

PSYCHOSOCIAL RISKS IN POLICE OFFICERS – A CROSS-SECTIONAL STUDY

August 2024

Authorship

This report was authorised by Dr Trang Khieu (MD, MPH, MPP, PhD), Principal Analyst Research and Evaluation.

Acknowledgement

Acknowledgement to Dr Mark Johnson (Acting Head of Insights), Angele Tommey (Acting Manager Research and Evaluation), Dr John Fitzgerald (Mental Health Work Lead) and Angela McGregor (Senior Advisor Mental Health Work Priority Areas) for their contribution to the survey's development and implementation and the overall report's peer-review process.

Acknowledgement to the research company Verian for undertaking the field work and preparing the final dataset.

CONTENTS

Executive summary	5
1. Background	7
2. Methodology summary	8
2.1. Population of interest	8
2.2. Fieldwork and sample size.....	8
2.3. Analysis	8
2.4. Survey participants	8
3. Measures	10
3.1. The Copenhagen Psychosocial Questionnaire III (COPSOQ-III)	10
3.2. The Psychosocial Safety Climate 12 items (PSC - 12)	11
3.3. The World Health Organization Wellbeing Five Index (WHO-5).....	11
3.4. Scale reliability	11
4. Detailed findings	13
4.1. The Copenhagen Psychosocial Questionnaire III (COPSOQ-III): Psychosocial factors experienced by police officers.....	13
4.1.1. <i>Demands at Work</i>	13
4.1.2. <i>Work Organisation and Job Content</i>	15
4.1.3. <i>Interpersonal Relations and Leadership</i>	16
4.1.4. <i>Work-individual Interface</i>	19
4.1.5. <i>Social Capital</i>	21
4.1.6. <i>Offensive behaviours in the POLICE working environment</i>	23
4.1.7. <i>Health</i>	25
4.2. Psychosocial Safety Climate in the policing environment	27
4.3. Police officers' wellbeing	29
4.4. Association among psychosocial variables in the survey	31
4.5. Estimating the effect of work-related psychosocial risk factors on negative health outcomes in the policing working environment	33
5. Summary and conclusion.....	35
6. References.....	37
7. Appendix 1: Mean, standard deviation and Cronbach's alpha of survey variables.....	39
8. Appendix 2: Psychosocial factors and negative health outcomes.....	40
9. Appendix 3: New Zealand Police roles	42

List of figures

Figure 1: Example of COPSOQ item, scale, and domain in the survey	10
Figure 2: Summary of all psychosocial scales in the survey	12

List of tables

Table 1: A snapshot of the survey sample.....	8
Table 2: Explanation of COPSOQ scores in the survey	10
Table 3: Demands at Work in surveyed police officers	14
Table 4: Work Organisation and Job Content in surveyed police officers.....	15
Table 5: Interpersonal Relations and Leadership in surveyed police officers (1)	17
Table 6: Interpersonal Relations and Leadership in surveyed police officers (2)	18
Table 7: Work-individual Interface in surveyed police officers.....	20
Table 8: Social Capital in surveyed police officers	22
Table 9: Self-reported offensive behaviours in surveyed police officers	24
Table 10: Self-reported health problems in surveyed police officers	26
Table 11: Psychosocial Safety Climate subscales and overall scale	27
Table 12: Psychosocial Safety Climate in surveyed police officers.....	28
Table 13: WHO wellbeing in surveyed police officers	30
Table 14: Intercorrelations for study variables.....	32
Table 15: Psychosocial risk factors and negative health outcomes.....	34

Executive summary

The Psychosocial Survey for First responders was conducted in 2024 to explore the current level of psychosocial risks and health and wellbeing for police officers and ambulance workers in New Zealand. The survey has used a set of three internationally validated questionnaires; the Copenhagen Psychosocial Questionnaire III (COPSOQ III), the 12-item Psychosocial Safety Climate (PSC), and the World Health Organization Five Wellbeing Index (WHO-5), which are measures of the workplace climate surrounding psychosocial health and safety, and individual wellbeing, respectively.

This report only summarises the key findings on psychosocial factors in police work¹. Data was collected online, between 15 January and 5 February 2024. The New Zealand Police shared an open link to the survey in a staff publication on their intranet. In total there were 229 respondents to the survey. The report aims to provide information to answer the following questions:

- What are the current psychosocial risks for New Zealand Police employees?
- How do these psychosocial risks affect New Zealand Police employees' health and wellbeing?

Key findings

New Zealand Police employees are exposed to a range of psychosocial risks at work. Some roles appear to face higher risks than the average respondent.

- With over a half (55.9%) of the survey respondents exposed to at a *large* or *very large extent*, Emotional Demands is probably the most common psychosocial risk experienced by police officers, followed by Work Pace (48.0%), low (lack of) Recognition (42.8%) and Work-life Conflict (37.1%).
- Over a half (52.8%) of the participants report experiencing at least one form of offensive behaviours², with Physical Violence, Threats of Violence and Bullying being the most common exposures.
- Nearly a quarter (24.5%) of the survey respondents report experiencing at least one health or wellbeing issue *all the time* (either Burnout, Stress, Cognitive Stress or Sleep Troubles).
- Those who have at least one direct report experience significantly higher levels of Quantitative Demands, Emotional Demands, and Work-life Conflict. They report significantly lower levels of Social Support from Supervisors, Social Support from Colleagues and Sense of Community at Work (feeling not part of the team).
- Police officers working in the Public Safety Team report significantly higher levels of Quantitative Demands, Emotional Demands, and Role Conflicts. They report lower Vertical Trust. Reports of Burnout, Stress and Sleep Troubles are also more common among these respondents.

The survey revealed a low level of Psychosocial Safety Climate (PSC) among the participating police officers.

- Overall, the self-reported PSC score is 33.1, indicating a low level of PSC among participating police officers. Of the four PSC components, the mean score for Management Priority is the lowest, followed by Management Commitment and Organisation Communication.

¹ A summary report on key findings on psychosocial health and safety in ambulance workers has been developed.

² Offensive behaviours include Bullying, Cyberbullying, Threats of Violence, Physical Violence and Sexual Harassment.

- Over two-thirds (67.2%) of the survey respondents report an overall PSC score below 37, suggesting a higher risk of negative health and wellbeing outcomes. Nearly a quarter (24%) of surveyed police officers report an overall PSC over 41.

Irregular, long working hours and working at night have a significant impact on psychosocial safety, health and wellbeing of New Zealand Police employees.

- In the survey, police officers working for more than 51 hours per week appear to face greater risk from higher Emotional Demands and Threats of Violence. They are also more likely to perceive higher Burnout and Stress than the average respondent.
- Compared to those who do not work at night, respondents who work between midnight and 5 am at least 3 hours per week reported higher prevalence of Threats of Violence and Physical Violence. They appear to face greater risk from higher Role Conflicts and Emotional Demands, and lower (lack of) Vertical Trust and Organisational Justice. Sleep Troubles are also more common among these officers.

The report has highlighted several important findings on the relationship between adverse health outcomes and psychosocial risks in police work.

- Respondents with high Work-life Conflict are six to seven times greater odds of experiencing high Stress, Sleep Troubles, and high Burnout.
- High Role Conflicts at work increase Burnout, Stress and Cognitive Stress.
- Respondents with high Emotional Demands are deemed to experience higher prevalence of Burnout, Stress, Sleep Troubles, and poor Health.
- Respondents who perceive low Horizontal Trust (trust between employees) are three to four times greater odds of experiencing Sleep Troubles, high Cognitive Stress and high Stress.
- Police officers with low Vertical Trust (trust between management and employees) and low Organisational Justice (fair treatment at work) appear to be exposed to high Burnout, high Stress and Sleep Troubles.

This deep-dive report provides significant insights into the psychosocial health and safety in the police working environment in New Zealand. It also identifies a range of psychosocial risks affecting police officers' health and wellbeing. The report also reveals how much exposure to psychosocial risks among police workers varies in relation to their sociodemographic characteristics (age and gender), the length of time in service, their working hour patterns and whether they are in a managerial role. These baseline findings can be useful for prioritising initiatives to mitigate psychosocial risks and support mental health and wellbeing for police officers.

1. Background

Police work is one of the most demanding and exhausting occupations. Police personnel have the potential to be exposed to a range of violent, traumatic, and distressful situations on a daily basis (Anshel, 2000; Blue, 2016; Muir et al., 2020). These exposures are considered harmful to their physical and psychosocial health and wellbeing (Anshel, 2000; Berg et al., 2006; Rohwer et al., 2022).

Lack of opportunities to express emotion at work, less role clarity, lack of organisational support, high job demands, and work-life imbalance are among the most common psychosocial risks experienced by police officers (Berg et al., 2006; Ruiz-Ruano García et al., 2023). International literature has found a strong relationship between psychosocial risks and police personnel's health and wellbeing. In Norway, police officers who did not receive support from the organisation were 1.5 times more likely to report anxiety and depression (Berg et al., 2006). Another study on British police personnel's psychosocial health and wellbeing showed that those who reported higher demands at work experienced significantly higher levels of stress and anxiety. On the other hand, police officers with more support from their supervisors and better rewards at work were less likely to be exposed to job stress (Oliver et al., 2023).

Occupational stress and burnout are the biggest health problems in the police force (Alves et al., 2023; Aytac, 2015; Berg et al., 2006). A survey in eighty-nine police institutions in the US in 2019 showed that about 19% of the participants experienced emotional exhaustion every week and approximately 13% suffered severe levels of depersonalisation³ (McCarty et al., 2019). One-third of police officers in a survey in Spain reported having burnout which was caused by their work (Emilia et al., 2013). Another study in Sweden in 2013 indicated that nearly 30% of police officers reported being emotionally exhausted and over half of the respondents were exposed to depersonalisation (Backteman-Erlanson et al., 2013).

Police officers are often involved in night shifts and long and irregular working hours, which potentially put them at higher risk of adverse health and wellbeing outcomes (Ma et al., 2015). In the USA, police workers who continually work at night or during evening shifts were 70% more likely to experience poor sleep quality compared to people who only work during the daytime (Fekedulegn et al., 2016). A study in Italy found a strong association between night shift work and sleep troubles in police workforce (Garbarino et al., 2007). In North America, police officers working overtime were 1.4 times more likely to be emotionally exhausted. The prevalence of depersonalisation among police officers working in night shifts was 1.3 times higher than that reported by those not working at night (Peterson et al., 2019). Shift work was significantly associated with higher social stress and lower access to primary health care in Swiss police officers (Gerber et al., 2010).

New Zealand Police is the largest national law enforcement agency in Aotearoa New Zealand, which employs over 14,000 staff (New Zealand Police, n.d.). Since 2017, the number of Māori, Pacific and Asian officers have rapidly grown by 40%, 83% and 157%, respectively (Beehive, 2023). According to Census 2018, Māori, Pacific and Asian officers comprise 16.5%, 15.1% and 8.1%, respectively of the New Zealand Police workforce (Los'e, 2023). Women comprise 32.2% of New Zealand Police employees (New Zealand Police, n.d.).

Psychosocial health and wellbeing in police force has not been well documented in New Zealand. In 2024, WorkSafe New Zealand commissioned the research company Verian to conduct a Psychosocial Survey to explore the current level of psychosocial risks and health and wellbeing of police officers and ambulance workers in New Zealand. This report aims to provide insights on the psychosocial working environment in the policing context⁴ in New Zealand through these two questions:

- What are the current psychosocial risks for New Zealand Police employees?
- How do these psychosocial risks affect New Zealand Police employees' health and wellbeing?

