The New Zealand Workplace Barometer

Psychosocial safety climate and worker health – findings from the 2021 NZ Workplace Barometer

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Executive Summary

The New Zealand Workplace Barometer (NZWB) is designed to provide data to inform national, industry, and organisational approaches to psychosocial risk prevention at work, by identifying workplace indicators of mental health, stress-related conditions and some aspects of physical health. The NZWB represents the first national-level psychosocial risk surveillance scheme in New Zealand and was launched in 2018. Psychosocial hazards and their associated risks include aspects of the design and management of work, and its social and organisational contexts that have the potential to cause psychological or physical harm. Importantly, improvements to the psychosocial work environment have been shown to produce a significant return on investment for organisations.

Data were collected between September and October 2021 from a sample of workers (N=2029) employed within 23 New Zealand organisations. Overall, the 2021 results appear remarkably similar to those of 2020 (and also 2019), suggesting that the COVID-19 pandemic which dominated (and continues to dominate in some sectors) many aspects of the world of work had little effect on the extensive range of variables measured by this barometer. However, like last year, we contend that is not an accurate reflection of the impacts of COVID-19 on New Zealand workplaces generally (this will be discussed further in the report summary).

Specifically, even with differing samples between this year and last, most of the substantive associations (correlations) between the variables measured were near identical in direction and size. However, using a cautious approach to comparison, it appears that there were clear differences in six of the variables when compared to 2020. There was a meaningful increase in participants' perceptions of psychosocial climate, management competency, job flexibility, the influence in the decision-making aspect of inclusion, and also unfortunately an increase in psychological distress and a decrease in mental well-being.

Importantly, as with the 2020 NZWB, **four key features of the work environment** were associated with positive outcomes for both individuals and organisations in this study: These were (1) **organisational justice**, (2) **inclusion**, (3) a **positive (high levels of) psychosocial safety climate** and (4) **perceived management competence**. These four elements of healthy work appear to be the key resources which organisations, industries and policy makers should prioritise for developing and sustaining worker health and wellbeing, and positive individual and organisational outcomes generally. We also highlight the importance of **gender**, **role**, **hours of work**, **bullying** and **work-home conflict** in understanding the relationships between the key variables of interest.

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1. Introduction

Work-related psychosocial factors arise from the design and management of work, and the social and organisational contexts in which work occurs (Cox, Griffiths & Leka, 2005). These factors can influence the health, safety, general satisfaction and work performance of people either positively or negatively. On the one hand, work can be uplifting, rewarding and enjoyable, while on the other it can be stressful, toxic and damaging. Negative psychosocial factors (i.e., psychosocial hazards) include issues such as work overload, lack of control, role conflict, and poor relationships at work, among others. The current COVID-19 pandemic and the more general ongoing changes to the nature of work such as reduced job security and blurred work/non-work boundaries can also contribute to these potential hazards. The presence of psychosocial hazards can result in negative psychological, physical or social outcomes such as work-related stress, burnout, depression, or musculoskeletal disorders (MSDs), therefore potentially affecting psychological health, and health and safety more broadly (ISO45003, 2021). Psychosocial hazards can also affect individuals differently; what results in harm to one person may not harm another. Additionally, the effect of various psychosocial hazards can be cumulative, and these effects can build up overtime.

Psychosocial hazards and the risks they create are recognised internationally as resulting in considerable costs to organisations and employees. A 2014 European Union report estimated that psychosocial hazards cost as much as €25.4 billion per annum (European Agency for Safety and Health at Work (EU-OSHA, 2014). In the United Kingdom, work-related stress, depression and/or anxiety were responsible for 44% of cases of work-related ill health and 57% of working days lost in 2017/18 (HSE, 2018). Recent survey data from Europe also highlights that the awareness of psychosocial hazards is often low, and that in sectors attempting to manage them, the process of doing so is considered to be difficult (EU-OSHA, 2020).

The World Health Organisation (WHO) recognises the workplace as a priority area for health promotion, with psychosocial hazards and associated risks considered to be a leading workplace health concern. The WHO defines mental health as "a state of wellbeing in which every individual realises their own potential, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to her or his community" (WHO, 2018).

Research indicates that New Zealand workers are highly vulnerable to psychosocial hazards which places a considerable burden on the economic and social wellbeing of society (e.g., Bentley et al., 2009; 2012; Gardner et al., 2016; O'Driscoll et al., 2011). The need to address psychosocial hazards at work and reduce psychological harm for all workers is also a legal requirement. The Health and Safety at Work Act 2015

('HSWA'), requires organisations (or more specifically, persons conducting a business or undertaking, PCBUs) to ensure the safety of their workers' mental health as well as their physical health, a statement reaffirmed in the NZ Government's Health and Safety at Work Strategy (2018-2028).

The intention of the New Zealand Workplace Barometer (NZWB) is to provide organisations with information to help them assess potential psychosocial hazards and to promote improvements in the psychosocial work environment. The survey measures psychosocial safety climate (PSC) as well as other psychosocial factors that impact on individual and organisational wellbeing and performance. Developed in collaboration with a WHO Collaborating Centre, and the Asia-Pacific Centre for Work,Safety and Health, the NZWB is intended to inform national approaches to psychosocial risk through the provision of data on leading workplace indicators of mental health, stress-related conditions and some aspects of physical health.

Organisations participating in the NZWB provide access for data collection in exchange for a report summarising the psychosocial hazards and associated risks within their organisation (where more than 50 people complete the survey). Organisations who participate annually can use their results to understand and monitor their performance with respect to their psychosocial environment. The NZWB survey is administered annually, and this report presents results from the 4th year of conducting the survey following the inaugural survey in 2018.

It is important to note that the 2021 and 2020 data were collected in the context of COVID-19 which has had diverse and ongoing impacts across workplaces and everyday life. The true effect that COVID-19 has had on the present results is difficult to isolate, not least because, unsurprisingly, we found it difficult to recruit organisations from the most-affected industry sectors such as the Health, Education, and Tourism sectors. This has resulted in a significantly different mix of industry sectors this year and in 2020 from that of previous years. Although the overall 2021 and 2020 results are broadly similar to those of 2019, we believe this is not a true reflection of the general state of workplaces during this difficult period. We make further comments on this issue in Section 4.

Finally, there are broadly two types of analysis that we have undertaken with this year's NZWB data. Firstly, as we have done in all previous versions of the NZWB, we report on meaningful relationships between the variables measured. Secondly, we cautiously compared this year's results with those of 2020. This needed to be approached with caution for at least two reasons. Firstly, our sample is not 'matched' in the true statistical sense (e.g., identical respondents each year) meaning that we need to be careful and conservative in making comparisons. Furthermore, many of the factors which may affect results year-to-year potentially cancel each other out (e.g., the COVID environment making 'things' worse while at the same time organisational initiatives are making 'things' better). More will be said about this in the main body of the report.

1.1   Psychosocial hazards and risk

Psychosocial hazards can be defined as:

'those aspects of work design and the organisation and management of work, and their social and environmental contexts, which have the potential for causing psychosocial or physical harm'

(Cox & Griffiths, 1995).

Psychosocial risk refers to the potential for psychosocial hazards to cause harm (Leka, Van Wassenhove & Jain, 2015). Table 1 briefly describes 10 psychosocial factors recognised by a large body of research as those which, if managed poorly, may be hazardous to people's health and wellbeing. Importantly, while these 10 factors have the potential to be a threat to health and safety, if managed well, they can be positive and enriching for both the organisation and workers. A similar taxonomy can be found in ISO45003, grouped under work organisation, social factors at work, and work environment, equipment and hazardous tasks.

Table 1: A taxonomy of psychosocial hazards (Adapted from Leka and Cox, 2008).

Content of work	
Job content	Lack of variety, fragmented or meaningless work, under use of skills
Workload and work pace	Work overload or under load, machine pacing, high levels of pressure, being continually subject to deadlines
Work schedule	Shift working, night shifts, inflexible work schedules, unpredictable hours, long or unsociable hours
Environment and equipment	Inadequate equipment availability, suitability or maintenance; poor environmental conditions such as lack of space, poor lighting, excessive noise
Context of work	
Control	Low participation in decision making, lack of control over workload, pacing, shift working, etc.
Organisational culture and function	Poor communication, lack of definition of, or agreement on, organisational objectives
Interpersonal relationships at work	Social or physical isolation, poor relationships with superiors, interpersonal conflict, lack of social support, bullying/harassment/violence
Role in the organisation	Role ambiguity, role conflict, and responsibility for people
Career development	Career stagnation and uncertainty, under promotion or over promotion, poor pay, job insecurity, low social value to work
Home–work interface	Conflicting demands of work and home, low support at home, dual career problems

1.2 Psychosocial safety climate

Psychosocial safety climate (PSC) is defined as the "policies, practices, and procedures for the protection of worker psychological health and safety" (Dollard & Bakker, 2010). PSC comprises four key elements: management commitment and support; priority for psychological health; organisational participation; and organisational communication (Dollard & Bakker, 2010; Hall, Dollard & Coward, 2010; Dollard et al., 2017).

PSC is described as the preeminent antecedent of stress-related illness, and as an 'upstream factor' (Dollard & Bakker, 2010) determining job demands and resources, worker engagement and psychological health. Enhancing the PSC of organisations is therefore likely to reduce the likelihood of psychosocial risks (demands) and increase workplace resources and subsequently reduce the risk of psychological ill-health among employees.

