# Queensland Mining Industry
## Health & Safety Conference
## The One Constant - Health & Safety

# Working Well: Mental Health and Mining


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**Background**

The Australian resources sector is an integral part of Australia's economy, contributing significantly to the economy overall and to regional and rural economies and communities.[1] In 2009-10 it was estimated the resources industry contributed $121.5 billion dollars to the Australian economy.[2] In 2013 260,000 people were employed in mining in Australia, representing approximately 2% of the total Australian workforce.[3]

The mining workforce is characterised as high income, predominantly male workforce which is older than the national average, with a median age of 40 years, compared to the average 37 years for the national workforce.[1]

**What is Mental Health and Mental Illness?**

Mental Health is a state of well-being in which the individual realises his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community.[4]

A mental Illness is a clinically diagnosable medical condition which describes a range of behavioural and psychological conditions, with the most common illnesses being anxiety, mood disorders such as depression, and substance use disorders.[5] The less common mental illnesses include schizophrenia, bipolar disorder and other psychoses, and a range of other conditions such as eating disorders, and severe personality disorder.[5] It is estimated that 2-3% are affected by these less common mental illnesses such as schizophrenia and bipolar disorder.[5]

People can experience a level of cognitive, emotional, behavioural and social problems that do not meet the criteria for a diagnosed mental illness. These will often resolve with time or when life stressors change. If mental health problems persist or increase in severity they may develop into a mental illness.

**What are the Common Mental Illnesses?**

In a twelve month period one in five (20% or 3.2 million people) Australians will have experienced a mental illness.[6] For the three most common categories of mental illness, in a twelve month period it is estimated that of Australians between 16 and 85 years:

- 6% will experience a mood disorder such as depression
- 14% will experience an anxiety disorder
- 5% will experience a substance use disorder [6]

***Depression***

Depression is the most common of the mood disorders and is characterised by intense feelings of sadness and moodiness which persist for some time. While feelings of sadness or being "low" are common, they usually do not persist. If these feelings are frequent, prolonged or intense they may indicate the presence of a depressive disorder.

Behaviours associated with depression include: moodiness that is out of character; increased irritability and frustration; loss of interest in food, sex, exercise or other pleasurable activities; increased alcohol and drug use; and being reckless or taking unnecessary risks (e.g. driving fast or dangerously).

***Anxiety Disorders***

Most people will feel anxious from time to time, either in anticipation of a hoped-for event or in response to a threat to our health and wellbeing. Such anxiety is very helpful but it becomes a problem when it is ongoing, irrational, or disproportionately extreme and interferes with a person's quality of life and ability to function well.

There are many types of anxiety disorders with people commonly experiencing the symptoms of more than one type. These include disorders referred to as generalised anxiety disorder, phobias (referring to excessive fears of specific situations) and Post-Traumatic Stress Disorder (PTSD). Being involved in or witnessing distressing situations such as a major accident, a natural disaster, or being a victim of violence or abuse can lead to PTSD.