³ Depersonalisation is an alteration in the experience of self so that one feels detached from and as if one is an observer of one's outside mental processes or body (New Oxford Textbook of Psychiatry (2012)).

⁴ A summary report on key findings on psychosocial health and safety in ambulance workers has been developed.

2. Methodology summary

2.1. Population of interest

The population of interest for this survey was people aged 18 years and over who are police officers. Volunteers were excluded from the survey. The research surveyed a total of 229 police workers.

2.2. Fieldwork and sample size

The data collection was completed online, between 15 January and 5 February 2024. The New Zealand Police shared an open link to the survey in a staff publication on their intranet.

2.3. Analysis

All analysis was performed in-house using RStudio 4.0.5. Reported differences between groups (or between a certain group and the average) are statistically significant at the 95% confidence level ($p < 0.05$) unless stated otherwise. The reliability of each of the scales and subscales used in the survey was checked for internal consistency of responses using Cronbach's alpha. Logistic regression modelling was performed to explore the impact of psychosocial factors on negative health outcomes.

2.4. Survey participants

The survey sample covered 229 respondents, who self-reported their demographic and occupational information. Below is key data from the survey demographic questions.

- 58.5% of the sample are men.
- 31.4% of the respondents are aged between 30 to 39 years.
- 55.5% of the respondents have worked in the service for more than 10 years, with another 36.7% working from four to nine years (36.7%).
- 54.6% of the respondents work 41 to 50 hours per week with only 4.4% who work less than 30 hours.
- 45.4% of the participants have shift-work patterns that include night work (midnight to 5 am).
- 69% of respondents do not have direct reports.

Table 1 shows how respondents are distributed across all demographic and occupational characteristics.

Table 1: A snapshot of the survey sample

Items	Total (N=)	%
Total sample	229	100
Gender		
Male	134	58.5
Female	90	39.3
Age group		
<=29	36	15.7
30-39	72	31.4
40-49	51	22.3
>=50	64	27.9

Items	Total (N=)	%
Length in the service		
Less than 3 years	27	11.8
4-9 years	84	36.7
More than 10 years	127	55.5
Average weekly working hours		
Less than 30 hours	10	4.4
31-40 hours	52	22.7
41-50 hours	125	54.6
51 hours and more	41	17.9
Direct reports		
Yes	66	28.8
No	158	69.0
Night work		
Yes	104	45.4
No	124	54.1
New Zealand Police role (**)		
AOS, STG, SSG, PNT, TPT, PTT	13	5.7
1-2-3-person station	4	1.7
CIB, TCU, SCU	51	22.3
Prosecutions, CJSU, ISU	15	6.6
Community Policing Team	9	3.9
Custody	8	3.5
Dive Squad, SAR, Maritime Unit	4	1.7
Dog Handler, Tactical Operator	2	0.9
Family Harm	2	0.9
Intel	11	4.8
NCIG	4	1.7
PST	38	16.6
Road Policing, IPT, Motorways, CVST	17	7.4
Youth Aid	*	*
Training Staff (TSC, TST, TOT, etc.)	5	2.2
Protection Services	2	0.9
District governance and leadership staff	11	4.8
Other (please specify)	69	30.1

(*) Not available.

(**) Please refer to Appendix 3 for the New Zealand Police roles.

3. Measures

The survey used three sets of questionnaires: the Copenhagen Psychosocial Questionnaire (COPSOQ) version III, the Psychosocial Safety Climate 12 item (PSC-12), and the World Health Organization Five Wellbeing Index (WHO-5). Figure 2 overleaf describes all psychosocial scales in the survey.

3.1. The Copenhagen Psychosocial Questionnaire III (COPSOQ-III)⁵

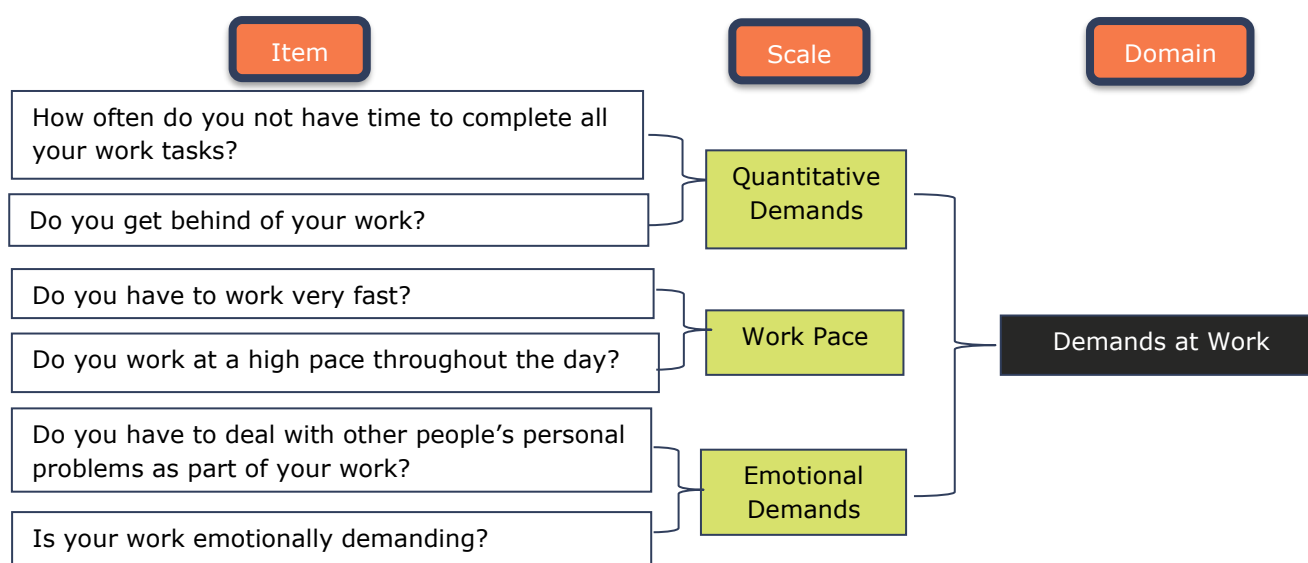
The COPSOQ-III comprises a range of five-point Likert format questions, wherein respondents state how frequently or to what extent they experience certain conditions at work. Each question is referred to as an item. The COPSOQ assigns a score between 0 and 100 as described in Table 2. Frequency of hostile acts (Bullying, Cyberbullying, Threats of Violence, Physical Violence and Sexual Harassment) is categorised into five groups: Yes, daily; Yes, weekly; Yes, monthly; Yes, a few times and No.

Table 2: Explanation of COPSOQ scores in the survey

Score	Frequency		Extent	Quality	Satisfaction
100	Always	All the time	To a very large extent	Excellent	Very satisfied
75	Often	A large part of the time	To a large extent	Very good	Satisfied
50	Sometimes	Part of the time	Somewhat	Good	Neither/Nor
25	Seldom	A small part of the time	To a small extent	Fair	Unsatisfied
0	Never/hardly ever	Not at all	To a very small extent	Poor	Very unsatisfied

Groups of items are referred to as a Scale (e.g., Quantitative Demand or Work Pace). The scale measures the respondent's overall level of exposure to a risk factor or condition. Scales are reported as a score between 0 and 100, representing the mean (average) score of the items within it. Finally, groups of Scales are referred to as a Domain. For example, in this survey a Domain 'Demands at Work' consists of three Scales: Quantitative Demands, Work Pace and Emotional Demands (see Figure 1 below).

Figure 1: Example of COPSOQ item, scale, and domain in the survey



(Please see the New Zealand Psychosocial Survey 2021 report on WorkSafe's website for more details on how to interpret COPSOQ items).

⁵ For information on COPSOQ and how to use it, please check this website <https://www.copsoq-network.org>.

3.2. The Psychosocial Safety Climate 12 items (PSC - 12)

The survey used the Psychosocial Safety Climate - 12 items (PSC-12). The PSC-12 consists of four domains, including Management Commitment (MC), Management Prioritisation (MP), Organisational Communication (OC), and Organisational Participation (OP). Each domain contains three items. Respondents answered the question using five-point Likert scales from "strongly disagree" to "strongly agree" (scoring from 1-5). An item example of PSC-12 is *"In my workplace senior management acts quickly to correct problems/issues that affect employees' psychological health"*.

Domain scores are the sum of three items in each domain with the minimum possible score of 3, and the maximum possible score of 15. The overall PSC scale is computed as the sum of 12 items. The minimum overall PSC score is 12, and the maximum possible score is 60.

3.3. The World Health Organization Wellbeing Five Index (WHO-5)⁶

Originating from a World Health Organization (WHO) meeting in Stockholm in 1998, the WHO-5 has become well-known and is used to assess psychological wellbeing. Since it is based on the Major Depression Inventory, which measures depression symptoms, the WHO-5 is used to explore the possibility of screening for depression (Topp et al., 2014).

The World Health Organization Wellbeing Five Index (WHO-5) questionnaire consists of five statements on how people have felt in the last 14 days. Respondents provide responses on a six-point Likert scale ranging from "At no time" (0) to "All the time" (5).

Below are the five statements asked in the WHO-5:

- I have felt cheerful in good spirits.
- I have felt calm and relaxed.
- I have felt active and vigorous.
- I woke up feeling fresh and rested.
- My daily life has been filled with things that interest me.

The raw score is calculated as the sum of all five answers. The raw score ranges from 0 to 25, 0 representing worst possible and 25 representing best possible quality of life. To obtain a percentage score ranging from 0 to 100, the raw score is multiplied by 4. A percentage score of 0 represents worst possible quality of life, whereas a score of 100 represents best possible quality of life. In this survey, the questionnaire was the original English version of the WHO-5, and no changes were made to content.

