

WORK RELATED SUICIDE OVERVIEW

What is a work related suicide.

Suicide is generally accepted to mean the fatal, and suicide attempt the non-fatal, act of self-injury, undertaken with more or less self-destructive intent, however vague and ambiguous (Stengel 1969). However there is a range of definitions according to purpose and the Coroner's definition based on legal rules is most strict. Suicide is rarely attributable to one single cause and is the consequence of a complex interaction of social, psychological and biological characteristics (van Heeringen et al. 2000).

Suicide was the most frequent cause of injury death in Victoria in 2008 with 504 deaths and since 1990 suicides have been more frequent than road traffic fatalities (303 unintentional deaths in Victoria in 2008) (ABS 2010).

Conventionally suicides that have occurred to workers either in the workplace, by use of a work agent or that have occurred due to work stressors have been defined in the academic literature as work related.

Work related suicide research from the academic literature

Using the conventional definition above, many studies on work related suicide have been analysed and reported by occupation. Farmers, health care professionals and electricians have commonly been reported as having an elevated suicide risk. In addition risk for males has been noted as seven times that for females, risk increases with age for males (Boxer et al. 1995); (Conroy 1989) and men have been found to be more at risk of depression in high strain jobs (Woo and Postolache 2008). Women have been found to be at higher risk working in male dominated occupations (Agerbo 2003) and in jobs with low decision authority (Woo and Postolache 2008).

Woo and Postolache (2008) reviewed the evidence around the impact of occupational factors on mood disorders and suicide and the efficacy of interventions and identified the following factors: poor lighting conditions at work may be conducive to depression; exposure to noise is an important stressor and predicts irritability, somatic complaints, anxiety, and depression; mild or intermittent noise may affect certain vulnerable subjects; shift work can increase the risk of developing or aggravating mood disorders, at least in vulnerable individuals; employees who perceive they are treated unfairly by their supervisors are at increased risk of poor mental health; workplace bullying is a significant risk factor for incident induced depression; lack of social support is related to depression and professional knowledge of a suicide agent can induce lethality where otherwise the suicide would not have occurred.

Although conditions of employment can be attributed to suicide, unemployment is a well documented suicide risk factor. (Platt and Hawton 1992) found an increased risk of suicide and

deliberate self-harm among the unemployed that may be compatible with both causal and self-selection processes. Chan et al. (2007) noted unemployment can trigger stress, health problems and reduce self-esteem. Involuntary and prolonged unemployment can induce depression and feelings of hopelessness. Several Australian studies have demonstrated a link between employment status and suicide risk, particularly for males (Hassan 1995, Baume et al. 1998, Taylor et al. 1998, Dudley et al. 1998, Morrell et al. 1993, Hassan and Tan 1989, DHAC 2000).

Broad definition

A broad definition of work related suicide was used by both (Bottomley et al. 2002) and (Kraus et al. 2005) in their research on work related suicide. Kraus (2005) considered a suicide work related if any of the following were implicated: unemployment or recent loss of job, inability to find a new job, financial issues related to lack of employment or failing business, dissatisfaction with employer or fellow employees, occurrence at a business location and demotion or any other similar work-connected factor. Bottomley et al (2002) included suicides on workers compensation through a long-term work injury or those made redundant or retrenched (not long-term unemployed).

The current study applies even broader work related suicide selection criteria of *work stressor*, *commercial vehicle (train and truck) as counterpart agent*, *work agent* as direct agent or *work location* for inclusion in the Victorian Work Related Fatality Database (WRFD) (Bugeja et al. 2009). Work related stressors include: Harassment or bullying; ongoing difficulties gaining employment; financial problems related to their business; mobility limitations, pain or depression after a workplace injury; recent redundancy, compensation claims or involvement in job related court proceedings, work-related interpersonal conflict or relationship breakdown.

Characteristics of Victorian work related suicides (broad definition)

Work relatedness overview

The inclusion criteria for the 643 suicides considered work related were mostly involvement of work stressors (n=355, 55.3%) followed by commercial transport as counterpart agent (n=205, 31.9%), workplace (n=44, 6.9%) and then work agent (n=37, 5.6%). The coding hierarchy applicable to cases where more than one work relatedness criteria was involved is as listed in Table 1 (overleaf) eg train suicide due to work stressors is listed in the primary work relatedness category as work stressor and commercial transport as secondary criterion.