The NZWB findings help direct attention to where intervention should be targeted: first and foremost, at enhancing the psychosocial safety climate as, consistent with previous research, a poor climate has been found to be the pre-eminent antecedent of stress-related illness – or the 'cause of the causes' (Dollard et al., 2012). Indeed, the closer interventions can get to the root cause of stress-related illness, the better the likelihood of influencing negative health outcomes and other unwanted impacts of psychosocial hazards.

1.3 Study aims

The aims of this study are to:

- Assess the prevalence, nature and impact of psychosocial risk factors in New Zealand workplace
- Identify the prevalence and nature of psychosocial health problems within the workforce
- Identify key workplace determinants of poor psychosocial health outcomes
- Provide participating New Zealand organisations with data on psychosocial risk for their organisation that can be monitored overtime and compared against other organisations in their sector and nationally.

2. Method

2.1 Respondents

Data were collected between September and October 2021 from a sample of workers (N=2029) employed within 23 New Zealand organisations or associations who were willingto distribute an online survey to their workforce or members.

2.2 Sample distribution

The ultimate goal of this barometer is to be able to report on a representative sample of New Zealand employees. However, it is important to note that we were wholly reliant on the generosity of participating organisations and their workers for collecting the data. The resulting convenience sample was comprised of organisations that were geographically dispersed and included those with employees spread across a number of locations as well as companies based on a single site. To help the reader assess the applicability of the NZWB results to the wider New Zealand working population, comparisons with Statistics New Zealand (SNZ) data sets are provided in Table 2.

2.3 Demographic and employment data for the 2021 NZWB sample

The sample included approximately 48% women, 51% men and 1% gender diverse, with 82% (down from 91% in 2020) working at least 40 hours per week.

One participating organisation which had less than 80 employees; all of the others had 100 or more employees.

Table 2 presents demographic data for the sample, with comparison to Statistics New Zealand (SNZ) data where applicable and to the previous NZWB data.

Overall, the demographics and employment data are very similar to that of the 2020 NZWB. However, as with the 2020 NZWB, the industry sectors represented are quite different from 2019, which may have been at least partly due to the COVID-19 pandemic reducing the likelihood of organisations from some sectors participating. For example, we had no participating organisations from the health or tourism sectors and only one from education.

Table 2: Individual and employment characteristics as a percentage of overall sample

	NZWB 2020 (N=1430)	NZWB 2021 (N=2029)	SNZ
Individual characteristics			
Gender[1]			
Men	62.2	51.3	52
Women	37.6	48.0	48
Gender diverse	0.2	0.7	6
Age (years)[1]			
25 or under	3.6	2.2	14.2
26-34	17.7	20.5	20.7
35-54	51.0	24.3	41.7
55-64	23.1	26.5	17.0
65 or over	4.6	20.7	6.3
Ethnicity[1]			
NZ European	72.5	69.1	70.9
Māori	9.9	8.1	14.0
Samoan	1.5	1.4	3.2
Cook Island Māori	0.5	0.5	1.3
Tongan	0.1	0.7	1.3
Niuean	0.3	0.4	0.5
Chinese	1.7	2.7	5.3
Indian	3.1	3.7	5.1
Other[2]	18.0	22.5	1.2
Job characteristics			
Tenure			
Less than a year	10.4	12.5	
1-2 years	19.4	15.7	
3-5 years	19.7	22.8	
6-10 years	16.3	18.0	
11-20 years	19.5	19.4	
21-30 years	5.0	6.0	
More than 30 years	9.7	5.7	
Contract type			
Permanent	93.8	93.9	
Fixed-term	4.3	3.6	
Casual	0.4	.4	
Contractor / Self-employed	1.0	1.6	
Other	0.5	.4	
Satisfaction with contract type			
Satisfied	94.5	95	
Dissatisfied	5.5	5	

[1] Statistics NZ data are from the 2018 census (note slight differences in age categories with census data)

[2] Statistics NZ data from Business Demography Statistics – Enterprises by Industry February 2021

	NZWB 2020 (N=1430)	NZWB 2021 (N=2029)	SNZ
Usual hours worked per week			
0-39	9	18	
40-45	67	58	
Over 45	24	24	
Satisfaction with usual hours worked per week			
Happy with the current working hours arrangement	70	65	
Would prefer to work fewer hours	27	32	
Would prefer to work more hours	3	3	
Industry classification (ANZSIC level 1)[2]			
Transport, Postal & Warehousing	51.5	28.3	3.9
Construction	14.3	35.0	8.3
Education and Training		12.9	8.4
Professional, Scientific and Technical Services	13.2	12.3	7.4
Information Media and Telecommunications	5.0	5.3	1.2
Health care and social assistance		4.5	11.4
Electricity, Gas, Water and Waste Services	12.3	1.2	0.9
Administrative and Support Services		<1%	4.8
Manufacturing	<1%	<1%	10.7
Agriculture, Forestry and Fishing		<1%	5.3
Job title			
Employee / Contractor (Non-managerial)	54.3	54.9	
First-line supervisor / Team leader	15.4	16.3	
Mid-level manager	19.2	15.1	
Senior manager	8.0	7.9	
Other	3.1	5.8	

2.4 Measures

A selection of standardised, validated measures along with demographic and job information were included in the online survey which took respondents approximately 20 minutes to complete.

Psychosocial Safety Climate

Psychosocial Safety Climate (PSC) was measured using the PSC-12, a survey questionnaire designed to consider the influence of senior management practices on the psychosocial health of employees. Four domains, which each include three items, invite responses about:

1. Management commitment and support for psychological health and safety (e.g., senior management acts decisively when a concern of an employee's psychological status is raised)
2. Management prioritisation of psychological health and safety (e.g., senior management considers employee psychological health to be as important as productivity)
3. Employee participation in psychological health and safety (e.g., employees are encouraged to become involved in psychological safety matters)
4. Organisational communication with employees about psychosocial health and safety (e.g., there is good communication about psychosocial issues which affect workers) (Hall et al., 2010).

Respondents provided responses on a five-point Likert scale ranging from "strongly disagree" to "strongly agree".

The overall PSC score was calculated as the sum of the 12 items. The higher the overall PSC score, the more likely the psychosocial safety climate will be associated with favourable psychological and physical health and safety. Published benchmarks for PSC indicate that a score of 41 and over is a 'best-practice standard' threshold which is associated with a low risk of employee job strain and depressive symptoms (Bailey, Dollard & Richards, 2015). A PSC score of 37 and below is associated with a higher psychosocial risk, and negative outcomes such as employee job strain and depressive symptoms.

Job demands and Harm

Work life balance

Six items measured work–family and family-work conflict, using statements about the balance between work and personal life (Matthews, Kath & Barnes-Farrell, 2010). Respondents were asked the extent to which they agreed (using a Likert scale from 1, "strongly disagree", to 7, "strongly agree") with three items assessing work-family conflict and three items assessing family-work conflict.

Job insecurity
The Job Insecurity Scale (JIS) (Vander Elst, De Witte & De Cuyper, 2014) was used to ask respondents to express the extent to which they agreed or disagree with four statements about their job security. This provides insight into their perception about current and future job loss. The validity and reliability of the JIS scale has been demonstrated across five European countries.

Job demands: mental and physical
Respondents were asked to indicate the extent to which they agreed with five statements about the physical demands of their work, and five statements about the mental demands. Their agreement with the statements was indicated using a 5-point scale (1, "strongly disagree" to 5, "strongly agree") (Choi et al., 2012).

Sickness presenteeism: working even though you are unwell
This scale measured the degree to which people went to work even though they were unwell. Respondents were asked how frequently (never, once, two to four times or more than five times) during the last six months they had gone to work feeling unwell, despite having symptoms such as a headache or backache (Lu et al., 2013).

Negative acts
The Short Negative Acts Questionnaire (S-NAQ) was used to indicate the frequency of exposure, over a six-month period, to negative interpersonal and work-related behaviours while at work. Respondents were asked how often (never, now and then, monthly, weekly or daily) they had been subjected to negative acts at work, using nine items relating to person-oriented, work-related, and social exclusion negative behaviours found to be associated with bullying situations (Notelaers & Einarsen, 2019).

Workplace bullying, cyber-bullying and sexual harassment
Workplace bullying, cyber-bullying and sexual harassment were measured using self-reporting questions whereby respondents were asked if they had observed (witnessed) these behaviours towards other people, or if they had been subjected to these behaviours at the workplace themselves in the past six months (Hauge, Skogstad & Einarsen, 2010; Farley et al., 2016; Nielson et al., 2010).

Definitions of bullying, cyber-bullying and sexual harassment were provided to reduce possible variations on respondents' interpretation. The respondents selected one response from the following options: no; yes, but only rarely; yes, now and then; yes, several times a week; and yes, almost daily, to being subjected to the behaviours indicated by the definition over a six-month period.

Bullying was defined in the survey as:
> "a situation where one or several individuals persistently over a period

of time perceive themselves to be on the receiving end of negative actions from one or several persons, in a situation where the target of bullying has difficulty in defending him or herself against these actions. We do NOT refer to a one-off incident as bullying".

Cyberbullying was defined as:
"a situation where one or several individuals, persistently over a period of time, perceive themselves to be on the receiving end of negative actions conducted through technology (e.g., phone, email, websites and social media) which are related to their work context. In this situation, the target of workplace cyberbullying has difficulty defending themselves against these actions".

Sexual harassment was defined as:
"unwanted sex-related behaviours at work that are perceived as offensive, exceed your coping resources, or threaten your wellbeing. This includes unwelcome verbal and non-verbal sexual behaviours, as well as undesired physical behaviours".