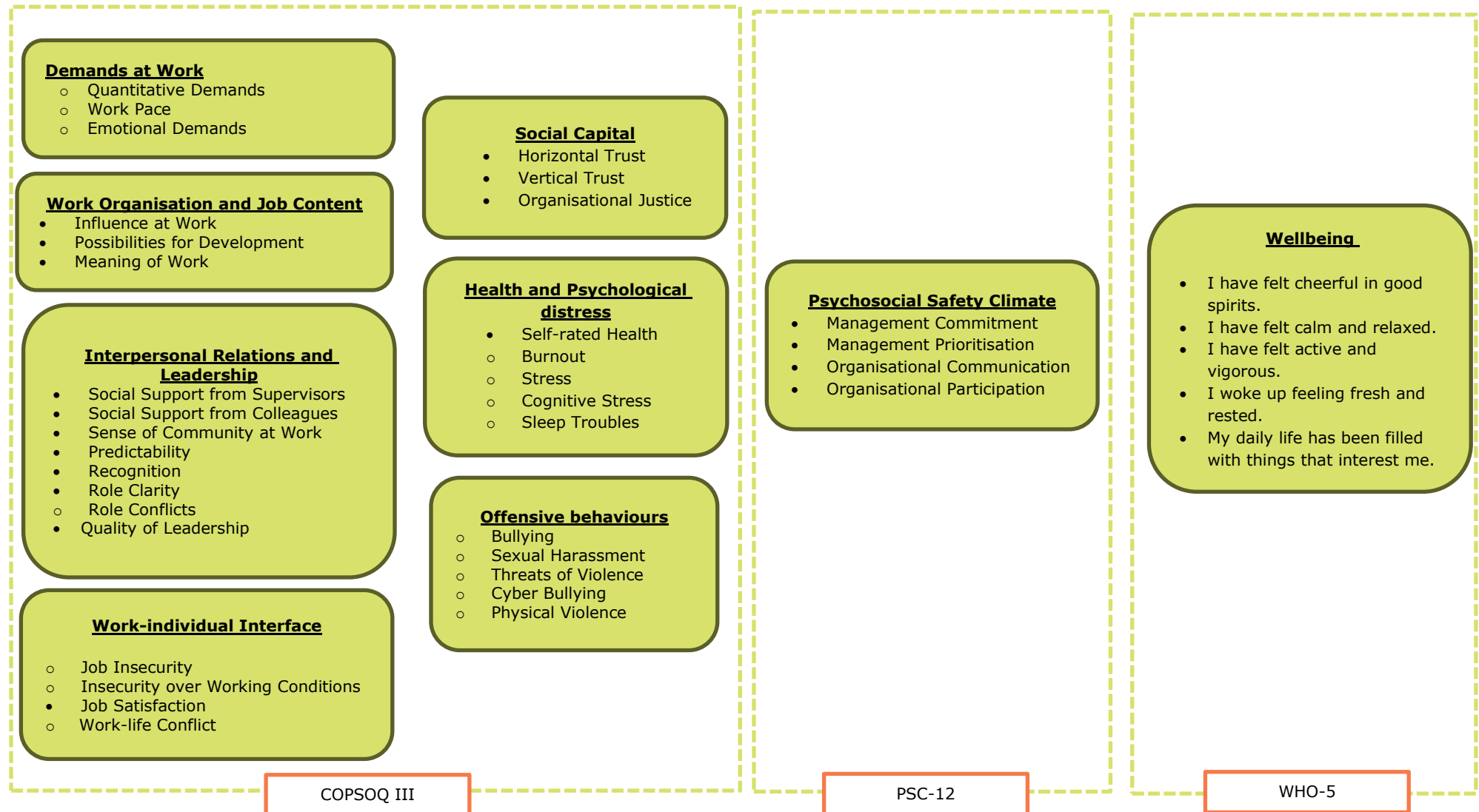
3.4. Scale reliability

All scales in the survey returned a Cronbach's alpha reliability between 0.6 and 0.9, except for Quantitative Demands, Emotional Demands and Possibilities for Development (*please see Appendix 1 for more details*). A scale is considered as reliable when the Cronbach's alpha is greater than 0.6 (Tavakol & Dennick, 2011).

⁶ <https://www.psykiatri-regionh.dk/who-5/Documents/WHO-5%20questionnaire%20-%20English.pdf>

Figure 2: Summary of all psychosocial scales in the survey

- High = Higher risk
- High = Lower risk



4. Detailed findings

4.1. The Copenhagen Psychosocial Questionnaire III (COPSOQ-III): Psychosocial factors experienced by police officers

The survey used COPSOQ-III to explore a range of psychosocial factors in the policing working environment, including Demands at Work, Work Organisation and Job Content, Interpersonal Relations and Leadership, Work-individual Interface, Social Capital, Offensive Behaviours, and Health and Psychological Distress.

4.1.1. DEMANDS AT WORK

In this survey, Demands at Work consists of the following scales:

- Quantitative Demands (how much a person can perform in their work or if the workers are behind their schedule)
- Work Pace (the speed at which tasks have to be performed)
- Emotional Demands (dealing with other people's feelings or being placed in emotionally demanding situations) at work.

Scores on these scales range from 0-100. Higher scores are considered harmful for employees.

The mean scores for Quantitative Demands, Work Pace and Emotional Demands in the survey respondents are 54.1, 66.2 and 67.1, respectively.

- Emotional Demands increase with longer working hours. Respondents who work more than 51 hours per week report the highest scores for Emotional Demands (75.3), which is significantly higher than the average respondent (67.1).
- Respondents with at least one direct report experience significantly higher Quantitative Demands and Emotional Demands than those without direct reports (59.1 compared to 51.7 and 72.5 compared to 64.3, respectively).
- Police officers who indicate working between midnight and 5 am at least 3 hours per week report significantly higher Emotional Demands than those who do not work at night (71.6 compared to 61.5).
- Officers who indicate working in the Public Safety Team report significantly higher Quantitative Demands and Emotional Demands than the average survey respondent (60.9 compared to 54.1 and 83.6 compared to 67.1).⁷

⁷ Data is not shown in the report. Other occupations are not reported due to a small number of respondents.

Table 3: Demands at Work in surveyed police officers

	Total (N=)	Demands at Work		
		Quantitative Demands	Work Pace	Emotional Demands
Total sample (Mean score)	229	54.1	66.2	67.1
Gender				
Male	134	54.2	65.9	68.5
Female	90	53.2	66.8	65.1
Age group				
<=29	36	47.2	71.2	67.7
30-39	72	58.3	66.7	69.8
40-49	51	54.9	63.5	66.4
>=50	64	51.8	64.8	64.1
Length in the service				
Less than 3 years*	27	43.5	66.2	56.5
4-9 years	84	56.9	68.8	69.6
More than 10 years	127	54.6	64.8	68.0
Average weekly working hours				
Less than 30 hours*	10	48.8	57.5	52.5
31-40 hours	52	51.0	59.4	57.7
41-50 hours	125	55.5	67.5	69.5
51 hours and more	41	54.9	72.9	75.3
Direct reports				
Yes	66	59.1	68.9	72.5
No	158	51.7	64.9	64.3
Night work				
Yes	104	52.1	53.8	71.6
No	124	54.0	54.4	61.5

(*) Due to a small sample size, the results are indicative only.
Mean scores are reported.

4.1.2. WORK ORGANISATION AND JOB CONTENT

In this survey, Work Organisation and Job Content consist of the following scales:

- Influence at Work (the capacity to affect how work is done, for example, planning work or prioritising tasks)
- Possibilities for Development (opportunities for learning and career development)
- Meaning of Work (understanding how workers' work contributes to the organisation).

Scores on these scales range from 0-100. Lower scores are considered harmful for employees.

The mean scores for Influence at Work, Possibilities for Development and Meaning of Work in the survey respondents are 51.6, 64.5 and 68.7, respectively.

- In the survey, young police officers under 29 years of age report significantly higher Possibilities for Development than the average survey respondent (72.9 compared to 64.5). On the other hand, police officers aged 50 and above appear to report higher Meaning of Work than the average respondent (76.2 compared to 68.7).

Table 4: Work Organisation and Job Content in surveyed police officers

	Total (N=)	Work Organisation and Job Content		
		Influence at Work	Possibilities for Development	Meaning of Work
Total sample (Mean score)	229	51.6	64.5	68.7
Gender				
Male	134	52.6	64.2	68.8
Female	90	51.4	65.3	69.7
Age group				
<=29	36	56.3	72.9	68.8
30-39	72	52.1	62.7	66.0
40-49	51	52.9	61.5	63.7
>=50	64	51.6	64.8	76.2
Length in the service				
Less than 3 years*	27	50.0	71.8	73.1
4-9 years	84	53.4	64.5	68.6
More than 10 years	127	51.4	62.9	67.7
Average weekly working hours				
Less than 30 hours*	10	40.0	63.8	72.5
31-40 hours	52	56.3	66.6	67.8
41-50 hours	125	49.4	64.4	67.8
51 hours and more	41	56.7	63.4	73.2
Direct reports				
Yes	66	56.4	64.4	67.0
No	158	50.2	64.8	69.9
Night work				
Yes	104	51.9	65.6	70.7
No	124	51.2	63.5	66.9

(*) Due to a small sample size, the results are indicative only. Mean scores are reported.

4.1.3. INTERPERSONAL RELATIONS AND LEADERSHIP

In this survey, Interpersonal Relations and Leadership consists of the following scales:

- Social Support from Supervisors (support for workers' direct manager if they need it)
- Social Support from Colleagues (support from colleagues if the workers need it)
- Sense of Community at Work (a feeling of being part of the team)
- Predictability (receiving relevant information to avoid uncertainty and insecurity at work)
- Recognition (workers' effort at work is valued and acknowledged by their manager)
- Role Clarity (ability to understand responsibilities, expectations, and tasks at work)
- Role Conflicts (conflict arising from task demands or prioritisation)
- Quality of Leadership (leadership capabilities of the next higher manager).

Scores on these scales range from 0-100. Lower scores indicate higher risk for employees, except for Role Conflicts where lower scores are positive for employees.

The psychosocial factors scored as the most protective by the respondents are (high) Social Support from Supervisors (66.6), (high) Social Support from Colleagues (70.4) and (high) Sense of Community at Work (78.2). The mean scores reported by the survey participants for Predictability, Recognition, Role Clarity, Role Conflicts and Quality of Leadership are 45.5, 41.9, 61.8, 50.3 and 64.0, respectively.

- Young officers aged under 29 years and below are more likely than their colleagues over 60 years of age to face risk from Role Conflicts (53.5 compared to 44.3).
- Survey respondents who work between midnight and 5 am at least 3 hours per week are more likely to face risk from Role Conflicts than those who do not work at night (56.2 compared to 46.2).
- Compared to those having direct reports, police officers without direct reports are more likely to perceive higher Quality of Leadership (68.4 compared to 54.2), receive more support from supervisors and colleagues (72.6 compared to 53.8 and 74.5 compared to 61.0, respectively), and have higher Sense of Community at Work (80.4 compared to 73.9).
- Officers working in the Public Safety Team report significantly higher Role Conflicts than the average survey respondent (62.5 compared to 50.3).⁸

⁸ Data is not shown in the report. Other occupations are not reported due to a small number of respondents.

Table 5: Interpersonal Relations and Leadership in surveyed police officers (1)

	Total (N=)	Interpersonal Relations and Leadership		
		Social Support from Supervisors	Social Support from Colleagues	Sense of Community at Work
Total sample (Mean score)	229	66.6	70.4	78.2
Gender				
Male	134	65.9	68.2	78.6
Female	90	69.4	73.3	78.1
Age group				
<=29	36	67.9	76.4	78.5
30-39	72	69.3	68.1	78.1
40-49	51	61.8	68.0	81.0
>=50	64	69.1	71.1	76.2
Length in the service				
Less than 3 years*	27	73.1	79.6	77.8
4-9 years	84	69.9	70.9	78.7
More than 10 years	127	63.6	67.9	77.8
Average weekly working hours				
Less than 30 hours*	10	67.5	67.5	70.0
31-40 hours	52	71.1	75.0	78.8
41-50 hours	125	65.0	70.0	78.2
51 hours and more	41	65.9	66.5	79.3
Direct reports				
Yes	66	53.8	61.0	73.9
No	158	72.6	74.5	80.4
Night work				
Yes	104	63.2	69.4	77.9
No	124	69.3	71.2	78.4

(*) Due to a small sample size, the results are indicative only.
Mean scores are reported.

Table 6: Interpersonal Relations and Leadership in surveyed police officers (2)

	Total (N=)	Interpersonal Relations and Leadership				
		Predictability	Recognition	Role Clarity	Role Conflicts	Quality of Leadership
Total sample (Mean score)	229	45.5	41.9	61.8	50.3	64.0
Gender						
Male	134	46.3	40.5	61.9	51.7	65.8
Female	90	46.0	45.0	63.3	47.9	62.9
Age group						
<=29	36	45.1	49.3	65.3	53.5	64.3
30-39	72	43.8	36.8	59.4	55.9	67.5
40-49	51	42.2	39.7	58.8	47.1	59.3
>=50	64	52.3	46.1	66.0	44.3	66.4
Length in the service						
Less than 3 years*	27	49.5	58.3	69.4	42.1	67.6
4-9 years	84	42.6	39.9	59.8	53.5	67.8
More than 10 years	127	46.4	39.8	61.2	50.4	61.1
Average weekly working hours						
Less than 30 hours*	10	46.3	52.5	62.5	36.3	66.3
31-40 hours	52	50.5	50.5	62.5	47.1	65.9
41-50 hours	125	43.7	39.6	62.6	49.1	61.9
51 hours and more	41	45.4	36.6	59.8	60.4	68.0
Direct reports						
Yes	66	44.7	37.5	58.0	53.8	54.2
No	158	46.1	44.0	63.8	48.3	68.4
Night work						
Yes	104	43.5	36.3	61.5	55.2	62.3
No	124	47.1	47.0	61.9	46.2	65.4

(*) Due to a small sample size, the results are indicative only.
Mean scores are reported.

