Socio-demographic and personal characteristics		
Stress outside of work	.15	.26
Demand and capacity characteristics		
Job stressfulness	**.31**	**.42**
Frequency of being able to take full rest break entitlement	-.17	-.14
Frequency of having had requests for annual leave refused	.19	.16
Frequency of having had rest days cancelled	.14	--

Ability to take full annual leave entitlement[a]	.14	.11
Frequency of being single crewed	--	.10
Overall workload	.24	.25
Unachievable deadlines	-.21	-.24
Have to neglect tasks because of too much to do	-.19	-.23
Pressured to work long hours	-.24	-.22
Unrealistic time pressures	-.24	-.26
Sufficient officers to manage demands made on team/unit	-.18	-.16
Sufficient officers in team/unit to do job properly	-.19	-.20
Sufficient officers working in team/unit	-.20	-.20
Availability of officers from other teams/units when struggling to meet demand	-.14	-.14
Ability to meet conflicting demands on time at work	-.22	-.20
Frequency of working in 'crisis mode', trying to do too much, too quickly	-.12	-.12
Time to engage in proactive policing	-.11	-.15
Expectation that as pressure builds officers will work faster, even if it means taking shortcuts	-.16	-.17
Time to do job to a standard to be proud of	-.23	-.26
Effectiveness of approach to determination of officer staffing levels	-.17	-.18
Awareness of how officer staffing levels are determined	--	-.11
Frequency of achievement of minimum staffing levels	-.11	-.13
Impact of failure to achieve minimum staffing levels on ability to meet demand	.16	.15
Officers unavailable due to sickness impacts upon staffing	.18	.19
Officers unavailable due to annual leave impacts upon staffing	.13	.15
Officers unavailable due to training impacts upon staffing	.12	.12
Officers unavailable due to being placed on limited duty impacts upon staffing	.14	.13
Officers unavailable due to filling gaps elsewhere impacts upon staffing	.12	.12
Availability of police staff to manage demands made upon the team/unit	-.15	-.15
Sufficient police staff in team/unit for job to be done properly	-.16	-.17
Availability of police staff from other teams/units if struggling to meet demand	-.15	-.15

All coefficients significant at $p < .001$.

[a]Ability to take full annual leave entitlement was coded "1" for yes and "2" for no.

23.3 Regression Results

Demand and capacity constructs that produced a coefficient of at least moderate strength ($r = .3$-$.49$) when correlated against the presenteeism measures (Table 15) were regressed onto these variables. Analyses were adjusted for socio-demographic, personal, and occupational-demographic variables that produced a coefficient of at least weak strength ($r = .1$-$.29$) when correlated against the criterion variable. Logistic regression results for presenteeism associated with physical ill health are shown in Table 16.

Table 16 Logistic Regression Analyses for Presenteeism (Physical Ill Health)

Demand/Capacity Characteristic	OR (95% CI)
High job stress	3.11 (2.70-3.58)

[a]Adjusted for socio-demographic and personal factors (stress outside of work)

OR, odds ratio; CI, confidence interval.

Logistic regression results for presenteeism associated with psychological ill health are shown in Table 17.

Table 17 Logistic Regression Analyses for Presenteeism (Psychological Ill Health)

Demand/Capacity Characteristic	OR (95% CI)
High job stress	4.31 (3.96-4.69)

Adjusted for socio-demographic and personal factors (stress outside of work)

OR, odds ratio; CI, confidence interval.

24 Appendix I: Leaveism

24.1 Leaveism Defined

Research on worker attendance behaviours associated with sickness has traditionally focused on sickness absence and more recently sickness presence (presenteeism). Lately a third form of attendance behaviour - leaveism - has been proposed as an additional manifestation of worker sickness. Leaveism describes hidden sickness absence and work undertaken during rest periods. Specifically, leaveism is the practice of employees: (i) utilising allocated time off such as annual leave entitlements, flexi hours, banked re-rostered rest days and so on, to take time off when they are in fact unwell; (ii) taking work home that cannot be completed in normal hours; and (iii) working while on leave or holiday to catch up (Hesketh & Cooper, 2014).