Job Resources

Job flexibility
Job flexibility was measured using a 9-item scale drawn from three of the sub-dimensions of the 'New Ways of Working Scale' developed by Ten Brummelhuis et al. (2011): flexibility of time, flexibility of place and freedom over use of communication channels. A sample item for flexibility in place was 'I choose which location I work from'; flexibility in time was measured by 'I decide when my business day starts'; and control over communication was assessed using 'I have the feeling of being in control over the communication I have for work'.

Inclusion
Inclusion was measured with a 14-item scale (Mor-Barak & Cherin, 1998). Respondents were asked the extent to which they "feel a part of critical organisational processes" with respect to 14 statements encompassing three domains: work group involvement, influence in decision making, and access to communications and resources.

Perceived management competence
In order to understand respondents' perceptions of management competencies, 12 statements asked the extent to which they agreed (from strongly disagreed to strongly agreed) that their immediate manager demonstrated particular management qualities.
These were based on a "management competencies for preventing and reducing stress at work" (MCPARS) framework (Yarker, Lewis & Donaldson-Fielder, 2008),

which included participant perceptions of their managers' competencies suchas integrity, problem-solving skills and conflict management.

Co-worker support
Respondents were asked about the support that they receive from colleagues at work, including helpful information or advice, sympathetic understanding and concern, clear and helpful feedback, and practical assistance (O'Driscoll, Brough & Kalliath, 2004). Their agreement with the four statements was indicated using a 6-point scale (1, "never" to 6, "all the time").

Perceived organisational justice
A six-item scale asked respondents about their experience of fairness within their organisation (Ambrose & Schminke, 2009).

Worker health and wellbeing

Psychological distress
A sub-scale of the K6 scale, comprising six questions about emotional states, was used to measure psychological distress (Kessler et al., 2003). Responses were based on how the respondent was feeling in the past four weeks and scored on a five-point scale from "none of the time" to "all of the time".

Mental wellbeing
The World Health Organisation Five Wellbeing Index (WHO-5) was used to measure mental wellbeing over the last two weeks (World Health Organization, 1998). Respondents were asked how they had been feeling (using a Likert scale from "at notime" to "all the time") with respect to five statements, for example "I have felt cheerful and in good spirits." The total raw score of 0 to 25 is multiplied by 4 to give afinal score of 0-100, with 0 representing the worst imaginable wellbeing.

Physical symptoms
Questions about physical symptoms were based on the Standardised Nordic questionnaires for the analysis of musculoskeletal symptoms (Kuorinka et al., 1987). Respondents were asked to indicate "yes" or "no" to whether they have "at any time in the last 12 months had trouble (ache, pain, discomfort, numbness) in any part of your body."

Those who answered "yes" were asked to indicate which parts of the body they have had trouble with in the last 12 months, and in the last 7 days. A further question asked about the extent to which these physical symptoms had prevented them from carrying out their normal activities during the last 12 months, using a scale from 1, "not prevented at all" to 5, "prevented to a significant extent".

Indicators of organisational wellbeing

Job satisfaction
Overall job satisfaction was measured by asking respondents to rate how they felt about their job, "taking everything into consideration", using a scale ranging from 1, "extremely dissatisfied" to 7, "extremely satisfied" (Warr, Cook & Wall, 1979).

Engagement
To measure work engagement, respondents were asked how they feel at work with respect to nine statements from the Utrecht Work Engagement Scale – Shortened Version (UWES-9; Schaufeli, Bakker & Salanova, 2006). The statements described feelings of engagement, such as 'at my job, I feel strong and vigorous' and 'I am immersed in my work'. The frequency of experiencing these feelings were measured on a 7-point scale ranging from 1, "never" to 7, "every day".

Intention to leave
An indication of the commitment of respondents to their organisation was measured by asking for their level of agreement to three items about their intention to leave (Meyer, Allen & Smith, 1993), using a 7-point scale from 1, 'strongly agree' to 7, 'strongly disagree'.

Absenteeism
A single item from the World Health Organisation Work Performance Questionnaire (HPQ; Kessler et al., 2003) was used to measure absenteeism. This item asked respondents to report the number of entire workdays missed because of problems with physical or mental health.

Productivity presenteeism: Effect on productivity due being unwell at work
The Stanford Presenteeism Scale 6 (SPS-6) was used to measure health status and employee productivity by asking the extent to which respondents agreed with six statements about their work experiences in the past month (Koopman et al., 2002). Items were scored 1-5 and summed. The SPS-6 measures potential productivity losses due to people being unwell at work. A higher score means that the person is less likely to have performance issues despite being unwell at work.

Stress
A single item asked respondents to rate the amount of stress felt in their job between 1 and 10, where 1 is "no stress" and 10 is "extreme stress" (Stanton et al., 2001).

2.5   Procedure

The opportunity to participate in the 2021 NZWB survey was promoted through the Healthy Work Group's network in addition to contacting organisations that had participated in earlier NZWB surveys. There was no cost to participate for organisations or respondents beyond the time associated with completing the survey. A link to the survey was provided by the research team to allow organisations to electronically distribute the survey to their employees. Participating organisations with 50 or more respondents received an anonymised organisational-level report to allow comparison of their outcomes against national data.

2.6   Individual organisation reports

An example of an organisational report is provided in Appendix 1. The report provides easy to understand feedback to the organisation on their psychosocial safety climate and specific psychosocial hazards. Firstly, PSC mean scores were presented and compared with published industry benchmarks for best practice. Secondly, the means and standard deviations (SD) or self-reported percentages for the remaining variables were presented. This allowed organisations to compare their scores with the entire 2021 sample of respondents. In addition, mean scores for the organisation were rated, using a 'traffic light' system (Table 3), to compare results with the mean scores of the entire 2021 NZWB sample (i.e., one SD either side of the mean scores from all 2021 NZWB respondents).

Table 3: Rating used to compare mean scores of the organisation with the entire 2021 sample

	Indicates that the results from your organisation are *significantly more favourable* than the results from the entire 2021 NZWB sample.
	Indicates that the results from your organisation are *broadly comparable* with the results from the entire 2021 NZWB sample.
	Indicates that the results from your organisation are *significantly less favourable* than the results from the entire 2021 NZWB sample.

3. Results

The following sections outline results from the 2021 NZWB, comprised of 23 organisations and 2029 individual respondents.

3.1 Relationships between study variables

Appendix 2 shows correlations between all continuous study variables. As with most studies with relatively large samples, statistically significant correlations were found between most study variables. For this reason, it is helpful to consider the strength of the correlation as well as whether its relationship with other study variables is in the expected direction (positive or negative). A correlation coefficient r can be considered weak when r is less than or equal to 0.20, moderate when $r = 0.30$, and strong when r is equal to or greater than 0.50 (Cohen, 1992). Given the large sample size, in this report correlations were typically only considered important if r was greater than 0.40.

Not surprisingly, and reassuringly in relation to sample equivalence/comparability, most relationships between variables reported in the 2020 report were also evident in the 2021 data, and for most, the magnitude of these relationships did not vary in any meaningful way. Hence many of the relationships reported here are similar to those reported in 2020.

High levels of PSC were associated with higher levels of:
- Perceived management competence
- Co-worker support
- Inclusion
- Flexibility
- Perceptions of organisational justice
- Mental wellbeing
- Employee engagement, and
- Job satisfaction.

PSC was also associated with lower levels of:
- Lower job security
- Work-family conflict
- Bullying
- Psychological distress, and
- Intention to leave.

This is consistent with the wider research on PSC that indicates its association with higher levels of workplace resources and lower levels of distress. Furthermore, the three other variables which appear to be most strongly related to key variables in the NZWB were perceived management competence, inclusion, and organisational justice.

Higher levels of perceived management competence were very strongly related to higher levels of psychosocial safety climate, co-worker support, inclusion, organisational justice, job satisfaction, intention to leave and lower levels of bullying. Similarly, feelings of inclusion were related to higher levels of psychosocial safety climate, management competence, co-worker support, perceived organisational justice, job flexibility, mental wellbeing, engagement, job satisfaction, and to less intention to leave and bullying.

As with previous reports, taken together these findings indicate the importance of a positive workplace psychosocial environment for individual and organisational wellbeing.

3.2 Psychosocial safety climate

As described in Section 2.4, PSC comprises four domains: senior management support; management priority for employee psychological health and safety, communication about psychological health and safety, and participation and involvement. Each domain was computed as the sum of three items on scales from 1-5, so the minimum possible score for each domain was 3, and the maximum possible score was 15.

The overall PSC scale was computed as the sum of 12 items. The minimum overall PSC score was therefore 12, and the maximum possible score was 60.

Overall PSC ratings and ratings of the four individual domains of PSC were acceptable (Table4), indicating moderate levels of psychosocial safety climate in the participating organisations. With respect to the published benchmarks for PSC, the overall scorewas below the 'best-practice standard' threshold of 41, which is associated with a low risk of employee job strain and depressive symptoms (Bailey, Dollard & Richards, 2015), but above 37. A score below 37 is associated with negative outcomes such as employee job strain and depressive symptoms. All scores were similar to the 2019 NZWB.

Table 4: Psychosocial safety climate subscales and overall scale: means and standard deviations.