4.1.4. WORK-INDIVIDUAL INTERFACE

In this survey, Work-individual Interface consists of the following scales:

- Job Insecurity (to deal with all forms of employment security)
- Insecurity over Working conditions (to deal with the changing of working schedule or content, for example working hours or relocation)
- Job Satisfaction (level of contentment employees feel with their job)
- Work-life Conflict (to deal with the impact of work on personal life).

Scores on these scales range from 0-100. Higher scores indicate higher risk for employees, except for Job Satisfaction where higher scores are positive for employees.

The mean scores reported by the survey participants for Job Security, Insecurity over Working conditions, Recognition, Work-life Conflict are 30.6, 35.8, and 55.6, respectively. In the survey, police officers report a medium score for Job Satisfaction (64.8).

- Compared to their female colleagues, male police officers are more likely to face risk from higher Insecurity over Working conditions (41.2 compared to 25.8).
- Police officers aged 50 years and over report significantly lower Work-life Conflict than the average respondent (48.6 compared to 55.6).
- Police officers having at least one person reporting to them are more likely to face risk from higher Work-life Conflict than those without direct reports (62.5 compared to 52.4).
- Compared to those who do not work at night, police officers who work between midnight and 5 am at least 3 hours per week are more likely to experience higher Work-life Conflict (62.9 compared to 49.3) and Insecurity over Working conditions (43.8 compared to 29.0).

Table 7: Work-individual Interface in surveyed police officers

	Total (N=)	Work-individual Interface			
		Job Insecurity	Insecurity over Working conditions	Job Satisfaction	Work-life Conflict
Total sample (Mean score)	229	30.6	35.8	64.8	55.6
Gender					
Male	134	29.1	41.2	62.5	57.0
Female	90	30.3	25.8	69.7	52.1
Age group					
<=29	36	28.5	24.3	66.7	56.3
30-39	72	30.6	45.8	55.9	60.9
40-49	51	31.5	35.3	66.7	55.4
>=50	64	28.2	30.9	73.8	48.6
Length in the service					
Less than 3 years*	27	25.5	11.1	74.1	41.7
4-9 years	84	29.3	40.9	59.5	62.0
More than 10 years	127	32.1	37.6	65.7	54.5
Average weekly working hours					
Less than 30 hours*	10	21.9	12.5	72.5	31.3
31-40 hours	52	25.0	30.3	64.4	43.5
41-50 hours	125	31.3	38.0	65.6	59.8
51 hours and more	41	35.7	41.5	62.8	64.0
Direct reports					
Yes	66	29.9	34.0	66.6	52.4
No	158	31.7	38.6	63.3	62.5
Night work					
Yes	104	29.0	43.8	63.2	62.9
No	124	32.1	29.0	66.1	49.3

(*) Due to a small sample size, the results are indicative only.
Mean scores are reported.

4.1.5. SOCIAL CAPITAL

In this survey, Social Capital consists of the following scales:

- Horizontal Trust (trust built among employees and if the employees trust each other)
- Vertical Trust (trust built between employees and managers)
- Organisational Justice (whether employees are fairly treated at work).

Scores on these scales range from 0-100. Higher scores are considered positive for employees. The mean scores for Horizontal Trust, Vertical Trust and Organisational Justice reported by the survey participants are 63.4, 51.7 and 47.1, respectively.

- Compared to their female colleagues, male police officers report significantly higher Horizontal Trust (66.4 compared to 60.3), but lower Vertical Trust (48.7 compared to 57.9).
- Compared to those who do not work at night, police officers who work between midnight and 5 am at least 3 hours per week are more likely to report lower Vertical Trust (45.9 compared to 56.6) and lower Organisational Justice (43.0 compared to 50.6).
- Officers working in the Public Safety Team report significantly lower Vertical Trust than the average survey respondent (43.1 compared to 51.7).⁹

⁹ Data is not shown in the report. Other occupations are not reported due to a small number of respondents.

Table 8: Social Capital in surveyed police officers

	Total (N=)	Social Capital		
		Horizontal Trust	Vertical Trust	Organisational Justice
Total sample (Mean score)	229	63.4	51.7	47.1
Gender				
Male	134	66.4	48.7	46.6
Female	90	60.3	57.9	48.3
Age group				
<=29	36	61.8	58.7	54.5
30-39	72	66.3	47.9	44.3
40-49	51	64.2	49.8	41.9
>=50	64	62.5	55.3	51.4
Length in the service				
Less than 3 years*	27	60.2	70.8	61.1
4-9 years	84	66.9	48.5	48.0
More than 10 years	127	62.4	49.7	43.5
Average weekly working hours				
Less than 30 hours*	10	65.0	66.3	57.5
31-40 hours	52	65.4	57.0	53.4
41-50 hours	125	63.4	48.8	45.8
51 hours and more	41	61.0	51.5	40.2
Direct reports				
Yes	66	63.8	52.9	48.2
No	158	63.3	49.4	44.9
Night work				
Yes	104	62.5	45.9	43.0
No	124	64.1	56.6	50.6

(*) Due to a small sample size, the results are indicative only.
Mean scores are reported.

4.1.6. OFFENSIVE BEHAVIOURS IN THE POLICE WORKING ENVIRONMENT

The survey focuses on five types of offensive behaviours at work:

- Bullying (repeated exposure to unpleasant or degrading treatment in the workplace and the workers find it hard to protect themselves at work)
- Sexual Harassment (exposure to unwanted sexual-related behaviours at work)
- Threats of Violence (exposure to threat of violence at work)
- Cyber Bullying (exposure to harassment at work through social media such as phone text or internet, etc.)
- Physical Violence (experience to physical violence at work).

Over half (52.8%) of the survey participants report experiencing at least one form of offensive behaviours, with Physical Violence, Threats of Violence and Bullying being the most common hostile acts.

- Compared to their female colleagues, male police officers are more likely to report experiencing Threats of Violence and Physical Violence (35.1% compared to 16.7% and 42.5% compared to 14.4%, respectively). However, men are less likely than women to be exposed to Bullying (19.4% compared to 33.3%).
- Police officers who work 51 hours or more per week report experiencing significantly higher Threats of Violence than the average survey respondent (43.9% compared to 28.4%).
- Compared to those who do not work at night, police officers who work between midnight and 5 am at least 3 hours per week are more likely to be exposed to Threats of Violence (40.4% compared to 18.5%) and Physical Violence (48.1% compared to 18.5%).

Table 9: Self-reported offensive behaviours in surveyed police officers

	Total (N=)	Offensive behaviours				
		Bullying	Sexual Harassment*	Threats of Violence	Physical Violence	Cyberbullying*
Total sample (Overall proportion)	229	26.2	8.7	28.4	31.9	9.6
Gender						
Male	134	19.4	3.7	35.1	42.5	9.0
Female	90	33.3	14.4	16.7	14.4	8.9
Age group						
<=29	36	33.3	25.0	36.1	25.0	11.1
30-39	72	20.8	6.9	34.7	40.3	9.7
40-49	51	25.5	5.9	29.4	35.3	7.8
>=50	64	25.0	4.7	15.6	21.9	7.8
Length in the service						
Less than 3 years*	27	25.9	18.5	22.2	14.8	7.4
4-9 years	84	27.0	9.5	40.5	37.8	9.5
More than 10 years	127	25.2	6.3	22.8	32.3	10.2
Average weekly working hours						
Less than 30 hours*	10	10.0	0	20.0	20.0	0
31-40 hours	52	23.1	11.5	17.3	23.1	3.8
41-50 hours	125	27.2	4.8	28.0	32.8	11.2
51 hours and more	41	31.7	19.5	43.9	41.5	14.6
Direct reports						
Yes	66	28.8	6.1	33.3	34.8	15.2
No	158	24.1	10.1	25.9	29.7	7.0
Night work						
Yes	104	28.8	13.5	40.4	48.1	14.4
No	124	24.2	4.8	18.5	18.5	5.6

(*) Due to a small sample size, the results are indicative only.
Proportions are reported.

4.1.7. HEALTH

In this survey, health consists of the following scales:

- Self-rated Health (personal assessment of their own health)
- Burnout (physical and emotional exhaustion)
- Stress (problems relaxing)
- Cognitive Stress (problems concentrating)
- Sleep Troubles (sleep length, quality of sleep, or interruptions of sleep).

Scores on Self-rated Health range from 0-100, with 0 for poor and 100 for excellent. On the other hand, scores for psychological distress (including Burnout, Stress, Cognitive Stress and Sleep Troubles) range from 0-100. Higher scores are harmful to workers.

About six in ten (61.6%) police officers in the survey rate their health as “good,” “very good” and “excellent”. The mean score for Self-rated Health is 54.5 among surveyed respondents.

Nearly a quarter (24.5%) of the survey respondents report experiencing at least one health problem (either Burnout, Stress, Cognitive Stress or Sleep Troubles) all the time. In the survey, the mean scores for Burnout, Stress, Cognitive Stress and Sleep Troubles are 51.9, 46.8, 40.7 and 46.4.

- Young police officers aged 29 years and below report significantly higher scores for Burnout than their colleagues aged 50 years and over (56.9 compared to 45.3).
- Compared to the average respondent, police officers working for more than 51 hours per week report significantly higher levels of Burnout (61.0 compared to 51.9) and Stress (59.8 compared to 46.8).
- Compared to those who do not work at night, police officers who work between midnight and 5 am at least 3 hours per week are more likely to report higher scores for Sleep Troubles (51.4 compared to 42.0).
- Compared to the average, police officers working in the Public Safety Team report significantly higher scores for Burnout (61.1 compared to 51.9), Stress (55.3 compared to 46.8) and Sleep Troubles (58.7 compared to 46.4).¹⁰

(please see Table 10 for more details).

¹⁰ Data is not shown in the report. Other occupations are not reported due to a small number of respondents.

Table 10: Self-reported health problems in surveyed police officers

	Total (N=)	Health problems			
		Burnout	Stress	Cognitive Stress	Sleep Troubles
Total sample (Mean score)	229	51.9	46.8	40.7	46.4
Gender					
Male	134	50.6	46.3	38.2	46.4
Female	90	53.2	45.8	43.1	44.7
Age group					
<=29	36	56.9	45.1	43.8	49.1
30-39	72	56.9	51.7	43.1	46.5
40-49	51	49.0	49.5	41.2	46.4
>=50	64	45.3	39.1	35.2	43.1
Length in the service					
Less than 3 years*	27	46.8	41.7	37.0	47.9
4-9 years	84	58.1	50.0	43.2	45.9
More than 10 years	127	49.4	45.9	40.2	46.1
Average weekly working hours					
Less than 30 hours*	10	38.8	37.5	35.0	39.4
31-40 hours	52	47.8	40.9	44.7	39.8
41-50 hours	125	51.9	45.8	39.0	48.6
51 hours and more	41	61.0	59.8	42.1	50.0
Direct reports					
Yes	66	55.3	50.8	43.6	49.8
No	158	50.9	45.3	39.1	45.1
Night work					
Yes	104	54.9	49.3	38.2	51.4
No	124	49.4	44.8	42.7	42.0

(*) Due to a small sample size, the results are indicative only.
Mean scores are reported.

