



THE IMPACT OF WORKPLACE BULLYING ON MENTAL HEALTH AND SUICIDALITY IN QUEENSLAND CONSTRUCTION INDUSTRY APPRENTICES

**REPORT BY THE AUSTRALIAN
INSTITUTE FOR SUICIDE RESEARCH
AND PREVENTION (AISRAP),
GRIFFITH UNIVERSITY FOR MATES
IN CONSTRUCTION**

Prepared by
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28th February, 2020



Australian Institute for Suicide
Research and Prevention





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A construction worker in a yellow high-visibility suit and hard hat is working on a rebar structure. The worker is positioned on the left side of the frame, with their back to the camera. They are holding a red horizontal bar. The background is a grid of rebar.

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EXECUTIVE SUMMARY

This study builds on previous qualitative research conducted by the Australian Institute for Suicide Research and Prevention which identified alleged bullying and poor treatment of Queensland construction industry apprentices.

The current study aims to estimate the prevalence of Queensland apprentices who have experiencing bullying, as well as to obtain a snapshot of apprentices' mental health and well-being, their perceptions of quality of supervision, suicide awareness and literacy, and experience of, and exposure to suicidal behaviours. In collaboration with Mates in Construction and the Department of Employment, Small Business and Training, an online survey was sent via SMS to all registered Queensland construction industry apprentices. A total of 1483 respondents (approximately 90 percent males and ten percent females) completed the survey.

The results indicate that a large proportion (27.3%) of Queensland construction industry apprentices have experienced workplace bullying (20% experiencing severe bullying), and that apprentices have high levels of exposure to suicidal behaviours. Alarming 30% of respondents reported having experienced some thoughts about suicide in the past 12 months. The findings indicated that 13% of respondents had high levels of psychological distress indicating probable severe mental illness, and nearly 30% had poor quality of life that may indicate depression.

Common factors associated with bullying were being aged 18–25, working for a large employer, working for a group training organisation, not currently having an employer, not currently in an apprenticeship or having an apprentice status as *other* (for reasons other than completion or on-leave, such as dismissal). Apprentices identifying as LGBTI+ were also shown to be vulnerable to bullying. First year apprentices and those aged up to 17 years were significantly less likely to be bullied than the other age groups. Bullying, substance use, and training for the electrical trades were significantly positively associated with psychological distress; with well-being and having completed apprenticeship significantly negatively associated with psychological distress. In turn, knowing someone who has attempted suicide, higher psychological distress, higher substance use, and lower well-being were uniquely associated with suicidal thoughts. Consistent with previous research, apprentices have relatively low suicide literacy but a positive disposition towards improving mental health and prevention suicide in the workplace.

Consultation was undertaken with industry representatives to gain their perspectives on these findings, which could in turn inform any recommendations or actions arising from the report. There was broad agreement that the findings warranted urgent action from the industry.



INTRODUCTION

It is well established that males working in the construction sector are in one of the highest occupational risk groups for suicide (Heller, Hawgood & De Leo, 2007; Milner, Spittal, Pirkis & LaMontagne, 2013; Roberts, Jaremin & Lloyd, 2013). Alarming, research also indicates that young Australian males working in the construction industry are at high risk of suicide and are twice as likely to take their own lives than other young Australian males (Heller et al., 2007).

This study builds on previous qualitative focus group research on the needs of construction industry apprentices by the Australian Institute for Suicide Research and Prevention (AISRAP) for Mates in Construction (MATES) which identified alleged bullying and poor treatment and supervision of Queensland apprentices (Australian Institute for Suicide Research and Prevention, 2018) (See Appendix A). Workplace bullying is a major issue in Australia and is associated with adverse outcomes such as poor mental health and increased risk for suicidal ideation and behaviours (Holt et al., 2015; Leach, Poyser & Butterworth, 2017).

The current study aimed to estimate the prevalence of bullying in Queensland construction industry apprentices, as well as to obtain a snapshot of their mental health and well-being, their perceptions of supervision quality, suicide awareness and literacy, and exposure to, and experience of suicidal behaviours. This survey provided a unique opportunity to learn more about the experiences of construction industry apprentices. The study had two main aims:

1. To identify the demographic characteristics of the apprentices who are being bullied.
2. To understand the impact of bullying, apprenticeship groups, socio-demographic and other factors on apprentices' mental health and suicidality.



METHOD

A high-angle, top-down photograph of a construction worker. The worker is wearing a bright red jumpsuit with reflective green stripes on the sleeves and a yellow hard hat. They are standing on a dark, uneven dirt or gravel surface. To the left of the worker is a grey wheelbarrow filled with dark material, and a shovel with a wooden handle leans against it. In the foreground, there is a blue bag of cement and several grey concrete blocks. The background is a light-colored, textured surface, possibly a wall or a different type of ground. The word "METHOD" is written in large, white, bold, sans-serif capital letters across the top of the image.

PARTICIPANTS AND PROCEDURE

Approximately 27,000 Queensland construction industry apprentices registered in the database of the Department of Employment, Small Business and Training (DEST) were invited to participate in the online survey via text messages sent by DEST. The survey was also promoted via the *Speak Up, Be Heard* campaign created by MATES to promote the survey and maximise the participation rates of apprentices. *Speak Up, Be Heard* was promoted by a range of industry connections, including MATES volunteer connectors and ASIST workers, registered training organisations and group training organisations, local government, Office of Industrial Relations, Queensland Building and Construction Commission, superannuation funds and redundancy trusts. The campaign was comprised of a website, printed campaign materials (information flyers, posters and stickers), social media and electronic distributions.

An initial text was sent by DEST in mid-July 2019 to inform apprentices about the upcoming survey and to advise that they could register their interest in the survey or update their contact details through the *Speak Up, Be Heard* website. The survey was launched in August 2019 and distributed to all apprentices registered in the DEST database via text message containing a link to the online survey. Reminder texts were sent to all apprentices on three separate occasions at approximately two-week intervals. The survey remained open for approximately eight weeks. The study was approved by the Griffith University's Human Research Ethics Committee (GU Reference number 2019/407).

MEASURES

The online survey was designed to further explore the issues identified in AISRAP's earlier qualitative study of apprentices, such as bullying, poor supervision, and poor suicide literacy (Appendix A). It was constructed using Qualtrics software and consisted of mainly fixed response questions and some open-ended questions (See Appendix B). To enhance participation from apprentices, the survey was designed to be brief (10–15 minutes to complete) and to be easily completed on a mobile phone. The survey contained questions on demographic information, perceptions of supervision, experiences of bullying, mental health and well-being, stress management, alcohol and substance use, attitudes and knowledge regarding mental health and suicide in the workplace, and exposure to, and experiences of suicidality. The measures used in the survey were a combination of validated scales and items specifically developed for this study. These are outlined in detail below.

Perceptions of supervisor

Participants were asked to respond to three items (i.e. *My supervisor: treats me fairly, respects me as a person, gives me clear directions and expectations*) on a five-point response scale, ranging from *Strongly disagree* to *Strongly agree*.

Suicide literacy and attitudes to mental health and suicide

Participants were asked for their opinions on two statements about suicidal behaviour (suicide literacy) and two general statements about workplace mental health and suicidal prevention (attitudes). Responses were on a five-point scale ranging from *Strongly disagree* to *Strongly agree*.

Exposure to suicide and suicidal thoughts

Participants were asked for Yes/No responses to three statements regarding whether they have had experience with suicide or suicidal behaviour (i.e. *I have known someone who has died by suicide; I have known someone who has attempted suicide; I have experienced some type of thoughts about suicide in the past 12 months*).

Bullying – objective measure

The Negative Acts Questionnaire – Revised (NAQ-R) (Einarsen et al., 2009) is an objective measure of workplace bullying, consisting of 22 items that do not explicitly use the word 'bullying' (e.g. *In the last six months, have you been ignored or faced hostile reactions when you approached*). The five-point response options ranged from *Never* to *Daily*.

Perceived bullying – subjective measure

Participants were provided with a definition of bullying: *Workplace bullying is described as verbal, physical, social or psychological abuse by your employer (or manager), another person or group of people at work.* They were then asked *How often have you been bullied at work in the past six months?* The five-point response options ranged from *Never* to *Daily*.

Stress management

Participants were asked to indicate their agreement on a scale from *Strongly agree* to *Strongly disagree* to whether specific activities (e.g. *My hobby, Going to the pub, Being with family or friends*) helped them deal with stress. Factor analysis of responses identified two factors: adaptive stress management and maladaptive stress management.

Alcohol

The AUDIT-C (Bush et al., 1998) is a brief, three item alcohol screen that reliably identifies patients who are hazardous drinkers or have active alcohol use disorders. Five-point response options ranged from *Never* to *Four or more times a week*.

Substance use

Participants were asked whether they had used particular substances in the last six months using a four-point response scale ranging from *Never* to *Regularly*.

Psychological distress

Kessler Psychological Distress Scale (K6) (Kessler et al., 2002) is a six-item scale asking participants how often they had felt emotions indicating distress (e.g. *nervous, hopeless*) in the past four weeks. The five-point response scale ranged from *None of the time* to *All of the time*.

Well-being and quality of life

The WHO-5 Well-Being Index (WHO, 1998) asks participants to indicate how they have been feeling over the last two weeks (e.g. *I have felt cheerful and in good spirits*) in the last two weeks. The five-point response scale ranges from *At no time* to *All of the time*.

