Global Concept: Health

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Global Concept: Health

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Global Concept: Health

Abstract

Along with 'work' and 'safety', 'health' is one of the global concepts of occupational health and safety (OHS) practice. This chapter explains how the concept of health expanded to include psychological health as well as physical health. It differentiates between the biomedical model that defines health negatively as 'absence of disease' and the biopsychosocial model that inspires positive health, linkage of 'health' and 'wellbeing,' and replacement of the traditionally dominant OHS safety paradigm with a holistic health paradigm inclusive of safety. After reviewing historical associations between work and health and examining the biopsychosocial approach and its compatibility with positive psychology 2.0, the chapter considers health in today's workplace. It provides a conceptual model of workplace health that OHS professionals can adapt to their organisational circumstances and draws on the workplace impacts of the COVID-19 pandemic to illustrate application of the model.

Keywords

Health, wellbeing, ill-health, work, workplace, disability, mental health, psychological health, biopsychosocial model

Contextual reading

Readers should refer to 1 Preliminaries for a full list of chapters and authors and a synopsis of the *OHS Body of Knowledge*. Chapter 2, Introduction, describes the background and development process while chapter 3, The OHS Professional, provides context by describing the role and professional environment.

Terminology

Depending on the jurisdiction and the organisation, Australian terminology refers to 'Occupational Health and Safety' (OHS), 'Occupational Safety and Health' (OSH) or 'Work Health and Safety' (WHS). In line with international practice, this publication uses OHS with the exception of specific reference to the Work Health and Safety (WHS) Act and related legislation.

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1 Introduction

Underpinning the practice of all generalist occupational health and safety (OHS) professionals should be a conceptual understanding of *work*, *safety* and *health.*[1] This chapter addresses the concept of *health* as it relates to OHS professional practice.

The 2012 edition of this chapter explained that OHS practice focuses primarily on minimisation of harm to health through control of work-related environmental factors, and outlined the three levels of preventative intervention:

> *Primary prevention*, which aims to prevent the occurrence of injury or disease…OHS has a strong commitment to primary prevention mandated through the regulated obligation on employers to provide a safe and healthy working environment…
>
> *Secondary prevention* refers to actions taken after a disease or injury has occurred, "but before the person notices that anything is wrong" (CDC, 2004)…
>
> *Tertiary prevention* interventions are directed at people who are already exhibiting symptoms of disease [i.e., accommodations within the workplace and rehabilitation of injured or ill workers]. "The goals of tertiary prevention are to: prevent damage and pain from the disease; slow down the disease; prevent the disease from causing complications; give better care to people with the disease; make people with the disease healthy again and able to do what they used to do (CDC, 2004).[2]

However, the 2012 chapter also recognised that OHS practice as it related to health was in a state of flux, that the scope of occupational health was broadening, and that new models of occupational health were emerging. Indeed, our understanding of health as it relates to work has continued to evolve and the engagement of the generalist OHS professional in health at work has changed in scope and approach.

This new edition of *Global Concept: Health* explains the expansion of the concept of health and the implications of this for the OHS professional. After brief consideration of definitions of health and occupational health, section 2 explains the strengthening of links between work and health. It considers, firstly, the development of the safety paradigm that has traditionally characterised OHS practice and, secondly, the rise of a holistic health paradigm with the inclusion of health monitoring, and psychological as well as physical health; changed perceptions of illness, injury and disability; and positive approaches to worker wellbeing. Section 3 focuses on the biopsychosocial model of health that addressed the inadequacy of the traditional biomedical model and inspired the broader, more positive concept of health. Section 4 addresses health in today's workplace and provides a model to assist OHS professionals in conceptualising worker health in their organisations.

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[1] The framework of the *OHS Body of Knowledge* (outlined in *OHS BoK* 1.3 Synopsis, pp. 3-4) encompasses the global concepts of work, safety and health. See also *OHS BoK* 4 Global Concept: Work (in development at the time of writing) and *OHS BoK* 5 Global Concept: Safety.

[2] *OHS BoK* 6 Global Concept: Health (2012), pp. 4-5.

1.1 Definitions of health and occupational health

Health

There are different types of definitions of health, and the choice of definition type has significant consequences. In 2006, Sartorius classified definitions of health into three categories:

1. Health as *the absence of any disease or impairment.* A definition of this type aligns with the traditional biomedical model of health (see section 3) and hands responsibility for declaring an individual healthy to the medical profession, thus rendering an individual's perception of their state of health largely irrelevant.
2. Health as *a state that allows the individual to adequately cope with all demands of daily life, implying also the absence of disease and impairment.* A definition of this type considers the individual's perspective but maintains the requirement for absence of disease.
3. Health as *an equilibrium that an individual has established within their self and between their self and their social and physical environment*. This broader, positive type of definition uncouples health from an essential absence of disease, requires an approach that considers the context of the person, and gives agency to the individual. It is inclusive of individuals not adequately accounted for by the other two definitions (e.g., those with disease symptoms who feel well and those without disease symptoms who feel unwell). (Sartorius, 2006)

The World Health Organization (WHO) constitutional principle that "**Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity**" is an example of Sartorius's second type of definition. It was adopted by delegates to an international health conference in New York in 1946 and came into force with the establishment of the WHO in 1948 (WHO, 2011). At the time, this definition was ground-breaking for conceptualising health as more than the absence of disease and for its holistic focus on wellbeing. While it has been the most enduring of all definitions of health, it has been criticised over the years for reasons including:

- The absolute nature of the word 'complete' can make a state of health unachievable and render the definition impractical (especially when compared to the relatively straightforward and measurable conception of health as absence of disease)
- It implies a static state, while health is recognised as dynamic
- It unintentionally contributes to the medicalisation of society by defining most people as unhealthy
- There have been considerable changes to demography of populations and the nature of disease (with the main burden of disease shifting from acute, infectious diseases to chronic conditions[3]) since the definition was adopted. (Huber et al., 2011)

[3] Mortality rates during the COVID-19 pandemic have prompted comparisons with the 1918 Spanish flu and a resurgence of medical interest in infectious disease.

In the last few decades, diffusion of the biopsychosocial model of health (section 3) has seen a trend towards Sartorius's (2006) third type of definition, which is inclusive of psychological, social and physical dimensions, but with health clearly identified as dynamic rather than static.

Notably, in 1986, the WHO Ottawa Charter for Health Promotion proposed a new definition that addressed some of the criticisms of the WHO's 1948 definition and foregrounded positive health: "**Health is…a resource for everyday life, not the objective of living. Health is a positive concept, emphasizing social and personal resources, as well as physical capacities**" (WHO, 1986).

