Psychological distress in remote mining and construction workers in Australia

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The known Empirical data on the psychological and social challenges faced by remote mining and construction workers and the associated risks of mental distress and suicide are limited.

The new This sample of remote mining and construction workers had higher rates of psychological distress than the general Australian community. Common stressors included relationship problems with partners, financial stress, shift rosters, and social isolation.

The implications Our findings highlight the importance of early intervention mental health and suicide prevention programs for remote mining, resource and construction workers.

Abstract

Objectives: To assess the prevalence and correlates of psychological distress in a sample of remote mining and construction workers in Australia.

Design, setting: A cross-sectional, anonymous Wellbeing and Lifestyle Survey at ten mining sites in South Australia and Western Australia, administered at meetings held during 2013–2015.

Participants: 1124 employees at remote construction, and open cut and underground mining sites completed the survey.

Main outcome measures: General psychological distress (Kessler Psychological Distress Scale, K10) and self-reported overall mental health status; work, lifestyle and family factors correlated with level of psychological distress.

Results: The final sample comprised 1124 workers; 93.5% were men, 63% were aged 25–44 years. 311 respondents (28%) had K10 scores indicating high/very high psychological distress, compared with 10.8% for Australia overall. The most frequently reported stressors were missing special events (86%), relationship problems with partners (68%), financial stress (62%), shift rosters (62%), and social isolation (60%). High psychological distress was significantly more likely in workers aged 25–34 years (*v* ≥ 55 years: odds ratio [OR], 3.2; $P = 0.001$) and workers on a 2 weeks on/1 week off roster (*v* 4 weeks on/1 week off: OR, 2.4; $P < 0.001$). Workers who were very or extremely stressed by their assigned tasks or job (OR, 6.2; $P = 0.004$), their current relationship (OR, 8.2; $P < 0.001$), or their financial situation (OR, 6.0; $P < 0.001$) were significantly more likely to have high/very high K10 scores than those not stressed by these factors. Workers who reported stress related to stigmatisation of mental health problems were at the greatest risk of high/very high psychological distress (*v* not stressed: OR, 23.5; $P < 0.001$).

Conclusions: Psychological distress is significantly more prevalent in the remote mining and construction workforce than in the overall Australian population. The factors that contribute to mental ill health in these workers need to be addressed, and the stigma associated with mental health problems reduced.

Remote mining, resource and construction workers are susceptible to a wide range of stressors, with recognised risks for mental health and wellbeing.[1-6] In particular, FIFO (fly in/fly out) and DIDO (drive in/drive out) employment arrangements have become more common in recent years, accompanied by a range of lifestyle stressors, such as motelling (hotbedding), compressed rosters, and social isolation.[6,7] These arrangements can increase relationship and family strains,[8,9] sleep disturbances,[5,10] and risky behaviour, such as excessive drinking.[2,11] Male predominance in the resource and mining workforce (88%)[12] and their low rates of help-seeking have motivated research into the risks of mental ill health in the FIFO population.[13]

Several studies have found elevated rates of mental health problems among FIFO workers.[4,5,14,15] High rates of psychological distress in FIFO workers have been reported,[4,5] particularly in those on high compression rosters (1–4 weeks on/1 week off),[4,16,17] who report dissatisfaction with shift lengths, challenges in maintaining conflict-free relationships because of prolonged periods away from home, and lower levels of work–life balance than any other Australian industry group.[16,17] Large Australian studies have also found significantly higher rates of depression and anxiety among FIFO workers than in the general population,[14,15] with the risk of anxiety and stress twice as high for younger workers (18–33 years) as for older workers.[15] However, research findings on mental health in mining have been inconsistent;[6,10] with some studies finding the prevalence of mental health problems among FIFO workers comparable with that for the general population.[2,18,19] Further, positive impacts of the FIFO lifestyle have been reported, including improved coping skills and stronger relationships.[6,10]

The mixed results have been attributed to the logistic difficulties of research at mining sites, and to methodological problems, such as sampling bias and small sample sizes,[20] variations in measurements and study design,[21] and low rates of help-seeking that reflect fears of stigmatisation, bullying, and termination and loss of income.[20] In light of parliamentary investigations into suicide by mining workers,[22-24] a clear understanding of the mental health needs of the mining workforce is essential, particularly of workers with a commuting arrangement (FIFO, DIDO, or bus in/bus out).

We collected data on the mental health and wellbeing of remote mining and construction workers to provide a snapshot of the prevalence of psychological distress in this workforce; we also investigated the correlates of distress in these workers.

