



SUMMARY OF KEY ISSUES FOR SAFEWORK NSW EMERGING FOR THE REVIEW OF RISKS FOR WORKPLACE MENTAL ILL-HEALTH

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LET'S TALK SAFETY

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Summary of Key Issues for SafeWork NSW Emerging from the Review of Risks for Workplace Mental Ill-Health

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Introduction and summary

This summary is based upon the literature review of the risks for mental ill-health at work and analytic and conceptual work that the authors have been involved in over the past two decades in this area. These issues are generally driven by lack of evidence, studies evaluating a few specific risk factors in a complex system, or by conceptual concerns in identifying what could be a systems regulatory and policy framework. We have not incorporated the evidence for interventions at different levels of this system derived from the literature review at this stage.

What are the commonly identified risk factors for workplace mental ill-health?

Person level risks for person-level outcomes

Subjective individual risks:

Job demands - this reflects the overall level of demands, conflicting demands and other perceived pressure in an employee's day to day work.

Job control - Job control describes the extent to which a worker is capable of controlling their tasks and general work activity (Control refers to decision latitude: the freedom to make decisions and control when and how activities are performed during the workday).

Job strain - 'high strain' is created in jobs where high physical and/or emotional demands, such as increased workload or time pressures, are combined with low job control (minimal decision making). According to the model, people in strained jobs bear the highest risk of illness and reduced wellbeing [Karasek 1979]. NB the model also articulates how work can be health-promoting for workers in jobs with both high demand and high job control.

Social support - at work was later integrated in the model and thought to possibly interact with job strain.

Effort Reward Imbalance (ERI) - Based on the individual experience of the balance between effort made at work and the reward received [Siergrist et al. 2004]. According to the model, the most stressful work condition is when the 'reward' (distributed by the employer; consist of esteem rewards such as recognition for good work, financial rewards such as bonuses and pay rises as well as career opportunities and job security) does not match the 'effort' (job demands and responsibilities expected of the employee) made.

Organisational change - can range from technology and management changes to downsizing or restructuring or relocation, and can lead to job insecurity.

Job insecurity – refers to the degree to which employees perceive their jobs to be threatened and the degree to which they feel powerless to do anything about it.

Bullying - Workplace bullying are behaviours – occurring repeatedly and regularly over time – that harass, offend, socially exclude, or adversely affect the work of an employee or co-worker. Currently SafeWork Australia defines workplace bullying as “repeated and unreasonable behaviour directed towards a worker or group of workers that creates a risk to health and safety.” Of note it goes on to say that unreasonable behaviour may involve unlawful discrimination or sexual harassment, which in isolation is not workplace bullying. Discrimination on the basis of a protected trait in employment may be unlawful under anti-discrimination, equal employment opportunity, workplace relations and human rights laws.

Objective individual risks:

Precarious / temporary employment - these include fixed term, subcontracted or zero hour contract jobs.

Hours worked or shift patterns - the number of hours or timing (which can be fixed or variable) of when a person works.

Key issues with individual risks

Previously the approach has been to assess individual risks and combine as though they independently contribute to mental ill-health. However this raises several concerns:-

- How independent is each risk? Can they be traded off to gain more autonomy, pay etc.?
- Are there thresholds or ‘tipping points’ beyond which the risk increases substantially?
- How is the reporting of measured risks affected by occupation, organisation, age, gender, education, culture or personal resilience?
- The effect of these risks appears to differ between people who have current mental ill-health and those who do not.
- Much of the evidence used to inform workplace interventions uses samples that are not representative of the work population.
- Most of the evidence around workplace mental health risks is from Northern Europe and Northern Asia and thus the outcomes and environment may not be consistent with those in NSW or Australia where the compensation, social security, insurance and health systems differ radically.