Participants at a 2009 international symposium in the Netherlands proposed a concept of health as "**the ability to adapt and self manage in the face of social, physical and emotional challenges**" (Huber et al., 2011, p. 1). This conception, which emphasises personal agency, has proved influential with some advocates of positive health (section 3.2) and prompted some others to offer alternatives; for example, health as "**being able to maintain and develop the necessary physical, psychological and social functions in view of the stage of life and living conditions, partly through their own efforts and according to well-being**" (van der Stel, 2016).[4]

It is generally accepted that health is more than the absence of disease and that definitions of health should be informed by both biomedical and biopsychosocial approaches.

Occupational health

The WHO and the International Labour Organization (ILO) have a common definition of occupational health. This was adopted at the first session of the Joint ILO/WHO Committee on Occupational Health in 1950 (Forssman, 1951), revised in 1995, and subsequently adopted by the International Commission on Occupational Health (ICOH):

> Occupational health should aim at: the promotion and maintenance of the highest degree of physical, mental and social well-being of workers in all occupations; the prevention amongst workers of departures from health caused by their working conditions; the protection of workers in their employment from risks resulting from factors adverse to health; the placing and maintenance of workers in an environment adapted to their physiological and psychological capabilities; and, to summarize, the adaptation of work to workers and of each worker to his or her job. (ILO/WHO as cited in Alli, 2008, p. 22)

[4] Translated from Dutch.

In 1995, the WHO Collaborating Centres in Occupational Health's *Global Strategy on Occupational Health for All* maintained that several definitions of occupational health could be summarised in the following manner:

> [O]ccupational health is considered to be multidisciplinary activity aiming at:
>
> - protection and promotion of the health of workers by preventing and controlling occupational diseases and accidents and by eliminating occupational factors and conditions hazardous to health and safety at work
> - development and promotion of healthy and safe work, work environments and work organizations
> - enhancement of physical, mental and social well-being of workers and support for the development and maintenance of their working capacity, as well as professional and social development at work
> - enablement of workers to conduct socially and economically productive lives and to contribute positively to sustainable development.
>
> Thus occupational health has gradually developed from a monodisciplinary risk-oriented activity to a multidisciplinary and comprehensive approach that considers an individuals' physical, mental and social well-being, general health and personal development. (WHO, 1995, pp. 41-42)

A simpler approach was taken by occupational psychologists Tetrick and Peiró (2012) and others influenced by positive psychology (section 3.2): "*Health* refers to optimal functioning."

2 Associations between work and health

Awareness that work can negatively impact the physical health of workers dates to ancient times. For example, lead poisoning appears to have been identified as an issue for lead miners and workers as well as for the general population in ancient Rome, with the writings of Pliny the Elder (23-70 A.D.) and others referring to dangers of water near lead mines, noxious fumes from lead furnaces, and illness-causing lead pipes and containers (Aneni, 2007; Cilliers & Retief, 2019).

In 1700, Italian physician Bernardino Ramazzini published *De Morbis Artificum Diatriba* (*Diseases of Workers*) (Breathnach, 2000; Franco, 1999). Ramazzini, who spent nearly 20 years visiting workplaces and investigating working conditions, maintained the view "that workplace analysis can identify potential and actual hazards to workers' health" (Franco, 1999, p. 858). *De Morbis Artificum Diatriba* (revised and published as a second edition in 1713) described occupational disorders attributable to dangerous materials such as dusts and fumes, excessive noise, workers' physical motions and postures, and other agents and environmental conditions encountered by workers in more than 50 occupations (Franco, 1999; Wright, 1940).[5]

[5] *De Morbis Artificum Diatriba* was translated from Latin into English several times, but most notably by Wilmer Cave Wright in 1940 (Felton, 1997).

Although Ramazzini and others identified work as a major hazard to health, there was little action taken to address this while hazard exposure was perceived as 'the lot of the working class.' Such was the case during the Industrial Revolution, when dangerous working conditions in factories and mines were compounded by long hours, cramped workspaces, poor ventilation, low wages and child labour, and contributed to marked differences in mortality rates across social classes (e.g., Eves, 2014; UK Parliament, 2021). Informed by the publication of Charles Turner Thackrah's *The Effects of the Arts, Trades and Professions on Health and Longevity* in 1831, and its second edition in 1832 (Carter & Spurgeon, 2017), the UK *Factory Act 1833* established a small-scale system of regulation by factory inspectors, who had legal powers to inspect working conditions and, subsequently, to appoint the certifying surgeons who ensured that children were eligible to work and that workers were healthy (Eves, 2014; UK Parliament, 2021). While limited in scope, the 19th century legislation for factories (and mines and railways), established that some employers were obligated to consider the health and safety of their employees (Rawlings, 2013).

Despite early acceptance that work can cause ill-health, pursuit of worker safety and injury prevention became the dominant OHS paradigm of the 20th century.

2.1 The safety paradigm

The health of workers became an 'economic category' during the Industrial Revolution, when good condition of workers was equated with productivity and minimal lost work days (Svalastog et al., 2017). Moral considerations aside, realisation of the financial and reputational costs to organisations and society as a result of physical injury and ill-health, along with legal imperatives, gradually led to major improvements in the physical health and safety of workers.

In 1837 in England, *Priestley v Fowler* became the first known successful lawsuit brought against an employer by an employee who sustained work-related injuries, but the case was unsuccessful in establishing a duty of care (Stein, 2003). Although the extent of employer liability for worker injuries was hotly debated in the 19th century, there was no legal precedent with the prevailing sentiment being:

> …an employee should be grateful for the opportunity for gainful employment. That he [*sic*] should receive any special legal protection on top of his [*sic*] good fortune was quite unthinkable. In a society in which disease and injury were rampant, and life itself fragile and short, the result [of *Priestly v Fowler*] should not come as too much of a surprise. Why should the legal system intervene on behalf of those fortunate enough to gain employment when there were countless others, far worse off, who would gladly trade places with them? (Epstein, 1982, pp. 777-778).