4.2. Psychosocial Safety Climate in the policing environment

Psychosocial Safety Climate (PSC) is “the shared belief held by workers that their psychosocial safety and wellbeing is protected and supported by senior management.” The PSC consists of 12 items (PSC-12) in four domains noted below. The PSC is conceived as an upstream organisational resource concerning senior management values and attitudes toward care and practices with employee psychosocial wellbeing. The PSC score ranges from 12 (highest risk) to 60 (lowest risk). It can be used as a predictor of psychological distress for workers and level of work engagement (Dollard & Bakker, 2010). Below are the four domains of PSC:

- Management commitment (senior management support and commitment for stress prevention through involvement and commitment).
- Management priority (management priority to psychological health and safety versus productivity goals).
- Organisational communication (organisational communication, that is, the organisation listens to contributions from employees).
- Organisational participation (organisational participation and involvement, for example, participation and consultation occurs with unions, and occupational health and safety representatives).

With respect to the published benchmarks of PSC, a score below 37 is associated with a high risk of adverse mental health and wellbeing outcomes such as employee depression and job strain. A PSC score over 41 indicates that the work climate is performing well for worker psychological health and wellbeing.

In this survey, the overall PSC score is 33.1, indicating a low level of psychosocial safety climate among participating police officers. Two thirds (67.2%) of the survey respondents report an overall PSC score below 37, suggesting a higher risk of negative health and wellbeing outcomes. Only a quarter (24.0%) of police officers in the survey report an overall PSC over 41. There is no significant difference for the overall PSC scores by demographic and occupational factors in the survey.

Table 11: Psychosocial Safety Climate subscales and overall scale

Domain	Minimum possible score	Maximum possible score	Police officers (n=229)	
			M	SD
Management Commitment	3	15	8.2	3.1
Management Priority	3	15	7.9	3.1
Organisation Communication	3	15	8.2	2.6
Organisational Participation	3	15	8.8	2.6
Overall Psychosocial Safety Climate	12	60	33.1	10.1

M- Mean; SD- Standard Deviation

Table 12: Psychosocial Safety Climate in surveyed police officers

	Total (N=)	Psychosocial Safety Climate				
		Management Commitment	Management Priority	Organisation Communication	Organisational Participation	Overall Psychosocial Safety Climate
Total sample (Overall proportion)	229	8.2	7.9	8.2	8.8	33.1
Gender						
Male	134	7.9	7.6	8.0	8.8	32.3
Female	90	8.6	8.5	8.6	8.9	34.6
Age group						
<=29	36	9.1	8.7	8.6	9.5	35.9
30-39	72	7.5	7.3	7.9	8.6	31.2
40-49	51	8.2	7.7	7.8	8.3	32.1
>=50	64	8.6	8.5	8.8	9.2	35.1
Length in the service						
Less than 3 years*	27	9.9	9.7	9.3	9.4	38.3
4-9 years	84	8.2	7.9	8.2	9.0	33.2
More than 10 years	127	7.9	7.6	8.0	8.5	32.0
Average weekly working hours						
Less than 30 hours*	10	9.3	9.2	8.6	7.9	35.0
31-40 hours	52	8.7	8.5	8.9	9.3	35.5
41-50 hours	125	7.8	7.6	8.0	8.7	32.1
51 hours and more	41	8.4	7.8	8.0	8.6	32.8
Direct reports						
Yes	66	8.4	8.0	8.3	8.8	33.6
No	158	7.8	7.8	8.2	8.9	32.7
Night work						
Yes	104	8.0	7.6	8.0	8.7	32.3
No	124	8.4	8.2	8.4	8.9	33.9

(*) Due to a small sample size, the results are indicative only.

Mean scores are reported.

4.3. Police officers' wellbeing

In this study, workers' wellbeing and quality of life is explored through the World Health Organization's five-item Wellbeing Index (WHO-5). The WHO-5 includes five statements on how workers felt within the 14 days prior to the survey. Scores of each statement range from 0 (At no time) to 5 (All of the time). The total WHO-5 percentage score ranges from 0 (worst possible quality of life) to 100 (best possible quality of life).

The wellbeing score in this study is defined as dichotomised variables with a cut-off point at the scores of 50. A mean score lower or equal to 50 indicates poor wellbeing.

The reported mean score for WHO-5 for police officers in the survey is 53.1. Approximately 47.6% of the survey respondents report a wellbeing level of 50 and below.

- Police officers aged 50 years and above report significantly higher mean score for wellbeing than the average survey respondent (59.8 compared to 53.1).
- Police officers having at least one person reporting to them report significantly lower mean score for wellbeing than those without direct reports (49.2 compared to 55.0). The proportion of reporting poor wellbeing (indicating a wellbeing mean score of 50 or less) is also significantly higher in this group compared to those without any direct reports (59.1% compared to 42.4%).

Table 13: WHO wellbeing in surveyed police officers

	Total (N=)	Wellbeing mean score	By cut-off point (%) 50 and below
Total sample	229	53.1	47.6
Gender			
Male	134	54.6	46.3
Female	90	52.3	46.7
Age group			
<=29	36	52.3	55.6
30-39	72	49.5	54.2
40-49	51	52.7	45.1
>=50	64	59.8	32.8
Length in the service			
Less than 3 years*	27	59.4	40.7
4-9 years	84	48.9	53.6
More than 10 years	127	54.4	40.9
Average weekly working hours			
Less than 30 hours*	10	62.8	20.0
31-40 hours	52	54.0	46.2
41-50 hours	125	53.4	47.2
51 hours and more	41	48.8	56.1
Direct reports			
Yes	66	49.2	59.1
No	158	55.0	42.4
Night work			
Yes	104	52.1	51.9
No	124	54.0	43.5

(*) Due to a small sample size, the results are indicative only.

4.4. Association among psychosocial variables in the survey

This section explores whether certain psychosocial scales in the survey are correlated and how they are linked. Table 14 displays the intercorrelations among survey variables. Strong correlations are observed between:

- Burnout and Stress
- Wellbeing and Stress
- Wellbeing and Burnout
- Recognition and Predictability
- Role Clarity and Predictability
- Wellbeing and Predictability
- PSC and Predictability
- Wellbeing and Job Satisfaction
- Vertical Trust and Recognition
- Vertical Trust and Role Clarity
- Vertical Trust and PSC

Based on the significant correlation coefficients, Burnout and Stress are positively associated with:

- Work-life Conflict
- Role Conflicts
- Emotional Demands
- Work Pace
- Job Insecurity
- Quantitative Demands

Burnout and Stress are negatively related to:

- Job Satisfaction
- Meaning of Work
- Predictability
- Horizontal Trust
- Vertical Trust
- Organisational Justice
- Sense of Community at Work
- Role Clarity

Table 14: Intercorrelations for study variables

	Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
1	QD																										
2	WP	0.32**																									
3	ED	0.30**	0.42**																								
4	IN	0.04	0.03	0.04																							
5	PD	-0.12	0.09	0.01	0.46**																						
6	PR	-0.18**	-0.13	-0.19**	0.30**	0.48**																					
7	RE	-0.14*	-0.13	-0.26**	0.26**	0.46**	0.63**																				
8	CL	-0.17*	0.02	-0.09	0.24**	0.35**	0.54**	0.42**																			
9	CO	0.32**	0.32**	0.45**	-0.08	-0.15*	-0.39**	-0.38**	-0.40**																		
10	SSX	-0.14*	0.00	-0.10	0.11	0.22**	0.36**	0.44**	0.32**	-0.13																	
11	SCX	-0.09	0.02	-0.07	0.08	0.27**	0.22**	0.31**	0.26**	-0.12	0.52**																
12	SW	-0.11	-0.05	-0.17**	0.15*	0.20**	0.28**	0.21**	0.22**	-0.10	0.33**	0.51**															
13	JI	0.08	0.05	0.02	-0.18**	-0.18**	-0.31**	-0.33**	-0.23**	0.18**	-0.25**	-0.14*	-0.13*														
14	IW	0.21*	0.06	0.22**	-0.13	-0.21**	-0.26**	-0.30**	-0.21**	0.32**	-0.20**	-0.20**	-0.09	0.33**													
15	WF	0.34**	0.38**	0.50**	-0.09	-0.14*	-0.33**	-0.35**	-0.24**	0.40**	-0.26**	-0.20**	-0.15*	0.26**	0.30**												
16	MW	-0.22**	-0.04	-0.05	0.31**	0.55**	0.49**	0.45**	0.39**	-0.22**	0.26**	0.26**	0.24**	-0.18**	-0.24**	-0.26**											
17	JS	-0.22**	-0.07	-0.26**	0.27**	0.40**	0.47**	0.54**	0.47**	-0.42**	0.33**	0.29**	0.26**	-0.29**	-0.31**	-0.43**	0.53**										
18	TE	-0.13	-0.02	-0.14*	0.27**	0.26**	0.42**	0.40**	0.29**	-0.25**	0.31**	0.30**	0.45**	-0.17**	-0.14*	-0.22**	0.31**	0.33**									
19	TM	-0.19**	-0.05	-0.23**	0.33**	0.38**	0.59**	0.59**	0.54**	-0.43**	0.34**	0.22**	0.23**	-0.21**	-0.47**	-0.31**	0.43**	0.45**	0.54**								
20	JU	-0.17*	-0.18**	-0.27**	0.29**	0.31**	0.56**	0.53**	0.47**	-0.46**	0.35**	0.31**	0.27**	-0.27**	-0.35**	-0.32**	0.33**	0.40**	0.47**	0.67**							
21	GH	-0.10	-0.16*	-0.19**	-0.03	0.03	0.20**	0.21**	0.05	-0.12	0.18**	0.21**	0.19**	-0.22**	-0.08	-0.35**	0.11	0.28**	0.14*	0.09	0.17*						
22	BO	0.26**	0.29**	0.42**	-0.14*	-0.14*	-0.25**	-0.22**	-0.19**	0.38**	-0.14*	-0.15*	-0.20**	0.25**	0.23**	0.65**	-0.24**	-0.40**	-0.22**	-0.22**	-0.25**	-0.38**					
23	ST	0.28**	0.31**	0.29**	-0.18**	-0.20**	-0.29**	-0.25**	-0.23**	0.34**	-0.15*	-0.18**	-0.22**	0.31**	0.26**	0.63**	-0.28**	-0.39**	-0.22**	-0.24**	-0.32**	-0.41**	0.75**				
24	CS	0.27**	0.10	0.16*	-0.16*	-0.17*	-0.20**	-0.11	-0.17*	0.18**	-0.16*	-0.07	-0.22**	0.19**	0.10	0.39**	-0.22**	-0.36**	-0.20**	-0.14*	-0.16*	-0.31**	0.55**	0.59**			
25	SL	0.22**	0.27**	0.34**	-0.23**	-0.14*	-0.32**	-0.26**	-0.20**	0.23**	-0.16*	-0.16*	-0.22**	0.27**	0.28**	0.50**	-0.22**	-0.25**	-0.23**	-0.25**	-0.27**	-0.26**	0.59**	0.54**	0.35**		
26	WHO5	-0.25**	-0.23**	-0.32**	0.23**	0.27**	0.53**	0.42**	0.37**	-0.37**	0.28**	0.20**	0.26**	-0.38**	-0.24**	-0.58**	0.48**	0.58**	0.31**	0.39**	0.34**	0.43**	-0.61**	-0.64**	-0.48**	-0.48**	
27	PSC12	-0.16*	-0.12	-0.19**	0.28**	0.39**	0.60**	0.56**	0.45**	-0.32**	0.36**	0.23**	0.22**	-0.24**	-0.28**	-0.39**	0.42**	0.51**	0.37**	0.59**	0.59**	0.22**	-0.25**	-0.36**	-0.26**	-0.30**	0.43**

Note: ** $p < 0.01$; * $p < 0.05$; QD- Quantitative Demands; WP- Work Pace; ED- Emotional Demands; IN- Influence at Work; PD- Possibilities for Development; PR- Predictability; RE - Recognition; CL – Role Clarity; CO- Role Conflict; SSX – Social Support from Supervisors; SCX – Social Support from Colleagues; SW – Sense of Community at Work; JI – Job Insecurity; IW- Insecurity over Working Conditions; WF- Work-life Conflict; MW – Meaning of Work; JS – Job Satisfaction; TE- Horizontal Trust; TM – Vertical Trust; JU – Organisational Justice; GH – Self rated Health; BO – Burnout; ST – Stress; CS – Cognitive Stress; SL – Sleep Troubles; WHO5 – World Health Organisation five - item Wellbeing Index; PSC12 – Psychosocial Safety Climate 12-item.