The reliabilities for each of the scales used in the analysis, the NAQ-R, WHO5, K6, adaptive stress management, maladaptive stress management, AUDIT-5, Substance use, and perceptions of supervision showed good internal consistencies ($\alpha = .95, .92, .91, .70, .74, .70, .70, .90$; respectively) for these measurements (where .70 is acceptable and .90 is excellent).

RESULTS



DESCRIPTIVE ANALYSES

SOCIO-DEMOGRAPHICS

A total of 1787 Queensland construction industry apprentices responded to the survey. During the data cleaning process, it was necessary to exclude some cases due to large amounts of missing data, and some non-sense responses, resulting in a final sample of 1483 for analysis. All data was analysed using the IBM SPSS version 25.0 statistical package. The sample was comprised of

89.8% males and 8.9% females, aged between 14 and 65 years (M age = 24.78, SD age = 8.16). Participants were predominantly from English-speaking backgrounds (96%). Eighty-four (5.7%) participants were of Aboriginal or Torres Strait Islander descent, and 49 (3.3%) reported that they identified as a LGBTI+ person. A detailed summary of participants' demographic information is displayed Table 1.

Table 1. Demographic and apprenticeship background ($N=1,483$).

	n	%
Gender		
Male	1331	89.8
Female	132	8.9
Other	1	.1
Missing	19	1.3
Age group		
Up to 17 years	123	8.3
18–25 years	873	58.9
26–39 years	380	25.6
40 years and over	89	6.0
Missing	18	1.2
Aboriginal or Torres Strait Islander		
Yes	84	5.7
No	1387	93.5
Missing	12	.8
Non-English speaking background		
Yes	53	3.6
No	1423	96.0
Missing	7	.5
LGBTI+		
Yes	49	3.3
No	1414	95.3
Missing	20	1.3

	n	%
Apprenticeship status		
Active	1203	81.1
Not currently in apprenticeship	60	4.0
Completed	183	12.3
Ongoing but on long-term leave	16	1.1
Other	16	1.1
Missing	5	.3
Year of apprenticeship		
First year	335	22.6
Second year	368	24.8
Third year	307	20.7
Fourth year	237	16.0
Completed within the last 12 months	181	12.2
Other	41	2.8
Missing	14	.9
Employer type		
Private company	1128	76.1
Group training organisation	133	9.0
Government/Public utility	79	5.3
Sole trader	84	5.7
No employer currently	49	3.3
Missing	10	.7

	n	%
Employer size		
Very large (501 or more employees)	223	15.0
Large (101–500 employees)	163	11.0
Medium (51–100 employees)	110	7.4
Small (11–50 employees)	327	22.0
Very small (1–10 employees)	601	40.5
Missing	59	4.0
Apprenticeship trade/occupation		
Metal trades	162	10.9
Electrical trades	362	24.4
Plumbing trades	190	12.8
Structural trades	413	27.8
Finishing trades	192	12.9
Civil and outdoor	37	2.5
Construction	78	5.3
Other	32	2.2
Missing	17	1.1
Highest level of education		
Other apprenticeship	89	6.0
University	66	4.5
Other (e.g. TAFE, Certificate)	88	5.9
Year 8, 9, or 10	186	12.6
Year 11	126	8.5
Year 12	836	56.4
Missing	92	6.2

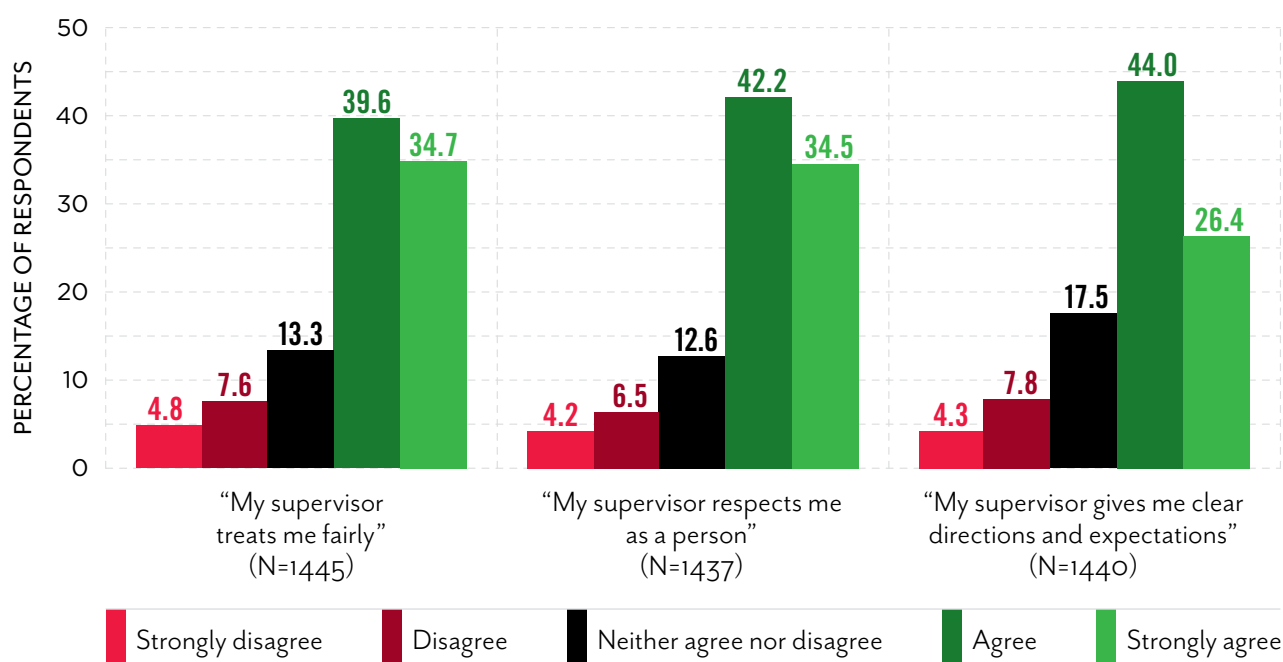
	n	%
Main industry sector		
Workshop	182	12.3
Maintenance	170	11.5
Housing	216	14.6
Small building/construction	262	17.7
Commercial/Residential medium-larger sites	417	28.1
Engineering construction	38	2.6
Civil construction	103	6.9
Other	82	5.5
Missing	13	.9
Overnight work in the past 12 months		
None	801	54.0
1–10 nights	290	19.6
11–50 nights	198	13.4
More than 50 nights	144	9.7
Missing	50	3.4

Perceptions of treatment by supervisor

Figure 1 shows that the majority of apprentices agreed or strongly agreed to the statements that *My supervisor: treats*

me fairly; respects me as a person; and; gives me clear directions and expectations.

Figure 1. Respondents' perceptions of their supervisor.



Bullying and psychological distress

Almost a third (27.3%) of apprentices reported some experience of bullying (subjective measure) in the past six months. Scores obtained on bullying using the objective measure (NAQ-R) showed that 21.4% of respondents scored above the cut-off of being bullied occasionally, and 20% scored above the cut-off for being a victim of severe workplace bullying (Notelaers & Einarsen, 2013). Approximately 13% of respondents scored

above the cut-off for the K6 Measure of Psychological Distress (i.e. total score of 19 and over) which indicates probable serious mental illness (Australian Bureau of Statistics, 2012). In addition, total scores on the WHO-5 Well-Being Index shows nearly 30% of apprentices who responded in the survey may have poor quality of life and may be an indication for depression according to the ICD-10 (i.e. total score of below 13) (WHO, 1998).

Suicide literacy and attitudes to mental health and suicide

Figure 2 shows apprentices' responses to questions on suicide literacy. The results suggest that respondents are not sure about

these issues, with half of them (50.5%) disagreeing that *talking about suicide can cause suicide*, and only 35.5% who agreed that *people considering suicide often send out warning signs*.

Figure 2. Respondents' answers to questions about suicide literacy.