Domain	Minimum possible score	Maximum possible score	Mean	Standard deviation
Management support	3	15	9.87	3.34
Management priority	3	15	9.93	3.44
Communication	3	15	9.96	2.90
Participation	3	15	9.92	2.98
Overall psychosocial safety climate	12	60	39.67	11.75

- Overall reported PSC appeared to be more favourable across the board when compared to 2020.

- The overall PSC mean score was 39.7. In relation to the published benchmarks for PSC:

  - 52.2% of respondents indicated scores greater than or equal to 41, suggesting a *low risk* of negative psychosocial outcomes for these workers (up from 48.6% in 2020).

  - 39.5% of respondents reported scores of 37 and below, which can indicate *high psychosocial risk* to these workers and negative outcomes such as job strain and depression (down from 42.4% in 2020)

- Those who reported working more than 50 hours a week reported less favourable PSC than those who worked fewer hours.

- Men reported more favourable PSC than women. This trend was most pronounced at the first-line supervisor/team leader level, where men respondents reported an average PSC of 40.8 whereas women respondents reported an average of 37.3.

- PSC varied as a function of tenure, with new employees reporting the highest while long term employees reported lowest.

- Senior managers reported significantly higher PSC (46.2) than other roles. More generally there was a consistent linear relationship between role and PSC with employees reporting the lowest (38.3).

- Higher PSC was associated with lower levels of work-family conflict and bullying.

- Higher PSC was associated with increased perceptions of management competence, co-worker support, inclusion, job flexibility, and perceptions of justice.

- In terms of individual wellbeing, higher levels of PSC were associated with less psychological distress and better mental wellbeing.

- For organisational wellbeing, higher PSC was associated with higher levels of employee engagement, job satisfaction, and lower intentions to leave and stress.

3.3 Additional job resources

Perceived organisational justice

- Organisational justice was strongly related to many key variables in the barometer. Higher perceptions of justice were most strongly related to higher levels of PSC, management competence, inclusion, co-worker support, mental wellbeing, engagement, job satisfaction and lower levels of work to family conflict, job insecurity, intentions to leave, and bullying.

- Men reported higher levels of organisational justice than women.

- Respondents aged between 35 & 54 reported the lowest levels of organisational justice.

- In relation to an individual's role within the organisation, perceptions of organisational justice varied in a linear fashion with non-managerial workers reporting the lowest levels and senior managers the highest levels.

- Respondents who reported working more than 50 hours a week reported less organisational justice than those who worked fewer hours.

Inclusion

- Like many of the job resources included in this barometer, perceptions of inclusion were strongly related to many of the key variables. Inclusion was most strongly related to PSC, perceived management competence, co-worker support, organisational justice, job flexibility, mental wellbeing, engagement, job satisfaction, and lower levels of intentions to leave, psychological distress, job insecurity, work to family conflict and bullying.

- Men reported perceiving significantly greater levels of inclusion than women.

- Causal workers reported perceiving significantly less inclusion than all other work arrangements.

- Similarly, those who reported working more than 50 hours a week reported less inclusion than those who worked less hours.

- In relation to role, perceptions of inclusion varied in a linear fashion with non-managerial workers reporting the lowest levels and senior managers the highest.

Perceived management competence

- Higher levels of perceived management competence were associated with higher levels of PSC and all the measured job resources including co-worker support, inclusion, and perceived organisational justice. Higher perceptions of management competence were also associated with more engagement and job satisfaction and with less bullying, work-family conflict, job insecurity and intentions to leave.

- Mid-level and senior-level management respondents reported higher perceptions of management competence than non-managerial respondents.

- Those aged 45-64 reported the lowest perceptions of management competence.

- The longer participants had worked at their workplaces, the lower their perceptions of management competence were.

- Finally, again, those who reported working 50 hours or more a week reported significantly lower perceptions of management competence.

Co-worker support

- Higher co-worker support was associated with higher PSC, management competence, organisational justice, inclusion, engagement and job satisfaction, and less bullying.

- The highest levels of co-worker support were reported by women.

- In relation to role, co-worker support varied in a linear fashion with non-managerial workers reporting the lowest levels and senior managers the highest levels

- Respondents under 35 reported the highest levels of co-worker support

- Perceptions of support also varied in a negative linear with tenure, with those who had worked at their workplaces for 30 years or more reporting the lowest levels.

- As with other job resources, those who reported working 50 hours or more a week reported significantly less co-worker support.

Job flexibility

- Levels of reported job flexibility were higher than in the 2020 data. This is likely

due to the ever-increasing pressures brought about by COVID and associated work from home directives. This brings into question whether, in the present context, job flexibility is seen as a supportive 'job resource' or as a necessary adaptation to the pandemic.

- Higher levels of job flexibility were most related to higher inclusion and less work to family conflict. Furthermore, roles which have high physical demands were associated with less job flexibility.

- In contrast to last year, men reported having significantly greater job flexibility than women.

- In relation to contract type, casual employees reported the least amount of Job flexibility.

- In relation to role, perceptions of job flexibility varied in a linear fashion with non-managerial workers reporting the lowest and senior managers the highest levels.

- Again, those who reported working 50 hours or more a week reported significantly less job flexibility.

3.4   Job demands and harm

Job demands- mental

- High mental job demands were associated with higher work-to-family conflict and job stress, and lower levels of perceived organisational justice and mental wellbeing.

- Women reported significantly higher mental job demands than men.

- Significantly higher mental job demands were reported by those between the ages of 24 & 54and those who worked 50 hours or more a week.

- Respondents in non-managerial positions had the lowest mental job demand scores, with those in management roles reporting the highest.

Job demands- physical

- Reported physical demands were higher when compared to 2020 data.

- High levels of physical job demands were associated with less job flexibility and employee engagement.

- In contrast to 2020 women reported significantly greater physical job demands than men.

- Physical demands appeared to be linearly related to age with the lowest physical job demands reported by those over 65 years of age.

- Employees and first-line managers/team leaders reported the highest levels of physical job demands.

- Employees who reported working less than 40 hours or more than 50 hours a week reported the greatest physical demands.

Work-family and family-work conflict

- Levels of reported family to work conflict have increased compared to 2020 data. This may have been due to the novelty of working from home wearing off in this second year of Covid restrictions?

- Similar to 2020, work interfering with family was strongly related to many variables measured. However, the inverse tended not to be the case (i.e., family interfering with work) despite the increase in the number of people 'working from home' during the data collection period.

- Specifically, the level of work-to-family conflict (as opposed to family-to-work conflict) was associated with many of the key variables in this barometer. It was most strongly related to mental job demands, sickness presenteeism, psychological distress, intentions to leave stress, and lower PSC, inclusion, management competence, organisational justice, mental wellbeing, job satisfaction, and productivity presenteeism.

- Men reported significantly higher family-to-work conflict (but unlike last year, not work to family) than women.

- Work-family conflict and family-work conflict were lowest for the youngest (25 & under) and oldest (65+) groups, those who worked less than 50 hours a week, and those who had been in the job for 12months or less.

- Family-to-work conflict was highest for employees and first-line managers/team leaders.

Job insecurity

- Job insecurity was associated with more psychological distress and intention to leave and with lower feelings of inclusion, perceptions of organisational justice and job satisfaction.

- It is worth noting that the relationship between job insecurity and organisational justice is substantially stronger than it was in 2020 (-0.43 vs -0.31) suggesting that perceptions of fairness within the organisation are an

increasingly important factor in feeling secure in the job.

- Similarly, the relationship between job insecurity and co-worker support has increased substantially from last year (-0.31 vs -0.17), potentially pointing to the importance of co-worker support in the current organisational climate.

- Unlike 2020, where women reported significantly higher levels of job insecurity than men, there were no gender differences this year.

- Permanent workers reported the lowest levels of job insecurity.

- Job insecurity varied in a linear fashion in relation to role, with employees reporting the highest level and senior management the lowest.

- Those under 35 years of age reported significantly lower insecurity than older respondents.

- Interestingly, those who worked more than 50 hours a week reported the highest levels of insecurity.

Sickness Presenteeism

- Sickness presenteeism was strongly associated with higher levels of work-to-family conflict and psychological distress.

- Women were more likely than men to report coming into work when they felt unwell.

- Those over 65 years of age reported significantly lower rates of going to work when unwell, than all other age groupings.

- Respondents who reported working more than 50 hours were significantly more likely to report coming into work when they felt unwell.

Workplace bullying, cyber-bullying and sexual harassment

Table 5 shows the proportion of self-reported bullying, cyberbullying and sexual harassment within the sample. It shows the percentage of respondents who reported 'yes' (rarely or more frequently) to witnessing or experiencing these behaviours.

The results across all six categories are similar to those reported in the 2020 and 2019 barometer.

Table 5: Reported bullying, as a percentage of overall sample

	Total reporting Yes (%) (2020%)	
Experienced bullying themselves (self-report)	17.0	(17.8)
Observed bullying towards other people	36.8	(39.9)
Experienced cyberbullying themselves	5.6	(5.2)
Observed cyberbullying towards other people	11.2	(9.4)
Had been subjected to sexual harassment themselves	2.5	(2.0)
Had observed sexual harassment of other people	6.5	(7.1)

- As with previous barometers, the two most frequently reported negative behaviours associated with bullying were "someone withholding information which affects your performance" and "being ignored by people at work (being ignored, excluded)."

- Workplace bullying was most strongly related to low PSC, perceptions of management competence, inclusion, organisational justice and low job satisfaction.

- Those who reported working more than 50 hours a week reported significantly more negative behaviours associated with bullying than those respondents who worked fewer hours.

- Respondents aged 65 and older, reported the least number of negative behaviours associated with bullying.