24.2 Measurement and Analytical Approach

The first of the leaveism dimensions encompassed within Hesketh and Cooper's (2014) definition was assessed using two items, the first of which examined leaveism associated with physical health problems *"In the last 12 months have you used annual leave or rest days to take time off due to your state of physical health?"* while the latter focused on leaveism associated with psychological health problems *"In the last 12 months have you used annual leave or rest days to take time off when you really should have taken sick leave due to stress, low mood, anxiety, or other problems with your mental health and wellbeing?"* Responses were given on a 4-point scale of (i) *No, never*, (ii) *Yes, once*, (iii) *Yes, 2-5 times*, and (v) *Yes, more than 5 times*. For purposes of logistic regression analysis responses on each item were dichotomized to indicate leaveism (*yes, once; yes, 2-5 times; yes, more than five times*) and no leaveism (*no, never*).

The second leaveism dimension was assessed using a single item that required respondents to indicate the frequency over the preceding 12 months of having taken work home that could not be completed during normal working hours. The third leaveism dimension was assessed using a single item that required respondents to indicate the frequency over the preceding 12 months of having worked while on annual leave in order to catch up with work. Responses to both items were given on a 5-point scale of (i) *never*, (ii) *seldom*, (iii) *sometimes*, (iv) *often*, and (v) *always*. For purposes of logistic regression analysis responses on each item were dichotomized to indicate leaveism (*seldom, sometimes, often, always*) and no leaveism (*never*).

24.3 Correlation Results

Socio-demographic, personal, and occupational characteristics plus demand and capacity dimensions that demonstrated a coefficient of ($r = \geq .1$) when correlated against the leaveism measures are shown in Table 18. For leaveism associated with physical ill health the magnitude of the effect in every case was small ($r = .1-.29$). For leaveism associated with psychological ill health the magnitude of the effect in almost every case was small, with only overall job stressfulness demonstrating an association of moderate strength ($r = .3-.49$).

For the second leaveism dimension – taking work home that cannot be completed in normal working hours – the magnitude of the effect in many cases was negligible, and small in the remainder. Only rank and unpaid overtime hours demonstrated an association of moderate strength. For the third leaveism dimension – working while on annual leave in order to catch up - the magnitude of the effect in many cases was negligible, and small in the remainder. Only unpaid overtime hours demonstrated an association of moderate strength.

Table 18 Correlations with Leaveism Dimensions

	Dimension 1		Dimension 2	Dimension 3
	Physical ill health	Psychological ill health	Taking work home that cannot be completed in normal working hours	Working on annual leave in order to catch up with work
			r	
Socio-demographic and personal characteristics				
Stress outside of work	.15	.20	--	--
Commute duration	--	--	.10	--
Occupational-demographic characteristics				
Rank	--	--	**.32**	.26
Role	--	--	.13	.10
Years service	--	--	.13	--
Shift pattern	--	--	.20	.14
Shift duration	--	--	-.14	-.10
Demand and capacity characteristics				
Overtime hours (unpaid)	--	--	**.36**	**.37**
Overtime hours (overall)	--	--	.25	.27
Job stressfulness	.25	**.32**	.20	.22
Frequency of being able to take full rest break entitlement	-.14	-.13	-.20	-.21
Frequency of having had requests for annual leave refused	.15	.15	--	--
Frequency of having had rest days cancelled	.14	.11	.10	.14
Ability to take full annual leave	.13	.12	.12	.16

entitlement[a]

Frequency of being single crewed	--	.10	.10	--
Overall workload	.18	.20	.23	.25
Unachievable deadlines	-.17	-.19	-.21	-.22
Have to neglect tasks because of too much to do	-.17	-.19	-.24	-.23
Pressured to work long hours	-.23	-.22	-.26	-.28
Unrealistic time pressures	-.21	-.22	-.25	-.26
Sufficient officers to manage demands made on team/unit	-.12	-.13	--	--
Sufficient officers in team/unit to do job properly	-.14	-.15	--	-.10
Sufficient officers working in team/unit	-.14	-.15	--	--
Availability of officers from other teams/units when struggling to meet demand	-.11	-.11	--	--
Ability to meet conflicting demands on time at work	-.17	-.19	-.17	-.18
Time to engage in proactive policing	--	-.11	--	--
Expectation that as pressure builds officers will work faster, even if it means taking shortcuts	-.13	-.14	--	--
Time to do job to a standard to be proud of	-.19	-.20	-.13	-.17
Effectiveness of approach to determination of officer staffing levels	-.12	-.14	--	--
Frequency of achievement of minimum staffing levels	-.10	-.10	--	--
Impact of failure to achieve minimum staffing levels on ability to meet demand	.11	.13	--	--
Officers unavailable due to sickness impacts upon staffing	.13	.15	--	--
Officers unavailable due to annual leave impacts upon staffing	.10	.12	--	--
Officers unavailable due to training impacts upon staffing	--	.10	--	--
Officers unavailable due to being placed on limited duty impacts upon staffing	.10	.10	--	--
Officers unavailable due to filling gaps elsewhere impacts upon staffing	.12	.13	--	--
Availability of police staff to manage	-.12	-.13	--	--