Macro level risks for person-level outcomes

These are risk derived from an individual's perception of their organisation:-

Organisational justice - This is an organisationally focused (compared to task or job focus of the Demand Control Model (DCM) and Effort Reward Imbalance (ERI) Model) concept capturing the fairness of rules and social norms within companies, specifically in terms of resources and benefits distribution (distributive justice), the methods and processes governing that distribution, and fairness or equity of decision making (procedural justice), and interpersonal relationships (interactional justice). Interactional includes relational justice, the level of respect and dignity received from management, and informational justice, the presence or absence of adequate information from management about workplace procedures.

Psychosocial safety climate - This reflects the balance of concern by management about psychological health versus productivity goals. Reflects management values and philosophy and priorities. Apparent in organisational policies, practices, and procedures that are implemented to protect worker psychological health and safety [Dollard & Bakker 2010].

Organisational culture or climate - Again this is a reflection of an individual's appraisal of the culture or social climate in their workplace.

Key issues with macro risks

- These are the risk factors that are most easily assessed by organisations and reflect organisational practices and culture.
- It is not known if they represent an aggregated way of assessing the impact of individually perceived risks on the mental ill-health of a workforce although there is limited evidence they may mediate this.
- Evidence is lacking as to whether these macro-risks are associated with the objective indicators most commonly used e.g. Workers' Compensation Claims and sick leave.

Other risks less commonly addressed or not seen as 'work-focused'

In most cases there is a broad evidential base that each of these e.g. discriminatory behaviour, physical demands, exposure to (potential) threats or violence, or other traumatic events is a moderate or strong risk factor for the development of mental ill-health in any setting.

Key issues with other risks

- There is almost no information on the relative weight of these risks compared to the 'workplace risks'.

1) Workplace risk factors

How do workplace individual psychosocial risks combine or interact to produce mental ill-health outcomes. Are some more 'toxic' than others?

For many years the research and evaluation of workplace risks has concentrated upon different models of 'psychosocial stressors' invariably assessed in isolation from each other e.g. Karasek's Demand / Control (support) Job strain model, or Seigrist's Effort Reward Imbalance Model (ERI). There is now consistent evidence that some of these psychosocial stressors are associated with an increased risk of common mental disorders. Specifically, there is at least moderate level evidence from multiple prospective studies that high job demands, low job control, high ERI, low relational justice and procedural justice, role stress, and low social support in the workplace are associated with a greater risk (Risk or Odds Ratios 1.3) for later mental ill-health. Although individually of small effect their relatively high prevalence of each risk factor (often determined as the top quartile of the sample i.e. 25%) means their overall impact on the working population may be substantial. There are a range of other work-related factors, including low distributive justice, low informational justice, organisational change, job insecurity, temporary employment status and atypical (long) working hours which appear likely to be important risk factors but the evidence supporting them is weaker.

This has led to the development of regulatory responses and audits which list each of these individual risks to be identified and somehow managed. One response has been the UK Health and Safety Executive (HSE) Stress Management Standards addressing risk factors six domains:-

- Demands – this includes issues such as workload, work patterns and the work environment.
- Control – how much say the person has in the way they do their work.
- Support – this includes the encouragement, sponsorship and resources provided by the organisation, line management and colleagues.
- Relationships – this includes promoting positive work to avoid conflict and dealing with unacceptable behaviour.
- Role – whether people understand their role within the organisation and whether the organisation ensures that they do not have conflicting roles.

- Change – how organisational change (large or small) is managed and communicated in the organisation.

However there are several key assumptions and questions that arise when evaluating these risks:-