It was 1938 before *Wilsons & Clyde Coal Co. Ltd v English* determined that UK employers had a duty of care to provide a safe system and place of work.[6] Nearly 20 years later, employer duty of care was established in Australia by *Hamilton v Nuroof (WA) Pty Ltd* (1956),[7] which recognised that an employer has "a duty to take reasonable care to avoid exposing the employees to unnecessary risks of injury [and to] ensure that reasonable steps are taken to provide a safe system of working."[8]

Attention to the impact of work on workers' health with a focus on improving worker safety increased during the early-to-mid 20th century.[9] The profile of worker safety was raised by, for example, a 'Safety First' movement that commenced in 1906 as a US steel industry initiative and spread to other countries, establishment of the International Labour Organization in 1919, emergence of a new role of safety engineer, and involvement of US insurance companies in safety-related activities (Swuste et al., 2010). Meanwhile, the importance of this safety focus was reinforced by the occurrence of major disasters.[10] The concepts of hazard identification, risk assessment, risk minimisation and mitigation evolved, supported by the principles of the hierarchy of control, to become the tools of safety. Despite establishment of the International Commission on Occupational Health in 1906 and the World Health Organization in 1948, the early years of 'health and safety' in the workplace were largely synonymous with 'safety.'

2.2 Development of a holistic health paradigm

The 1980s saw the commencement of a new era of health in the workplace that greatly broadened the preoccupation with safety and the tendency to focus on the negative effects of work on health. Contributing factors included:

- Health monitoring programs that raised the profile of workplace health, even though their initial concern was primarily treatment of the individual after diagnosis of disease
- Development of workers' compensation systems, the concept of rehabilitation and

[6] See https://www.bailii.org/uk/cases/UKHL/1937/2.html

[7] In this case, an employee was injured while a group of workers hoisted buckets of molten bitumen to the roof of a multi-storey building. See http://www8.austlii.edu.au/cgi-bin/viewdoc/au/cases/cth/HCA/1956/42.html

[8] For a discussion of duty of care as it applies in work health and safety legislation, see *OHS BoK* 9.2 Work Health and Safety Law in Australia.

[9] See *OHS BoK* 3.1 The Generalist OHS Professional in Australia (Appendix: Evolution of the role of the generalist OHS professional in Australia), which reviews the development of the safety paradigm.

[10] Early-to-mid 20th century disasters included: the 1911 Triangle Shirtwaist Company factory fire in New York City; the 1913 Universal Colliery disaster in Senghenydd, Wales; the 1921 ammonium sulfate and ammonium nitrate explosion at a BASF plant in Oppau, Germany; the 1924 ammonium nitrate explosion at Nixon Nitration Works in New Jersey; the 1947 ammonium nitrate explosion on docked ship Grandcamp in Texas City; the 1962 Centralia, Pennsylvania, coal mine fire that continues to burn today; and the 1966 collapse of a colliery spoil tip in Aberfan, Wales.

associated legislation that were instrumental in changing perceptions about injury, ill-health and disability

- Elucidation of the role of work and the workplace in psychological health and an imperative for mitigation of psychosocial risks
- Acknowledgement of the importance of 'good work'
- Proliferation of holistic, positive approaches and consideration of worker wellbeing.

2.2.1 Health monitoring

By the 1980s, specific roles had emerged for occupational health nurses and occupational physicians, with core duties including the development and implementation of health surveillance monitoring programs that sought early identification of adverse health effects from particular hazards (e.g., lung function testing for lung damage or occupational asthma, hearing testing for noise-induced hearing loss, skin monitoring for occupational dermatitis, blood/urine testing for chemicals or their metabolites). In 1985, the ILO adopted the Occupational Health Services Convention, which established principles of occupational health practice, including health surveillance of workers, and defined occupational health services as multidisciplinary (ILO, 1985).

While current regulations mandate health monitoring (health surveillance in earlier legislation) for a range of chemicals considered high risk (*WHSR* s 14) (SWA, 2019a), such programs are now seen as secondary interventions or evidence of the effectiveness or otherwise of primary prevention strategies.[11] If cases of occupational disease are detected by monitoring programs, controls are inadequate and legislation requires that further action be taken. Thus, a virtuous feedback loop occurs – the finding of cases triggers the need for risk assessment, which leads to tightening of controls, which leads to fewer cases. In recent decades, due to the influence of legislation and regulation, traditionally hazardous industries have had to 'clean up their act,' resulting in fewer cases and earlier detection of occupational disease. The need for robust health monitoring systems is highlighted in the case example below.

Coal Workers' Pneumoconiosis (CWP) in Queensland

In 2016, the crucial importance of a robust health monitoring system was made apparent during a review of the Queensland Coal Mine Workers' Health Scheme prompted by the identification of six cases of CWP – 'black lung' (MCOEH & UIC, 2016). Subsequently, a CWP Select Committee found that "a catastrophic failure, at almost every level, of the regulatory system intended to protect the health and safety of coal workers in Queensland" had resulted in 21 diagnosed CWP cases, with the expectation that more would be identified (CWP Select Committee, 2017, p. 3). With Queensland's

[11] See *OHS BoK* 35 Mitigation of Health Impacts for details on health monitoring programs.

last previously identified cases of CWP reported in 1984, there was a widespread belief that the disease had been eradicated.

> [This belief] pre-conditioned most in the industry to underestimate the extent of the potential risk that respirable coal mine dust still posed…[T]hose tasked with monitoring the health of Queensland coal workers were not actively looking for the disease, and in many cases were insufficiently informed and ill-equipped to enable its diagnosis. (CWP Select Committee, 2017, pp. 64, 166)

The review identified "major system failures" at every level of the scheme, including failures associated with how assessments were conducted, the training of doctors, a lack of follow up, and absence of a clear intention to identify or exclude cases of CWP (e.g., where chest x-rays were requested, there was often no indication for the radiologist that it was for the purpose of identifying CWP) (MCOEH & UIC, 2016). In short, the scheme had become focused on fitness for work rather than detecting and managing early coal mine dust lung disease, and it failed the coal miners and their families.

2.2.2 Workers' compensation and legislative change

How we think about injury, ill-health and work has been influenced by the development of workers' compensation systems, the concept of rehabilitation and associated legislation.[12] A significant contributor to increased organisational costs and health improvement efforts was the post-World War II realisation that the workplace had to make 'reasonable' adjustments for disabled workers.

It is now generally accepted that rehabilitation and return to work are best facilitated by a multidisciplinary approach focusing on psychological and social as well as physical aspects.[13] Section 3 describes the biopsychosocial model that has facilitated greater understanding of work disability, including the awareness that the longer someone is away from work after an illness or injury, the more likely it is that factors beyond the physical will come into play (Wade & Halligan, 2017). Increasingly, psychological and social factors are acknowledged as return-to-work barriers (e.g., Brijnath et al., 2014; Eggert, 2010; SWA, 2019b). Part of the role of a multidisciplinary rehabilitation/return-to-work team is to identify and address these barriers.