3.5 Worker health and wellbeing

Psychological distress

- Higher levels of psychological distress were associated with many of the variables in this barometer. Psychological distress was most strongly related to high levels of work-to-family conflict, sickness presenteeism, intentions to leave, and, low levels of inclusion, mental wellbeing, engagement, productivity presenteeism and job satisfaction.

- Psychological distress was higher among women and among younger workers.

- There was a linear relationship between psychological distress and role, with employees reporting the highest and senior managers the lowest.

- In relation to contract type, lower levels of distress were reported by contactors/self-employed, while the highest levels were reported by those who were on fixed-term contracts.

Mental wellbeing

- As with psychological distress (but in the reverse direction), mental wellbeing was associated with many of the variables in this barometer. It was most strongly related to high levels of PSC, organisational justice, engagement, job satisfaction, inclusion and productivity presenteeism, and lower levels of psychological distress, work-to-family conflict, stress and intentions to leave.

- Levels of mental wellbeing were higher among men, and older workers.

- Mental wellbeing was also higher for those respondents in managerial roles compared to non- managerial roles.

Physical symptoms

- Of the 1534 (75.6%, up from 71.9% in 2020) respondents who reported physical trouble (aches, pain, discomfort, numbness) during the previous 12 months, just over 68 percent (68.2%, up from 62.7% in 2020) reported that it prevented them from carrying out normal activities to at least a certain extent. An additional five percent (up from 4.5% in 2020) of this group reported that it prevented them from carrying out their normal activities to a significant extent.

- Respondent age was not related to these results in any meaningful way.

- As was reported in the 2020 report, again the most frequently reported symptoms were in the neck (n=1008), shoulders (n=1005) and lower back (n=996).

3.6   Indicators of organisational wellbeing

Engagement

- Levels of engagement were strongly related to many key variables in this barometer. Higher levels of engagement were most strongly related to higher PSC, inclusion, co-worker support, organisational justice, mental wellbeing, job satisfaction, and lower psychological distress, intention to leave and physical job demands. However, higher levels of engagement were also related to higher levels of productivity presenteeism.

- Engagement tended to be related to age in a positive fashion - older respondents were significantly more engaged in their jobs than younger respondents. Respondents aged 25-44 reported the lowest levels of

engagement.

- In relation to respondents' roles, engagement levels tended to vary in a linear fashion with non-managerial employees reporting the least engagement while senior managers reported the highest levels.

Job satisfaction

- Like engagement, job satisfaction was strongly related to many key variables in this barometer. Higher job satisfaction was most strongly related to higher PSC, management competence, inclusion, organisational justice, mental wellbeing, engagement, co-worker support, and low levels of psychological distress, work-to-family conflict, bullying, and intention to leave. As with job engagement, higher job satisfaction was also related to higher levels of productivity presenteeism.

- Men reported significantly higher levels of job satisfaction than women.

- Respondents who worked more than 50 hours a week reported significantly less job satisfaction than those who worked fewer hours.

- In relation to respondents' roles, and like engagement, job satisfaction tended to vary in a linear fashion with non-managerial employees reporting the least job satisfaction while senior managers reported the highest.

Intention to leave

- Higher intentions to leave were strongly associated with many key variables including lower feelings of inclusion, perceived organisational justice, job satisfaction, a less favourable psychosocial safety climate, lower mental health, more psychological distress, less management competence, and less engagement.

- Women reported significantly greater intentions to leave than men.

- Contractors/self-employed and those on fixed-term contracts reported significantly higher intentions to leave than all other work arrangement groups.

- Those aged 65 and over had the lowest intentions to leave out of all age groups.

- In relation to respondents' roles, intentions to leave tended to vary in a linear fashion with non-managerial employees reporting the greatest intentions to leave while senior managers reported the lowest.

Absenteeism

- Similar to 2020, exactly half the respondents (50%) reported an absence from work during the last 12 months due to 'physical or mental health'.

- Up slightly on last year, of those respondents who reported being absent, 75 percent reported having had seven or fewer days absent from work during the last 12 months due to 'physical or mental health'.

- Younger respondents were more likely to report an absence from work during the last 12 months due to 'physical or mental health than older respondents, however, of those respondents who reported being absent there were no age differences in relation to the number of days absent.

- Women were more likely to have reported an absence from work during the last 12 months due to 'physical or mental health than men, however of those respondents who reported being absent there were no differences in relation to the number of days absent.

Productivity presenteeism

- High levels of productivity presenteeism (to be less likely to have performance issues despite being unwell at work) was most strongly related to low levels of psychological distress and high levels of mental wellbeing, job satisfaction and engagement.

- Men were significantly more likely to report that they were less likely to have reduced performance even though they were unwell at work than women.

- Productivity presenteeism varied in a linear fashion in relation to age with older respondents reporting that they were less likely to have reduced performance even though working while unwell.

- In relation to respondents' roles, productivity presenteeism tended to vary in a linear fashion with non-managerial employees reporting that they were most likely to have reduced performance while working while unwell while senior managers reported the lowest impact on their performance.

- Respondents on fixed-term contracts were most likely to report that they had reduced performance while unwell at work.

Job related stress

- Higher levels of job-related stress were related to higher mental job demands, work to family conflict, psychological distress and lower levels of mental wellbeing.

- Women reported significantly higher levels of job-related stress than men.

- Stress levels were lowest for those aged under 25 and those aged 55 and above.

- In relation to respondents' roles, job related stress tended to vary in a linear fashion with non-managerial employees reporting the lowest job-related stress while senior managers reported the highest.

- Those who reported working more than 50 hours a week reported significantly greater levels of job-related stress.

4. Summary

The NZWB is designed to inform national, industry, and organisational approaches to psychosocial risk prevention at work, by assessing workplace indicators of mental health, stress-related conditions and some aspects of physical health. It also aims to provide annual data from which the effectiveness of implemented policies and programs can be assessed over time.

The NZWB represents the first national-level psychosocial risk surveillance scheme in New Zealand. Alongside its primary aim of producing information on the prevalence, nature, and impacts of psychosocial hazards in New Zealand workplaces, the NZWB provides individual reports for participating organisations. These reports encourage organisations to develop measures to address psychosocial hazards in their workplaces and to monitor their performance over time as well as provide benchmarks against other organisations.

Psychosocial hazards and their associated risks include aspects of the design and management of work, and its social and organisational contexts, that have the potential to cause psychological or physical harm. Research in New Zealand and internationally has clearly demonstrated the association between psychosocial hazards and negative outcomes for individual and organisational wellbeing and performance. Improvements to the psychosocial environment within which individuals work have produced a significant return on investment fororganisations.

Overall, although there were some differences which have been noted in this report, the 2021 results appear remarkably like those of 2020 and 2019. On the surface this might seem to suggest that the COVID-19 pandemic which dominated (and continues to dominate) many aspects of the world of work during 2020 and 2021 had little effect on the extensive range of variables measured in this barometer. However, we would suggest that is not the case. It appears that the organisations which were able and willing to be involved in the 2020 and 2021 Barometers were those that were affected to a lesser extent by COVID-19. For example, unlike in 2019 (pre-Covid-19), we had no participating organisations from the Health or Tourism sectors and only one from Education (sectors badly hit by COVID-19). Furthermore, only people who were employed at the time of the administration of this survey could participate, potentially skewing the results towards an appearance of 'business as usual'.

Another potential factor is that several of the significant contributing regular organisations have actively been using the results of past NZWBs to direct their healthy work initiatives during this COVID period. Significant increased job resources like PSC, perceptions of management competence, aspects of inclusion and job flexibility noted in this year's report support this assertion.

It is reasonable to expect that the increases in organisational resources developed by these organisations have helped offset some of the challenges brought by COVID-19. However, even with these potential offsets, mental wellbeing and psychological distress were less favourable this year compared to 2020.

4.1 Key findings

4.1.1 The 4 features of healthy work

Our analyses point to several key findings which we believe should be the primary focus of healthy work initiatives to address psychosocial hazards and their associated risks, as well as to improve wellbeing.

As with 2020, overall, **four key features of the work environment** were associated with positive outcomes for individuals and organisations. These are listed in order of the strength of their relationships with key outcome variables (identified through multiple regression analyses). The results of the 2020 and 2021 NZWB point to the following 4 'elements' of healthy work being important.

1. Perceptions of **organisational justice** - being treated fairly across all areas of the organisation, and all aspects of the employment relationship.

2. Feelings of **inclusion** - being involved in the decisions affecting work and having access to information which affects work, including having the required resources to get the job done.

3. A positive, thriving **psychosocial safety climate (PSC) -** which involves senior management's visible, substantive and on-going commitment and prioritisation of psychological health and safety, with the participation of workers in the development of these activities.

4. Perceptions of **management competence** which include management qualities including integrity, empowerment, conflict management, being genuinely empathetic and being accessible.

These four variables appear to be the key resources which organisations, industries and policy makers should focus on for developing and sustaining worker health and wellbeing, and for positive individual and organisational outcomes more generally.

4.1.2 Additional noteworthy trends

- Across nearly all indicators of individual health and well-being, and more general organisational wellbeing, **women** reported significantly less favourable results than **men**. Furthermore, women tended to report less

favourable job resources (e.g., inclusion, PSC, organisational justice, job flexibility) – the only exception to this was in relation to co-worker support.