Table 1 Work relatedness of closed suicide cases

	Work relatedness (primary)	%	Secondary work relatedness
Work agent (means)	37	5.8	18 workplace, 5 work stressors
Work stressors	355	55.2	16 commercial transport, 16 workplace
Commercial transport (means)	205	31.9	-
Workplace	44	6.8	-
Other	2	0.3	
Total	643	100	

Work-related suicides by age group

The age distribution for suicides by commercial transport as the counterpart agent (mostly rail) was considerably younger (53.5% aged 20-39 years) than for those caused wholly or in part by work stressors (45.1% aged 40-54 years) or than those undertaken at a work location (72.6% 30-54 years). The work agent distribution was bimodal with 42% aged 20-34 years and 17% aged 50-59 years (Figure 1). The majority were male (work stressors, location, agent and trucks approximately 88% male), less so for train suicides (67% male).

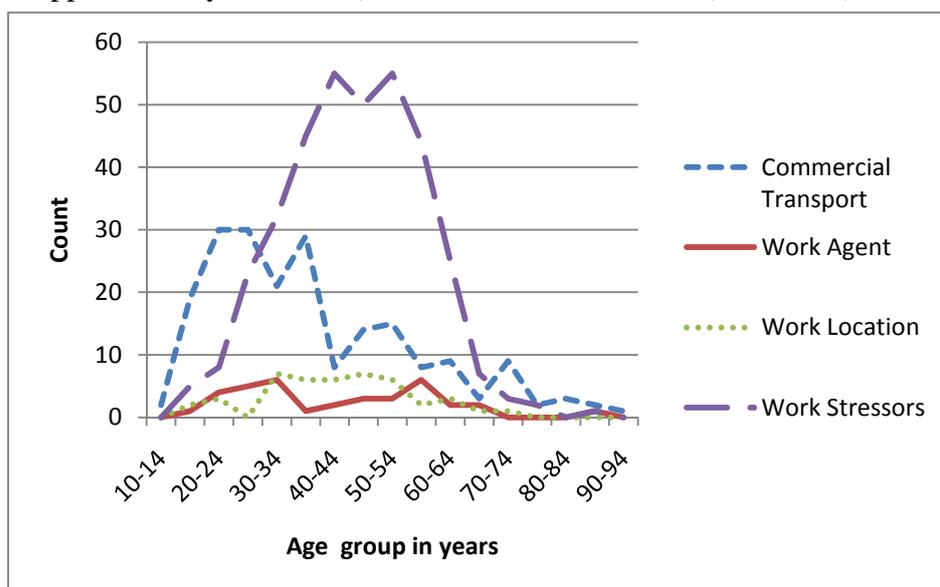


Figure 1 Work relatedness by age group

**Intentional self-harm cases where several work related factors are involved are allocated according to a hierarchy: 1. work agent, 2. work stressor, 3. bystander/ trespasser, 4. workplace*

Work relatedness of suicides by occupational groupings

The most commonly occurring occupational groupings for suicide associated with work related stressors included *managers* followed by *technicians and trades workers* and then *professionals* (eg engineers and accountants). For the ‘work stressors’, *managers* and *technicians* had business related stressors (mostly financial) as their most commonly associated stressor. For *professionals* it was general work stress. (Table 2)

For workplace suicides, managers and trades and technicians were the most common occupational group. ‘Work agent’ was most frequently used as a suicide means by professionals (largely health workers accessing pharmaceuticals) and managers, especially farmers using firearms. The means ‘commercial transport’ was more varied; of its largest group, professionals, three were teachers and two engineers. (Table 2)

Table 2. Intentional self-harm, work relatedness and ANZSCO groupings (working)

Major occupational groupings (ANZSCO)	Work relatedness*								
	Work stressors		Means = Commercial transport		Means = Work agent		Workplace		Total
	N	%	N	%	N	%	N	%	N
Clerical & Admin	9	4.1	*	7.7	*		*		15
Community & personal service workers	13	5.9	6	11.5	*		*		20
Labourers	19	8.6	9	17.3	*	8.3	6	13.6	37
Machinery operators & drivers	21	9.5	5	9.6	*		7	15.9	34
Managers	60	27.0	*		10	27.8	11	25.0	84
Professionals	36	16.2	12	23.1	13	33.3	*		63
Sales workers	6	2.7	*		0	0	*		11
Technicians & trades workers	57	25.7	9	17.3	*		11	25.0	80
Total	221	100	52	100	32	100	39	100	344

*Small cell counts <5.