While worker compensation schemes fund treatment for injury and ill-health deemed 'work-related' and provide financial compensation for loss of income, they expend substantial resources in determining questions of causation and liability. Requirements for diagnostic

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[12] For example, one of the objects of the *Accident Compensation Act 1985* (Vic.) is "to make provision for the effective occupational rehabilitation of injured workers and their early return to work" (s 3b).

[13] See Waddell et al. (2008) for a summary of evidence for a multidisciplinary approach to vocational rehabilitation. See *OHS BoK* 35 Mitigation of Health Impacts for information about the roles of return-to-work specialists in multidisciplinary teams.

labelling[14] and demonstration of work incapacity[15] create a time-consuming and expensive medico-legal environment and 'medicalise' injury and ill-health (Frost & Sheppard, 2017). More positive relationships between work and injury are envisioned, with occupational health professionals moving beyond contentious medico-legal practice to add value to the health and wellbeing of workers.

At the same time as legislation was driving change in how injured workers were managed in the workplace, disability discrimination legislation was changing how people with disabilities were treated in the community (McEwin, 2018). The *Disability Discrimination Act 1992* (Cth) made it unlawful to discriminate against a person because of their disability in many areas of public life, including in the following employment-related situations:

- the recruitment process, such as advertising, interviewing, and other selection processes
- decisions on who will get the job
- terms and conditions of employment, such as pay rates, work hours and leave
- promotion, transfer, training or other benefits associated with employment
- dismissal or any other detriment, such as demotion or retrenchment (Australian Human Rights Commission, 2014, p. 2).

This resulted in an employer duty to make "reasonable adjustments," i.e., employers have a legal obligation to consider the effects of a person's disability and measures that can be taken to help them overcome the effects of the disability at work. This may involve making changes to recruitment and selection procedures; modifying work premises and/or equipment; changing job design, work schedules or other work practices; and providing training or other assistance (Australian Human Rights Commission, 2014).

2.2.3 Psychological health

As the 20th century safety focus brought many serious occupational hazards to physical health under control, the attention of occupational medicine turned to workers' psychological health, which was proving increasingly costly for organisations. Although occupational physicians were expressing interest in the negative impact of work on psychological health (particularly in terms of stress) in the 1960s and earlier,[16] it was some time before a focus on

[14] Diagnostic labelling takes what can be ill-defined symptom complexes, particularly involving chronic pain, and assigns artificially specific diagnostic terms, such as repetitive strain injury (RSI) and work-related back pain (e.g., Merdith, 2019; Sloan & Walsh, 2010). Occupational physicians are then placed in the position of determining causation and separating pathology caused by work from age-related degenerative changes and non-specific symptom complexes (medically unexplained symptoms).

[15] The requirement to demonstrate work incapacity or prove disability can detract from the need to actively rehabilitate the worker and represent an opportunity cost when occupational health professionals are not spending their time and energy on prevention, health promotion and wellbeing.

[16] For example, the International Committee on Occupational Mental Health (later the International Forum on Organizational Health) was formed in 1966, and overlap between physiological and psychological stress had been a prominent focus of post-World War II research (Fingret, 2000).

affected individuals broadened to encompass psychosocial hazards in the work environment (Fingret, 2000).

Research linked poor psychosocial health with reduced workplace productivity expressed as absenteeism and sub-par performance (e.g., presenteeism) and elucidated the concept of 'health as a personal resource' that impacts work engagement and quality (Becher & Dollard, 2016; Burgard & Lin, 2013). In addition to research demonstrating the potential for psychosocial risks in the workplace (e.g., job demands, bullying) to negatively impact both psychological health and physical health (e.g., cardiovascular disease, musculoskeletal disorders), studies of population health identified adverse mental health conditions (e.g., anxiety, depression and stress) as among the fastest growing causes of morbidity. Assessments of the costs of psychological ill-health of workers on organisations and society[17] are fuelling efforts to improve work-related factors and employee mental health. Table 1 includes some evidence and activities that have influenced the imperative for action to mitigate workplace psychological risks.[18]

Table 1: Examples of support for mitigation of workplace psychological risks since the 1980s

Year	Organisation	Activity
1986	Joint ILO/WHO Committee on Occupational Health	The Joint ILO/WHO Committee acknowledged that a large amount of research conducted in the preceding two decades had demonstrated an association between workplace psychosocial factors and a wide range of health disorders in *Psychosocial Factors at Work: Recognition and Control*, a publication that proposed the following definition: Psychosocial factors at work refer to interactions between and among work environment, job content, organisational conditions and workers' capacities, needs, culture, personal extra-job considerations that may, through perceptions and experience, influence health, work performance and job satisfaction (ILO/WHO, 1986, p. 3).
1989	European Economic Community (EEC)	The EEC's *Council Directive 89/391 on the introduction of measures to encourage improvements in the safety and health of workers at work* (the OHS 'framework directive') increased the focus on workplace psychosocial factors in Europe (EEC, 1989). In the 2000s, the WHO/ILO-supported European Framework for Psychosocial Risk Management (PRIMA-EF) program delivered workshops, conferences and publications on developing international standards and best-practice guidance,[19] e.g., the *PRIMA-EF Guidance on the European Framework for Psychosocial*

[17] For example: in 2014, PwC estimated the cost of mental health conditions to Australian workplaces to be $10.9 billion annually, including $4.7 billion in absenteeism, $6.1 in presenteeism and $146 million in compensation claims (PwC, 2014); in 2019, the Productivity Commission estimated that mental health and suicide were costing Australia up to $180 billion annually, including $10-18 billion in lost productivity and reduced participation (Productivity Commission, 2019).

[18] See also *OHS Bok* 19 Psychosocial Hazards.