- 1) **How independent are these risks** – At face value many e.g. social support and bullying, or low justice and effort reward imbalance would appear to have strong overlap. The implication of the audit approaches as above here is that intervening for each risk will have an impact. However the overlap means that there may be underlying factors, that the ‘stressors’ are proxies for, which exert the real risk. Thus addressing individual domains may provide little extra benefit and assessing these can distract from the key higher order risks.
- 2) **Can they be traded off?** Low levels of one stressor can offset the impact of high levels of other stressors. The exemplar of this is control and demand whereby high levels of autonomy and control can diminish negative impacts of excess demands and long hours, or ERI which is a fundamentally translational.
- 3) **Are there thresholds or tipping points?** These risks are thought of as linear and on a continuum which has yet to be tested with the possible exception of working hours. Even here the thresholds from the international literature which have evaluated hours of greater than 40 per week and have shown no negative effect appear different from those evaluated in Australia where working greater than 49 hours per week lead to poorer mental health, especially in women. Without establishing if key thresholds exist, it is difficult to know which factors need to be prioritised in any interventions.
- 4) **How do measured risks change by occupation or organisation?** Without thresholds, and with the use of perceptions as the basis for assessing these risks the range of what may be considered a ‘risk factor’ could alter dramatically between occupations. For instance some occupation tolerate far higher levels of hours, demands, and uncivil behaviour than others and what would be considered a risk in one group considered low levels in another. This may in part explain why there is only minimal correlation often between external ratings of the stressors of particular jobs and individual ratings e.g. (example for illustration only).

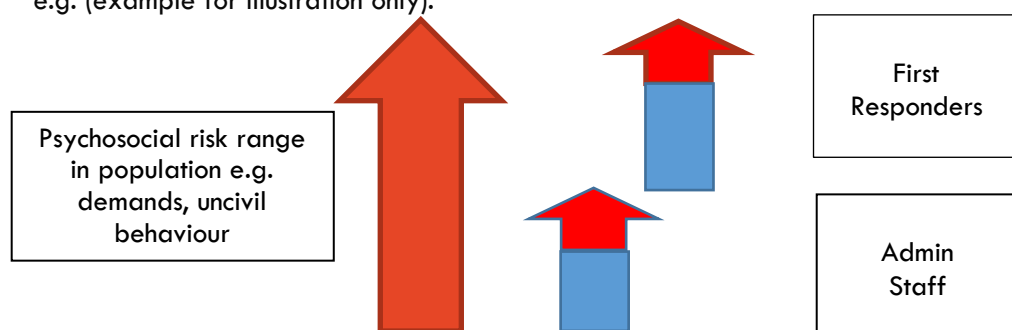


Figure 1 – example of potential differential demands by occupation.

- 5) **How do measured risks change by other demographics such as gender, education?** As noted above, most of the risk factors identified are based on a worker's subjective appraisal of their work situation. Such appraisals can be impacted by a range of individual factors, such as personality, past history and coping skills. When assessed certain risk factors appear to have gender differences e.g. social support and balancing home and work demands. There is a paucity of such information which could help address risks in male or female dominated industries or roles. The same is also often seen for different levels of education as in the UK Whitehall II study. Some measures of job stress are known to increase with decreasing socio-economic status. E.g. low job control and high physical demands are more common among lower status occupations, whereas higher psychological demands combined with greater job control are more common among well-educated white collar workers. This pattern observed generally in the international literature. A small literature suggests that mental health-related productivity loss varies across occupations. It is likely that other immutable factors e.g. age, culture, culturally and linguistically diverse (CALD) populations also have similar interactions.
- 6) **How do measured risks change by work status?** Workers on sick leave, workers with participation/performance problems, people who want to work, workers without access to paid sick leave, which might promote attendance at work when unwell, and multiple job holding may all influence both a person's perception of risk factors and the impact that each risk factor may have on their mental health.
- 7) **How do measured risks change by whether someone has a mental health problem or not?** Almost all of our knowledge comes from samples where those with mental ill-health are excluded or the levels of symptoms 'controlled for' in the analyses. This results in studies that examine the risk in those that, by definition, are a healthier and more resilient group and therefore quite possibly underestimating their impact in the overall population. The consistent finding of stronger associations of these risk factors with current mental ill-health supports this. Recent high quality findings from Australian national data showed that job conditions are relatively more important in understanding diminished productivity 'presenteeism' at work if workers are in good rather than poor mental health and some factors e.g. low control and complexity of jobs have no effect on presenteeism on those with poor mental health. The effects of job complexity and stress on absenteeism however do not depend on workers' mental

health, while job security and control moderate the effect of mental illness on absenteeism.