Methods

This investigation was conducted as part of the delivery of a prevention program by Rural and Remote Mental Health (RRMH; http://www.rrmh.com.au) and their remote mining and construction client companies.

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Participants

All employees based at any of the RRMH client companies and working on remote Australian mining and construction sites in South Australia and Western Australia during 2013–2015 were invited to participate. No exclusion criteria were applied; participants with low literacy levels were offered assistance to complete the survey.

Measures

All participants were administered the RRMH Wellbeing and Lifestyle Survey, which requires no longer than 20 minutes to complete. This survey comprised three sections:

- *Demographic information and work characteristics*: Standard demographic questions (sex, age, level of education, relationship status), and questions about work characteristics (including roster swing, resource sector [open cut, underground, construction], location of rest and relaxation).
- *Common symptoms of stress and burnout*: Twenty-three items about stress related to specific lifestyle, family and work factors.
- *Physical and mental health*: The final section of the survey asked participants to describe dietary habits and overall physical and mental health status, rated from 1 (poor) to 5 (excellent). The Kessler Psychological Distress Scale questionnaire (K10) was administered to obtain a validated measure of psychological distress that could be compared with that of the general population.

Procedures

An RRMH representative attended a series of workplace Toolbox Talks at ten mining sites (four construction, three underground mining, three open cut mining sites) across Western Australia and South Australia during 2013–2015. Toolbox Talks are brief, usually compulsory meetings at mining sites that provide information on safety and daily work plans before a shift begins. Managers informed workers in advance that the Wellbeing and Lifestyle Survey would be administered at this talk, and assured them that results would be provided to their company only in an aggregated format.

The RRMH representative introduced the survey by explaining its purpose and length, and by describing the processes that ensured the anonymity and confidentiality of the data collected. All attenders were informed that participation was voluntary, and this consent information was also included on the first page of the survey form. Individual consent to participation was inferred from completion of the survey.

Statistical analysis

All data were analysed in SPSS 24 (IBM). Frequencies and percentages were calculated for categorical variables; continuous variables were summarised as means and standard deviations (SDs). The K10 responses were summed to give a cumulative score (range, 10–50), with total scores categorised according to pre-established thresholds:[25] low (10–15), moderate (16–21), high (22–29) and very high stress levels (30–50).

Predictors of psychological distress were assessed in a two-stage process. First, a series of univariate multinomial regressions were conducted, including all demographic variables that might influence psychological distress. The second stage was a multivariable regression analysis of psychological distress and all work characteristics, controlling all demographic variables with a significant impact on psychological distress. This process was repeated for all lifestyle and family characteristics. Collinearity of variables was assessed (Spearman ρ) before inclusion in the multinomial model; when variables were highly correlated ($P \leq 0.05$), one was randomly selected for inclusion in the model. Odds ratios (ORs) were calculated for all significant predictors ($P \leq 0.05$) and emphasis was placed on the magnitude of difference in scores. As this was an exploratory analysis, correction for multiple comparisons was not applied.

Ethics approval

After approval by the client companies, the research protocol was submitted to Bellberry Human Research Ethics Committee, who deemed the study low risk and appropriate for scientific publication (reference, 2015-08-535).

Results

The Wellbeing and Lifestyle Survey was administered at morning and evening Toolbox Talks for up to 3 days at each of the ten participating sites; between 50 and 100 workers attended each Toolbox Talk. As the time available for administering the survey was limited, and to alleviate concerns about anonymity and confidentiality, attendance sheets and unreturned surveys were not collected; as a result, a precise response rate could not be calculated. Based on the reports of the RRMH representatives, it was estimated that 1500 workers were invited to participate in the surveys (about 65% of workers at each site).

The Wellbeing and Lifestyle Survey was completed by 1461 workers. Data from two mining sites at which the K10 was not administered were excluded from analysis (176 survey forms); a further 161 were excluded because a substantial amount of data was missing. The final sample comprised a total of 1124 workers. There were no significant differences between survey respondents excluded because of missing data and respondents included in the analysis with respect to sex (men, 92.5% *v* 93.5%; $P = 0.41$) or age (mean, 37.1 [SD, 12.1 years] *v* 37.3 years [SD, 10.7 years]; $P = 0.46$).