- Those respondents who **worked over 50 hours a week** consistently reported significantly lower job resources and greater job demands than those who worked less hours. Correspondingly, those who reported working more than 50 hours a week also reported significantly lower job satisfaction and higher levels of work-related stress. This suggests that specific focus may need to be applied to this group of employees.

- An additional trend worth reflecting on is that, especially in relation to job resources (such as those highlighted above), respondents in **managerial roles** tended to have more favourable evaluations than **non-managerial** workers. This trend was generally linear with non-managerial workers reporting the least positive and senior managers the most positive perceptions. As suggested last year, organisations might want to consider what this trend means. There are three likely scenarios: either (1) these roles actually do have access to different levels of resources;or (2) management is unjustifiably optimistic about the levels of organisational resources; or (3) employees are unaware of resources available to them. We would argue that all of these scenarios warrant further investigation and potential intervention.

- Potentially connected to the above trend, there was a consistent linear trend in relation to the role that respondents held within the organisation. This occurred across effectively all indicators of individual health and well-being and more general organisational outcome measures with employees reporting the least favourable results, and senior management the most favourable.

- Lastly, the toxic effects of **bullying** (and other forms of harm), **work to family conflict** and **family-to-work conflict** (which increased this year) were evident in their strong relationships with reduced job satisfaction, inclusion, and mental wellbeing, and increased distress and intentions to leave. These results strongly suggest that, wherever possible, organisations need to prioritise healthy workplace relationships and effective work-life balance.

4.1.3 Key differences in the 2021 data compared to 2020

Not surprisingly, given the continuing COVID environment, individual indicators of mental wellbeing and psychological stress were significantly less favourable when compared to 2020. It was somewhat reassuring that respondents felt that they had significantly more flexibility in relation to how, when, and what they did as part of their jobs than reported in 2020. However, it needs to be pointed out that although

job flexibility is typically seen as a positive job resource, given that it was likely to have been imposed due to the COVID-19 context we should be cautious in interpreting an increase in job flexibility as being a positive factor for individual wellbeing and organisational performance outcomes. This may also relate to the reported increases in family-to-work conflict, and physical work demands this year compared to 2020.

On a more positive note, this year's barometer found a significant increase in 3 of the four key aspects of the work environment discussed above compared to 2020. Specifically, respondents reported significantly higher psychosocial climate, management competency, and influence in decision making (an aspect of inclusion) than in 2020. It is encouraging to see these increases. From talking to our participant organisations, it seems that these changes have primarily been driven by organisational initiatives. The increases in these job resources may have been somewhat protective in relation to individual and organisation wellbeing indicators during this difficult time, despite the apparent decrease in mental wellbeing and an increase in psychological distress. It appears that organisational initiatives have been either part of a normal ongoing desire to develop job resources to improve wellbeing, as suggested in previous reports or as a reactive strategy to counteract the effects of the ongoing COVID environment.

4.2 Overall Conclusions

- Overall, as we stated in 2020, although organisational leaders are themselves under pressure and may feel less able to prioritise healthy work initiatives in this ongoing, often uncertain, COVID-19 influenced economy, the results strongly indicate that employee and organisational productivity and wellbeing will be enhanced by increasing inclusion, organisational justice and management competence and by promoting a positive psychosocial safety climate. Certainly, our results strongly suggest that many organisations are currently conducting these types of initiatives.

- More specifically, given the interrelated and cumulative nature of the 4 main aspects of the work environment /job resources we have advocated in these reports, we suggest that organisational initiatives place increased focus on organisational justice and the 'work group involvement', and 'access to communications and resources' aspects of inclusion to further bolster individual and organisational wellbeing, as we did not see find any change in these resources when compared to 2020.

- Furthermore, we suggest that organisations consider their employee profile (e.g., roles held, gender, hours typically worked) when deciding on where to focus their initiatives.

4.3 Where to next in relation to the NZWB

Finally, given that this is the last iteration of the NZWB in its current form, it seems pertinent to reflect on what a future iteration might look like. We believe there are 4 types of interrelated tensions or considerations that need to be addressed:

- The value of longitudinal research with matched samples vs, the easier administration of larger but unmatched samples.
- The value of a lengthy and comprehensive questionnaire which includes a broad range of variables (such at the present NZWB) vs a shorter, more targeted questionnaire.
- A national focus vs an industry or organisational focus
- Identifying the most appropriate frequency of survey administration for both feasibility and usefulness.

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References

Ambrose, M. L., & Schminke, M. (2009). The role of overall justice judgments in organizational justice research: A test of mediation. *Journal of Applied Psychology, 94(2)*, 491.

Bailey, T. S., Dollard, M. F., & Richards, P. A. (2015). A national standard for psychosocial safety climate (PSC): PSC 41 as the benchmark for low risk of job strain and depressive symptoms. *Journal of occupational health psychology, 20(1)*, 15.

Bentley, T., Catley, B., Cooper-Thomas, H., Gardner, D., O'Driscoll, M., & Trenberth, L. (2009). *Understanding stress and bullying in New Zealand workplaces: Final report to OH&S steering committee*. Wellington, New Zealand.

Choi, B., Kurowski, A., Bond, M., Baker, D., Clays, E., De Bacquer, D., & Punnett, L. (2012). Occupation-differential construct validity of the Job Content Questionnaire (JCQ) psychological job demands scale with physical job demands items: a mixed methods research. *Ergonomics, 55(4)*, 425-439.

Cohen, J. (1992). A power primer. *Psychological bulletin, 112*(1), 155.

Cox, T., & Griffiths, A. (1995). The assessment of psychosocial hazards at work. In M. J. Shabracq, J. A. M. Winnubst, & C. L. Cooper (Eds.), *Handbook of work and health psychology* (pp. 127-146): Wiley & Sons,Chichester.

Cox, T., Griffiths, A., & Leka, S. (2005). Work Organization and Work-Related Stress. *Occupational hygiene,* 421-432.

Dollard, M. F., Dormann, C., Tuckey, M. R., & Escartín, J. (2017). Psychosocial safety climate (PSC) and enacted PSC for workplace bullying and psychological health problem reduction. *European Journal of Work and Organizational Psychology, 26(6)*, 844-857.

Dollard, M., Bailey, T., McLinton, S., Richards, P., McTernan, W., Taylor, A., & Bond, S. (2012). *Australian Workplace Barometer: Report on psychosocial safety climate and worker health in Australia*. University of South Australia, Magill SA 5072: Safe Work Australia.

Dollard, M., & 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.

European Agency for Safety and Health at Work (EU-OSHA). (2014). *Calculatingthe cost of work-related stress and psychosocial risks. European Risk Observatory Literature Review*. Luxembourg: Publications Office of the European Union.

European Agency for Safety and Health at Work (EU-OSHA). (2020). *ESENER 2019: what does it tell us about safety and health in Europe's workplaces.*

Luxembourg: Publications Office of the European Union.

Farley, S., Coyne, I., Axtell, C., & Sprigg, C. (2016). Design, development and validation of a workplace cyberbullying measure, the WCM. *Work & Stress, 30(4)*, 293-317.

Gardner, D., O'Driscoll, M., Cooper-Thomas, H., Roche, M., Bentley, T., Catley,B., Teo, S. & Trenberth, L. (2016). Predictors of workplace bullying and cyber-bullying in New Zealand. *International Journal of Environmental Research and Public Health, 13*(5), 448.

Hall, G. B., Dollard, M. F., & Coward, J. (2010). Psychosocial safety climate: Development of the PSC-12. *International Journal of Stress Management, 17*(4), 353.

Hauge, LJ., Skogstad A., & Einarsen, S. (2010). The relative impact of workplace bullying as a social stressor at work. *Scandinavian Journal of Psychology,51(5)*, 426-433.

HSE. (2018). Work Related Stress, Depression or Anxiety Statistics in GreatBritain 2018: Health and Safety Executive (HSE).

International Standards Organisation (2021). ISO 45003: Occupational health and safety management - Psychological health and safety at work: guidelines for managing psychosocial risks.

Kessler RC, Barker PR, Colpe LJ, Epstein JF, Gfroerer JC, Hiripi E, et al. (2003). Screening for serious mental illness in the general population. *Arch Gen Psychiatry, 60(2)*,184-9.

Koopman, C., Pelletier, K. R., Murray, J. F., Sharda, C. E., Berger, M. L., Turpin, R. S., ... & Bendel, T. (2002). Stanford presenteeism scale: health status and employee productivity. *Journal of occupational and environmental medicine, 44(1)*, 14-20.

Kroenke, K., & Spitzer, R. L. (2002). The PHQ-9: a new depression diagnostic and severity measure. *Psychiatric Annals, 32(9).*

Kuorinka, I., Jonsson, B., Kilbom, A., Vinterberg, H., Biering-Sørensen, F., Andersson, G., & Jørgensen, K. (1987). Standardised Nordic questionnaires for the analysis of musculoskeletal symptoms. *Applied ergonomics, 18(3),* 233-237.

Leka, S. and T. Cox (2008). *PRIMA-EF-Guidance on the European Framework for Psychosocial Risk Management: a resource for employers and worker representatives*. World Health Organization.

Leka, S., Van Wassenhove, W., & Jain, A. (2015). Is psychosocial risk prevention possible? Deconstructing common presumptions. *Safety Science*, Vol 71, pp 61-67.

Lu, L., Cooper, C. L., & Lin, H. Y. (2013). A cross-cultural examination of presenteeism and supervisory support. *Career Development International,*

18(5), 440-456.