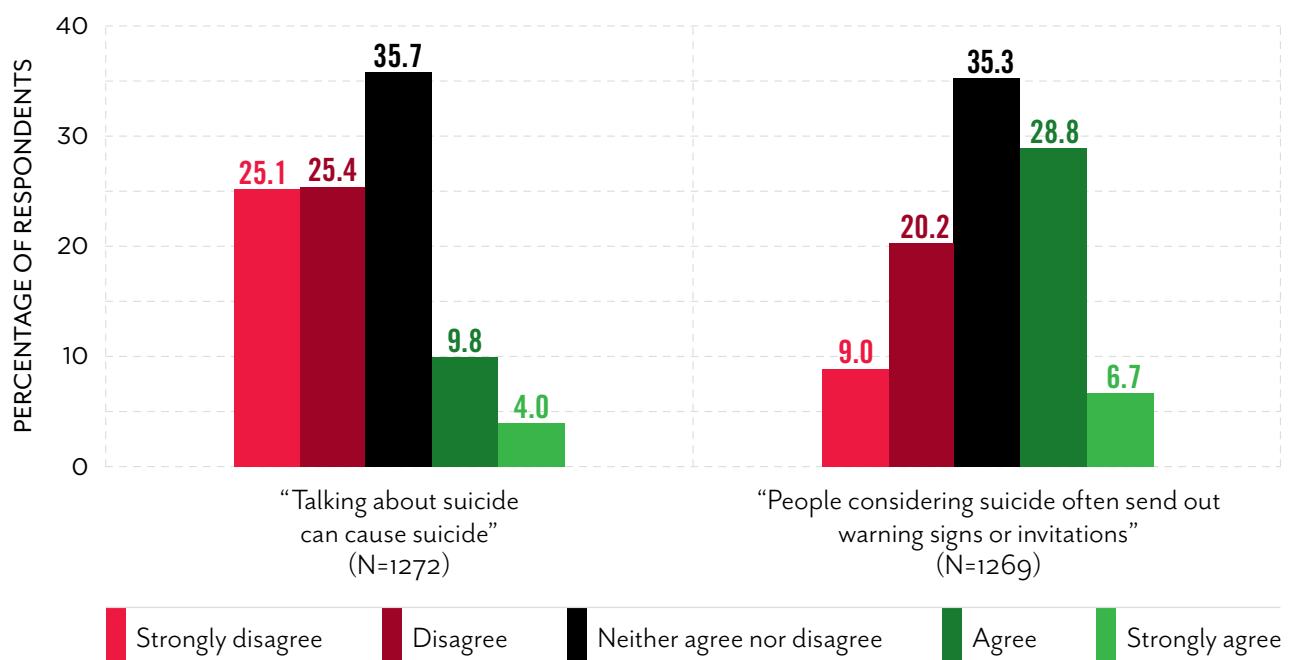
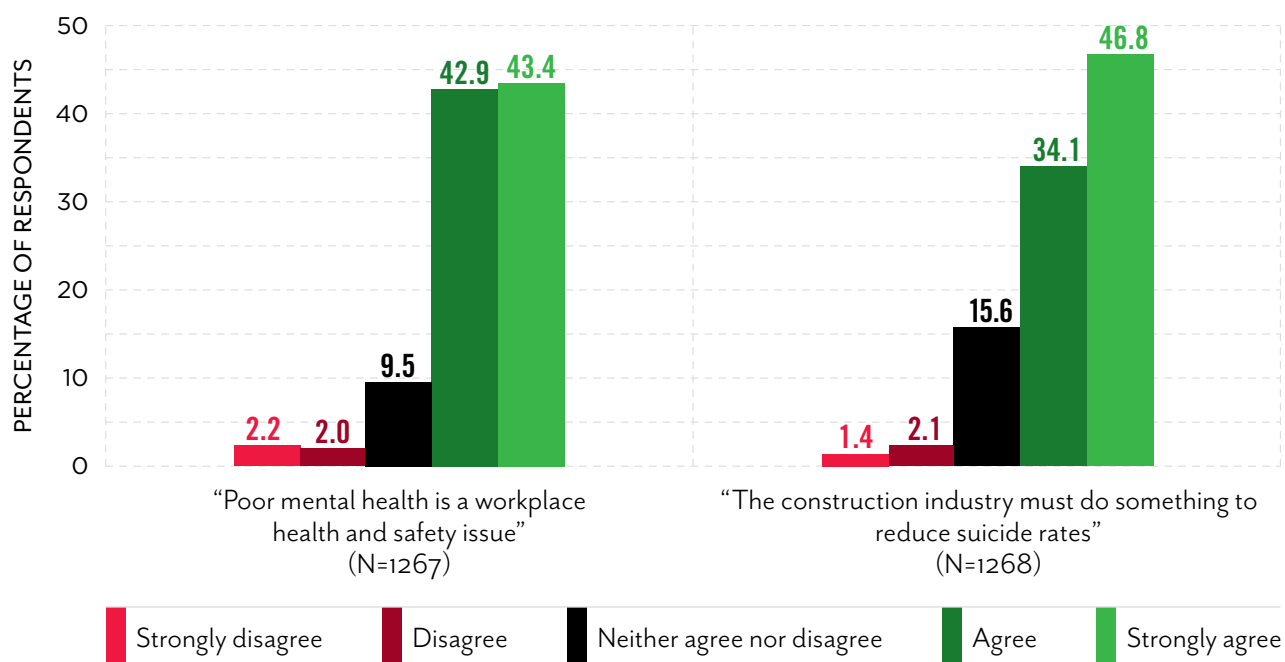


Figure 3 shows apprentices' responses regarding their attitudes to mental health and suicide. The results indicate that the majority of apprentices have positive attitudes towards

workplace mental health and preventing suicide in the construction industry.

Figure 3. Attitudes towards workplace mental health and suicide prevention.



Exposure to suicidality and suicidal thoughts

More than half (55.2%) of apprentices reported that they knew someone who had died by suicide, and 64.2 % said they knew

someone who had attempted suicide. Alarming, almost a third (30%) of respondents reported having experienced some type of suicidal thoughts in the last 12 months.

WORKPLACE BULLYING

OBJECTIVE MEASURE OF BULLYING (NAQ-R)

One-way ANOVAs were conducted to compare experiences of bullying (as measured by the NAQ-R) between apprentices in different demographic groups. Table 2 shows that there were significant differences in the mean score of bullying between **age groups, apprenticeship status, year of apprenticeship, company type, company size, industry sector, and overnight work**. Specifically:

- Apprentices aged between 18 and 25 years experienced more bullying at work than the other age groups. Apprentices aged up to 17 years experienced the least bullying.
- Second, third, and fourth year apprentices, and *other* experienced more bullying than apprentices from other years. First year apprentices were the least bullied group.
- Apprentices who work for a large employer experienced more bullying than the other employer sizes. Those who work for a very small employer were the least bullied.
- Apprentices who currently do not have an employer or who work for a group training organisation experienced the most bullying compared to other employer types. Those who work in a private company experienced the least bullying.
- Apprentices who mostly work in engineering/construction and the workshop industry sector experienced more bullying than the other sectors. Apprentices in small building/construction, civil construction, and *other* were the least bullied.
- Apprentices who were not currently in an apprenticeship or *other* were more bullied according to apprenticeship status. Those in an active apprenticeship and those who had completed their apprenticeship were the least bullied.
- Apprentices who have worked 11–50 nights and more than 50 nights of overnight work in the past 12 months were more bullied than apprentices who had less overnight work. Apprentices who had never worked overnight experienced the least bullying.

Table 2. Mean scores of objective bullying (measured with NAQ-R) by demographic and apprenticeship variables.

	Being bullied in the past 12 months				
	<i>n</i>	Mean	SD	F	<i>p</i> -value
Gender*				.06	.938
Male	1202	37.34	16.95		
Female	123	36.80	16.31		
Age Group				5.17	.001
Up to 17	109	32.76	16.18		
18–25	772	38.55	17.37		
26–39	361	35.77	15.52		
40 and over	87	36.33	16.95		
Aboriginal or Torres Strait Islander				.61	.435
Yes	76	38.62	16.90		
No	1256	37.07	16.74		
Non-English speaking background				.19	.660
Yes	47	36.11	14.84		
No	1290	37.20	16.85		

Being bullied in the past 12 months					
	n	Mean	SD	F	p-value
LGBTI+				2.02	.156
Yes	46	40.63	19.35		
No	1279	37.06	16.64		
Apprenticeship Status				18.10	<.001
Active	1084	36.29	15.82		
Not currently in apprenticeship	52	53.94	26.07		
Completed	172	36.00	15.49		
Ongoing but on long-term leave	16	44.69	21.09		
Other	14	51.71	22.92		
Year of apprenticeship				5.69	<.001
First year	300	33.59	14.77		
Second year	324	37.08	15.46		
Third year	280	39.05	17.82		
Fourth year	218	40.19	19.16		
Completed within the last 12 months	170	35.81	15.70		
Other	39	41.69	21.63		
Employer type				9.10	<.001
Private company	1031	36.20	16.00		
Group training organisation	110	40.41	16.82		
Government/Public utility	72	37.88	15.86		
Sole trader	77	37.35	18.57		
No employer currently	46	50.26	25.11		
Employer size				2.96	.019
Very large (501 or more employees)	198	38.08	15.39		
Large (101–500 employees)	150	39.65	18.57		
Medium (51–100 employees)	102	37.82	19.36		
Small (11–50 employees)	301	37.24	15.39		
Very small (1–10 employees)	544	35.17	15.93		

Being bullied in the past 12 months					
	n	Mean	SD	F	p-value
Apprenticeship trade/occupation				1.15	.33 ¹
Metal trades	147	39.76	17.16		
Electrical trades	334	35.71	15.65		
Plumbing trades	171	37.46	16.69		
Structural trades	373	37.29	17.34		
Finishing trades	174	37.56	17.14		
Civil and outdoor	33	38.52	19.41		
Construction	69	34.88	15.78		
Other	28	35.36	14.50		
Highest level of education				.70	.624
Other apprenticeship	82	35.00	13.82		
University	63	38.25	17.06		
Other (e.g. TAFE, Certificate)	78	38.45	18.38		
Year 8, 9, or 10	171	37.23	18.26		
Year 11	111	35.43	16.12		
Year 12	759	37.41	16.35		
Main industry sector				2.29	.025
Workshop	165	40.01	17.59		
Maintenance	153	37.90	16.92		
Housing	196	38.44	17.76		
Small building/construction	238	35.04	15.21		
Commercial/Residential medium-larger sites	373	37.22	17.22		
Engineering construction	36	40.08	17.19		
Civil construction	94	35.21	15.88		
Other	77	33.62	12.62		
Overnight work in the past 12 months				5.74	.001
None	721	35.74	15.64		
1–10 nights	268	36.47	14.91		
11–50 nights	183	39.75	18.48		
More than 50 nights	130	40.99	20.59		
Note: 352 had missing response in NAQ-R, for missing numbers for other variables please see Table 1.					
Results in bold indicate significant ($p < .05$) ; ± Only one person identified gender as 'other' and not included in multiple comparisons analysis.					