- 8) Few studies have looked at the ***intensity and duration of exposure to risk factor/s***, and timing of exposure relative to the onset of mental health. It is likely that some, but not all risk factors have a cumulative, additive effect in chronic stressful situations.
- 9) There is remarkably little evidence for any effects (positive or negative) of ***non-psychological stressors*** e.g. chemical (pesticides, heavy metals) and physical (heavy loads, awkward positions, irradiation, cold and hot temperature, noise) risk factors. One review suggested some association with depressive symptoms. (Theorell). Some risks commonly thought of as risk for poor mental health have no consistent support e.g. shift work.
- 10) How do ***positive work factors*** like engagement or autonomy ameliorate the psychosocial risks? In addition, can certain coping strategies, for example regular physical activity or mindfulness provide a buffer against the impact of some risk factors?
- 11) ***Are there risks in measuring and discussing risk factors?*** The process of auditing a workplace and measuring a range of risk factors is not without potential adverse consequences. Informing workers that they have elevated risk factors may make them feel more vulnerable and anxious. Psychosocial risk factors are unlike many physical risks, in that making a person aware of the risk factor can increase its potency. This can create a dilemma for workplaces trying to balance a desire to be proactive about mental health risk factors, but not wanting to create additional problems.

Summary – There are many questions surrounding what has become a rather conservative approach to individually ascertained psychosocial risks. These questions are not merely academic; an absence of evidence based answers to these key questions creates major limitations on the advice that can be offered to workplaces. The above questions can be answered with good quality research. The new data analytics (e.g. Bayesian contingency modelling) and the multiwave cohort data available in Australia (e.g. Household, Income & Labour Dynamics of Australia - 'HILDA') create a real opportunity to address many of these issues that currently limit a guided response to the standard psychosocial workplace risks.

The other effects of psychosocial risks

There is consistent evidence that many of the same mental ill-health risk factors are also risk factors for other health problems, in particular cardiovascular disease and sleep problems. For example, a set of recent individual level meta-analyses by a European consortium has shown that job strain, shift work, and injustice are risk factors for cardiovascular disease and stroke. A purely mental health focus may underestimate the potential gains from tackling such risk factors. In contrast a more holistic approach that considers both the physical and mental health benefits of addressing such risk factors is likely to have a greater impact in both domains and may be less stigmatised.

2) The meta-construct of a mentally healthy workplace

Within Australia (e.g. the Mentally Healthy Workplace Alliance), and elsewhere led by regulators e.g. the UK Stress Management Standards, Mental Health Commissions (e.g. Canada) and private enterprise (e.g. UK's Business in the Community (BITC)) the focus has moved away from identifying 'risks' to identifying the characteristics of mentally health workplaces. These have often been derived from 'beacon' employers or those who 'experts' agree demonstrate good practice by which other can benchmark themselves.

Constructs such as the 'Psychosocial Safety Climate' (PSC) or 'organisational culture' have been developed to evaluate individual's perceptions of the value their organisation places on wellbeing and other related topics. Other approaches have been to ask key informants to rate their organisations (as undertaken by BITC in UK or Superfriend in Australia). Whilst intuitively attractive at face value they have several limitations that need to be addressed before they can be recommended. These limitations include:-

1. Those measures that ask employee's views of their organisational culture or similar constructs, such as the PSC, have some consistent *cross sectional* evidence for an association with a worker's poor mental health, and appear to partially mediate the effect of individually assessed psychosocial risk factors. However there are several 'addressable' issues:-
 - a. Although purported to be a "shared perception of employees that senior management have prioritised their mental wellbeing by creating a psychologically healthy workplace" it in fact is an individually assessed construct.
 - b. As such any cross sectional associations can reflect reverse causation (depressed people with workplace disutility will rate their employers more poorly).

- c. There is limited evidence for their association prospectively with (i) poor individual or (ii) organisational outcomes.
 - d. This could be addressed in part with current data (i) and further work for (ii).
2. In the approaches asking key informants to rate their organisation :-
- a. We do not know of the biases of these individuals.
 - b. The benchmarking is usually tautologous (e.g. these factors were rated highly by the individual who thought their workplace was a 'high performer in supporting a mentally healthy workplace').
 - c. There is no information on whether such macro perceptions are associated with organisational level outcomes e.g. mental health levels, absences, turnover etc.