4.5. Estimating the effect of work-related psychosocial risk factors on negative health outcomes in the policing working environment

This section provides an overview of how much the chance of negative health outcomes (including burnout, stress, cognitive stress, sleep troubles, and poor health) change based on a certain psychosocial factor.

Burnout, Stress, and Cognitive Stress are considered high if these psychological distresses occur from a large part of the time to all the time. Sleep Troubles are defined if they occur part of the time and more. Poor health is identified if the respondents rate their self-rated health as "fair" or "poor". Report of exposure to Bullying, Threats of Violence and Physical Violence with any frequency (either daily, weekly, monthly or a few times) is considered as high risk (Stander et al., 2017).

Below are notable findings on how likely the respondents are exposed to negative health outcomes based on a certain psychosocial risk factor after adjusting for age and gender (Table 15 and Appendix 2):

- Respondents with high Work-life Conflict are more likely to be exposed to high Burnout (Adjusted Odds Ratio (AOR)=7.28), high Stress (AOR=6.41), Sleep Troubles (AOR=6.9), poor health (AOR=4.1) and high Cognitive Stress (AOR=2.7).
- High Role Conflicts at work are strongly associated with high Burnout (AOR=4.42), high Stress (AOR=4.5) and high Cognitive Stress (AOR=2.59).
- Respondents with high Emotional Demands are deemed to be exposed to Burnout (AOR=4.19), high Stress (AOR=2.18), Sleep Troubles (3.01) and poor health (AOR= 2.01).
- Police officers with high Work Pace are more likely to experience to high Burnout (AOR=2.70), high Stress (AOR=2.72), Sleep Troubles (2.93) and poor health (AOR= 1.97).
- Respondents who perceive low Horizontal Trust are more likely to experience high Stress (AOR=4.6), high Cognitive Stress (AOR=3.8) and Sleep Troubles (AOR=3.0).
- Respondents with low Vertical Trust and low Organisational Justice appear to be exposed to high Burnout (AOR= 2.13 and AOR= 2.24, respectively), high Stress (AOR= 3.01 and AOR=3.18, respectively) and Sleep Troubles (AOR=2.26 and AOR=2.71).
- Respondents with low Predictability are more likely to experience high Burnout (AOR=2.03), high Stress (AOR=2.52), high Cognitive Stress (AOR=2.73) and Sleep Troubles (AOR=1.96).

Table 15: Psychosocial risk factors and negative health outcomes

	High Burnout	High Stress	High Cognitive Stress	Sleep Troubles	Poor health
High Quantitative Demands	-	-	↑	↑	-
High Work Pace	↑	↑↑	-	↑↑	↑
High Emotional Demands	↑↑	↑	-	↑↑	↑
Low Influence at Work	-	-	-	-	-
Low Possibilities for Development	-	-	-	-	-
Low Meaning of Work	-	↑↑	↑		↑↑
Low Predictability	↑	↑	↑	↑	
Low Recognition	↑	-	-	↑	↑↑
Low Role Clarity	-	-	-	-	-
High Role Conflicts	↑↑	↑↑	↑	-	-
Low Quality of Leadership	-	-	-	-	-
Low Social Support from Supervisors	-	-	-	-	↑
Low Social Support from Colleagues	-	-	-	-	-
Low Sense of Community at Work	-	-	↑↑↑	-	-
High Job Insecurity	-	↑	-	↑↑	-
High Insecurity over Working Conditions	↑	↑↑	-	↑	-
High Work-life Conflict	↑↑↑	↑↑↑	↑↑	↑↑↑	↑↑
Low Horizontal Trust	-	↑↑	↑↑	↑↑	-
Low Vertical Trust	↑	↑↑	-	↑	-
Low Organisational Justice	↑	↑↑	-	↑	-
Bullying	↑	-	↑	↑	-
Physical Violence	-	-	-	-	-
Threats of Violence	-	-	-	-	-

"High" psychosocial scales correspond to the response options of "to a large extent" or "very large extent" (with a score range of 75-100), while "low" psychosocial scales are based on the answers of "to a small extent" or "very small extent" (with a score range of 0-25).

Arrows represent odds ratios being adjusted for age and gender of respondents (AOR or Adjusted Odds Ratio).

↑: AOR <3; ↑↑: 3≤AOR<5; ↑↑↑: AOR≥5; (-) AOR is not statistically significant. Please see Appendix 2 for more details on AOR.

5. Summary and conclusion

Using three sets of questionnaires- the Copenhagen Psychosocial Questionnaire III (COPSOQ III), the Psychosocial Safety Climate (PSC), and the World Health Organization Five Wellbeing Index (WHO-5), the survey has been designed to provide detailed information on psychosocial factors experienced by police officers and inform measures to mitigate psychosocial risks in the policing work environment in New Zealand.

Police work is challenging. With 55.9% of the survey respondents exposed to at a *large* or *very large extent*, Emotional Demands, which is probably the most common psychosocial risk experienced by police officers, followed by Work Pace (48.0%), low (lack of) Recognition (42.8%) and Work-life Conflict (37.1%). Some teams are more likely than others to be exposed to these factors. In the survey, police officers in Public Safety Team report a significantly higher level of Emotional Demands and lower level of Recognition than the average respondent. They appear to face higher risk from Role Conflicts and less Vertical Trust (trust between management and employees).

In the survey, female officers tend to feel more secure about their working conditions than their male colleagues. They also report significantly higher scores for Vertical Trust (trust between management and employees). However, they are less likely than male police officers to perceive trust between employees (Horizontal Trust). Reports of exposure to hostile acts at work are uneven between males and females. While women are more likely to report experiencing Bullying and Sexual Harassment, men appear to face higher risk from Physical Violence and Threats of Violence.

Irregular and long working hours is common in the policing context. It has been shown that police officers working night shifts are more likely to perceive stress at work than those working day shifts (Ma et al., 2015). Adapting the shift rotation according to the occupational health guidelines can increase quality of life and satisfaction at work and reduce work-life imbalance among police officers (Rohwer et al., 2022). Nearly half (45.4%) of the participants in the current survey report that they work at least three hours per week between midnight and 5 am. Compared to those who do not work at night, police officers who have night shifts appear to face more frequent risk from Physical Violence, higher Role Conflicts, and lower (lack of) Vertical Trust and Organisational Justice. They tend to experience higher levels of Insecure over Working Conditions and Work-life Conflict. Some 17.9% of the surveyed police officers work over 51 hours weekly. Police officers working at night or more than 51 hours per week are more likely being exposed to higher Emotional Demands and Threats of Violence. These results suggest that interventions to support shift workers and adjust work schedule could be helpful for addressing psychosocial harms in the policing working environment.

Psychosocial risks are different across roles. It is known that managers or team leaders are usually more satisfied at work than the average employee (Perez et al., 2010). However, in many occupational settings, those in managerial roles are more likely to experience higher work-life conflicts and work demands and receive less support from their peers. Although there has been growing research on managers and how likely they are to be exposed to a specific psychosocial risk at work, little has been known about psychosocial risks among police managers and supervisors (Rohwer et al., 2022). In the current survey, about 30% of the participants mention that they have at least one person reporting to them. These police officers tend to experience higher Quantitative Demands, Emotional Demands and Work-life Conflict compared to those without any direct reports. They also perceive significantly lower Quality of Leadership. They seem to face risk from less (lack of) social support from their supervisors and colleagues and not being part of their community (lower Sense of Community at Work).

The survey has highlighted a number of significant findings on Psychosocial Safety Climate (PSC) in the police working environment. Overall, the average self-reported PSC score is 33.1, which indicates a low level of PSC among participating police officers. Over two thirds (67.2%) of the survey respondents report an overall PSC score below 37, suggesting a higher risk of negative health and wellbeing outcomes. Only a quarter (24.0%) of the surveyed police officers perceive having low risk PSC in their work environment (overall PSC mean score over 41). Among the four PSC components, the mean score for Management Priority (management priority to psychological health and safety versus productivity goals) is the lowest with a score of 7.9 (± 3.1), followed by Management Commitment (8.2 ± 3.1) and Organisation Communication (8.2 ± 2.6).

The report has documented several important findings on how much the chance of adverse health outcomes (including burnout, stress, cognitive stress, sleep troubles, and poor health) changes based on certain psychosocial factors. Exposure to high psychosocial risks tends to generate a greater likelihood of experiencing psychological distress and poor health. For example, in the survey police officers with high Work-life Conflict are six and seven times, respectively more likely to be exposed to high Burnout, Sleep Troubles and Stress than those without high Work-life Conflict. Respondents perceiving less trust among employees (low Horizontal Trust) or lack of trust between managers and employees (low Vertical Trust) are two and three times, respectively more likely to experience Sleep Troubles than those with high Horizontal Trust and Vertical Trust. The research identified the most significant sources of stressors affecting police officers' health and wellbeing. These include:

- high Work-life Conflict
- high Role Conflicts
- high Emotional Demands
- high Work Pace
- low Horizontal Trust
- low Vertical Trust
- low Predictability, and
- low Organisational Justice.

It is commonly reported in international literature that psychosocial factors and negative health outcomes in police work are strongly associated (Ruiz-Ruano García et al., 2023; Oliver et al., 2023). However, it is not well researched in the New Zealand policing context. Findings from the study could be used to prioritise the primary focus of healthy work initiatives to reduce psychosocial risk and improve health and wellbeing in police officers.

In summary, the survey shows that police officers in New Zealand might be exposed to different sources of psychosocial risks at work depending on their roles. Addressing these risk factors could increase the health and wellbeing of police officers. Future explorations on linking organisational and demographic details with certain psychosocial factors could be helpful to inform a more effective psychosocial health and safety programme in the policing context.