[19] See http://www.prima-ef.org/

Year	Organisation	Activity
		Risk Management: A Resource for Employers and Worker Representatives (Leka & Cox, 2008) provided a PRIMA indicator model and intervention strategies.
1990–	Institute for Health Metrics and Evaluation (IHME), University of Washington	The Global Burden of Disease (GBD) Study estimates the incidence, prevalence and mortality of diseases and injuries in 204 countries and territories. Measured by disability-adjusted life years (DALYs), overall improvement in global health over the last three decades masks complex trends for specific diseases and injuries, e.g., 'depressive disorders' are identified as one of the ten most important drivers of *increasing* health burden (IHME, 2020). Overall, depressive disorders ranked as the 19th leading cause of DALYs in 1990, rising to the 13th in 2019, and anxiety disorders rose from 34th to 24th. Ritchie and Roser (2018) used the 2017 GBD study data (IHME, 2018) to estimate the prevalence of mental health disorders to be one in ten people (10.7%) globally.
2007	Australian Bureau of Statistics (ABS)	From the 2007 National Survey of Mental Health and Wellbeing, the ABS estimated that one in five (20%) Australians aged 16-85 had experienced a mental disorder (anxiety disorder, affective disorder and/or substance use disorder) in the 12 months prior to the survey interview (ABS, 2008).[20]
2012	National Mental Health Commission (NMHC)	In 2012, the NMHC established the Mentally Healthy Workplace Alliance of 15 Australian organisations from business, union, community and government sectors.[21] The Alliance has prioritised a National Workplace Initiative to establish a consistent approach to workplace mental health, with funding of $11.5 million over four years announced in the 2019-20 Federal Budget (NMHC, 2020).
2015	Australian Institute of Health and Welfare (AIHW)	The Australian Burden of Disease Study found 'mental and substance use disorders' to be the fourth leading disease group in Australia in 2015, responsible for 12% of DALYs, after cancer (18%), cardiovascular diseases (14%) and musculoskeletal conditions (13%) (AIHW, 2019). Mental and substance abuse disorders were responsible for 25% and 22% of the non-fatal disease burden for males and females, respectively.
2017-18	Safe Work Australia (SWA)	In 2017-18, 7.5% of serious workers' compensation claims in Australia were for 'mental health conditions,' an increase of 15% on reports for 2000-01 with median compensation paid increasing by 166% in the same period (SWA, 2020). Importantly, mental health conditions recorded in workers' compensation data are known to be underreported (e.g., LaMontagne et al., 2010).

Psychological health entered Australian OHS legislation in 2011 with the introduction of the model *Work Health and Safety Act*, which stated "*health* means physical and psychological health" (SWA, 2011, p. 4).[22] Codes of practice and guidelines for meeting responsibilities

[20] The ABS is planning an Intergenerational Health and Mental Health Study, including a National Study of Mental Health and Wellbeing, in conjunction with the 2021 Australian census (Department of Health, 2020).

[21] See https://mentallyhealthyworkplacealliance.org.au

[22] See SWA (2019c) for the latest revision of the Act. Although the model WHS laws were not implemented in all jurisdictions, similar duties related to work-related psychological health are required by WHS laws in all jurisdictions (SWA, 2019b).

and obligations are now available for both physical and psychosocial hazards; for example, Safe Work Australia's *How to Manage Work Health and Safety Risks: Code of Practice* (SWA, 2018), *Principles of Good Work Design* (SWA, 2015) and *Work-related Psychological Health and Safety: A Systematic Approach to Meeting your Duties* (SWA, 2019b). However, an inconsistent policy context for work-related psychosocial hazards and protection of psychological health has been identified, with psychological risk regulation perceived as a complex 'wicked problem' that elicits divergent views (Potter, O'Keefe, Leka, Webber & Dollard, 2019; Potter, O'Keefe, Leka & Dollard, 2019). A trend towards vigilance and consistency in approaches to psychosocial risk management should be expected.

2.2.4 Positive associations between work and health

Until relatively recently, necessary OHS attention to the negative effects of work on health and health on work overshadowed the significant positive associations. In 1995, the WHO's *Global Strategy on Occupational Health for All* stated:

> Occupational health is an important strategy not only to ensure the health of workers, but also to contribute positively to productivity, quality of products, work motivation, job satisfaction and thereby to the overall quality of life of individuals and society. (WHO, 1995, p. 2).

The PRIMA-EF project (see Table 1) declared that good psychosocial risk management was good for business (Leka & Cox, 2008).

Research attention to the health-enhancing aspects of work revealed that, in addition to improved quality of life via earnings, work provided psychological benefits associated with, for example, social integration, prestige, meaning and creative expression (Burgard & Lin, 2013). Unemployment, on the other hand, was revealed to be associated with poor physical and psychological health (Waddell & Burton, 2006). Inspired by Dame Carol Black's review of the health of Britain's working-age population, *Working for a Healthier Tomorrow* (Black, 2008),[23] the Australasian Faculty of Occupational and Environmental Medicine (AFOEM) of the Royal Australasian College of Physicians (RACP) reviewed international evidence on the association between health and work, and concluded that "work is generally good for health and wellbeing, and that long term work absence, work disability and unemployment generally have a negative impact on health and wellbeing" (AFOEM, 2011, p. 1).

However, it was clear that not all work was conducive to a positive relationship with health, and that distinctions needed to be made between 'good work' and 'bad work.'

[23] See *OHS BoK* 35 Mitigation of Health Impacts.

Good work vs bad work

In 1999, the ILO developed the Decent Work Agenda, which sought "not just the creation of jobs, but the creation of jobs of acceptable quality" (ILO, 1999). A fundamental principle of decent work and its four interrelated objectives (principles and rights at work, creation of greater employment opportunities for women and men, extending social protection and promoting social dialogue) is occupational safety and health and the insistence that "Decent Work must be Safe Work" (ILO, 1999, 2004; Somavia, 1999). This concept of decent work informs the United Nations 2030 Agenda for Sustainable Development and its 13 Sustainable Development Goals (SDGs), specifically *SDG 8 Decent Work and Economic Growth* (UN, 2015). SDG 8 and *SGD 3 Good Health and Wellbeing* have been identified as inextricably linked:

> Individuals in poor health are more likely to be unemployed or underemployed as poor health reduces their ability to work. When they are in work, poor health reduces their productivity. In a vicious circle, this increases the likelihood of job loss, sick leave or early retirement. … Decent work instils self-worth in people; it provides a sense of purpose and fulfilment and keeps people connected with their peers and communities. The material and emotional resources associated with employment improve living conditions for individuals and households and their mental and physical health, ultimately benefiting all of society and the economy at large. (WHO, 2019, pp. 1, 2).

However, 'bad work' – i.e., "poor quality jobs which combine several psychosocial stressors" (Broom et al., 2006) – can be just as detrimental to health as being out of work: "the mental health benefits of work are restricted to good quality jobs, and the poorest quality work is comparable to unemployment as a risk factor for poor mental health" (Butterworth et al., 2013, p. 7). Consequently, AFOEM's (2011) position statement, *Realising the Health Benefits of Work*, drew on the concept of 'good work,' which was elucidated in the companion document, *What is Good Work?* (RACP, 2013).