3) The context

The vast majority of what we know about risks for mental ill-health at work comes from Northern Europe and North East Asia and many of the risks (or more likely the interventions) less applicable here. Most of these countries do not have a federal / state divide, or specific compensation systems which can shift cost between different players, have a brokered management systems, or set up adversarial relationships in establishing compensation or access timely care in the same way as here.

This is exemplified by Joosen et al 2013 who summarised worldwide practice guidelines that address work disability due to mental disorders and stress-related symptoms. They found no Australian guidelines and only five countries were identified with one or more occupational health guidelines dealing with mental health disorders or stress-related symptoms (Japanese, Finnish, Korean, British, Dutch. Seven were developed in the Netherlands which has a very different Bismarkian health care system. Dutch studies also dominate much of our knowledge about managing employees off sick with mental ill-health. The organisation of the Dutch occupational healthcare system and its socio-political system, in which sick leave guidance by an occupational physician plays a central role, and without a potentially adversarial compensation system, is very different to Australia's. Medical professionals actively participate in guidelines development and managing sickness absence is considered an important part of medical professionalism.

4) Trends and megatrends

- 1) Contractual arrangements under which workers are employed have been changing with; increasing competition in the workplace; probable intensification in the same

number of hours, loss of 'base' as companies move to open plan, hot desking and home working.

- 2) Technology as a potential risk factor and force for good. The dramatic rise of the use of social media and how it may affect some of the risks above e.g. we have seen recent articles about whether managers refusing social media contacts constitutes bullying. There is also the impact of new technologies on home/work distinction and balancing demands. Whilst this may allow for greater autonomy / control it may increase the hours 'worked' and overall demands but the risk approaches above may not be suitable.

In determining any framework it may help to be aware of different scenarios for the future. The most applicable to Australia has been laid out in the report by **CSIRO Tomorrow's digitally enabled workforce (2016)**.

Scenarios
<p>4 scenarios were developed along two axes: the extent of structural change in the labour market (significant or limited) and the extent of automation of tasks within jobs (high or low).</p> <p><u>Lakes (low levels of automation, limited labour market change)</u></p> <p>Despite linear advances in technology, penetration is bumpy and uneven. There is little change to business structure or process. The Australian workforce is similar to today. Questions are raised about what will happen to job opportunities in Australia if the rest of the world undergoes a digital transformation.</p> <p><u>Harbours (high levels of automation, limited labour market change)</u></p> <p>The promises of artificial intelligence and automated systems have been fully realised. However, whilst the technology has advanced and has replaced many jobs, there are fewer changes to employment models. This leads to rising levels of productivity, but potentially higher numbers of displaced workers.</p> <p><u>Rivers (low levels of automation, significant labour market change)</u></p> <p>Technology has advanced more slowly than many envisaged and task automation hasn't had much impact on the bulk of people's jobs. However, organisational structure, culture and practices have changed substantially – seeing major increases in the peer to peer economy.</p> <p><u>Oceans (high levels of automation, low levels of labour market change)</u></p> <p>Exponential technology growth and innovative, socially inclusive employment models. This is an exciting world laden with amazing opportunities for individuals and society. A question that arises, however, is the extent to which these opportunities are distributed equally across the economy.</p>

5) Is there a suitable framework within which risks can be identified and their impacts assessed?

There does not appear to be one common 'toxic factor' among the variety of psychosocial work-related risk factors identified, overlapping concepts are beginning to appear, which has led to suggestions of unifying models such as those by Harvey et al. 2016. Evaluating the risk imposed by underlying constructs may provide greater clarity about the relative impact of such stressors. The best approach would be to utilise both qualitative and quantitative methods to address this overlap.