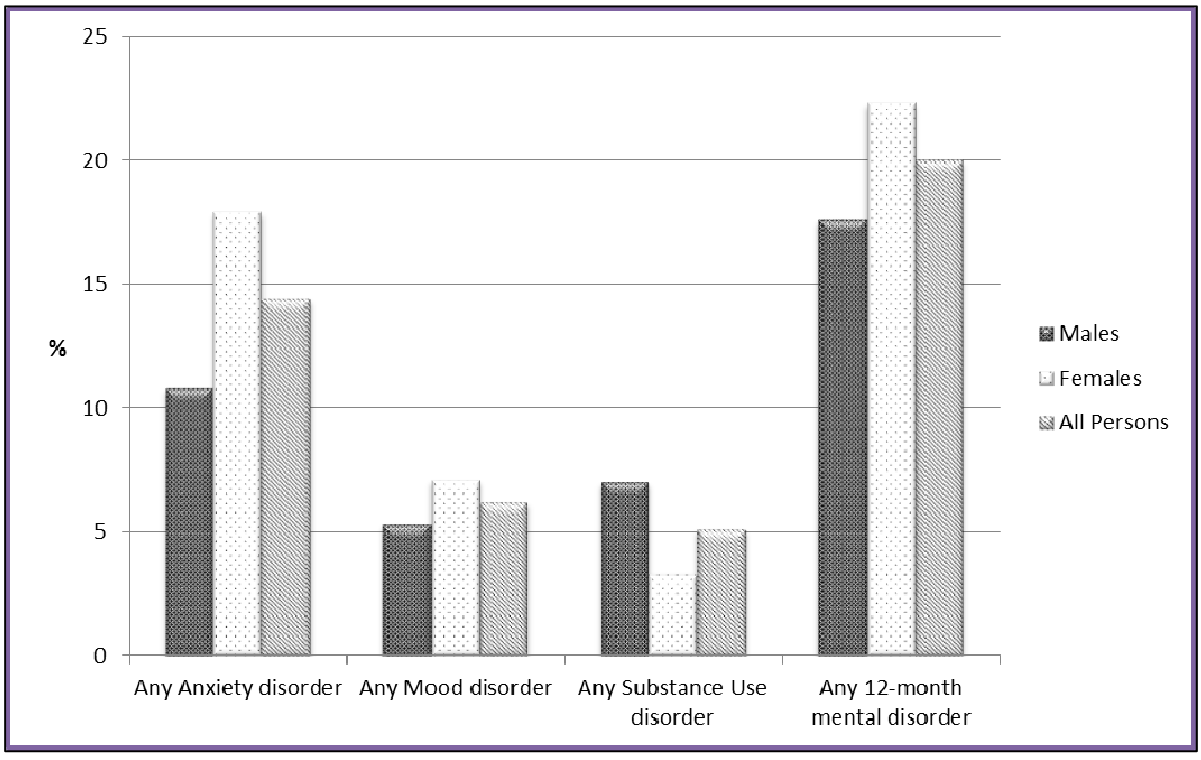
### *Substance Use Disorders*

Harmful use of alcohol or drugs contributes to physical or psychological harm, including impaired judgement or dysfunctional behaviour. Drug use includes the use of illicit substances and the misuse of prescribed medicines. Dependence occurs when the use of alcohol or drugs takes on a much higher priority for a person than other behaviours that once had greater value. The central characteristic of dependence is the strong, sometimes overpowering, desire to take the substance despite significant substance-related problems.[6]

People with substance use disorders may have difficulties meeting their responsibilities associated with work and family. Their performance at work may be affected and they may have increased absenteeism. The use of substances may continue despite recognition that it is contributing to a range of problems including relationships with family, friends and colleagues. Risk taking behaviours such as driving cars while intoxicated or becoming abusive and violent are more common.