A Consensus Statement subsequently developed by RACP and AFOEM (2017) was signed by more than 300 Australian and New Zealand organisations.[24] It defined good work in the following way:

> Good work is engaging, fair, respectful and balances job demands, autonomy and job security. Good work accepts the importance of culture and traditional beliefs. It is characterised by safe and healthy work practices and it strikes a balance between the interests of individuals, employers and society. It requires effective change management, clear and realistic performance indicators, matches the work to the individual and uses transparent productivity metrics. (RACP & AFOEM, 2017)

This definition signalled a change in attitude to health at work by pledging commitment to the following principles:

- The provision of good work is a key determinant of the health and wellbeing of employees, their families and broader society.
- Long term work absence, work disability and unemployment may have a negative impact on health and wellbeing.
- All workplaces should strive to be both healthy and safe.
- Providing access to good work is an effective means of reducing poverty and social

[24] The AIHS is a signatory to the consensus statement.

exclusion.

- With active assistance, many of those who have the potential to work, but are not currently working, can be enabled to access the benefits of good work.
- Safe and healthy work practices, understanding and accommodating cultural and social beliefs, a healthy workplace culture, effective and equitable injury management programs and positive relationships within workplaces are key determinants of individual health, wellbeing, engagement and productivity.
- Good outcomes are more likely when individuals understand and are supported to access the benefits of good work especially when entering the workforce for the first time, seeking re-employment or recovering at work following a period of injury or illness. (RACP & AFOEM, 2017)

Positive approaches and the rise of worker wellbeing

The traditional conception of health as absence of disease (section 1.1) implies a deficit or negative model. In the 21st century, new conceptions of health have emerged based on a more dynamic, holistic and positive model. This biopsychosocial model – a significant contributor to the expansion of both the concept of health and the OHS safety paradigm – is addressed in the following section.

3 A biopsychosocial approach to health

This section describes the biopsychosocial model and the positive psychology and positive health movements that have developed within the more expansive concept of health.

3.1 The biopsychosocial model

When chronic illnesses (e.g., heart disease, cancer, diabetes, depression) began to replace acute and infectious diseases (e.g., tuberculosis, influenza,[25] diarrhea, diphtheria) as leading causes of morbidity and mortality in technologically advanced countries, the traditional biomedical model of medicine came under scrutiny. One of its critics, psychiatrist and medical scientist George Engel, published several papers between 1960 and 1980 in which he argued that the traditional view of Western medicine – the biomedical model, which embraced reductionism and mind-body dualism – was an inadequate approach to medicine as it “leaves no room within its framework for the social, psychological, and behavioral dimensions of illness” (Engel, 1977, p. 130). In response to the “necessity and challenge to broaden the approach to disease to include the psychosocial without sacrificing the

[25] As noted in section 1.1, mortality rates during the COVID-19 pandemic have prompted a resurgence of medical interest in infectious disease.

enormous advantages of the biomedical approach," Engel (1977, p. 131) proposed a more holistic 'biopsychosocial model' informed by general systems theory.[26]

Engel's model brought together various strands of research that were demonstrating relationships between social/psychological context and physiological response/disease, including early investigations of the impact of stress on the body (Friedman & Adler, 2007). Despite criticism (e.g., the model is vague, too generic, lacks operationalisation), the multidisciplinary biopsychosocial approach is widely accepted as capable of improving the traditional biomedical approach with more humanistic and person-centred care (Farre & Rapley, 2017). The broad scope of the biopsychosocial model (Figure 1) is evident in Table 2. Importantly, the two approaches are complementary, not mutually exclusive.

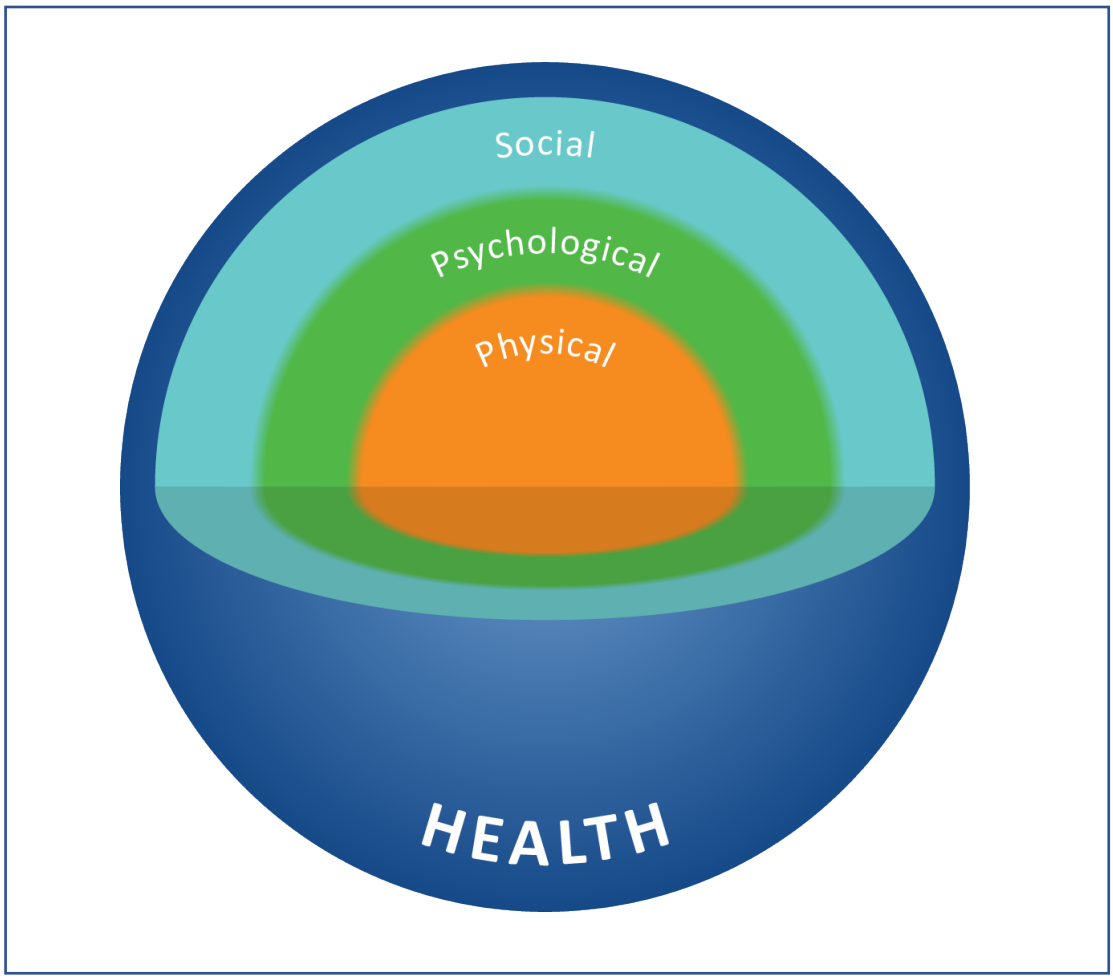

Figure 1: Biopsychosocial model of health

[26] General systems theory was outlined by von Bertalanffy (e.g., 1968); see also *OHS Bok* 12.1 Systems.