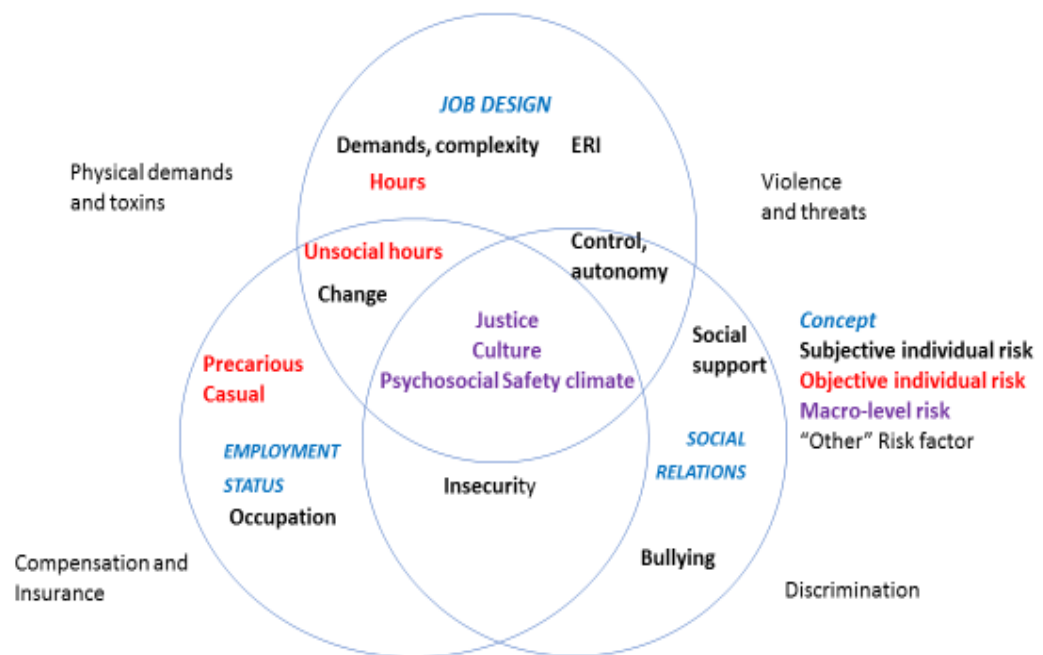


Figure 2. Unifying Model for conceptualising and assessing risks for workplace mental ill-health (adapted from Harvey et al 2016).

6) Which risk for which problem?

When forming policy responses to risks for poor mental health in workers a key question arises as to what is the negative outcome that is to be most of the literature has assumed an 'iceberg' model with less common but costly outcomes such as Workers Compensation Claims or absence reflecting the 'tip' of the workplace mental health problem and the impact of the different risks according to their effect and prevalence of the impact of. However even a cursory review of

the statistics for Workers' Compensation claims shows that this is almost certainly untrue. From 2013/4 to 2015/6 the top five mechanisms of mental health claims for which liability was accepted was as follows.

Mechanism	Number of claims	% of claims
87: Work related harassment and/or workplace bullying	2,354	29.1%
84: Work pressure	1,799	22.3%
82: Exposure to workplace or occupational violence	1,227	15.2%
86: Other mental stress factors	1,071	13.2%
81: Exposure to a traumatic event	939	11.6%

Table 1. NSW WCC Mental Health Claims in 2013/14 to 2015/16 for which liability was accepted.

Thus certain risk factors, such a bullying or a traumatic event, which in and of themselves do not necessarily increase the risk of mental ill-health much more than combinations of other psychosocial risk factors according to the effect sizes from epidemiological studies (see review) have a much greater influence on work-related outcomes of mental ill-health. Whilst focusing on job design may address in part ‘work pressure’ as part of a universal prevention program, violence and traumatic incidents may be unavoidable in certain occupations and so the focus should be on secondary and tertiary responses to enabling individuals to cope with these, and their consequences. That harassment and bullying constitute nearly one third of all claims is disconcerting in the face of reviews suggesting little evidence for the effect of individual programs tackling this.

7) The consequences of mental ill-health in the workplace - presenteeism vs absenteeism

As our model depicts, and as highlighted by the recent publication by leading Australian economists in this area there are two approaches to how these two outcomes interact.