### Who is affected by Common Mental Illnesses?

**Figure 1: Common Mental Illnesses by Gender**

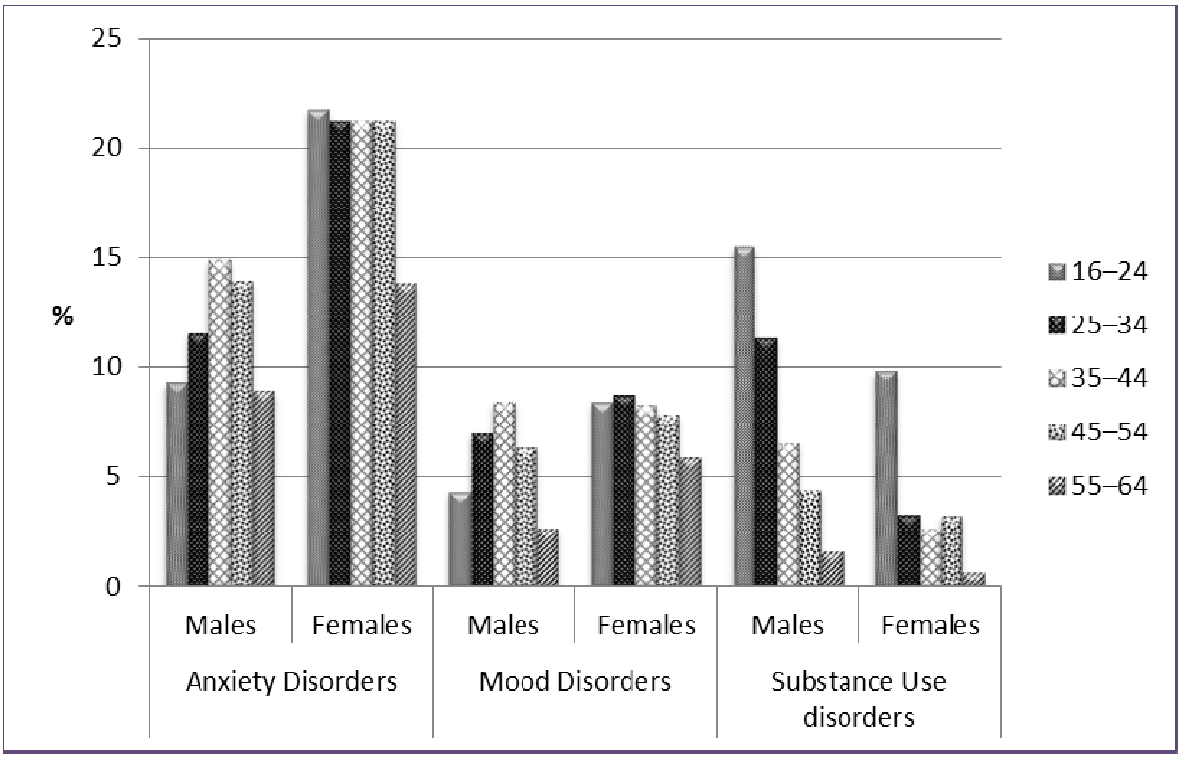



There are some variations between men and women in the prevalence of mental illness in Australia (Figure 1). Women, compared to men of all ages (22%) experience higher rates of 12 month mental illness than men (18%), higher rates of anxiety(18% and 11% respectively) and mood disorders (7% and 5% respectively).[6] However, men (7%) have more than twice the rate of substance use disorders compared with women (3%).[6]

In each of these common mental illnesses peaks in prevalence in males and females occur in working age groups. Younger people (16-35 years) experience higher prevalence of any disorder (25%) in the last 12 months in these age groups.

Figure 2 shows the peak prevalence of anxiety disorder for males (15%) in the 35-44 years and for females (22%) in the 16-24 years age group.[6]

**Figure 2: Common Mental Illnesses by Age**




For males (8%) mood disorders such as depression peaks in the 35-44 year age group and for females (9%) in the 25-34 years age group. Prevalence rates for substance use disorders are at their highest in younger males (11% - 16-24 years) and for females (10%) in the same age category.

Mental Illness also affects people of all educational and income levels, cultures and employment categories. Variations occur in prevalence of mental illnesses across employment categories. The prevalence of any 12 month orders is close to 20% for all employment categories and ranges from 19% in professionals and managers to 23% in community and personal service workers.

Whether or not a person develops a mental illness seems to depend on a range of individual, social and community factors. Economic stress and social disadvantage can play a part in triggering and exacerbating mental illness and mental health problems. Lifestyle or behaviour factors such as physical activity, diet, weight, smoking, alcohol consumption can also influence mental health and mental illness in either positive or negative ways.

A positive family environment during childhood, particularly the stability of families and the quality of parenting, and having supportive early childhood relationships with peers and other adults, are important foundations for good mental health in childhood and adulthood. People in stable relationships or married are less likely to have mental illness compared to those not in or in unstable relationships. Being connected to community (as demonstrated through participation in community networks and being a member of sporting, cultural or religious groups) has been identified as being supportive of positive mental health and well-being.

**Suicide and Suicidal Behaviour**

Most instances of suicide are associated with mental illness, most often depression. Substance use is also associated with suicide, most commonly problems with alcohol use.[7]

In 2010 in Australia, there were 2361 individuals who took their own life. More than three times as many men as women died by suicide. The median age at death for suicide in 2009 was 43.4 years for males, 44.9 years for females and 43.8 years overall.[8]

There are a range of factors that indicate people are at greater risk of suicide and signs that people may be having suicidal thoughts. Behaviours such as increased alcohol or drug use or withdrawing from friends, family or society are some of a number of warning signs for suicide. For family friends and colleagues, knowing the warning signs and responding quickly and effectively may save a person's life.[9]

**Treatment for the Common Mental Illnesses**

Most people with a mental illness will recover fully especially if identified and treated early. Some people may have only one episode of mental illness and recover fully while others may experience episodes of mental illness occasionally, with years of wellness between episodes. Successful treatment for mental illnesses includes psychological and medical treatment and has been shown to increase employee health, performance and productivity.[10,11]

However in Australia it is estimated only 35% of people aged 16 to 85 years experiencing a mental illness seek assistance from a health service with most (71%) consulting their General Practitioner.[6] In workplaces in Australia of those employees with high levels of psychological distress, the majority (78%) were not in active treatment. In the context of the workplace, stigma, lack of knowledge, and concern about job retention are suggested as reasons why people may not seek treatment.[12,13]

Concerns that medications are addictive, required for life, and are ineffective are common misconceptions in the community, all of which are refuted by evidence.[14,15] Indeed the risks of untreated mental illness are likely to have greater effects on the

individual and the workplace than risks associated with medication which can be effectively managed.

## Mental Illness in the Mining Industry

There is limited evidence about the prevalence of mental illnesses in the mining sector in Australia. Given the evidence about risk factors for mental it is reasonable to assume that the prevalence of the common mental illnesses in the industry is at least equivalent to that of the community as a whole.