Matthews, R. A., Kath, L. M., & Barnes-Farrell, J. L. (2010). A short, valid,predictive measure of work–family conflict: Item selection and scale validation. *Journal of occupational health psychology, 15(1),* 75.

Meyer, J. P., Allen, N. J., & Smith, C. A. (1993). Commitment to organizations and occupations: Extension and test of a three-component conceptualization. *Journal of applied psychology, 78(4), 538.*

Mor-Barak, M. E., & Cherin, D. A. (1998). A tool to expand organizational understanding of workforce diversity: Exploring a measure of inclusion-exclusion. *Administration in Social Work, 22(1),* 47-64.

Nielsen, M. B., Bjørkelo, B., Notelaers, G., & Einarsen, S. (2010). Sexual harassment: Prevalence, outcomes, and gender differences assessed by three different estimation methods. *Journal of Aggression, Maltreatment & Trauma, 19(3),* 252-274.

Notelaers, G., Van der Heijden, B., Hoel, H., & Einarsen, S. (2019). Measuring bullying at work with the short-negative acts questionnaire: identification of targets and criterion validity. *Work & Stress, 33(1)*, 58-75.

O'Driscoll, M. P., Cooper-Thomas, H. D., Bentley, T., Catley, B. E., Gardner, D. H., & Trenberth, L. (2011). Workplace bullying in New Zealand: A survey of employee perceptions and attitudes. *Asia Pacific Journal of Human Resources, 49*(4), 390-408.

O'Driscoll, M. P., Brough, P., & Kalliath, T. J. (2004). Work/family conflict, psychological well- being, satisfaction and social support: A longitudinal study in New Zealand. *Equal opportunities international, 23*(1/2), 36-56.

Schaufeli, W. B., Bakker, A. B., & Salanova, M. (2006). The measurement of work engagement with a short questionnaire: *A cross-national study. Educational and psychological measurement, 66(4),* 701-716.

Stanton, J. M., Balzer, W. K., Smith, P. C., Parra, L. F., & Ironson, G. (2001). A general measure of work stress: The stress in general scale. *Educational and Psychological Measurement, 61(5)*, 866-888.

Ten Brummelhuis, L.L., Halbesleben, J.R.B., & Prabhu, V. (2011). Development and validation of the New Ways of Working scale. Paper presented at the Annual Meeting of the Southern Management Association, Savannah, GA.

Vander Elst, T., De Witte, H., & De Cuyper, N. (2014). The Job Insecurity Scale:A psychometric evaluation across five European countries. European *Journal of Work and Organizational Psychology, 23(3)*, 364-380.

Warr, P., Cook, J., & Wall, T. (1979). Scales for the measurement of some work attitudes and aspects of psychological well-being. *Journal of occupational Psychology, 52(2)*, 129-148.

WHO. (2018). Mental health: a state of well-being. Retrieved from:

http://www.who.int/features/factfiles/mental_health/en/.

Yarker, J., Lewis, R. & Donaldson-Feilder, E. (2008). *Management competenciesfor preventing and reducing stress at work.* Research Report RR633. Prepared by Goldsmiths, University of London for the Health and Safety Executive 2008.

World Health Organization (1998). The World Health Organisation-Five Well- Being Index - Well-being measures in primary health Care/The DepCareProject. WHO Regional Office for Europe: Copenhagen.

Appendix 1: Example of an organisational report

Introduction

Psychosocial hazards and their associated risks include aspects of the design and management of work, and its social and organisational contexts, that have the potential to cause psychological or physical harm. Research conducted in New Zealand and internationally has clearly demonstrated the association between psychosocial hazards and negative outcomes for individual and organisational wellbeing and performance. Improvements to the psychosocial environment within which individuals work have been shown to produce a significant return on investment for organisations.

The New Zealand Workplace Barometer (NZWB)

The NZWB is a survey that provides organisations and associations with information to assess psychosocial hazards and to promote improvements in the psychosocial work environment. The survey measures psychosocial safety climate (PSC) as well as other psychosocial factors that impact on outcomes related to individual and organisational wellbeing and performance. Organisations and associations participating in the NZWB provide access for data collection in exchange for a report summarising the psychosocial hazards and associated risks within their organisation/association. Those who participate annually can use their results to understand and monitor their performance with respect to their psychosocial environment (understanding though that their sample and the overall comparison sample could be somewhat different than previous years). The following table provides a demographic breakdown of the <u>entire 2021 NZWB sample of 2029 respondents, against which your organisation's results have been compared.</u>

Table 1. Individual and employment characteristics of all 2021 NZWB survey respondents

	N	%		N	%
Gender			*Age range*		
Male	1040	51.3	Under 25	45	2.2
Female	974	48.0	26-34	416	20.5
Another gender	15	0.7	35-44	493	24.3
Ethnicity[1]			45-54	537	26.5
NZ European	1403	69.1	55-64	421	20.7
Māori	164	8.1	65+	117	5.8
Samoan	28	1.4	*Employment arrangement*		
Cook Island Māori	10	0.5	Permanent	1905	93.9
Tongan	14	0.7	Fixed-term	74	3.6
Niuean	8	0.4	Casual	9	0.4
Chinese	54	2.7	Contractor/self-employed	33	1.6
Indian	75	3.7	Other	8	0.4
Other	457	22.5	*Job title*		
			Employee / Contractor	1113	54.9
			First-line supervisor / Team leader	330	16.3
			Mid-level manager	307	15.1
			Senior manager	161	7.9
			Other	118	5.8

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[1] Some respondents identified with more than one ethnic group

Your organisation's results

The following sections provide the results of your organisation's psychosocial safety climate (PSC) and your psychosocial risk profile based on the responses from 99 respondents who participated in the 2021 NZWB survey. These results can assist in your decision-making about where to direct resources and focus attention with respect to psychosocial hazards and associated risks. Should you elect to participate in future NZWB surveys you will be able to develop an understanding of changes to your organisation's psychosocial environment over time. We have provided your results as mean scores and standard deviation (SD) or as percentages. You can consider where your results sit within the scoring range, and also compare your results for each variable with the entire 2021 NZWB sample. Similarly, standard deviations which are larger than that of the entire sample are indicative of more variability across your respondents, whereas smaller ones suggest greater consensus. It is important to note that your findings will not necessarily be representative of your organisation as a whole and will only indicate the views of those that responded. The higher the proportion of your employees who participated, the more confidence you can have that these findings accurately reflect the psychosocial environment in your organisation. Furthermore, in comparing your results across years, consideration needs to be taken in relation to the context in which the data was collected (i.e., COVID-19, lockdowns etc).

1. **Psychosocial Safety Climate (PSC)**

PSC measures the respondents' perceptions of the organisation's concern for psychological harm and the wellbeing of its workers – including worker wellbeing and work stress. The 12-item PSC tool measures PSC across four aspects: 1) management commitment and support for psychological health and safety; 2) management prioritisation of psychological health and safety; 3) organisational participation in psychological health and safety; and 4) organisational communication about psychological health and safety. Published benchmarks for PSC indicate that a score of 41 and over is a 'best-practice standard' threshold which is associated with a low-risk of employee job strain and depressive symptoms. A PSC score of 37 and below is associated with negative outcomes such as employee job strain and depressive symptoms.

The higher your overall PSC score, the more likely your climate will be associated with favourable psychosocial wellbeing and physical health and safety.

PSC variable	Your organisation's score	Entire 2021 NZWB sample
PSC-12 Scoring range: 12-60	Your mean score: 45.05 (SD: 10.10)	Mean score: 39.67 (SD: 11.75)

Comment on PSC score:
Your results were above the threshold of 41 for best-practice, and also an improvement on last year's result. This indicates a low risk of employee job strain and depressive symptoms and is encouraging with respect to the efforts being made to manage psychosocial harm. It is important to continue to monitor psychosocial hazards and address any occurrences; and maintain the commitment and support at senior levels of the organisation for psychosocial health and safety.

2. Psychosocial risk profile

The following tables present your results for each of the variables. You can consider <u>where your scores sit within the scoring range for each variable</u>. Also, a colour system, as outlined below, has been used to compare your mean scores with the <u>mean scores of the entire 2021 NZWB sample</u> (i.e., 1 SD either side of the mean scores from all 2021 NZWB respondents). Please note these ratings are indicative only, aimed at assisting you in where to focus your attention.

   	Indicates that the results from your organisation are *significantly more favourable* than the results from the entire 2021 NZWB sample.
   	Indicates that the results from your organisation are *broadly comparable* with the results from the entire 2021 NZWB sample.
   	Indicates that the results from your organisation are *significantly less favourable* than the results from the entire 2021 NZWB sample.

2.1 Job demands and harm
The following results relate to some aspects of the job that place demands on workers.
Higher scores mean greater psychosocial job demands or harm.