6. References

- Alves, L., Abreo, L., Petkari, E., & da Costa, M. P. (2023). Psychosocial risk and protective factors associated with burnout in police officers: A systematic review. *Journal of Affective Disorders*.
- Anshel, M. H. (2000). A conceptual model and implications for coping with stressful events in police work. *Criminal justice and Behavior*, 27(3), 375-400.
- Aytac, S. (2015). The sources of stress, the symptoms of stress and anger styles as a psychosocial risk at occupational health and safety: a case study on Turkish police officers. *Procedia Manufacturing*, 3, 6421-6428.
- Backteman-Erlanson, S., Padyab, M., & Brulin, C. (2013). Prevalence of burnout and associations with psychosocial work environment, physical strain, and stress of conscience among Swedish female and male police personnel. *Police Practice and Research*, 14(6), 491-505.
- Beehive (2023). Government delivers 1800 additional frontline police. <https://www.beehive.govt.nz/release/government-delivers-1800-additional-frontline-police>.
- Berg, A. M., Hem, E., Lau, B., & Ekeberg, Ø. (2006). An exploration of job stress and health in the Norwegian police service: a cross sectional study. *Journal of Occupational Medicine and Toxicology*, 1, 1-9.
- Blue, B. (2016). Good practice framework for mental health and wellbeing in first responder organisations. *Melbourne: Beyond Blue*.
- Dollard, M. F., & Bakker, A. B. (2010). Psychosocial safety climate as a precursor to conducive work environments, psychological health problems, and employee engagement. *Journal of occupational and organizational psychology*, 83(3), 579-599.
- Emilia, I., Extremera, R. A., Pecino, C. V., & De La Fuente, G. R. C. (2013). Prevalence and risk factors of burnout syndrome among Spanish police officers. *Psicothema*, 25(4), 488-493.
- Fekedulegn, D., Burchfiel, C. M., Charles, L. E., Hartley, T. A., Andrew, M. E., & Violanti, J. M. (2016). Shift work and sleep quality among urban police officers: the BCOPS study. *Journal of Occupational and Environmental Medicine*, 58(3), e66-e71.
- Garbarino, S., Repice, A., Traversa, F., Spigno, F., Mascialino, B., Mantineo, G., Ferrillo, F., & Bonsignore, A. (2007). Commuting accidents: the influence of excessive daytime sleepiness. A review of an Italian Police officers population. *Giornale italiano di medicina del lavoro ed ergonomia*, 29(3 Suppl), 324-326.
- Gerber, M., Hartmann, T., Brand, S., Holsboer-Trachsler, E., & Pühse, U. (2010). The relationship between shift work, perceived stress, sleep and health in Swiss police officers. *Journal of Criminal Justice*, 38(6), 1167-1175.
- Los'e, J. (2023). The change face of the New Zealand Police better reflects the communities they serve. <https://www.nzherald.co.nz/kahu/the-changing-face-of-the-new-zealand-police-better-reflects-the-communities-they-serve/ST3GN4Y2Q5GNZGR4PMZGBNJ3EU/>. New Zealand Herald.
- Ma, C. C., Andrew, M. E., Fekedulegn, D., Gu, J. K., Hartley, T. A., Charles, L. E., Violanti, J. M., & Burchfiel, C. M. (2015). Shift work and occupational stress in police officers. *Safety and health at work*, 6(1), 25-29.
- McCarty, W. P., Aldirawi, H., Dewald, S., & Palacios, M. (2019). Burnout in blue: an analysis of the extent and primary predictors of burnout among law enforcement officers in the United States. *Police quarterly*, 22(3), 278-304.
- Muir, C., Prang, K.-H., Sheppard, D., & Newnam, S. (2020). Occupational injuries among police workers: patterns and contributing factors in an Australian jurisdiction. *Safety science*, 122, 104525.

New Zealand Police (n.d.). <https://www.police.govt.nz/about-us/75-years-women-police/celebrating-our-current-staff/current-statistics-women-nz-police>.

Oliver, H., Thomas, O., Neil, R., Moll, T., & Copeland, R. J. (2023). Stress and psychological wellbeing in british police force officers and staff. *Current Psychology*, 42(33), 29291-29304.

Perez, E. A., Beatrice, D., & Mascherini, M. (2010). Why are managers happier than workers. *JRC*

Peterson, S. A., Wolkow, A. P., Lockley, S. W., O'Brien, C. S., Qadri, S., Sullivan, J. P., Czeisler, C. A., Rajaratnam, S. M., & Barger, L. K. (2019). Associations between shift work characteristics, shift work schedules, sleep and burnout in North American police officers: a cross-sectional study. *BMJ open*, 9(11), e030302 *Scientific and Technical Report*.

Rohwer, E., Garrido, M. V., Herold, R., Preisser, A. M., Terschüren, C., Harth, V., & Mache, S. (2022). Police officers' work-life balance, job satisfaction and quality of life: longitudinal effects after changing the shift schedule. *BMJ open*, 12(9), e063302.

Ruiz-Ruano García, A. M., Blaya Sánchez, M. Á., López Morales, J. L., Peinado Portero, A. I., Giner Alegría, C. A., López Puga, J., & Moya-Faz, F. J. (2023). Psychosocial risks factors and burnout in police officers: a network analysis.

Stauder, A., Nistor, K., Zakor, T., Szabó, A., Nistor, A., Ádám, S., & Konkolý Thege, B. (2017). Quantifying multiple work-related psychosocial risk factors: proposal for a composite indicator based on the COPSOQ II. *International journal of behavioral medicine*, 24, 915-926.

Tavakol, M., & Dennick, R. (2011). Making sense of Cronbach's alpha. *International Journal of Medical Education*, 2, 53-55.

Topp, C. W., Østergaard, S. D., Søndergaard, S., & Bech, P. (2015). The WHO-5 Well-Being Index: a systematic review of the literature. *Psychotherapy and psychosomatics*, 84(3), 167-176.

7. Appendix 1: Mean, standard deviation and Cronbach's alpha of survey variables

Psychosocial factors					Psychosocial factors			
	Cronbach's alpha	M	SD			Cronbach's alpha	M	SD
WHO-5 Well-being	0.9	53.1	19.9		Insecurity over Working Conditions	-	35.8	35.1
Quantitative Demands	0.4	54.1	21.1		Job Satisfaction	-	64.8	26.1
Work Pace	0.7	66.2	20.7		Work-life Conflict	0.9	55.6	29.1
Emotional Demands	0.5	67.1	27.2		Horizontal Trust	-	63.4	21.8
Influence at Work	-	51.6	25.9		Vertical Trust	-	51.7	25.3
Possibilities for Development	0.5	64.5	20.1		Organisational Justice	-	47.1	23.9
Meaning of Work	-	68.7	24.3		Self-rated Health	-	54.5	22.8
Predictability	0.7	45.5	21.2		Sleep Troubles	0.9	46.4	22.4
Recognition	-	41.9	29.3		Burnout	0.7	51.9	23.5
Role Clarity	-	61.8	25.1		Stress	-	46.8	30.0
Role Conflicts	0.7	50.3	24.3		Cognitive Stress	-	40.7	24.9
Quality of Leadership	0.8	64.0	24.6		PSC- Management Commitment	0.9	8.2	3.1
Social Support from Supervisors	-	66.6	28.4		PSC-Management Priority	0.9	7.9	3.1
Social Support from Colleagues	-	70.4	25.4		PSC-Organisational Commitment	0.8	8.2	2.6
Sense of Community at Work	-	78.2	21.1		PSC-Organisational Participation	0.8	8.8	2.6
Job Insecurity	0.6	30.6	25.6		Overall PSC score	0.9	33.1	10.1

M- Mean; SD- Standard Deviation; PSC- Psychosocial safety climate; Cronbach's alpha measures the scale reliability.

(-): Not available (single item).

8. Appendix 2: Psychosocial factors and negative health outcomes

Risk factor	Prevalence of high risk (%)	High Burnout		High Stress		High Cognitive stress		Sleep troubles		Poor health	
		OR	Adjusted OR	OR	Adjusted OR	OR	Adjusted OR	OR	Adjusted OR	OR	Adjusted OR
High Quantitative Demands	23.6	1.62 (0.84,3.11)	1.59 (0.81,3.10)	1.84 (0.98,3.44)	1.74 (0.95,3.38)	2.31 * (1.13,4.71)	2.35 * (1.07,5.08)	2.18 * (1.17,4.06)	2.12 * (1.11, 4.07)	0.72 (0.33,1.55)	0.67 (0.29,1.44)
High Work Pace	48.0	2.88 *** (1.57,5.3)	2.70 ** (1.45, 5.01)	2.84 *** (1.61,5.02)	3.28 *** (1.79, 6.16)	1.31 (0.67,2.54)	1.29 (0.64, 2.63)	2.89 *** (1.65,5.06)	3.01 *** (1.70, 5.41)	2.03 * (1.08,3.82)	2.01 * (1.11, 4.06)
High Emotional Demands	55.9	3.85 *** (1.98,7.51)	4.19 *** (2.1,8.37)	2.08 ** (1.17,3.69)	2.18 ** (1.21,3.94)	1.61 (0.81,3.2)	1.82 (0.88,3.74)	2.9 *** (1.62,5.18)	3.01 *** (1.67,5.41)	2.08 * (1.08,4.02)	2.01 * (1.04,3.91)
Low Influence at Work	27.1	1.52 (0.81,2.87)	1.77 (0.91,3.42)	1.64 (0.9,3)	1.84 (0.98,3.45)	1.05 (0.5,2.21)	1.1 (0.5,2.4)	1.72 (0.95,3.13)	1.74 (0.94,3.2)	0.87 (0.43,1.77)	0.95 (0.46,1.95)
Low Possibilities for Development	5.7	1.18 (0.35,3.99)	1.35 (0.39,4.71)	1.75 (0.57,5.4)	1.94 (0.61,6.14)	1.32 (0.35,5.02)	1.43 (0.36,5.72)	1.58 (0.51,4.87)	1.56 (0.5,4.86)	0.6 (0.13,2.81)	0.65 (0.14,3.07)
Low Meaning of Work	8.7	2.35 (0.92,5.97)	2.34 (0.89,6.13)	3.32 * (1.3,8.52)	3.22 * (1.23,8.47)	3.31 * (1.26,8.7)	2.94 * (1.07,8.09)	2.38 (0.94,6)	2.29 (0.9,5.86)	3.16 * (1.23,8.11)	3.61* (1.36,9.59)
Low Predictability	23.6	2.02* (1.05,3.85)	2.03* (1.05,3.94)	2.5 ** (1.34,4.68)	2.52** (1.33,4.76)	2.63 ** (1.3,5.35)	2.73** (1.3,5.71)	1.97 * (1.06,3.67)	1.96 * (1.05,3.65)	1.84 (0.93,3.67)	1.84 (0.93,3.67)
Low Recognition	42.4	2.1* (1.16,3.78)	2.04 * (1.12,3.72)	1.66 (0.96,2.89)	1.61 (0.92,2.83)	0.77 (0.39,1.52)	0.72 (0.36,1.47)	2.22 ** (1.28,3.85)	2.23** (1.28,3.87)	3.82*** (1.98,7.36)	3.76*** (1.94,7.27)
Low Role Clarity	17.0	2.12* (1.03,4.34)	2.05 (0.99,4.26)	1.9 (0.94,3.83)	1.82 (0.89,3.7)	1.94 (0.88,4.29)	1.83 (0.81,4.17)	1.49 (0.74,2.99)	1.46 (0.72,2.94)	1.43 (0.66,3.11)	1.43 (0.65,3.13)
High Role Conflicts	21.4	4.37*** (2.24,8.52)	4.42*** (2.24,8.74)	4.47*** (2.3,8.68)	4.5*** (2.29,8.82)	2.39* (1.16,4.97)	2.59* (1.21,5.54)	1.81 (0.96,3.45)	1.83 (0.96,3.48)	1.94 (0.96,3.91)	1.87 (0.92,3.78)
Low Quality of Leadership	10.5	1.16 (0.45,2.95)	1.15 (0.44,2.98)	1.03 (0.42,2.53)	1.002 (0.4027,2.4934)	0.89 (0.29,2.76)	0.82 (0.25,2.64)	1.63 (0.69,3.83)	1.59 (0.67,3.75)	1.52 (0.59,3.91)	1.59 (0.61,4.11)
Low Social Support from Supervisors	16.2	1.21 (0.56,2.63)	1.28 (0.58,2.82)	1.72 (0.84,3.54)	1.81 (0.87,3.77)	1.58 (0.68,3.66)	1.67 (0.69,4.02)	1.3 (0.63,2.68)	1.3 (0.63,2.68)	2.23* (1.04,4.78)	2.29* (1.06,4.95)
Low Social Support from Colleagues	10.9	1.55 (0.65,3.72)	1.67 (0.68,4.09)	1.96 (0.85,4.53)	2.13 (0.9,5.01)	0.8 (0.26,2.47)	0.88 (0.27,2.84)	1.75 (0.76,4.05)	1.8 (0.78,4.16)	2.09 (0.87,5.06)	2.08 (0.86,5.06)
Low Sense of Community at Work	3.9	1.32 (0.32,5.47)	1.67 (0.38,7.4)	1.6 (0.42,6.14)	1.94 (0.48,7.88)	3.69 (0.95,14.38)	5.27* (1.15,24.14)	3.76 (0.92,15.47)	3.88 (0.93,16.17)	1.73 (0.42,7.19)	2 (0.47,8.49)
High Job Insecurity	8.3	1.18 (0.43,3.26)	1.19 (0.42,3.35)	2.85* (1.1,7.43)	2.87* (1.09,7.6)	1.6 (0.54,4.73)	1.51 (0.48,4.72)	3.33* (1.25,8.84)	3.24* (1.22,8.64)	1.25 (0.43,3.67)	1.31 (0.44,3.87)
High Insecurity over Working Conditions	24.9	2.01 (1.06,3.8)	2.06* (1.07,3.96)	3.27*** (1.76,6.08)	3.39*** (1.8,6.4)	1.4 (0.67,2.91)	1.48 (0.69,3.17)	2.33** (1.26,4.29)	2.34** (1.27,4.33)	1.01 (0.4933,2.0582)	0.98 (0.48,2.02)
High Work-life Conflict	37.1	7.06*** (3.71,13.43)	7.28*** (3.74,14.15)	6.19*** (3.39,11.3)	6.41*** (3.45,11.93)	2.59** (1.32,5.08)	2.72** (1.34,5.52)	6.57*** (3.61,11.95)	6.94*** (3.76,12.81)	4.18*** (2.18,8)	4.05*** (2.11,7.8)