PERCEIVED BULLYING

In order to identify the factors that are associated with perceived bullying (subjective measure) in apprentices, odds ratios (OR) with 95% confidence intervals (95%CI) were calculated for each of the demographic variables. Table 3 presents the frequencies and ORs showing that **age group, LGBTI identity, year of apprenticeship, type of company, employer size, and industry sector were significantly associated with perceived bullying in the past 12 months**. Specifically:

- Apprentices between the age of 18 and 25 years experienced more bullying (subjective) than the other age groups. Apprentices aged up to 17 years experienced the least bullying.
- Apprentices who identified as LGBTI+ experienced more bullying than those who did not identify as LGBTI+.
- Second, third, and fourth year apprentices, and other experienced more bullying than apprentices from other years. First year apprentices were the least bullied group.
- Apprentices who currently do not have an employer or who work for a group training organisation were more bullied compared to other employer types. Those who work in a private company were the least bullied.
- Apprentices who work for a large or very large employer experienced more bullying than the other employer sizes. Those who work for a very small employer were the least bullied.
- Those not currently in an apprenticeship and those whose apprenticeship is not active due to reasons other than completion, on-leave or resigning (e.g. dismissed or suspended) were more bullied according to apprenticeship status. Those in an active apprenticeship and those who had completed their apprenticeship were the least bullied.
- Apprentices who are training for plumbing trades were significantly more likely to have been bullied than the other apprenticeship trades/occupations. Those in the *other* group were the least likely to be bullied.
- Participants who work mainly in maintenance industry were significantly more likely to be bullied than the other industry sectors. Those in *other* and small building/construction were the least likely to be bullied.

Table 3. Perceived bullying in last 12 months by demographic and apprenticeship variables.

Being bullied in the past 12 months							
	Yes		No		OR	95% CI	
	n	%	n	%		L	U
Gender*							
Male	361	30.5	824	69.5	.85	.57	1.25
Female	42	34.1	81	65.9	1.00		
Age Group							
Up to 17	19	17.6	89	82.4	.43	.25	.72
18–25	254	33.3	508	66.7	1.00		
26–39	105	29.6	250	70.4	.84	.64	1.10
40 and over	25	29.4	60	70.6	.83	.51	1.36
Aboriginal or Torres Strait Islander							
Yes	27	35.5	49	64.5	1.27	.78	2.06
No	375	30.3	862	69.7	1.00		

Being bullied in the past 12 months							
	Yes		No		OR	95% CI	
	n	%	n	%		L	U
Non-English speaking background							
Yes	15	32.6	31	67.4	1.10	.59	2.07
No	388	30.5	884	69.5	1.00		
LGBTI+							
Yes	21	45.7	25	54.3	1.95	1.08	3.53
No	379	30.1	881	69.9	1.00		
Apprenticeship Status							
Active	310	29.0	758	71.0	1.00		
Not currently in apprenticeship	31	59.6	21	40.4	3.61	2.04	6.28
Completed	47	27.8	122	72.2	.94	.66	1.35
Ongoing but on long-term leave	8	50.0	8	50.0	2.45	.91	6.57
Other	8	57.1	6	42.9	3.26	1.12	9.47
Year of apprenticeship							
First year	67	22.6	230	77.4	1.00		
Second year	109	34.1	211	65.9	1.77	1.24	2.53
Third year	97	35.0	180	65.0	1.85	1.28	2.67
Fourth year	68	31.8	146	68.2	1.60	1.08	2.38
Completed within the last 12 months	48	28.6	120	71.4	1.37	.89	2.11
Other	13	35.1	24	64.9	1.86	.90	3.85
Employer type							
Private company	289	28.4	729	71.6	1.00		
Group training organisation	43	39.4	66	60.6	1.64	1.09	2.47
Government/Public utility	26	36.1	46	63.9	1.43	.86	2.35
Sole trader	23	31.9	49	68.1	1.18	.71	1.98
No employer currently	22	48.9	23	51.1	2.41	1.32	4.40
Employer size							
Very large (501 or more employees)	69	35.4	126	64.6	1.47	1.04	2.08
Large (101–500 employees)	50	34.0	97	66.0	1.38	0.94	2.04
Medium (51–100 employees)	33	32.4	69	67.6	1.28	0.81	2.03
Small (11–50 employees)	89	29.9	209	70.1	1.14	0.84	1.56
Very small (1–10 employees)	145	27.2	389	72.8	1.00		

Being bullied in the past 12 months							
	Yes		No		OR	95% CI	
	n	%	n	%		L	U
Apprenticeship trade/occupation							
Metal trades	57	39.0	89	61.0	1.67	1.12	2.50
Electrical trades	83	25.2	246	74.8	0.88	0.63	1.23
Plumbing trades	66	39.5	101	60.5	1.70	1.16	2.50
Structural trades	102	27.7	266	72.3	1.00		
Finishing trades	56	32.6	116	67.4	1.26	0.85	1.86
Civil and outdoor	11	34.4	21	65.5	1.37	0.64	2.93
Construction	19	28.4	48	71.6	1.03	0.58	1.84
Other	6	21.4	22	78.6	0.71	0.28	1.80
Highest level of education							
Other apprenticeship	22	27.2	59	72.8	.81	.48	1.35
University	20	32.3	42	67.7	1.03	.59	1.79
Other (e.g. TAFE, Certificate)	27	35.1	50	64.9	1.17	.71	1.91
Year 8, 9, or 10	45	26.3	126	73.7	.77	.53	1.12
Year 11	29	27.1	78	72.9	.80	.51	1.26
Year 12	237	31.6	512	68.4	1.00		
Main industry sector							
Workshop	60	36.6	104	63.4	1.36	0.92	2.01
Maintenance	59	38.8	93	61.2	1.50	1.01	2.22
Housing	55	28.5	138	71.5	0.94	0.64	1.38
Small building/construction	60	25.6	174	74.4	0.81	0.56	1.18
Commercial/Residential medium-larger sites	109	29.8	257	70.2	1.00		
Engineering construction	12	34.3	23	65.7	1.23	0.59	2.56
Civil construction	28	30.4	64	69.6	1.03	0.63	1.70
Other	19	25.0	57	75.0	0.79	0.45	1.38
Overnight work in the past 12 months							
None	196	27.6	513	72.4	1.00		
1–10 nights	86	32.2	181	67.8	1.24	.92	1.69
11–50 nights	62	34.8	116	65.2	1.40	.99	1.98
More than 50 nights	43	33.6	85	66.4	1.32	.89	1.98

Note: 161 had the variable 'being bullied' missing, for missing numbers for other variables please see Table 1.

Results in bold indicate significant ($p < .05$); '1' denotes reference category; *Only one person identified gender as 'other' and not included in analysis.

PSYCHOLOGICAL DISTRESS

One-way ANOVAs were conducted to compare experiences of psychological distress across the different demographic and apprenticeship groups. Table 4 shows that there were significant differences in levels of psychological distress between **gender, age group, apprenticeship status, employer type, apprenticeship trade/occupation and industry sector**. Specifically:

- Females experienced higher levels of psychological distress than males.
- Apprentices aged 18 to 25 years experienced higher levels of psychological distress than the other age groups. Apprentices aged over 40 years and up to 17 years experienced the least psychological distress.
- Those whose apprenticeship status was *other* experienced higher psychological distress than compared to other types of apprenticeship status. Those who had completed their apprenticeship experienced the least psychological distress.
- Those not currently in an apprenticeship, ongoing but on long-term leave, and *other* had higher psychological distress according to apprenticeship status. Those in an active apprenticeship and those who had completed their apprenticeship had the least psychological distress.
- Apprentices who currently do not have an employer had more psychological distress compared to the other employer types. Apprentices working for a sole trader or a private company had the least psychological distress.
- Apprentices in the finishing and metal trades reported more psychological distress than the other apprenticeship trade/occupations. Those in the civil and outdoor trades were the least psychologically distressed.
- Those who work mostly in the workshop sector were more psychologically distressed than the other sectors. Those working mostly in civil construction and *other* sectors were the least psychologically distressed.

Table 4. Mean scores of psychological distress (measured with K6) by demographic and apprenticeship variables.