**Table 1: Estimated Numbers of Employees (FT and PT) in NSW Minerals Industry Experiencing Common Mental Illnesses in a 12 Month period**

| Mental Illness | National Prevalence Estimates of Common Mental Illnesses (%) | Estimated Numbers of Employees Experiencing Common Mental Illnesses |
|---|---|---|
| Anxiety disorder | 14 | 5777 |
| Mood disorder such as depression | 6 | 2476 |
| Substance use disorder | 5 | 2063 |

In a report for the NSW Minerals Councils estimates of the overall numbers experiencing a mental illness in a 12 month period were made by applying national, community 12 month prevalence data to employment data for mining in NSW.[16]

Based on the data that in the last 12 months 20% of the population experienced any one of the common mental illness it is estimated that between eight and ten thousand employees in the NSW Minerals Industry experienced a mental illness (Table 1).[16]

## Risk Factors for Mental Illness and Mental Health Problems in Workplaces

Employment provides income, social connections and life purpose, and has the potential to increase an individual's self-worth, and satisfaction, thus positively impacting on mental health.[17,18]

Long working hours and associated fatigue have been demonstrated to be associated with increased risks of depression and anxiety.[19] Working overtime has been linked with risks of depression even after accounting for a range of other family, social and workplace factors[20]. The evidence for the impact of shift work on physical and mental health and well-being is inconclusive.[21] Shift-work has been shown to disrupt sleep-wake cycles and have some negative effects on physical and mental health and on family relationships.[22] However it is unclear as to whether shift work contributes to mental illness or whether shift workers might have pre-existent psychiatric conditions. Difficulties in determining the strength of the relationship is in

part due to the increased prevalence of risk factors for a range of these conditions in shift workers.[23]

Jobs with high-effort and low reward have been demonstrated to result in increased risks of common mental illnesses.[24] There is also evidence for the impact of bullying, violence and discrimination in the workplace on the mental health and well-being of employees.[25]

**Impact of Mental Illness in the Workplace**

There are significant personal, social and financial costs associated with mental illness. Mental illness accounted for 13% of the total burden of disease in Australia in 2003 and ranked third in the major morbidity and mortality disease burden groupings, after cancer and cardiovascular diseases.[26]

Mental illness affects the workplace through absenteeism, presenteeism, injuries and, ultimately, lower productivity. Recent estimates of costs to workplace from mental illness, using prevalence of mental illnesses in the last month in Australia are $2.6 billion dollars per year. The Productivity Commission identified that for both men and women, mental illness has the most significant impact on workforce participation compared to a range of other chronic diseases such as cancer, diabetes and cardiovascular disease and injury.[27]

Mental illnesses have been demonstrated in Australian workplaces to have a greater impact on absenteeism and presenteeism than any other health condition. Estimates of lost productivity in Australian workplaces have identified that male employees with high levels of psychological distress have lost productivity of $8,591 per annum.[28] In blue collar workers this is most likely to result from increased rates of absenteeism whereas in white collar workers it is derived from presenteeism.[28]

In the NSW Minerals Council Report, productivity losses in NSW Minerals Industry from mental illness were estimated to range from $AU288 million ($11,067 per annum per employee) to $AU429 million per year ($16,500 per annum per employee).[16]

There is some evidence of an association between mental illness and accidents at work. Links between moderate and high levels of psychological distress, a significant risk for mental illness, and workplace accidents has been demonstrated.[29]

**What can be done in the Workplace?**

Occupational health and safety is in transition, moving from managing the costs of health-related claims to managing the health of their workforce.[30] Implicit in this transition is how to understand the health of the workforce and its relationship with work and productivity; and how to measure, monitor and address the productivity impact of health. This will require a more strategic and holistic approach to

maximising productivity in the workforce by consideration of approaches targeting individuals but also by considering structures and systems in the workplace.[31]

There is evidence from other settings that workplaces are important places to address mental health and mental illness. There is no singular solution; rather there is a need for a comprehensive and integrated approach across different aspects of the problem i.e. promoting mental health, preventing mental illness and mental health problems, identifying them early, and supporting people who are experiencing a mental illness in the workplace to achieve full recovery at work where possible.

**An Overview of ACARP Project: Working Well Mental Health and Mining**

The University of Newcastle is in the early stages of an important study into mental health in the Australian coal industry. This study is funded by the Australian Coal Association Research Program (ACARP) and led by the School of Medicine and Public Health alongside the Newcastle Institute for Energy and Resources (NIER) in partnership with the Hunter Institute of Mental Health.

Building on work in the NSW Minerals industry, this ACARP funded research project will be undertaken in NSW and Queensland coal mines in 2 stages. The first stage aims to scope current programs and employee mental health. Mine managers and employees will be asked to participate in discussions and surveys about mental health in the context of mining. All data collected will be confidential.

The second stage will involve testing the feasibility of an intervention to address mental health needs in four coal mines in NSW and Queensland. This will involve activities such as supervisor training and workplace education in the mine sites.

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