Table 2: Comparison of the biomedical and biopsychosocial approaches to health and illness[27]

Aspect	Biomedical model	Biopsychosocial model
Primary focus	Diagnosing and treating the biological or physical aspects of disease, which is directly attributable and proportionate to underlying physical pathology	Achieving improvements in health and wellbeing by addressing a wide range of determinants of health with a multi-systems approach
What is health?	The absence of disease (negative definition)	A multidimensional and dynamic state of wellbeing that is the result of interacting biological, psychological and social processes (positive definition)
What causes illness?	Biological factors (e.g., chemical imbalances and exposures, bacteria, viruses and genetic predisposition); identifiable physical pathology	Illness can have multiple contributing factors, including biological (e.g., virus), psychological (e.g., beliefs, behaviour) and social (e.g., relationships, unemployment)
Who is responsible for health/illness?	Because disease is a result of biological changes, individuals are not responsible for their illness	As behaviour influences health, individuals have responsibility to cooperate in their healthcare, and are active participants in prevention and recovery processes
How should illness be treated?	Illness-centred diagnosis and treatment within medical specialty boundaries, including heavy emphasis on prescription of drugs	Integrated approach to holistic patient-centred care, with treatment of relevant modifiable biological and nonbiological factors, and appropriate prevention, intervention and coping strategies; the benefits of scientific medicine are complemented with psychosocial approaches
Who is responsible for treatment?	The medical profession is responsible for treatment of illness	Because the focus is the whole person to be treated not just their physical illness, the individual is responsible for their treatment (e.g., taking medication or changing behaviour)
What is the relationship between health and illness?	Health and illness are qualitatively different – individuals are either healthy or ill	There is no clear boundary between health and illness, which exist on a continuum
What is the relationship between mind and body?	The mind and body function independently of each other	The mind and body interact
What is the role of psychology in health and illness?	Illness may have psychological consequences, but not psychological causes, e.g., cancer may cause unhappiness, but mood is not seen as related	Illness may have psychological consequences and psychological factors may contribute to illness at all stages along the health-illness continuum

[27] The structure of this table is adapted from Taukeni (2019) and the content is informed by Dunstan and Covic (2006); Engel (1977); Farre and Rapley (2017); Fava and Sonino (2017); Friedman and Adler (2007); HWCA and HCTP (2011); Lunt et al. (2007); Suls and Rothman (2004); Taukeni (2019); and Wade and Halligan (2017).

Aspect	Biomedical model	Biopsychosocial model
	to onset or progression of the cancer	
What is the relationship of illness with work?	Assumes a linear relationship between disease, symptoms, disability and incapacity for work: work-related injury/illness leads to physical pathology (the cause of pain/disability) so work disability is resolved by curing the physical pathology or relieving pain	Wellbeing at work is subjective; it results from a complex, dynamic interaction between an individual's health condition and psychosocial dimensions, including the work environment; health is a desirable, but not necessary, condition for a state of wellbeing at work

The degree of success of the biomedical model in explaining and treating acute/infectious diseases that were leading causes of morbidity and mortality decades ago is not matched for conditions that lack clear physical pathology (e.g., chronic non-specific back pain) (Dunstan & Covic, 2006). It has become clear that it is more effective either to prevent chronic illness by modifying health risk behaviours and the environments that reinforce them, or to facilitate early detection and management. These prevention strategies interact with psychosocial factors, including lifestyle, social capital and health literacy (Bolton & Gillett, 2019). In addition to the clear implication of psychological factors in disease and illness, there is strong evidence for social determinants of health that result in shorter life expectancy and greater incidence of physical and psychological illness for workers of low socioeconomic status.[28] Table 3 lists several high-profile adoptions of the biopsychosocial approach to health that contributed to, and validated, its diffusion and acceptance.

Table 3: Examples of high-profile applications of the biopsychosocial approach to health

Year	Organisation	Application
2001	World Health Organization (WHO)	The WHO *International Classification of Functioning Disability and Health* conceptualised functioning as "a dynamic interaction between a person's health condition, environmental factors and personal factors" underpinned by an integrative biopsychosocial model (WHO, 2002).
2005	UK Government	As part of the evidence base for the UK Government's 2005 *Health, Work and Well-being Strategy,* a review of the literature found that "Understanding and addressing common health problems requires a biopsychosocial approach that takes account of the person, their

[28] For example, Marmot et al.'s (e.g., 1991) longitudinal Whitehall studies of British civil servants demonstrated a social gradient, i.e., a correlation between social status and health outcomes. See also CSDH (2008); Marmot (2015) and Wilkinson and Marmot (2003).

Year	Organisation	Application
		health problem and their work environment" (Waddell & Burton, 2006, p. 36).
2007	UK Health and Safety Executive (HSE)	The HSE Health & Safety Laboratory scoping review – *Applying the Biopsychosocial Approach to Managing Risks of Contemporary Occupational Health Conditions* (Lunt et al., 2007, p. vi) – stated that "biopsychosocial mechanisms can be implicated in the onset of most, if not all occupational health conditions" and acknowledged "the approach's greater scope in explaining the development and progression of common health problems compared to biomedical or psychosocial perspectives."
2008–	US National Institute of Mental Health (NIMH)	The 2008 NIMH strategic plan stated that "in the next few decades, it will be essential to study the various biological, psychological and social 'signatures' of mental disorders" (Lupien et al., 2017, p. 2) and flagged the launch of a long-term Research Domains Criteria (RDoC) project to advance understanding of mental disorders and to address research issues associated with the Diagnostic and Statistical Manual of Mental Disorders (DSM) (Bolton & Gillett, 2019; Cuthbert, 2014). The resultant RDoC framework[29] for investigating mental health disorders, underpinned by the biopsychosocial model, provides a new method of classifying mental disorders.
2011	Australasian Faculty of Occupational & Environmental Medicine (AFOEM)	AFOEM's position statement, *Realising the Health Benefits of Work*, acknowledged the increasing prominence of the biopsychosocial model and its capacity to explain how work is good for health and wellbeing (AFOEM, 2011, p. 8) (section 2.2.4).
2011	Heads of Workers' Compensation Authorities & Heads of Compulsory Third Party	The Australian workers' compensation authorities prepared a position paper on a biopsychosocial approach to injury management, including a glossary of biopsychosocial terms and relevant risk assessment tools, and outlined their adoption of biopsychosocial injury management principles (HWCA & HCTP, 2011).
2016	US National Institute for Occupational Safety and Health (NIOSH)	NIOSH updated its *Total Worker Health* (TWH) concept[30] to accommodate biopsychosocial perspectives more explicitly, with TWH intervention areas including "control of physical, biological, and psychosocial hazards and exposures; organization of work; compensation and benefits; built environment supports; and work-life integration" (NIOSH, 2016, p. 1).