Being bullied in the past 12 months					
	<i>n</i>	Mean	SD	F	<i>p</i> -value
Gender*				5.44	.020
Male	1069	12.85	5.65		
Female	109	14.17	5.53		
Age Group				3.98	.008
Up to 17	90	11.96	5.52		
18–25	677	13.33	5.77		
26–39	328	12.80	5.54		
40 and over	83	11.46	4.60		
Aboriginal or Torres Strait Islander				3.43	.064
Yes	70	14.16	5.44		
No	1110	12.87	5.64		
Non-English speaking background				.33	.568
Yes	44	12.48	6.00		
No	1141	12.97	5.62		
LGBTI+				2.76	.097
Yes	36	14.50	6.03		
No	1137	12.91	5.63		

Being bullied in the past 12 months					
	n	Mean	SD	F	p-value
Apprenticeship Status				6.85	<.001
Active	959	12.89	5.57		
Not currently in apprenticeship	46	15.69	7.09		
Completed	153	12.03	5.20		
Ongoing but on long-term leave	14	15.00	6.16		
Other	13	17.92	5.42		
Year of apprenticeship				1.16	.325
First year	263	12.73	5.53		
Second year	280	13.18	5.60		
Third year	250	13.12	5.49		
Fourth year	198	13.53	6.33		
Completed within the last 12 months	151	12.24	5.33		
Other	37	12.46	5.32		
Employer type				5.41	<.001
Private company	917	12.69	5.56		
Group training organisation	93	13.98	5.29		
Government/Public utility	68	13.37	5.44		
Sole trader	65	12.57	5.58		
No employer currently	41	16.44	7.25		
Employer size				1.02	.398
Very large (501 or more employees)	178	12.90	5.48		
Large (101–500 employees)	126	13.55	5.75		
Medium (51–100 employees)	95	13.25	5.52		
Small (11–50 employees)	270	13.01	5.52		
Very small (1–10 employees)	479	12.55	5.58		
Apprenticeship trade/occupation				2.77	.007
Metal trades	134	13.67	5.48		
Electrical trades	296	13.12	5.77		
Plumbing trades	148	13.09	5.27		
Structural trades	319	12.62	5.87		
Finishing trades	161	13.68	5.68		
Civil and outdoor	30	10.83	4.85		
Construction	62	11.24	4.22		
Other	26	11.08	5.59		

Being bullied in the past 12 months					
	n	Mean	SD	F	p-value
Highest level of education				.47	.999
Other apprenticeship	73	13.01	5.41		
University	60	12.92	5.24		
Other (e.g. TAFE, Certificate)	71	12.79	5.63		
Year 8, 9, or 10	147	13.03	6.43		
Year 11	101	12.75	6.11		
Year 12	673	12.97	5.44		
Main industry sector				3.27	.002
Workshop	152	14.37	5.84		
Maintenance	129	13.50	5.43		
Housing	170	13.11	5.23		
Small building/construction	204	12.39	5.92		
Commercial/Residential medium-larger sites	334	12.86	5.65		
Engineering construction	34	13.88	6.12		
Civil construction	84	11.40	5.40		
Other	74	11.99	4.93		
Overnight work in the past 12 months				1.11	.343
None	631	12.63	5.46		
1–10 nights	238	13.16	5.82		
11–50 nights	162	13.08	5.57		
More than 50 nights	121	13.46	5.92		

Note: 295 had missing response in K6 variable, for missing numbers for other variables please see Table 1.

Results in bold indicate significant ($p < .05$); ± Only one person identified gender as 'other' and not included in multiple comparisons analysis.

To test for associations between psychological distress and other variables, Pearson's bivariate correlations were conducted. Table 5 shows that **bullying (objective NAQ-R measure), bullying (subjective) maladaptive stress management, substance use, and alcohol use** were all positively and significantly correlated with psychological distress. In contrast,

well-being (WHO5) was significantly negatively correlated with psychological distress and adaptive stress management, indicating that as would be expected, higher scores on well-being and adaptive stress management were associated with lower psychological distress.

Table 5. Correlations between psychological distress (measured with K6 Cronbach's $\alpha = .91$) and other variables.

	N	Pearson's r	p-value	Cronbach's α
Objective bullying (NAQ-R)	1188	.58	<.001	.95
Perceived bullying	1184	.44	<.001	N/A
Well-being (WHO-5)	1123	-.66	<.001	.92
Substance use (SU)	1121	.26	<.001	.70
Alcohol use (AUDIT-C)	1165	.14	<.001	.70
Adaptive stress management	1139	-.16	<.001	.70
Maladaptive stress management	945	.21	<.001	.74

Note: 295 had missing response in K6 variable.

MULTIVARIATE LINEAR REGRESSION

To measure whether bullying is independently associated with psychological distress in apprentices after adjusting for potential confounding variables, multivariate linear regression analysis was conducted. The significant variables from previous analyses –age group, apprenticeship status, employer type, apprenticeship trade/occupation, industry sector, bullying (objective measure), bullying (subjective measure), substance use, alcohol use and well-being, were entered to a multivariate

linear regression analysis to measure which variables are independently associated with psychological distress. As shown in Table 6, the final multiple linear regression (stepwise) model showed that **bullying (objective), bullying (subjective), substance use, and not currently having an employer** were significantly positively associated with psychological distress. **Well-being, working in the construction trades, and having trade/occupation type as other** were significantly negatively associated with psychological distress.

Table 6. Final model of multivariate linear regression with Psychological Distress (K6) as outcome.

	B	Std. Error	β	p-value
Objective bullying (NAQ-R)	.10	.01	.29	<.001
Perceived bullying	.96	.36	.08	.008
Substance use (SU)	.18	.04	.10	<.001
Well-being (WHO-5)	-.46	.03	-.48	<.001
Trade/Occupation type: Construction trades*	-1.23	.61	-.05	.044
Trade/Occupation type: Other trades*	-2.27	.84	-.06	.007
Employer type: No employer currently+	2.27	.71	.07	.001

Note: N included in analysis = 837

Method – stepwise; $F(7, 829) = 157.44$, $p < .001$, R-squared = 57.1%

Reference category '*' = Structural trades ; '+' = Private company

B – represents the slope or unit change in outcome for every one unit change in predictor; β – refers to standardised regression coefficient that conveys relative strength of predictors

SUICIDAL THOUGHTS

In order to identify the factors that are associated with suicidal thoughts, ORs were calculated individually for each of the demographic variables. Table 7 shows that **age group, LGBTI+ identity, apprenticeship status, employer type, trade or occupation type, and highest level of education** were significantly associated with suicidal thoughts. Specifically:

- Apprentices aged 40 and over were less likely to have experienced suicidal thoughts than those aged 18–25 years. Apprentices aged 18–25 years were the most likely to have experienced suicidal thoughts.
- Apprentices who identified as LGBTI+ were more likely to have experienced suicidal thoughts than those who did not identify as LGBTI+.
- Apprentices with the status of *other* (for reasons other than completion or on-leave, such as dismissal) and were more likely to have suicidal thoughts according to apprenticeship status. Those who had completed or were in an active apprenticeship were least likely to have suicidal thoughts.
- Apprentices who currently do not have an employer were more likely to have experienced suicidal thoughts compared to other employer types. Those who work for a sole trader were the least likely to have suicidal thoughts.
- Apprentices training for finishing trades were more likely to have suicidal thoughts than the other apprenticeship trade/occupations. Those in civil and outdoor and construction were the most likely to have suicidal thoughts.
- Apprentices who had completed another apprenticeship as their highest level of education were the least likely to experience suicidal thoughts than compared to other levels of education.

Table 7. Demographic and apprenticeship variables by suicidal thoughts.

Suicidal thoughts in the past 12 months							
	Yes		No		OR	95% CI	
	n	%	n	%		L	U
Gender*							
Male	393	34.6	744	65.4	.71	.48	1.04
Female	50	42.7	67	57.3	1.00		
Age Group							
Up to 17	32	31.7	69	68.3	.76	.49	1.19
18–25	274	37.8	450	62.2	1.00		
26–39	114	32.9	232	67.1	.81	.62	1.06
40 and over	23	26.7	63	73.3	.60	.36	.99
Aboriginal or Torres Strait Islander							
Yes	29	39.7	44	60.3	.95	.46	1.96
No	413	34.8	774	65.2	1.00		
Non-English speaking background							
Yes	17	37.0	29	63.0	1.08	.59	1.99
No	428	35.1	791	64.9	1.00		

Suicidal thoughts in the past 12 months							
	Yes		No		OR	95% CI	
	n	%	n	%		L	U
LGBTI+							
Yes	22	52.4	20	47.6	2.09	1.13	3.87
No	418	34.5	793	65.5	1.00		
Apprenticeship Status							
Active	354	34.7	667	65.3	1.00		
Not currently in apprenticeship	23	46.9	26	53.1	1.67	.94	2.96
Completed	51	30.7	115	69.3	.84	.59	1.19
Ongoing but on long-term leave	7	46.7	8	53.3	1.65	.59	4.58
Other	9	64.3	5	35.7	3.39	1.13	10.20
Year of apprenticeship							
First year	104	36.9	178	63.1	1.00		
Second year	115	37.7	190	62.3	1.04	.74	1.45
Third year	81	30.6	184	69.4	.75	.53	1.08
Fourth year	74	36.1	131	63.9	.97	.67	1.41
Completed within the last 12 months	53	32.3	111	67.7	.82	.54	1.23
Other	15	39.5	23	60.5	1.12	.56	2.23
Employer type							
Private company	331	33.8	648	66.2	1.00		
Group training organisation	42	42.4	57	57.6	1.44	0.95	2.20
Government/Public utility	23	32.9	47	67.1	0.96	0.57	1.61
Sole trader	22	31.4	48	68.6	0.90	0.53	1.51
No employer currently	26	59.1	18	40.9	2.83	1.53	5.23
Employer size							
Very large (501 or more employees)	63	33.3	126	66.7	.94	.661	1.339
Large (101–500 employees)	45	33.1	91	66.9	.93	.623	1.389
Medium (51–100 employees)	43	43.4	56	56.6	1.44	.933	2.237
Small (11–50 employees)	95	32.9	194	67.1	.92	.679	1.251
Very small (1–10 employees)	177	34.7	333	65.3	1.00		