Risk factor	Prevalence of high risk (%)	High Burnout		High Stress		High Cognitive stress		Sleep troubles		Poor health	
		OR	Adjusted OR	OR	Adjusted OR	OR	Adjusted OR	OR	Adjusted OR	OR	Adjusted OR
Low Horizontal Trust	11.8	1.98 (0.86,4.55)	2.25 (0.93,5.42)	4.02*** (1.74,9.3)	4.63*** (1.91,11.27)	3.65** (1.55,8.59)	3.84** (1.51,9.72)	3.0** (1.32,6.82)	3.0* (1.3,6.96)	1.51 (0.62,3.69)	1.77 (0.7,4.45)
Low Vertical Trust	22.3	2.03* (1.05,3.91)	2.13* (1.09,4.19)	2.88*** (1.52,5.46)	3.01*** (1.57,5.8)	1.94 (0.93,4.04)	2.06 (0.96,4.43)	2.27* (1.2,4.27)	2.26* (1.2,4.26)	1.22 (0.59,2.51)	1.23 (0.59,2.55)
Low Organisational Justice	26.2	2.22* (1.19,4.17)	2.24* (1.18,4.25)	3.15*** (1.71,5.8)	3.18*** (1.71,5.92)	1.68 (0.82,3.42)	1.66 (0.8,3.48)	2.72** (1.48,4.98)	2.71** (1.48,4.97)	1.7 (0.87,3.32)	1.7 (0.87,3.33)
Bullying	26.2	2.22 * (1.19,4.17)	2.29* (1.18,4.43)	1.77 (0.96,3.25)	1.72 (0.92,3.24)	3.17** (1.59,6.35)	2.93** (1.41,6.1)	2.47** (1.35,4.52)	2.46** (1.32,4.57)	1.7 (0.87,3.32)	1.9 (0.95,3.79)
Physical Violence	31.9	1.21 (0.65,2.24)	1.24 (0.65,2.35)	1.24 (0.7,2.23)	1.3 (0.71,2.38)	0.79 (0.38,1.65)	0.92 (0.43,1.98)	1.28 (0.72,2.27)	1.34 (0.75,2.42)	1.46 (0.77,2.79)	1.36 (0.7,2.65)
Threats of Violence	28.4	1.7 (0.91,3.16)	1.6 (0.85,3.04)	1.01 (0.55,1.86)	0.96 (0.51,1.79)	0.72 (0.33,1.57)	0.71 (0.32,1.57)	2.02 (1.12,3.64)	2.09 (1.15,3.81)	1.16 (0.59,2.28)	1.07 (0.53,2.13)

"High" psychosocial scales correspond to the response options of "to a large extent" or "very large extent" (with a score range of 75-100), while "low" psychosocial scales are based on the answers of "to a small extent" or "very small extent" (with a score range of 0-25). OR- Odds ratio. Adjusted for age and gender of respondents. *: $p < .05$; **: $p < .01$; ***: $p < .001$

9. Appendix 3: New Zealand Police roles

AOS, STG, SSG, PNT, TPT, PTT:

Armed Offenders Squad (AOS): Specially trained teams that respond to incidents involving armed offenders and other high-risk situations.

Special Tactics Group (STG): A unit that responds to situations of higher risk than the AOS, such as sustained or complex incidents like counterterrorism or hostage situations.

Specialist Search Group (SSG): A team of full-time and on-call staff specializing in searching for hazardous items, including explosive substances.

Police Negotiation Team (PNT): Assists in the resolution of high-risk incidents, often working alongside AOS or STG during crises like hostage negotiations.

Tactical Prevention Teams (TPT): Focus on crime prevention at a local level through a range of measures.

Precision Targeting Teams (PTT): Focus on identifying and apprehending high-priority offenders, often linked to organized crime. Both TPT and PTT are more localized than AOS and STG, with PTT tending to be more intelligence driven.

1-2-3 Person Station:

Rural Police Stations: Rural stations often have 1, 2, or 3 staff members. These officers handle a broad range of police work, adapted to the needs of the local community.

CIB, TCU, SCU:

Criminal Investigation Branch (CIB): Handles serious criminal investigations such as homicide, adult sexual assault, and child protection, with specialized units within the branch.

Tactical Crime Unit (TCU): Focuses on burglary, vehicle crime, and other high-volume crimes in specific areas, supporting intelligence-driven operations.

Serious Crash Unit (SCU): Investigates serious road traffic accidents, particularly those involving fatalities or significant injuries.

PPS, CJSU, ISU:

Police Prosecution Service (PPS): Prosecutes criminal charges on behalf of the Commissioner of Police and represents the interests of the state in court.

Criminal Justice Support Unit (CJSU): Provides support to CIB and other police units with administrative tasks related to criminal justice proceedings, such as managing files, evidence, and statements.

Investigation Support Unit (ISU): Handles the administration and follow-up of high-volume cases, ensuring that all necessary paperwork and processes are completed efficiently.

Community Policing Team:

Community Policing Team: Focuses on crime prevention and building relationships within communities to reduce crime through proactive engagement and education.

Custody Staff:

Custody Staff: Responsible for managing individuals in police custody and ensuring their safe transfer to court and other detention facilities.

Dive Squad, SAR, Maritime Unit:

Dive Squad: Conducts underwater searches for missing persons or evidence in criminal cases.

Search and Rescue (SAR): Responds to emergency situations where individuals are lost or at risk, particularly in wilderness or remote environments.

Maritime Unit: Enforces laws and responds to emergencies on New Zealand's waterways, focusing on marine safety and criminal activity in maritime environments.

Dog Handler, Tactical Operator:

Dog Handlers: Specially trained officers who work with police dogs to track, detect, and apprehend suspects.

Tactical Operators: Officers trained in AOS tactics who often support dog handlers and other units during high-risk operations, though they do not handle dogs themselves.

Family Harm Staff:

Family Harm Staff: Work in family violence, helping to resolve cases and support victims. These roles may include both sworn officers and non-sworn personnel such as social workers.

Intelligence:

Intelligence Staff: Non-sworn intelligence analysts and operational officers who gather and provide intelligence to support policing operations.

NCIG:

National Criminal Investigations Group (NCIG): Covers a wide range of specialist teams within the police force, including those working with informants, conducting surveillance, and providing forensic analysis in serious investigations.

PST:

Public Safety Teams (PST): Frontline officers who respond to emergencies, providing the primary first-response capability for the New Zealand Police.

Road Policing, IPT, Motorways, CVST:

Road Policing: These officers are responsible for enforcing traffic laws and ensuring road safety. They conduct regular patrols, enforce speed limits, monitor driver behaviour, and respond to traffic incidents.

Impairment Prevention Team (IPT): Focuses primarily on detecting and preventing impaired driving, such as through breath alcohol testing and drug impairment assessments. Their work involves roadside testing and public education campaigns.

Motorway Police: These officers specialise in patrolling motorways, focusing on maintaining traffic flow, enforcing motorway-specific regulations, and responding to incidents on high-speed roads. They often include motorcycle officers.

Commercial Vehicle Safety Team (CVST): Specialises in enforcing regulations related to commercial vehicles. They are responsible for checking compliance with vehicle weight limits, vehicle safety standards, and transport regulations at weigh stations and during roadside inspections.

Youth Aid:

Youth Aid: Works specifically with youth offenders and at-risk young people, focusing on preventing reoffending and providing rehabilitation options. While primarily operational, teams may include non-sworn staff such as social workers and youth workers who support interventions.

Training Staff (TSC, TST, TOT etc.):

Training Staff: Responsible for training and upskilling police personnel in various capacities. These roles include Tactical Skills Coaches (TSC), Tactical Skills Trainers (TST), and Tactical Options Trainers (TOT). Most of these roles can be part-time or fixed term, but Tactical Options Trainers (TOT) tend to be full-time positions due to the continuous need for training in tactical response options.

Protection Services:

Protection Services: Provides close protection and security for specific individuals, such as the Prime Minister, other government officials, foreign dignitaries, and individuals in witness protection programs. Many of these officers work full-time, while some may be assigned on a part-time or rotational basis depending on the assignment.

District Governance and Leadership Staff:

District Governance and Leadership Staff: Includes key leadership positions within police districts, such as District Commanders, Prevention Managers, and Māori Responsiveness Managers. These roles are responsible for overseeing district operations, strategy, and community engagement, ensuring that local policing is effective and culturally responsive.

Road Policing, IPT, Motorways, CVST

Road police are the ones out on the roads. Impairment prevention team primarily focus on impaired driving (e.g., the people that breath test you), motorway staff are not dissimilar from road police but specific to motorways (including the staff you see on motorbikes). Commercial vehicle safety team focus on commercial vehicles – they are the ones you see weighing trucks at weigh stations etc.

Youth Aid Work with youth. This role will be mostly operational but not always (e.g., might be a social worker in the team).

Training Staff (TSC, TST, TOT etc)

All roles that involve training and upskilling operational staff. All are part-time/on-call/fixed term except for Tactical Options Trainers.

Protection Services provide close protection and security for specific people, e.g., the Prime Minister, government members, people visiting from other governments, people in witness protection. Some officers are full-time, and some are part-time.

District governance and leadership staff

This can include people like district commanders, prevention managers, Māori responsiveness managers who have oversight of district happenings.