demands made upon the team/unit				
Sufficient police staff in team/unit for job to be done properly	-.14	-.14	--	--
Availability of police staff from other teams/units if struggling to meet demand	-.14	-.13	--	--

All coefficients significant at *p* < .001.

[a]Ability to take full annual leave entitlement was coded "1" for yes and "2" for no.

24.4 Regression Results

No relationships between demand and capacity constructs and leaveism associated with physical ill health (dimension 1) produced a correlation coefficient of at least moderate strength ($r = .3$-$.49$) that was required as a threshold for the subsequent application of regression analyses.

For leaveism associated with psychological ill health (dimension 1) overall job stressfulness produced a correlation coefficient of moderate strength resulting in this variable being regressed onto the leaveism variable. Analyses were adjusted for socio-demographic, personal, and occupational-demographic variables that produced a coefficient of at least weak strength ($r = .1$-$.29$) when correlated against the criterion variable. Logistic regression results for leaveism associated with psychological ill health are shown in Table 19.

Table 19 Logistic Regression Analyses for Leaveism (Psychological Ill Health)

Demand/Capacity Characteristic	OR (95% CI)
High job stress	2.94 (2.74-3.16)

Adjusted for socio-demographic and personal factors (stress outside of work)

OR, odds ratio; CI, confidence interval.

For the second leaveism dimension – taking work home that cannot be completed in normal working hours – unpaid overtime hours produced a correlation coefficient of moderate strength resulting in this variable being regressed onto the leaveism variable. Analyses were adjusted for socio-demographic, personal, and occupational-demographic variables that produced a coefficient of at least weak strength ($r = .1$-$.29$) when correlated against the criterion variable. Logistic regression results for taking work home that cannot be completed in normal working hours are shown in Table 20.

Table 20 Logistic Regression Analyses for Taking Work Home That Cannot be Completed in Normal Working Hours (leaveism dimension 2)

Demand/Capacity Characteristic	OR (95% CI)
Working unpaid overtime	2.81 (2.51-3.14)

71

Adjusted for socio-demographic and personal characteristics (commute duration) and occupational-demographic characteristics (rank, role, years of service, shift pattern, shift duration).

OR, odds ratio; CI, confidence interval.

For the third leaveism dimension – working on annual leave in order to catch up with work – unpaid overtime hours produced a correlation coefficient of moderate strength resulting in this variable being regressed onto the leaveism variable. Analyses were adjusted for socio-demographic, personal, and occupational-demographic variables that produced a coefficient of at least weak strength ($r = .1$-$.29$) when correlated against the criterion variable. Logistic regression results for working on annual leave in order to catch up with work are shown in Table 21.

Table 21 Logistic Regression Analyses for Working on Annual Leave in Order to Catch Up with Work (leaveism dimension 3)

Demand/Capacity Characteristic	OR (95% CI)
Working unpaid overtime	3.13 (2.78-3.51)

Adjusted for occupational-demographic characteristics (rank, role, shift pattern, shift duration).

OR, odds ratio; CI, confidence interval.

25 Appendix J: Violent Victimisation

25.1 Violent Victimisation Defined

Violent victimisation was defined in accordance with the UK Health and Safety Executive's (1996) definition of work-related violence that encapsulates "any incident in which a person is abused, threatened, or assaulted in circumstances relating to their work." This allowed for the assessment of four forms of violent victimisation: verbal insults, verbal threats, unarmed physical attacks, and attacks with a weapon.