Suicidal thoughts in the past 12 months							
	Yes		No		OR	95% CI	
	n	%	n	%		L	U
Apprenticeship trade/occupation							
Metal trades	50	35.5	91	64.5	1.12	0.74	1.69
Electrical trades	109	34.7	205	65.3	1.08	0.78	1.49
Plumbing trades	59	37.6	98	62.4	1.23	0.83	1.81
Structural trades	115	33.0	234	67.0	1.00		
Finishing trades	72	42.6	97	57.4	1.51	1.04	2.20
Civil and outdoor	8	25.0	24	75.0	.68	0.30	1.56
Construction	18	27.3	48	72.7	.76	0.42	1.37
Other	9	32.1	19	67.9	.96	0.42	2.20
Highest level of education							
Other apprenticeship	18	23.1	60	76.9	.53	.31	.92
University	19	31.1	42	68.9	.80	.46	1.40
Other (e.g. TAFE, Certificate)	27	36.0	48	64.0	.99	.61	1.63
Year 8, 9, or 10	60	36.4	105	63.6	1.01	.71	1.44
Year 11	40	37.7	66	62.3	1.07	.70	1.63
Year 12	257	36.1	454	63.9	1.00		
Main industry sector							
Workshop	62	39.2	96	60.8	1.20	0.82	1.77
Maintenance	52	36.4	91	63.6	1.06	0.71	1.60
Housing	71	38.8	112	61.2	1.18	0.82	1.71
Small building/construction	73	32.7	150	67.3	.91	0.64	1.29
Commercial/Residential medium-larger sites	123	34.9	229	65.1	1.00		
Engineering construction	16	44.4	20	55.6	1.49	0.74	2.98
Civil construction	25	28.1	64	71.9	.73	0.44	1.21
Other	21	27.6	55	72.4	.71	0.41	1.23
Overnight work in the past 12 months							
None	225	33.3	450	66.7	1.00		
1–10 nights	96	37.5	160	62.5	1.20	.89	1.62
11–50 nights	60	34.7	113	65.3	1.06	.75	1.51
More than 50 nights	49	38.9	77	61.1	1.27	.86	1.88

Note: 215 had missing response in suicidal thoughts variable, for missing numbers for other variables please see Table 1.

Results in bold indicate significant ($p < .05$); '1' denotes reference category; * Only one person identified gender as 'other' and not included in analysis.

In order to test for individual associations between suicidal thoughts and the continuous variables, t-tests were conducted. Table 8 shows that apprentices who had experienced suicidal ideation were significantly more likely to experience more **bullying (objective NAQ-R measure), psychological distress, alcohol use and substance use, and had**

significantly lower well-being and engaged in more maladaptive stress management and less adaptive stress management. Scores on well-being for those who had suicidal thoughts indicate poor quality of life which is an indication for assessment of depression according to ICD-10 (WHO, 1998).

Table 8. Mean scores by suicidal thoughts.

	Suicidal thoughts in the past 12 months							
	Yes			No			t - test	p-value
	n	Mean	SD	n	Mean	SD		
Objective bullying (NAQ-R)	445	45.42	19.64	822	32.91	12.68	-12.14	<.001
Psychological Distress (K6)	419	17.28	5.62	765	10.57	3.98	-21.67	<.001
Well-being (WHO-5)	395	10.35	5.25	732	16.10	5.08	17.92	<.001
Substance use (SU)	398	3.29	3.38	733	1.61	2.45	-8.69	<.001
Alcohol use (AUDIT-C)	417	5.96	2.96	760	5.04	3.07	-5.04	<.001
Adaptive stress management	417	24.41	3.60	765	25.19	3.31	3.68	<.001
Maladaptive stress management	378	11.68	3.79	378	10.02	3.67	-6.77	<.001
Note: 215 had missing response in suicidal thoughts variable								

To test for associations between suicidal thoughts and the categorical variables, including bullying (subjective), exposure to suicide, and exposure to suicide attempt, ORs were calculated. Table 9 shows that **being bullied in the past 12 months,**

knowing someone who has died by suicide, and knowing someone who has attempted suicide were associated with higher likelihood of suicidal thoughts.

Table 9. Categorical variables by suicidal thoughts.

Suicidal thoughts in the past 12 months							
	Yes		No		OR	95% CI	
	n	%	n	%		L	U
Being bullied in the past 12 months							
Yes	208	54.0	177	46.0	3.22	2.50	4.13
No	235	26.8	643	73.2	1.00		
Exposure to suicide death							
Yes	311	38.1	506	61.9	1.47	1.15	1.89
No	128	29.4	307	70.6	1.00		
Exposure to suicide attempt							
Yes	385	40.5	565	59.5	2.92	2.14	3.98
No	60	18.9	257	81.1	1.00		
Note: 215 had missing response in suicidal thoughts variable							
Results in bold indicate significant ($p < .05$) ; '1' denotes reference category							

MULTIVARIATE LOGISTIC REGRESSION

Multivariate logistic regression analysis was then conducted to test which variables were significantly associated with suicidal thoughts. A backward stepwise method was applied to the analysis to explore which variables remain as individually associated with suicidal thoughts. As seen in Table 10, the final model shows that **knowing someone who has attempted suicide, higher psychological distress, higher substance use, and lower well-being** were associated with

the higher likelihood of suicidal thoughts. In addition, there were significant differences by **employer type** and **level of education**. Specifically, apprentices who work for a group training organisation and who currently do not have an employer were more likely to have suicidal thoughts compared to those working in private companies (the reference group for the analysis), and those with university or other education were less likely to have suicidal thoughts than those with Year 12 education (reference group).

Table 10. Final model of the multivariate logistic regression with suicidal thoughts as outcome.

	Suicidal thoughts in the past 12 months				
	Wald	p-value	OR	95% CI	
				L	U
Exposure to suicide attempt	7.03	.008	1.99	1.20	3.30
Substance use (SU)	9.64	.002	1.11	1.04	1.19
Psychological distress (K6)	70.09	<.001	1.23	1.18	1.30
Well-being (WHO-5)	21.76	<.001	.90	.87	.94
Employer type: Group training organisation*	6.82	.009	2.39	1.24	4.60
Employer type: No employer currently*	4.66	.031	3.83	1.13	12.99
Highest level of education: Other apprenticeship#	4.36	.037	.40	.17	.95
Highest level of education: University#	4.12	.042	.38	.15	.97
Note: N included in analyses = 762					
Method: Backward Stepwise; Final model chi-square = 354.20, $p < .001$; Cox & Snell-Nagelkerke R-squared = 37.2–50.5%; Hosmer & Lemeshow chi-square=3.73, $p = .881$					
Reference category = '*' Private company; '#' Year 12					

OPEN-ENDED RESPONSES

Approximately 160 apprentices chose to provide responses to the open-ended question, *Do you have any other comments?* Five overarching themes emerged from the responses:

LACK OF FINANCIAL SECURITY

Many of the respondents stressed that low wages impacted on their mental health and contributed to their stress and dissatisfaction. According to apprentices, these financial stressors had a flow-on impact of affecting their home-life and disrupting their ability to provide for their families or to afford the expensive tools required for the job. Some apprentices described issues of financial insecurity and not knowing from where or when their next pay was coming.

BULLYING AND HARASSMENT

Many respondents described a sense of being treated *lesser than* other tradespeople, and experienced unfair treatment or even dismissal. Others described harsh bullying or harassment that greatly affected their mental health in the workplace. It was reported that this was compounded for those from minority groups such as female, non-English background, or LGBTQ+ where apprenticeships were described as stigmatising and damaging. Apprentices described a fear of a *backlash* for speaking out, or not feeling that support structures like HR or other colleagues were able/willing to help them.

WORK PRESSURES

Being an apprentice was described as incredibly stressful with a number of work-related pressures impacting mental health and stress. These included *bad bosses*, the FIFO-style roster (being away from family), and long work hours. Many apprentices described a workplace culture that placed huge pressure on apprentices not to take leave to which they were entitled, not

to take sick leave, going without a break or pauses during the day, and pressure to return to work too quickly after an injury etc. There were many descriptions of unrealistic targets and unobtainable standards that apprentices felt they were trying to achieve yet feeling their efforts were going unacknowledged and unappreciated.

LACK OF SUPPORT FOR TRAINING/ EDUCATION

There was a sentiment throughout the responses that apprentices' education was stifled and not supported by educational institutions or large and small companies. Respondents called for more regulation and an overhaul of the system to ensure that apprentices have support in completing their apprenticeship, finding work, and receiving financial aid (e.g. if forced to take time off due to injury, or fired through no fault of their own). Some apprentices described feeling as though they were treated as *cheap labour* and were assigned menial tasks (sweeping, digging holes etc.) that led to a sense of frustration and diminished prospects upon completion.

MENTAL HEALTH STIGMA

Respondents described a poor attitude toward mental health within the construction industry, and a recognition for a greater need to address issues such as stigma. Many participants stated that they were appreciative of the efforts of MATES and the fact this survey was being conducted. Apprentices highlighted that they recognised that mental health and suicide are big issues in their industry and were keen to contribute to helping to improve this situation.





INDUSTRY CONSULTATION

On the 11th December 2019, the preliminary findings from this study was presented to the representatives of 28 construction related organisations for comment. The session was externally facilitated by ConNettica. Representation included relevant unions and employer associations, training organisations and government departments. The purpose of this consultation was to gain an industry perspective on the data from the research which could in turn inform any recommendations or actions arising from the report.