Job Demand variable	Your organisation's score	Entire 2021 NZWB sample
Work-family conflict — Scoring range: 1-5	Mean: 2.48 (SD: 0.90)	Mean: 2.90 (SD: 1.05)
Family-work conflict — Scoring range: 1-5	Mean: 1.99 (SD: 0.88)	Mean: 2.13 (SD: 0.82)
Job insecurity — Scoring range: 1-5	Mean: 2.88 (SD: 1.00)	Mean: 1.94 (SD: 0.97)
Job demands - mental — Scoring range: 1-5	Mean: 3.11 (SD: 0.73)	Mean: 3.44 (SD: 0.79)
Job demands - physical — Scoring range: 1-5	Mean: 1.33 (SD: 0.55)	Mean: 1.86 (SD: 1.11)

Harm variable	Percentage your organisation (Percentage entire 2021 NZWB sample)					
	Yes, almost daily	Yes, several times a week	Yes, now and then	Yes, but only rarely	**YES (total)**	**NO**
Workplace bullying – self reported	(1.2)	1.0 (1.2)	1.0 (6.0)	3.5 (8.5)	**5.5 (16.9)**	**94.5 (83.0)**
Workplace bullying – witnessed	(1.8)	1.0 (4.0)	0.0 (14.5)	2.5 (16.4)	**3.5 (36.7)**	**96.5 (63.2)**
Cyber-bullying – self reported	(0.3)	(0.1)	(2.0)	(3.2)	**0.0 (5.6)**	**100.0 (94.4)**
Cyber-bullying – witnessed	(0.5)	(0.8)	1.0 (4.6)	4.0 (5.2)	**5.0 (11.1)**	**95.0 (88.8)**
Sexual harassment – self reported	(0.2)	(0.0)	(0.7)	1.0 (1.6)	**1.0 (2.5)**	**99.0 (97.5)**
Sexual harassment – witnessed	(0.3)	(0.2)	2.0 (1.9)	1.5 (4.1)	**3.5 (6.5)**	**96.5 (93.5)**

Comments:
Your results are comparable with the entire 2021 sample, but are generally more favourable and show an improvement from the scores in 2020. A smaller percentage of respondents reported negative behaviours than in 2020, but as negative behaviours were witnessed it is important to continue efforts in this area.

2.2 Job resources

Job resources are aspects of the job that help workers to meet the demands on them to do the work. Higher scores mean *more favourable* psychosocial job resources.

Job Resource variable	Your organisation's score	Entire 2021 NZWB sample
Management competencies Scoring range: 1-5	Mean: 4.10 (SD: 0.95)	Mean: 3.89 (SD: 0.92)
Co-worker support Scoring range: 1-5	Mean: 4.80 (SD: 1.00)	Mean: 4.44 (SD: 1.18)
Work Group Involvement Scoring range: 1-6	Mean: 4.75 (SD: 0.99)	Mean: 4.54 (SD: 1.01)
Influence in Decision Making Scoring range: 1-6	Mean: 4.00 (SD: 1.15)	Mean: 3.82 (SD: 1.30)
Access to Communications and Resources Scoring range: 1-6	Mean: 4.58 (SD: 0.99)	Mean: 4.24 (SD: 1.04)
Fairness (Perceived organisational justice) Scoring range: 1-7	Mean: 5.80 (SD: 1.00)	Mean: 5.15 (SD: 1.34)
Flexibility Scoring range: 1-7	Mean: 5.00 (SD: 1.00)	Mean: 4.46 (SD: 1.57)

Comments:

In all the measures of job resources, your results, whilst comparable with the entire sample for 2021, are all more favourable. The scores are generally very similar to 2020 and so this is an area that you may improve on if you work with employees in identifying interventions that will help them meet the demands of their work, and implementing measures to develop management competencies around employee support and knowledge of psychosocial wellbeing.

2.3 Worker mental health and wellbeing

The following table reports on a number of 'general' measures of health/ill-health. Although these indicators represent a person's overall current status (work and non-work), typically the work environment is a significant determiner of these 'general' health indictors. *Higher* scores mean *poorer* outcomes in terms of psychological distress and physical symptoms, unless indicated otherwise.

Individual variable	Your organisation's score	Entire 2021 NZWB sample
Psychological distress Scoring range: 1-5	Mean: 1.88 (SD: 0.88)	Mean: 1.96 (SD: 0.80)
Impact of psychological distress Scoring range: 1-4	Mean: 1.66 (SD: 0.66)	Mean: 1.70 (SD: 0.72)
Mental wellbeing (higher score is better) Scoring range: 0-100	Mean: 55.55 (SD: 20.00)	Mean: 52.76 (SD: 22.63)
Physical symptoms – reported 'trouble' Yes/No in 12 months	74.0% reported Yes	71.9% reported Yes
Physical symptoms – impact of trouble Scoring range: 1-5	Mean: 2.00 (SD: 1.00)	Mean: 2.24 (SD: 1.15)

Comments:

Your scores were comparable with the entire 2021 sample, but again tended to be more favourable and were improved from last year. As highlighted in previous reports, there is a strong association between physical injuries and mental wellbeing, and as a large proportion of respondents report physical symptoms, considering measures to manage risks of both physical and psychosocial risks is likely to be beneficial across these variables

2.4 Indicators of organisational wellbeing

The following results are from the indicators of the culture and psychosocial wellbeing of the organisation. Higher scores mean better outcomes, unless indicated otherwise.

Organisational wellbeing variable	Your organisation's score	Entire 2021 NZWB sample
Engagement Scoring range: 1-7	Mean: 5.50 (SD: 1.19)	Mean: 5.38 (SD: 1.19)
Job satisfaction Scoring range: 1-7	Mean: 5.00 (SD: 1.39)	Mean: 4.96 (SD: 1.40)
Leave intentions (lower score is better) Scoring range: 1-7	Mean: 3.20 (SD: 1.90)	Mean: 3.20 (SD: 1.84)
Presenteeism (lower score is better) Scoring range: 1-4	Mean: 2.42 (SD: 1.11)	Mean: 2.53 (SD: 1.04)
Productivity and absenteeism Yes/No days missed in 12 months Number of entire missed days in 12 months	Yes: 52.2% Mean: 6.68 days Median: 4.00 days Range: 1 – 99 days	Yes: 50.0% Mean: 7.98 days Median: 4.00 days Range: 1 – 365 days

Comments:

Your results are comparable with the whole 2021 sample and similarly show a general improvement; with the exception of leave intention, where the score is slightly higher than the whole sample, and is also higher than last year. Whilst we do not know how representative the sample is of your workforce, and there are mitigating circumstances that have made the last 12 months challenging, the efforts to manage psychosocial risk is likely to have positive organisational outcomes.

Thank you again for your participation in the 2021 NZWB.

A full report detailing the results from the entire NZWB sample will be sent to your organisation once it has been prepared. This report will provide greater detail on the nature of the variables employed in this study and will examine the relationship between study variables.

You are welcome to contact the Healthy Work Group by emailing Liz Ashby (L.Ashby@massey.ac.nz) or the Healthy Work Group (healthyworkgroup@massey.ac.nz).

Appendix 2: Table of correlation coefficients

		1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.	17.	18.	19.	20.
1.	PSC	--																			
2.	WFC	-.452**	--																		
3.	FWC	-.188**	.430**	--																	
4.	Job Insecurity	-.218**	.242**	.195**	--																
5.	Mental demands	-.347**	.527**	.170**	.078**	--															
6.	Physical demands	-.210**	.265**	.120**	.060**	.124**	--														
7.	Sickness Presenteeism	-.303**	.419**	.206**	.191**	.338**	.206*	--													
8.	NAQ9 (Bullying)	-.419**	.390**	.183**	.297**	.249**	.274*	.323**	--												
9.	Job Flexibility	.358**	-.270**	-.030	-.121**	-.106**	-.472*	-.203**	-.291**	--											
10.	Inclusion	.640**	-.400**	-.246**	-.452**	-.186**	-.203**	-.283**	-.501**	.404**	--										
11.	Mgt. competence	.594**	-.357**	-.164**	-.300**	-.218**	-.256**	-.225**	-.468**	.355**	.625**	--									
12.	Co-worker Support	.436**	-.332**	-.203**	-.311**	-.193**	-.095**	-.222**	-.398**	.197**	.564**	.435**	--								
13.	POJ	.709**	-.446**	-.221**	-.427**	-.337**	-.213**	-.316**	-.477**	.312**	.642**	.557**	.427**	--							
14.	Psych. Distress	-.356**	.410**	.317**	.354**	.265**	.093**	.412**	.392**	-.143**	-.422**	-.272**	-.276**	-.396**	--						
15.	Impact of psych distress	-.334**	.407**	.328**	.251**	.263**	.107**	.376**	.339**	-.144**	-.350**	-.253**	-.245**	-.357**	.704**	--					
16.	Mental Wellbeing	.472**	-.436**	-.268**	-.290**	-.335**	-.066**	-.388**	-.307**	.173**	.446**	.323**	.372**	.432**	-.648**	-.562**	--				
17.	Job Satisfaction	.583**	-.438**	-.208**	-.395**	-.276**	-.127**	-.322**	-.403**	.280**	.613**	.499**	.461**	.582**	-.486**	-.448**	.564**	--			
18.	Engagement	.438**	-.307**	-.201**	-.288**	-.146**	-.043**	-.250**	-.265**	.237**	.515**	.359**	.421**	.421**	-.459**	-.392**	.589**	.693*	--		
19.	Intentions to leave	-.482**	.389**	.186**	.393**	.257**	.117**	.311**	.397**	-.204**	-.510**	-.423**	-.377**	-.535**	.429**	.365**	-.467**	-.674**	-.511**	--	
20.	Productivity Presenteeism	.280**	-.341**	-.365**	-.241**	-.228**	-.099**	-.277**	-.227**	.078**	.327**	.228**	.264**	.315**	-.572**	-.558**	.519**	.405**	.432**	-.338**	--
21.	Stress	-.306**	.506**	.199**	.146**	.596**	-.074**	.353**	.286**	-.079*	-.197**	-.188**	-.190**	-.284**	.419**	.370**	-.429**	-.336**	-.246**	.307**	-.320**

** correlation is significant at the 0.01 level