Most respondents were FIFO workers (1105, 98%), and 649 (57.8%) were employed at remote sites in WA. The sex and age composition of the final sample of 1124 respondents was consistent with recently reported figures for the remote construction and mining workforce:[24] most respondents were men (93.5%) and aged 25–44 years (63%). Nearly half the respondents (519, 46%) were employed on a 2 weeks on/1 week off roster, and one-third (374, 33%) on a 4 weeks on/1 week off roster (Box 1).

The distribution of K10 psychological distress scores for the survey respondents was skewed towards higher values than that of the general Australian population (Box 2); the median K10 score was 17 (interquartile range, 13–22). More than one-quarter of respondents had scores indicating high or very high psychological distress (311, 28%), compared with 10.8% for the general population; a higher proportion of respondents rated their own mental health as poor or fair (22%) than did the general population (14.8%).

The most commonly reported sources of stress were missing special events while on site (86.5%) and relationship problems with partners (68.0%). More than half the respondents were worried by financial stress (62.3%), shift rosters (62.0%), and social isolation (60.2%). The inability to practise religious or spiritual beliefs was nominated as a stressor by 11.2% of respondents. A total of 41% of

1 Demographic characteristics of the 1124 workers who participated in the survey

Sex		Travel arrangements to work	
Men	1051 (93.5%)	Fly in/fly out	1105 (98.3%)
Women	73 (6.5%)	Drive in/drive out	12 (1.1%)
Age (years)		Daily commute (< 1 hour)	7 (0.6%)
16–24	114 (10.1%)	Roster swing	
25–34	415 (36.9%)	1 week on/1 week off	186 (16.5%)
35–44	295 (26.2%)	2 weeks on/1 week off	519 (46.2%)
45–54	223 (19.8%)	4 weeks on/1 week off	374 (33.3%)
≥ 55	77 (6.9%)	Other	45 (4.0%)
Mining sector		Time with this company	
Construction	434 (38.7%)	< 6 months	184 (16.4%)
Underground	475 (42.3%)	6–12 months	181 (16.1%)
Open pit	215 (19.1%)	1–2 years	257 (22.9%)
Relationship status		2–5 years	344 (30.6%)
Single	298 (26.5%)	> 5 years	158 (14.1%)
Married/de facto	734 (65.3%)	Time at site/project	
Separated	52 (4.6%)	< 6 months	261 (23.2%)
Widowed	40 (3.6%)	6–12 months	285 (25.4%)
Dependents under 18		1–2 years	247 (22.0%)
None	634 (56.4%)	2–5 years	288 (25.6%)
One	182 (16.2%)	> 5 years	43 (3.8%)
Two or more	308 (27.4%)	Location of rest and recreation	
Highest level of education		Perth	533 (47.4%)
Did not complete high school	396 (35.2%)	Adelaide	118 (10.5%)
High school or equivalent	218 (19.4%)	Other Australian cities	149 (13.3%)
Diploma/trade certificate	412 (36.7%)	Regional Western Australia	123 (10.9%)
University	98 (8.7%)	Regional South Australia	44 (3.9%)
Mining location		Other regional Australia	118 (10.5%)
Western Australia	649 (57.8%)	Overseas	39 (3.5%)
South Australia	475 (42.3%)		

respondents were worried about the stigma attached to mental health problems, and 38.5% reported stress caused by the unavailability of help when needed (Box 3).

Age, relationship status, roster swing and mining sector were significant predictors of psychological distress in the univariate multinomial regression analysis (Box 4; online Appendix) and were included in the final combined multinomial model. Three variables were excluded because of collinearity (stress related to missing special events, social isolation, and stress caused by management).

Respondents aged 34 or less were three times as likely to report high levels of distress as more senior workers, (25–34 years: OR, 3.2; $P = 0.001$; 35–44 years: OR, 2.6; $P < 0.018$ respectively), and respondents who were separated were more likely than singles to have high or very high K10 levels (OR, 3.7; $P = 0.001$). The factor most strongly associated with psychological distress was the work roster ($P < 0.001$); those on 1 week on/1 week off (OR, 1.6; $P = 0.039$) or 2 weeks on/1 week off swings (OR, 2.4; $P < 0.001$) had about twice the risk of moderate psychological distress of those who worked 4 weeks on/1 week off (Box 4).

The strongest predictor of psychological distress overall was fear of stigmatisation for mental health problems; workers who reported being stressed by this factor were 20 times (OR, 19.6; $P < 0.001$), and those who were extremely stressed about it were 24 times (OR, 23.5; $P < 0.001$) as likely to have high or very high levels of distress values (Box 5).