25.2 Measurement and Analytical Approach

Verbal and physical violence was assessed using four items developed for a nationwide study of Finnish police officers (Leino, 2013). The items assessed the frequency over the previous 12 month period of being the recipient of verbal insults, verbal threats, unarmed physical attacks, and attacks with a weapon. Each item was scored on a 6-point response scale of (i) *never*, (ii) *once or twice*, (iii) *more than twice*, (iv) *once a month*, (v) *once a week*, and (vi) *daily*. The wording of the first three items – those concerning verbal insults, verbal threats, and unarmed physical attacks – was identical to that used in Leino's (2013) study. The wording of the fourth item was adapted slightly; whereas the original item examined frequency of violence involving a *threat* to use a deadly weapon, our study examined frequency of violence involving *actual* use of a deadly weapon. A further item adopted from Leino's (2013) study concerned fear of future violence from members of the public. Officers were invited to indicate the degree to which they were concerned about future violence with responses given on a 5-point scale of (i) *not a lot*, (ii) *a little*, (iii) *somewhat*, (iv) *a lot*, and (v) *very much*.

For purposes of logistic regression analyses, and consistent with Leino (2013), responses on the first three items were dichotomized to indicate regular violent victimisation (*once a month, once a week, daily*) and infrequent violent victimisation (*never, once or twice, more than twice*). The fourth item – attacks with a weapon – was dichotomized to indicate violent victimisation at least once in the last year (*once or twice, more than twice, once a month, once a week, daily*) versus no violent victimisation (*never*). Leino (2013) reported findings on frequency of attacks with a deadly weapon in this manner owing to its relatively rare occurrence and potentially serious consequences. The item concerning fear of future violence was dichotomized on the basis of fear (*a lot, very much*) and no fear (*not a lot, a little*), with responses of *somewhat* discarded.

25.3 Correlation Results

Socio-demographic, personal, and occupational characteristics plus demand and capacity dimensions that demonstrated a coefficient of ($r = \geq .1$) when correlated against the violent victimisation and fear of violence variables are shown in Table 22. Frequency of having had requests for annual leave refused and frequency of being single crewed produced a coefficient of moderate strength ($r = .3-.49$) when correlated against three of the violent victimisation variables.

Table 22 Correlations with Violent Victimisation and Fear of Future Violence

	Verbal insults	Verbal threats	Unarmed physical attacks	Attacks with a weapon	Fear of future violence
			r		
Socio-demographic and personal characteristics					
Age	-.27	-.27	-.26	-.17	-.13
Gender[a]	.12	.13	.11	.14	--
Stress outside of work	--	--	--	--	.11
Occupational-demographic characteristics					
Rank	-.21	-.17	-.17	-.13	-.17
Years of service	**-.33**	**-.31**	**-.31**	-.19	-.17
Role	**-.42**	**-.40**	**-.42**	-.23	-.20
Years in current role	.10	.10	.11	.13	--
Shift pattern	**-.44**	**-.42**	**-.43**	-.27	-.18
Shift duration	.26	.25	.25	.14	.12
Commute duration	-.12	-.11	-.12	--	--
Demand and capacity characteristics					
Job stressfulness	.16	.16	.13	.11	.28
Frequency of being able to take full rest break entitlement	-.18	-.20	-.18	-.13	-.11
Frequency of having had requests for annual leave refused	**.39**	**.38**	**.38**	.29	.25
Frequency of having had rest days cancelled	.27	.29	.29	.26	.17
Ability to take full annual leave entitlement[b]	.16	.17	.17	.17	.12
Frequency of being single crewed	**.41**	**.38**	**.39**	.20	.24
Overall workload	.10	.10	--	--	.15
Unachievable deadlines	--	--	--	--	-.14
Have to neglect tasks because of too much to do	-.12	-.12	-.10	--	-.15
Pressured to work long hours	-.19	-.21	-.18	-.20	-.17
Unrealistic time pressures	-.18	-.18	-.16	-.14	-.17
Sufficient officers to manage demands made on team/unit	-.21	-.20	-.19	-.14	-.20
Sufficient officers in team/unit to do job properly	-.21	-.21	-.21	-.16	-.22
Sufficient officers working in team/unit	-.23	-.22	-.21	-.16	-.23
Availability of officers from other teams/units when struggling to meet demand	-.17	-.17	-.15	-.13	-.16
Ability to meet conflicting demands on time at work	-.18	-.18	-.16	-.13	-.21
Frequency of working in 'crisis mode', trying to do	-.13	-.12	-.12	--	-.10