Several union representatives highlighted the vulnerable position of apprentices, and their need for additional support and protection such as that provided through the union-based mentor schemes. There was broad consensus from representatives that the data presented warranted urgent action from the industry. There was general agreement that there is an urgent need to:


- Address structural issues such as the power imbalance experienced by apprentices in relation to co-workers and employers – including more active support and regulation by government.
- Address the culture in the industry that allows this to happen and to break *the cycle of the way things are done*.
- Gain a deeper understanding of the perspectives of both the perpetrators as well as the victims of bullying.
- Provide more support for apprentices to build resilience.

CONCLUSIONS

The results of this study indicate that a large proportion (27.3%) of Queensland construction industry apprentices have experienced workplace bullying. This is exceedingly high in comparison to the bullying rate of 9.6% in Australian workplaces (for 2014/2015) determined by the Australian Workplace Barometer (AWB) project (Potter, Dollard & Tuckey, 2016). Our results are consistent with the current literature that demonstrates the serious consequences of workplace bullying on the mental health and suicidality of employees (Holt et al., 2015; Leach, Poyser & Butterworth, 2017; Magee et al., 2017).

Apprentices have high levels of exposure to suicidal behaviours, and alarmingly 30% reported having experienced some thoughts about suicide in the past 12 months. This is an extremely high level of suicidal ideation, particularly when benchmarking against data from the National Survey of Mental Health and Wellbeing (NSMHWB), which calculated the 12-month prevalence of suicidal ideation for Australians as 2.3%, and Lifetime prevalence as 13.3% (ABS, 2007). (However, the differences in measurement of suicidal ideation between the current survey and the NSMHWB, and the fact that the NSMHWB was conducted quite some time ago should be considered). Results indicated that although apprentices' suicide literacy appeared to be low (despite their high exposure to suicidal behaviours); they had positive attitudes towards improving workplace mental health and preventing suicide in the construction industry. Both these findings are consistent with those of King et al. (2019) who examined suicide prevention literacy and attitudes in young male construction workers.

Very clear patterns emerged from the data across the different analyses. The common factors associated both objective and subjective measures of bullying were being aged 18–25, working for a large employer, working for a group training organisation, not currently having an employer, not currently in an apprenticeship or having an apprentice status as *other* (for reasons other than



completion or on-leave, such as dismissal). Apprentices identifying as LGBTI+ were also shown to be vulnerable to bullying. Interestingly, first year apprentices and those aged up to 17 years were significantly less likely to be bullied than the other age groups. It may be possible that first year/younger apprentices are more protected (possibly while still attached to the education system), that supervisors may be more direct and demanding from older apprentices after their first year; or perhaps young workers are more likely to see certain behaviours of their supervisors as acceptable and therefore not *bullying*. During industry consultation the issue of transition from school to work was highlighted as potentially problematic; however, the data does not support this suggestion given the youngest workers and 1st year apprentices experienced lowest rates of bullying and psychological distress.

Bullying (objective and subjective measures), substance use, and not currently having an employer were significantly positively associated with psychological distress; while well-being, working in the construction trades, and having trade/occupation type as other were significantly negatively associated with psychological distress. In turn, knowing someone who has attempted suicide, higher psychological distress, higher substance use, and lower well-being were uniquely associated with suicidal thoughts. It is important to note that bullying was not directly linked to suicidal thoughts. Based on our results, psychological distress appears to be a mediating factor between bullying and suicidal thoughts.

The descriptive open-ended responses provided by apprentices complemented the quantitative data by illustrating the difficulties experienced by apprentices; and were also reflective of the findings from the previous qualitative study (e.g. lack of financial security, work pressures, reluctance to report bullying, poor supervision/*bad bosses*). Responses to the quantitative questions regarding supervision indicated that most apprentices believed their supervisors were fair, respectful and gave clear directions.

The limitations of this study include low response rate, self-reporting and the application of a cross-sectional design (where causality cannot be inferred). Future research exploring the nature of the bullying experienced by apprentices, workplace culture and attitudes to bullying amongst trades people, supervisors and employers of apprentices and into how resilience can be developed in apprentices would be of value. The findings from the current study will be critical for developing policies and evidence-based interventions to address the issues of bullying, poor mental health and suicidality among apprentices.



RECOMMENDATIONS

The combined findings from the current study, the previous qualitative study, and the construction industry consultation suggest that a response to the issues of bullying, mental health and suicidal behaviours in apprentices is urgently required across various levels. It is strongly recommended that the following areas are considered for intervention:

Recommendation 1

Development and evaluation of an industry-wide onsite intervention program focusing on supervisors, trade workers and apprentices to raise awareness of bullying as an issue and highlight the negative consequences of bullying in the industry.

Recommendation 2

Maintain and expand access to support for apprentices experiencing poor mental health and suicide risk to third party providers such as MATES in Construction.

Recommendation 3

Inclusion of resilience training for apprentices with specific focus on financial management, alcohol and other drugs awareness, suicide and mental health literacy, and workplace rights.

Recommendation 4

Further investigation into the vulnerable position of apprentices experiencing bullying, and in particular, understanding the experiences of apprentices who have been bullied and are unemployed. This investigation should include departmental supervision of apprentices, employment security and conflict management between employers and apprentices.



Recommendation 5

Examination into how various industry, safety and employment regulators impact on bullying, psychological distress and suicidality of apprentices. Specifically, how the relevant agencies may support an apprentice experiencing bullying and a poor psycho-social work environment. These should include but not be limited to:

- Division of Workplace Health and Safety
- Department of Employment, Small Business and Training
- The Queensland Training Ombudsman
- Queensland Building and Construction Commission
- Fairwork Australia

Recommendation 6

Undertake an investigation into the potential benefits of structured industry-based apprentice mentor and support programs such as those offered by several trade unions and employer associations in the industry.

Recommendation 7

Conduct further research exploring the nature of the bullying experienced by apprentices and on how resilience can be developed.

Recommendation 8

Conduct further research exploring workplace culture and attitudes to bullying amongst trade workers, supervisors and employers of apprentices.

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APPENDIX A



SUMMARY

MATES IN CONSTRUCTION: REPORT ON THE CONSTRUCTION INDUSTRY APPRENTICES' FOCUS GROUPS

The Australian Institute for Suicide Research and Prevention (AISRAP) conducted six focus groups in South East Queensland with a total of 57 apprentices (55 male, 2 female). The focus groups varied in size, with between five and 15 apprentices in each group. Two of the groups were comprised of electrical apprentices and four groups were comprised of carpentry and cabinet maker apprentices. MATES in Construction staff assisted with recruitment of apprentices to participate in the groups. The focus groups were conducted by an experienced facilitator, who was also a registered psychologist, with assistance from a MATES in Construction representative.

The purpose of this study was to learn about construction industry apprentices' needs from their own viewpoints, in order to strategically inform appropriate and practical content for the Life Skills training. The focus of the research was on problems/issues experienced at work and outside of work, and the types of information and support that would help them (and others) when they are *doing it tough*. All focus groups were audio-recorded and professionally transcribed. Data was analysed using thematic analysis, a method for identifying and analysing themes within qualitative data. The study was approved by the Griffith University's Human Research Ethics Committee (GU Reference number 2017/353).

Analysis of the focus group data resulted in seven overarching and inter-related themes. These were:

1. Bullying;
2. Variation in quality of employers/supervision;
3. Differences between older and younger workers;
4. Stress management;
5. Mental health and well-being;
6. Suicide prevention awareness training; and
7. Budgeting on a low salary.

Bullying

When asked *what stops you getting out of bed to go to work?*, apprentices generally spoke about very early morning starts, working long hours and being expected to work overtime, travelling long distances to work, working in extreme heat, and low pay. However, the biggest issue that arose across all focus groups was being treated poorly and being bullied by their employer or boss. Apprentices also described how they were reluctant to report bullying for fear of losing their job or apprenticeship.

"...when someone's really harassing you, if he's going off his nut calling you all these names and stuff, just throwing tools at you and stuff like that, then it gets a bit extreme. But that's what you have to deal with I guess."

Variation in quality of employers/supervision

Another closely related issue was the variation in quality of employers/supervision, with some apprentices describing their employers as excellent, and many others depicted as short tempered, aggressive and unwilling to explain or teach things. Many apprentices spoke of their anxiety in moving to other work sites and not knowing what to expect in terms of how they will be treated and whether they will be bullied.

"If you're somewhere for a week at first you're not going to know who to go to, to ask questions. You don't know who is going to be nice to you or who is going to call you an idiot, tell you to 'fuck off', like that sort of thing."

Differences between older and younger workers

Apprentices described an entrenched culture of construction workers (particularly older workers) suppressing their personal problems and instead taking out their stress on those *lower on the ladder*.

"You get the older tradies who half of them feel like they need to treat you like harsher because they were treated like shit when they were apprentices."

Stress management

In turn, some apprentices themselves spoke of how they would take their own problems home and how this had impacted negatively on their relationships and families. In addition, apprentices spoke of differences in communication and in learning styles between the older and younger workers and how this could be an issue.

“Like I get a bit of anxiety every now and then. If you have a crappy day, like when you’re getting yelled at and stuff, you get home and you’re like really ready to snap at somebody.”

Mental health and well-being

Most apprentices said they would not discuss with their employer if they were feeling stressed, anxious or struggling with problems, and that they would definitely not ask for time off to deal with these problems. When questioned about help-seeking, apprentices said they did not want to speak up about struggling with problems because of concerns about being judged and said they would be embarrassed other co-workers observed them seeking help (e.g. talking to a field worker on site). Despite their perceived difficulties and barriers to offering help to others, most apprentices demonstrated compassion and a willingness to support those in need.