Work-related factors, such as stress caused by immediate supervisors ($P = 0.024$), job tasks ($P = 0.034$), shift length ($P = 0.042$), and shift roster ($P = 0.050$), were significantly associated with high distress levels. Workers who felt very or extremely stressed by their immediate supervisors were four times as likely to experience high or very high levels of distress as those who were not stressed by their supervisors (OR, 4.3; $P = 0.003$). Respondents reporting job- or task-specific stress were twice as likely to report high or very high levels of distress than those who did not experience any stress (OR, 2.2; $P = 0.031$); those who were highly stressed were six times as likely to report high or very high levels of distress (OR, 6.2; $P = 0.004$). Workers who were stressed by the length of their shift were more than twice as likely (OR, 2.4; $P = 0.017$) to experience high levels of distress, while those concerned with their roster swing were twice as likely to have moderate levels of distress (stressed: OR, 2.2; $P = 0.010$; very stressed: OR, 2.6; $P = 0.017$) (Box 5).

Workers who reported stress in their relationship with their partner were eight times as likely to have high psychological

2 Psychological distress levels (K10) and self-rated mental health for 1124 survey participants and the general Australian population

	Survey participants	Australian population[26]*
Psychological distress levels (K10 scores)		
Low (10–15)	448 (39.9%)	70.1%
Moderate (16–21)	365 (32.5%)	18.4%
High (22–29)	240 (21.4%)	7.4%
Very high (30–50)	71 (6.3%)	3.4%
Self-reported mental health		
Poor	45 (4.0%)	4.4%
Fair	197 (17.5%)	10.4%
Good	446 (39.7%)	28.9%
Very good	302 (26.9%)	36.5%
Excellent	114 (10.1%)	19.8%
Missing data	20 (1.8%)	—

K10 = Kessler Psychological Distress Scale questionnaire. * Weighted to adjust for the predominantly male sample (93.5%). ◆

distress levels (OR, 8.2; $P < 0.001$), while workers who reported financial stress were six times as likely to have high or very high K10 scores (OR, 6.0; $P < 0.001$). Workers reporting stress about the remoteness of their living circumstances were nearly four times as likely to experience high psychological distress (OR, 3.7; $P = 0.002$).

Discussion

We found elevated levels of psychological distress in the remote mining and construction workforce in Australia. The risk of psychological distress was significantly higher among workers aged 44 years or less, workers who had separated from their partner, and workers employed on compressed roster swings (2 weeks on/1 week off or 1 week on/1 week off). These findings differ from those of some earlier studies that found that the mental health and wellbeing of the mining and construction workforce were similar to those of the general Australian community.[2,16,17]

Although the strongest predictor of psychological distress was stress related to the stigmatisation of mental health problems, a number of work-, family- and relationship-related stressors were also significantly associated with high psychological distress. These results are consistent with previous suggestions that the unique characteristics of the remote mining lifestyle can cause psychological distress.[1,3-6] In particular, psychological distress was significantly higher among workers assigned to a swing rosters with 1 or 2 weeks on, and among workers who felt stressed about the length of their rostered shifts. Earlier research found that the

3 Level of stress associated with work, lifestyle and family factors

	Not stressed	Slightly stressed	Very stressed
Work-related stressors (1061 responses)			
Travelling to and from work	502 (47.3%)	386 (36.4%)	173 (16.3%)
Accommodation	657 (61.9%)	303 (28.6%)	101 (9.6%)
Work colleagues	472 (44.5%)	439 (41.4%)	150 (14.2%)
Immediate supervisors	494 (46.6%)	363 (34.2%)	204 (19.2%)
Senior management	439 (41.4%)	341 (32.1%)	281 (26.5%)
Job tasks	452 (42.6%)	424 (40.0%)	185 (17.4%)
Shift length	530 (50.0%)	312 (29.4%)	219 (20.7%)
Shift roster	403 (38.0%)	318 (30.0%)	340 (32.0%)
Availability of help if needed	653 (61.5%)	252 (23.8%)	156 (14.7%)
Stigma attached to mental health problems	626 (59.0%)	279 (26.3%)	156 (14.7%)
Physical environment	542 (51.1%)	346 (32.6%)	173 (16.3%)
Lifestyle-related stressors (1098 responses)			
Living in remote circumstances	437 (39.8%)	387 (35.2%)	274 (24.9%)
Social isolation	437 (39.8%)	351 (32.0%)	310 (28.2%)
Lack of social participation	511 (46.5%)	326 (29.7%)	261 (23.8%)
Inability to practise religion	975 (88.8%)	77 (7.0%)	46 (4.2%)
Lack of general facilities	650 (59.2%)	294 (26.8%)	154 (14.0%)
Lack of access to telecommunications	625 (56.9%)	249 (22.7%)	224 (20.4%)
Lack of public transport	917 (83.5%)	93 (8.5%)	88 (8.0%)
Family-related stressors (869 responses)			
Missing special events (eg, birthdays)	118 (13.6%)	264 (30.4%)	487 (56.1%)
Relationship with partner	278 (32.0%)	245 (28.2%)	346 (39.8%)
Relationship with children	399 (45.9%)	196 (22.6%)	274 (31.5%)
Relationship with parents	461 (53.0%)	224 (25.8%)	184 (21.2%)
Financial situation	328 (37.7%)	252 (29.0%)	289 (33.3%)