too much, too quickly					
Time to engage in proactive policing	-.15	-.15	-.14	--	-.15
Expectation that as pressure builds officers will work faster, even if it means taking shortcuts	-.17	-.17	-.16	-.12	-.17
Time to do job to a standard to be proud of	-.21	-.21	-.19	-.15	-.22
Effectiveness of approach to determination of officer staffing levels	-.19	-.18	-.17	-.14	-.19
Awareness of how officer staffing levels are determined	-.12	-.11	-.10	--	-.11
Frequency of achievement of minimum staffing levels	-.10	--	--	--	-.12
Impact of failure to achieve minimum staffing levels on ability to meet demand	.21	.21	.20	.15	.22
Officers unavailable due to sickness impacts upon staffing	.14	.12	.10	--	.19
Officers unavailable due to annual leave impacts upon staffing	.12	.11	.10	--	.17
Officers unavailable due to training impacts upon staffing	.16	.16	.15	.14	.18
Officers unavailable due to being placed on limited duty impacts upon staffing	.20	.20	.19	.14	.20
Officers unavailable due to filling gaps elsewhere impacts upon staffing	.19	.19	.19	.15	.20
Availability of police staff to manage demands made upon the team/unit	-.15	-.15	-.13	-.12	-.17
Sufficient police staff in team/unit for job to be done properly	-.15	-.15	-.14	-.13	-.18
Availability of police staff from other teams/units if struggling to meet demand	-.15	-.15	-.14	-.13	-.16

All coefficients significant at $p < .001$.

[a]Gender was coded "1" for female and "2" for male.

[b]Ability to take full annual leave entitlement was coded "1" for yes and "2" for no.

25.4 Regression Results

Demand and capacity constructs that produced a coefficient of at least moderate strength ($r = .3-.49$) when correlated against each of the violent victimisation and fear of violence variables (Table 22) were regressed onto these variables in a logistic regression model. Analyses were adjusted for socio-demographic, personal, and occupational-demographic variables that produced a coefficient of at least weak strength ($r = .1-.29$) when correlated against the criterion variable. Logistic regression results are shown in Tables 23-25.

The first violent victimisation variable concerned verbal insults. Nine covariates (age, gender, rank, years of service, years in current role, role, shift pattern, shift duration, commute duration) fulfilled the condition for inclusion as control variables, while two demand and capacity characteristics – frequency of having had requests for annual leave refused and frequency of being single crewed – fulfilled the condition for inclusion as a predictor variable in regression analyses. Logistic regression results are shown in Table 23.

Table 23 Logistic Regression Analyses for Verbally Insulted at Least Once Per Month

Demand/Capacity Characteristic	OR (95% CI)
Requests for annual leave refused (often or always)	2.88 (2.55-3.25)
Single crewed (often or always)	1.35 (1.14-1.61)

Adjusted for socio-demographic and personal factors (age, gender) plus occupational-demographic factors (rank, years of service, years in current role, role, shift pattern, shift duration, commute duration)
OR, odds ratio; CI, confidence interval.

The second violent victimisation variable concerned verbal threats. Nine covariates (age, gender, rank, years of service, years in current role, role, shift pattern, shift duration, commute duration) fulfilled the condition for inclusion as control variables, while two demand and capacity characteristics – frequency of having had requests for annual leave refused and frequency of being single crewed – fulfilled the condition for inclusion as a predictor variable in regression analyses. Logistic regression results are shown in Table 24.

Table 24 Logistic Regression Analyses for Verbally Threatened at Least Once Per Month

Demand/Capacity Characteristic	OR (95% CI)
Requests for annual leave refused (often or always)	3.20 (2.84-3.60)
Single crewed (often or always)	1.37 (1.16-1.62)

Adjusted for socio-demographic and personal factors (age, gender) plus occupational-demographic factors (rank, years of service, years in current role, role, shift pattern, shift duration, commute duration)
OR, odds ratio; CI, confidence interval.

The third violent victimisation variable concerned unarmed physical attack. Nine covariates (age, gender, rank, years of service, years in current role, role, shift pattern, shift duration, commute duration) fulfilled the condition for inclusion as control variables, while two demand and capacity characteristics – frequency of having had requests for annual leave refused and frequency of being single crewed – fulfilled the condition for inclusion as a predictor variable in regression analyses. Logistic regression results are shown in Table 25.

Table 25 Logistic Regression Analyses for Unarmed Physical Attack at Least Once Per Month

Demand/Capacity Characteristic	OR (95% CI)

Requests for annual leave refused (often or always)	2.95 (2.61-3.34)
Single crewed (often or always)	1.24 (1.05-1.47)

Adjusted for socio-demographic and personal factors (age, gender) plus occupational-demographic factors (rank, years of service, years in current role, role, shift pattern, shift duration, commute duration)

OR, odds ratio; CI, confidence interval.