**Intentional self-harm cases where several work related factors are involved are allocated according to a hierarchy: 1. work agent, 2. work stressor, 3. bystander/ trespasser, 4. workplace.

*** Plus 2 other work relatedness.

The work stressor and jumping in front of commercial transport as counterpart agent suicides in the work relatedness subgroups were largely unemployed, retired or pensioners. In addition students were among those who more frequently used commercial transport as a means of suicide, consistent with the younger age group of these means. Occupation unknown was most frequent for suicides by commercial transport (Table 3).

Table 3. Suicide by primary work relatedness and current ANZCO occupational groupings (Non working)

Occupational group (N/A & U/K)	Work relatedness								
	Work stressors		Means = Commercial transport		Means = Work agent		Workplace		Total
	N/A	128	%	111	%	5	%	5	
- Unemployed	71	53.0	32	20.8	*	40	*	20	106
-Pensioner	24	17.9	30	19.5	*		*	20	56
-Retired	23	17.2	13	8.4	*		*		36
-Students	*		24	15.6	*	60	*	40	31
-Home duties	*		5		*		*	20	10
-In care	*		*		*		*		6
-Other	*		*		*				*
U/K	6	4.5	42	27.3	*		*	0	48
Total	134	100	153	100	5	100	5	100	297

*Small cell counts <5.

**Intentional self-harm cases where several work related factors are involved are allocated according to a hierarchy: 1. work agent, 2. work stressor, 3. bystander/ trespasser, 4. workplace

Prevention

Individual level

1. Measures that improve protective factors for individuals at risk of suicide. These protective factors include:
 - Personal resilience and problem-solving skills
 - Good physical and mental health
 - Economic security in older age
 - A sense of meaning and purpose to life
 - Community and social integration
 - Early identification and appropriate treatment of psychiatric illness

Population level

2. Measures which increase employment. Consideration should be given to the wider aspects of market conditions and situations and their impact on suicide. “Many European nations have regulations in place preventing companies from laying off employees during hard financial times” (Lester and Yang 2003).

Measures that reduce access to the means of suicide eg fencing along rail lines, firearm and drug access policies, restricted access to and fencing for high jumping sites.

Measures which address mental health issues, especially for men and for those in higher risk professions eg farmers and the medical profession.

Workplace

3. Psychiatric quality care to treat workers under stress; increased awareness and destigmatising of mental health; regular monitoring of high-risk populations identifying increased risk such as recent hire, demotion, transfer, laying-off and offering of counselling, listing of suicide crisis hotlines in every directory.
4. Job re-design aimed at increasing worker’s control and work flows that encourage human contact and reporting concerns to a supervisor immediately.
5. Increased light especially in winter either through outdoor breaks, light treatment devices or location near windows.

Resources

6. Beyond Blue (<http://www.beyondblue.org.au>) for their programs which focus on educating about depression, anxiety and bipolar disorder. The Beyond Blue National Workplace Program has been evaluated in both Australia and overseas and appears most relevant. Additional Beyond Blue programs relevant to work related depression and suicide are MensLine Australia, Trans-Help support for transport drivers and their families and Rural men's health.
7. SuicideLine (Vic) (<http://www.suicideline.org.au>). Counsellors provide specialist telephone counselling and information to anyone affected by suicide – those thinking about suicide, worried about someone or have lost someone to suicide 24 hours a day, seven days a week. Service supports callers through a series of up to six 50 minute phone calls.

Other

8. Access be given to researchers to other injury and fatality datasets to supplement and link information in the WRFD in order to improve data richness and guide appropriate interventions.

Implications for Worksafe

- Suicide is a very large public health problem (greater than the road toll) which is linked directly and indirectly to work in a number of ways that are more clearly defined in the current research than has previously been the case in Victoria. Some or all of these links may require a policy response from WorkSafe or more attention to the implementation of aspects of existing policy.
- To counter previously described suicide risk factors, WorkSafe should support or continue to support programs that encourage resilience, work-life balance, healthy workplaces, counselling availability, sense of community and social integration, knowledge of mental illness, employment of older workers.
- WorkSafe should develop or support programs that restrict access of workers to the means of suicide in their workplace, particularly health and veterinary professionals' access to pharmaceuticals and farmers to firearms.

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