“Researchers are increasingly recognising that absenteeism and presenteeism (remaining at work whilst unwell and being less productive) result from the same decision process and are therefore beginning to model them jointly. Workers who fall ill or experience a personal crisis, for example, make a decision to either go to work or to remain at home. Workplace policies and practices that affect one choice will also affect the other. At first glance, it seems intuitive that those factors which limit the opportunity to be absent from work will also be associated with greater presenteeism a proposition which has been dubbed the substitution hypothesis”). Others, however, have argued that there are potential complementarities in the relationship between absenteeism

and presenteeism in which the choice of an ill worker to be absent from or present at work has feedback effects on the severity and longevity of the health event itself. This, in turn, has consequences for subsequent attendance behaviour. Similarly, Arnold and de Pinto (2015) have a model whereby workers are more likely to view the health shocks they experience as a 'sickness' if their productivity is relatively low or they have a high disutility from work. Thus work-related factors that increase absenteeism may also increase presenteeism by altering workers' individual specific definition of sickness."

The implication here has been that return on investment (ROI) approaches so far and other models assume that the two outcomes are independent. However an intervention that has an effect on improving mental ill-health and thus improves BOTH outcomes simultaneously when in fact an intervention that improves one of these outcomes may well be deleterious for the other. For instance the Price Waterhouse Coopers (PWC) report for beyondblue apparently modeled the impact of mental health conditions on as having the following impacts:-

Mild psychological health condition:

10 fewer productive work hours per year

Moderate psychological health condition:

52 fewer productive work hours per year

2 more days absent

Severe psychological health condition:

127 fewer productive work hours per year

13 more days absent

It is unclear where these estimates of the impact came from. Much of the evidence cited in the literature, however, comes from samples that are not representative of the broader population, often drawn from individual employers or patients of health service providers, or restricted to coverage of specific occupation or industry groups. Studies utilising nationally representative population samples have mostly involved cross-sectional designs. Probably the best econometric analysis of Australian population level data from a multiwave prospective cohort with observations spanning the period 2005–2012, and covering all employed persons aged 15–64 years, (56 348 observations from 13 622 individuals) and looked at within person differences i.e. difference between periods when an individual was well and when unwell and accounted for the heterogeneity in factors associated with absence suggested overestimation. Whilst still significant this analysis suggested that the 10% of people with the poorest mental health (a similar figure to national estimates of prevalence of common mental illness in working samples) had a 13% increased rate of paid sick leave (much less than the 200% suggested in the PWC model). The effect was stronger for longer term sickness absence, as commonly found.

Similarly a tertiary intervention that improves return to work rates (decreases absence periods) will increase 'presenteeism' by having workers back before being fully productive (and potential associated issues in the worker's workgroup e.g. loss of back fill, dealing with someone who may be still highly symptomatic, resentment of accommodations etc.). Whilst this may be a desirable outcome it highlights (a) the false assumptions of much modelling and (b) how costs can be shifted from an insurer to the employer. Other examples can produce different cost shifting.

8) Suggested future directions in assessing risks for mental –ill health at work

- 1) Utilise some of the very high quality existing Australian data and current advances in data science to evaluate how the individually perceived risks interact to lead to mental ill health ill health and work related outcomes.
- 2) Using the same approach combine the impact of non-work risks with work-related risk to address the relative importance of these.
- 3) Evaluate the differences between organisations, response rates, genders, age, etc.
- 4) This would support the development of a more cohesive and testable heuristic for complex interventions.
- 5) Link data from individual risks with routine organisational outcomes /indicators to inform whether the assumption that they reflect a mentally (un)healthy workplace is correct.
- 6) Work is rapidly undertaken to fill the evidence gap by evaluating how either macro level risks for unhealthy workplace OR macro level assessments of healthy workplace (as currently recommended by a numerous guides in Australia) derived from either employees, key informants or routine data are associated with key mental health outcomes at organisational or work group levels.
- 7) Evaluate recent policy effects on routinely collected outcomes.