The fourth violent victimisation variable concerned physical attack with a weapon. No demand and capacity characteristics fulfilled the criterion for inclusion as a predictor variable in regression analyses. Thus, regression analysis was not performed on this criterion variable.

The final variable concerned fear of future violence. No demand and capacity characteristics fulfilled the criterion for inclusion as a predictor variable in regression analyses. Thus, regression analysis was not performed on this criterion variable.

26 Appendix K: Injuries

26.1 Injuries Defined

For purposes of the current study injuries were defined as those of sufficient severity to require medical attention. Two forms of injury were explored, those arising out of work-related accidents and those arising out of work-related violence.

26.2 Measurement and Analytical Approach

Work-related injuries were assessed using two items developed for a nationwide study of Finnish police officers (Leino, 2013). The first item examined the frequency of injuries arising from work-related accidents: *How many times have you suffered an injury that required medical attention as a result of work-related accidents in the last year?* The second item examined the frequency of injuries arising from work-related violence: *How many times have you suffered an injury that required medical attention as a result of work-related accidents in the last year?* Responses to each item were given on a 7-point response scale of (i) *never*, (ii) *once*, (iii) *twice*, (iv) *three times*, (v) *four times*, (vi) *five times*, and (vii) *more than five times*. For purposes of logistic regression analyses responses on each item were dichotomized to indicate no injuries (*never*) and one or more injuries (all other responses).

26.3 Correlation Results

Socio-demographic, personal, and occupational characteristics plus demand and capacity dimensions that demonstrated a coefficient of ($r = \geq .1$) when correlated against the injury variables are shown in Table 26. No demand and capacity dimensions produced a coefficient of moderate strength ($r = .3$-$.49$) when correlated against the injury variables.

Table 26 Correlations with Injuries

	Injuries arising from accidents	Injuries arising from violence
	r	
Socio-demographic and personal characteristics		
Age	--	-.11
Gender[a]	.10	
Occupational-demographic characteristics		
Rank	-.11	.10
Years of service	--	-.12
Role	-.15	-.19

Years in current role	.12	--
Shift pattern	-.17	-.20
Shift duration	.11	.11
Demand and Capacity characteristics		
Job stressfulness	.14	.13
Frequency of being able to take full rest break entitlement	-.11	-.13
Frequency of having had requests for annual leave refused	.24	.23
Frequency of having had rest days cancelled	.20	.19
Ability to take full annual leave entitlement[b]	.14	.13
Frequency of being single crewed	.17	.18
Overall workload	.10	.11
Pressured to work long hours	-.15	-.16
Unrealistic time pressures	-.13	-.14
Sufficient officers to manage demands made on team/unit	-.11	-.11
Sufficient officers in team/unit to do job properly	-.14	-.13
Sufficient officers working in team/unit	-.15	-.14
Availability of officers from other teams/units when struggling to meet demand	--	-.10
Ability to meet conflicting demands on time at work	-.12	-.12
Time to engage in proactive policing	--	-.10
Expectation that as pressure builds officers will work faster, even if it means taking shortcuts	-.11	-.12
Time to do job to a standard to be proud of	-.14	-.14
Effectiveness of approach to determination of officer staffing levels	-.12	-.13
Impact of failure to achieve minimum staffing levels on ability to meet demand	.10	.11
Officers unavailable due to training impacts upon staffing	.11	--
Officers unavailable due to being placed on limited duty impacts upon staffing	.11	.10
Officers unavailable due to filling gaps elsewhere impacts upon staffing	.10	.10
Availability of police staff to manage demands made upon the team/unit	-.11	--
Sufficient police staff in team/unit for job to be done properly	-.12	-.10
Availability of police staff from other teams/units if struggling to meet demand	-.12	-.11

All coefficients significant at $p < .001$.

[a]Gender was coded "1" for female and "2" for male.

[b]Ability to take full annual leave entitlement was coded "1" for yes and "2" for no.

26.4 Regression Results

No demand and capacity characteristics produced a coefficient of at least moderate strength ($r = .3-.49$) when correlated against either of the injury variables that was required for inclusion as a predictor variable in regression analyses. Regression analysis was therefore not performed on these variables.

27 References

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