4 Demographic characteristics associated with psychological distress in 1124 survey participants (multinomial univariate regression)

		Moderate K10 score		High/very high K10 score	
Demographic	*P*	OR (95% CI)	*P*	OR (95% CI)	*P*
Mining sector	0.001				
Construction		0.8 (0.5–1.1)	0.12	0.4 (0.3–0.6)	< 0.001
Underground		1.0 (0.7–1.4)	0.87	0.9 (0.6–1.3)	0.46
Open pit		1		1	
Age (years)	0.001				
16–24		1.9 (1.0–3.5)	0.06	2.6 (1.2–5.6)	0.018
25–34		1.8 (1.0–3.0)	0.035	3.2 (1.6–6.2)	0.001
35–44		1.1 (0.6–1.9)	0.68	2.6 (1.3–5.0)	0.006
45–54		0.9 (0.5–1.6)	0.82	1.8 (0.9–3.7)	0.09
≥ 55		1		1	
Sex	0.26				
Relationship status	0.014				
Divorced/widowed		1.0 (0.5–2.0)	0.90	0.7 (0.3–1.6)	0.40
Separated		1.5 (0.7–3.4)	0.32	3.7 (1.8–7.6)	0.001
Married/de facto		1.1 (0.8–1.5)	0.60	1.1 (0.8–1.6)	0.47
Single		1		1	
Number of dependents under 18	0.10				
Education	0.78				
Occupation	0.07				
Roster swing	< 0.001				
1 week on/1 week off		1.4 (0.9–2.1)	0.12	1.6 (1.0–2.5)	0.039
2 weeks on/1 week off		1.4 (1.0–1.9)	0.05	2.4 (1.7–3.4)	< 0.001
4 weeks on/1 week off		1		1	
Other		0.5 (0.2–1.0)	0.06	1.0 (0.5–2.0)	0.91
Duration of previous job	0.20				
Time at current company	0.32				
Time in current job	0.11				

CI = confidence interval; K10 = Kessler Psychological Distress Scale questionnaire; OR = odds ratio. ◆

4 weeks on/1 week off swing was most detrimental to mental wellbeing.[16,17] Our divergent findings may be attributable to our broader workforce sample, particularly our inclusion of underground mining workers, who are less frequently captured in research studies.

Consistent with previous studies,[2,7,8] the remoteness of the mining lifestyle was significantly associated with high psychological distress. Most notably, stress associated with the stigma attached to mental health problems was the strongest predictor of high psychological distress. Given that 40% of respondents rated stigma a source of stress, this finding is alarming, and highlights the importance of early interventions and suicide prevention programs based on improving mental health literacy.

Our study was facilitated by the support of the relevant companies, but the logistic problems inherent to research at mining sites remained (restricted opportunities to meet with employees). This limitation resulted in a substantial amount of missing data (161 of 1285 surveys, 12.5%) and the inability to provide an accurate estimate of the survey response rate. Further, the survey was administered to groups of as many as 100 workers in a time-pressured environment, preventing our assessing the possibility of biased responding; given the workplace setting, socially desirable responses are not unexpected. Finally, we did not examine interactions between demographic, work, lifestyle and family factors and their effects on psychological distress.

Nevertheless, our findings have informed the development and expansion of RRMH mental health education programs, including material (funded by the Movember Foundation, au.movember.com) tailored to the special features of the remote mining and construction workforce identified by our research. Moreover, our findings have the potential to inform health and safety policy and practice more broadly, particularly given the growing awareness of the levels of mental distress and suicide rates among workers in this industry.