Suicide prevention awareness training

Apprentices demonstrated a lack of knowledge about suicide and how to respond appropriately to a suicidal person, indicating a subsequent need for general awareness training.

Budgeting on a low salary

The issue of budgeting on a low salary arose frequently across all focus groups. Apprentices described how it was difficult to manage on a low salary, particularly as it was necessary to have their own car and take out a loan to buy tools (which previously had been subsidised). Budgeting was understandably more difficult for the first- and second-year apprentices receiving the lowest level of pay.

Based on the key issues/themes identified across the six focus groups, AISRAP recommended that the following areas should be included in the Life Skill training for apprentices:

- general information about rights and responsibilities of both apprentices and their employers;
- communication skills training;
- stress management and self-care;
- budgeting skills; and
- suicide prevention general awareness training.

APPENDIX B

Default Question Block

Apprentices' Survey

The purpose of this survey is to learn about apprentices' well-being. It is funded by Mates in Construction and being conducted by the Australian Institute for Suicide Research and Prevention, Griffith University. You will be asked to respond to 'yes/no' or numbered questions which should take about 5-10 minutes. The survey is voluntary, and you can withdraw at any time. **Your responses will be confidential and cannot be linked to your identity.** There are no direct benefits to you, but the results will help identify conditions that could be improved for apprentices. The overall findings from this survey will be reported to Mates in Construction, and may also be disseminated via journal articles and/or conference presentations.

Griffith University research is in accordance with the National Statement on Ethical Conduct in Human Research (2007). If you have any concerns about the ethical conduct of this study you should contact the Manager, Research Ethics on 07 3735 4375 or research-ethics@griffith.edu.au and quote GU Ref No: 2019/407. If you have any questions, you can contact Dr Victoria Ross, 07 3735 3381, or victoria.ross@griffith.edu.au. A summary of the survey results can be obtained by contacting Dr Ross via email.

Completing this survey should not be a risk for you, however the survey does include some personal questions, including those about suicidal thoughts and drug use. If you feel distressed at any time, you can stop the survey and get help at:

Mates in Construction Hotline: 1300 642 111

Beyondblue: 1300 224 636

Lifeline: 13 11 14

headspace: 1800 650 890

Queensland Government Apprenticeship and Traineeship Enquiries: 1800 210 210

Completion of this survey will be taken as your consent to participate in the research.

Questions about you

My gender is:

☐ Male

☐ Female

☐ Other

My age is (in years):

My current apprenticeship status is:

- ☐ Active
- ☐ Not currently in an apprenticeship
- ☐ Completed
- ☐ Ongoing but on long term leave
- ☐ Other

I am a:

- ☐ First Year Apprentice / Trainee
- ☐ Second Year Apprentice / Trainee
- ☐ Third Year Apprentice / Trainee
- ☐ Fourth Year Apprentice
- ☐ I completed my training within the last 12 months
- ☐ Other:

I work for a:

- ☐ Private company
- ☐ Group Training Organisation
- ☐ Government/Public utility
- ☐ Sole trader
- ☐ I currently do not have an employer

My employer is:

- ☐ A very large employer (More than 501 employees)

- ☐ A large employer (101- 500 employees)
- ☐ A medium size employer (51-100)
- ☐ A small employer (11-50)
- ☐ A very small employer (1-10)
- ☐ Not applicable

The trade or occupation I am training for is (please select ONE option that is most relevant to you. If your occupation is not listed, please select 'Other'):

- ☐ Air-conditioning and refrigeration
- ☐ Bricklayer
- ☐ Carpenter
- ☐ Construction
- ☐ Electrician
- ☐ Landscaper
- ☐ Painter and decorator
- ☐ Plasterer
- ☐ Plumber
- ☐ Roofer
- ☐ Tiler
- ☐ Other
- ☐ Not applicable

The highest level of schooling completed was:

- ☐ Year (insert last completed school year grade):
- ☐ Other Apprenticeship
- ☐ University
- ☐ Other

What industry sector do you work mostly in:

- ☐ Workshop
- ☐ Maintenance

- ☐ Housing
- ☐ Small building / construction
- ☐ Commercial / Residential medium-larger sites
- ☐ Engineering Construction
- ☐ Civil Construction
- ☐ Other:

How many nights have you been away from home over night for work in the past 12 months:

- ☐ 0 Nights
- ☐ 1-10 Nights
- ☐ 11-50 Nights
- ☐ More than 50 Nights
- ☐ Not applicable

Do you characterise yourself as any of the following?

Aboriginal or Torres Strait Islander

- ☐ Yes
- ☐ No

A non-English Speaking Background Person

- ☐ Yes
- ☐ No

Do you identify as LGBTI+

- ☐ Yes
- ☐ No

The next questions ask about your employer or supervisor. Please indicate to what extent you agree or disagree with each statement.

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
My supervisor treats me fairly	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My supervisor respects me as a person	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My supervisor gives me clear directions and expectations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

The next questions ask about your experiences at work. Please indicate how often this has happened to you.

In the last 6 months, have you:

	Never	Now and then	Monthly	Weekly	Daily
Had information withheld that affected your performance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Been exposed to an unmanageable workload	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ordered to do work below your level of competence	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Given tasks with unreasonable/impossible targets/deadlines	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Had your opinions and views ignored	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Had your work excessively monitored	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Been reminded repeatedly of your errors or mistakes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Been humiliated or ridiculed in connection with your work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Had gossip or rumours spread about you	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	Never	Now and then	Monthly	Weekly	Daily
Had insulting or offensive remarks made about you	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Been ignored, excluded or isolated from others	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Received hints or signals that you should quit your job	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Been intimidated with threatening behaviour	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Experienced persistent criticism of your work and effort	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Been ignored or faced hostile reactions when you approached	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Had key tasks removed, replaced w/trivial unpleasant tasks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Had false allegations made against you	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Been subjected to excessive teasing and sarcasm	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Been shouted at or targeted with spontaneous anger (or rage)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pressured into not claiming something which is entitled	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Been the subject of unwanted practical jokes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Experienced threats of violence or abused/attacked	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Workplace bullying is described as verbal, physical, social or psychological abuse by your employer (or manager), another person or group of people at work.

How often have you been bullied at work in the past six months?

☐ Never

- ☐ Now and then
- ☐ Monthly
- ☐ Weekly
- ☐ Daily

In the next section, we would like to ask your opinion about mental health and suicidal behaviour. Please indicate to what extent you agree or disagree with each statement.

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
Talking about suicide can cause suicide.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People considering suicide often send out warning signs or invitations.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Poor mental health is a workplace health and safety issue.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The construction industry must do something to reduce suicide rates.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

The next questions ask about your experience with suicidal behaviour.

I have known someone who has died by suicide

- ☐ Yes
- ☐ No

I have known someone who has attempted suicide

- ☐ Yes
- ☐ No

I have experienced some type of thoughts about suicide in the past 12 months

- ☐ Yes
- ☐ No

This section asks about your mental health and well-being, including how you manage stress, and alcohol and drug use.

Please select all that apply to you and indicate how much do you agree with the statement.

The following activities help me deal with stress (Please select 'Not applicable' if you do not engage in the activity):

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	Not applicable
Sport or exercise	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My hobby	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Smoking	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Drinking	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Recreational drugs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Going to the pub	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Being with family or friends	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Nature	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sleeping	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Music	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other:	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="text"/>						

The following questions ask about how you have been feeling during the past 4 weeks. For each question, please select that best describes how often you had this feeling.

In the last 4 weeks, about how often did you feel...

	All of the time	Most of the time	Some of the time	A little of the time	None of the time
...nervous?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
... hopeless?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	All of the time	Most of the time	Some of the time	A little of the time	None of the time
...restless or fidgety?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
...so depressed that nothing could cheer you up?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
...that everything was an effort?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
...worthless?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Questions about alcohol use.

How often did you have a drink containing alcohol in the past year?

- ☐ Never
- ☐ Monthly or less
- ☐ Two to four times a month
- ☐ Two to three times a week
- ☐ Four or more times a week

How many drinks did you have on a typical day when you were drinking in the past year?

- ☐ None, I do not drink
- ☐ 1 or 2
- ☐ 3 or 4
- ☐ 5 or 6
- ☐ 7 or 9
- ☐ 10 or more

How often did you have six or more drinks on one occasion in the past year?

- ☐ Never
- ☐ Less than monthly
- ☐ Monthly
- ☐ Weekly

☐ Daily or almost daily

**In the past 6 months have you taken or used any of the following substances?
(Your responses will be completely confidential and can not be linked to your identity).**

	Never	Occasionally	Sometimes	Regularly
Marijuana/cannabis/hashish	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ecstasy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Heroin, opium, morphine	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Speed, LSD, or cocaine	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Nicotine (smoking)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other drugs and substances (NOT including medication)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please indicate for each of the 5 statements which is closest to how you have been feeling over the last two weeks.

	All of the time	Most of the time	More than half of the time	Less than half of the time	Some of the time	At no time
I have felt cheerful and in good spirits	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have felt calm and relaxed	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have felt active and vigorous	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I woke up feeling fresh and rested	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My daily life has been filled with things that interest me	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

So far today the best way to describe how I'm feeling emotionally/mentally is:

- ☐ Very bad
☐ Bad
☐ OK
☐ Good
☐ Very good

Do you have other comments?

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