Competing interests: Jennifer Bowers is the managing director of Rural and Remote Mental Health (RRMH). This organisation has pre-existing relationships with the participating mining sites. This study was conducted as part of an agreement between Rural and Remote Mental Health and three client companies. Data collection and dissemination of feedback to participants was facilitated by these companies.

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5 Demographic characteristics associated with psychological distress in 1124 survey participants (multinomial multivariate regression)

		Moderate K10 score		High/very high K10 score	
	P	OR (95% CI)	*P*	OR (95% CI)	*P*
Work-related factors					
Immediate supervisors	0.024				
Not stressed		1		1	
Slightly stressed		1.2 (0.8–1.7)	0.46	1.6 (1.0–2.7)	0.048
Stressed		1.3 (0.7–2.5)	0.38	2.0 (1.0–4.3)	0.06
Very/extremely stressed		0.9 (0.4–2.4)	0.89	4.3 (1.6–11.3)	0.003
Job tasks	0.034				
Not stressed		1		1	
Slightly stressed		1.3 (0.9–2.0)	0.14	1.7 (1.0–2.7)	0.039
Stressed		1.2 (0.6–2.3)	0.57	2.2 (1.1–4.4)	0.031
Very/extremely stressed		2.9 (0.9–9.8)	0.08	6.2 (1.8–21.2)	0.004
Shift length	0.042				
Not stressed		1		1	
Slightly stressed		1.1 (0.8–1.7)	0.52	1.5 (0.9–2.5)	0.12
Stressed		1.0 (0.5–1.9)	0.98	2.4 (1.2–5.1)	0.017
Very/extremely stressed		0.5 (0.2–1.4)	0.19	0.5 (0.2–1.6)	0.25
Shift roster	0.05				
Not stressed		1		1	
Slightly stressed		1.5 (0.9–2.3)	0.10	0.9 (0.5–1.6)	0.67
Stressed		2.2 (1.2–3.9)	0.010	0.9 (0.4–1.8)	0.76
Very/extremely stressed		2.6 (1.2–5.8)	0.017	1.5 (0.6–3.8)	0.39
Stigma attached to mental health problems	< 0.001				
Not stressed		1		1	
Slightly stressed		2.1 (1.4–3.1)	< 0.001	3.6 (2.2–5.9)	< 0.001
Stressed		2.7 (1.1–6.3)	0.023	19.6 (8.3–46.6)	< 0.001
Very/extremely stressed		1.9 (0.5–6.5)	0.33	23.5 (7.5–73.2)	< 0.001
Physical environment	0.06				
Lifestyle-related factors					
Remote living circumstances	< 0.001				
Not stressed		1		1	
Slightly stressed		2.2 (1.5–3.1)	< 0.001	1.5 (1.0–2.3)	0.06
Stressed		3.6 (2.1–6.1)	< 0.001	4.1 (2.4–7.3)	< 0.001
Very/extremely stressed		1.3 (0.5–3.2)	0.62	3.7 (1.6–8.6)	0.002
Inability to pursue religious/spiritual practices	0.018				
Not stressed		1		1	
Slightly stressed		1.1 (0.6–2.3)	0.72	2.7 (1.4–5.5)	0.004
Stressed		0.8 (0.2–2.8)	0.68	2.4 (0.8–7.8)	0.14
Very/extremely stressed		2.7 (0.5–15.4)	0.27	3.1 (0.6–17.2)	0.19
Lack of access to telecommunications (eg, social media)	0.10				
Family-related factors					
Relationship with partner	< 0.001				
Not stressed		1		1	
Slightly stressed		1.5 (0.9–2.4)	0.14	1.2 (0.6–2.1)	0.61
Stressed		1.6 (0.9–2.8)	0.08	1.6 (0.8–3.0)	0.17
Very/extremely stressed		3.4 (1.5–7.8)	0.003	8.2 (3.5–19.3)	< 0.001
Financial situation	< 0.001				
Not stressed		1		1	
Slightly stressed		1.5 (0.9–2.3)	0.08	1.3 (0.8–2.3)	0.28
Stressed		2.9 (1.7–5.2)	< 0.001	4.6 (2.5–8.5)	< 0.001
Very/extremely stressed		3.3 (1.5–7.1)	0.002	6.0 (2.7–13.1)	< 0.001
Lack of access to telecommunications (eg, family contact)	0.07				

CI = confidence interval; K10 = Kessler Psychological Distress Scale questionnaire; OR = odds ratio. * Comparison group: low distress level. ◆

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