There have been attempts to 'update' the biopsychosocial model. For example, Lehman et al. (2017) proposed an expanded version that "construes human health as a product of the reciprocal influences of biological, psychological, interpersonal, and macrosystem contextual

[29] See https://www.nimh.nih.gov/research/research-funded-by-nimh/rdoc/index.shtml

[30] The *Total Worker Health* approach commenced in 2003 as the Steps to a Healthier US Workforce Initiative, which advocated integration of OHS protection with health/wellbeing promotion; it became the NIOSH WorkLife Initiative in 2005 and was renamed *Total Worker Health* in 2011 (NIOSH, 2016).

dynamics that unfold over personal and historical time" (p. 1). This 'dynamic biopsychosocial model' (Figure 2) includes the following health-influencing factors:

- *Biological dynamics* – physical elements that affect and determine health, e.g., "the immune system not only operates to deter infection and disease but also interacts with other biological dynamics such as the circulatory system and with social and psychological dynamics"
- *Psychological dynamics* – the cognitive, emotional, motivational, attitudinal and behavioural systems that impact physical and mental health
- *Interpersonal dynamics* – the effects of actual or perceived social contacts (whether direct or as a consequence of the actions of others) on health. The model draws on Bronfenbrenner's ecological framework to categorise interpersonal dynamics as *microsystem* factors (e.g., family, work environment, peers), *mesosystem* factors (interactions among microsystems, e.g., "daily strain in balancing microsystem contexts of work and family may affect emotions, physiology, and work performance") and *exosystem* factors (indirect influences as a result of microsystem dynamics, e.g., "an individual may have little direct contact with their spouse's employment setting, yet that employer may provide health insurance")
- *Contextual dynamics* – shared culture, norms, policies and values that shape and are shaped by interpersonal, psychological and biological factors, e.g., "Health-care policy shapes the availability and quality of medical and psychological services." (Lehman et al., 2017, pp. 2-7)

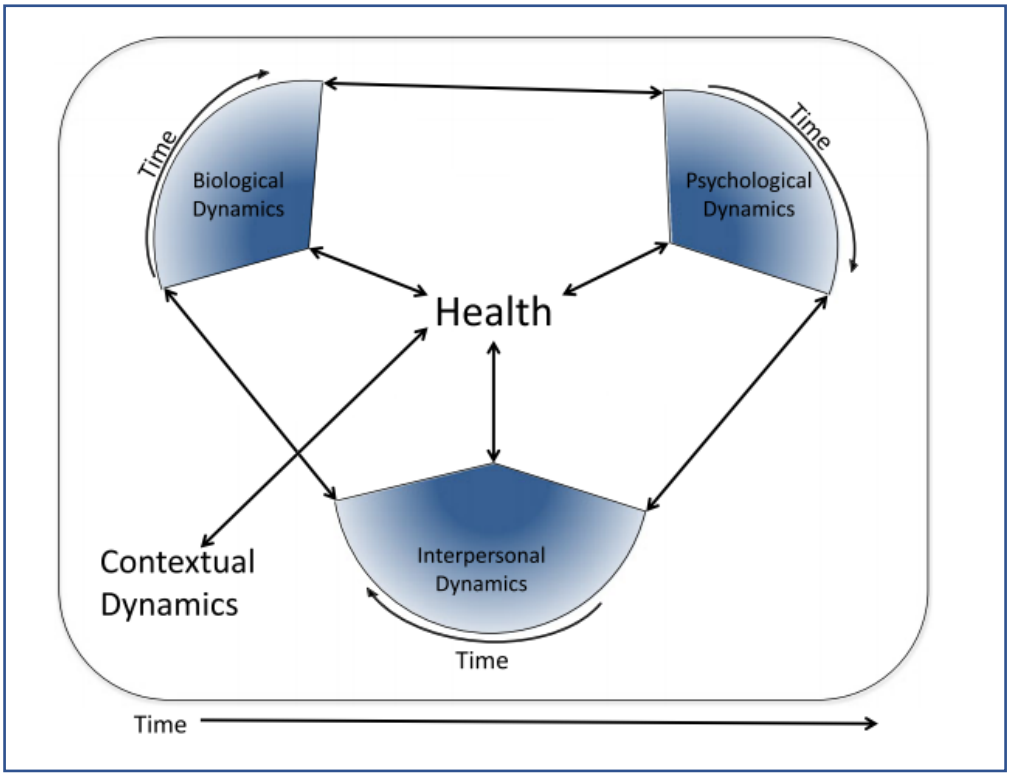

Figure 2: The dynamic biopsychosocial model of health (Lehman et al., 2017, p. 2)

The dynamic biopsychosocial model emphasises a systems perspective:

> For an example of how the model functions, imagine an injury causes a shift in the biological dynamic. Much like the movement in a three-armed hanging mobile, an injury not only alters biological immune and muscle systems that respond to and compensate for the injury but also changes interpersonal and psychological dynamics. Interpersonal changes might occur as support and assistance is offered by others, while psychological dynamics require an interpretation of the causes and implications of the injury. (Lehman et al., 2017, p. 2)

Various system dynamics will differ in terms of their *centrality*, or relative importance as influences on health (indicated by graduated shading in Figure 2, and centrality will fluctuate over time, for example: "An injury might temporarily make some biological dynamics and interpersonal dynamics central, while workplace interpersonal dynamics would be less central if the person takes time off from work" (Lehman et al., 2017, p. 2).

3.2 Positive psychology and positive health

The biopsychosocial approach to health as a response to inadequacy of the biomedical model, along with the rise of chronic disease and escalating costs of medical care, saw the emergence of health psychology as a specialty area within psychology (Schwarzer & Gutiérrez-Doña, 2000; Suls & Rothman, 2004). An increasing tendency to link 'health' and 'wellbeing' arose in part from growth of the field of positive psychology – "the study of the conditions and processes that contribute to the flourishing or optimal functioning of people, groups, and institutions" (Gable & Haidt, 2005, p. 103) – which overlapped with health psychology to produce 'positive health.'[31] The fundamental hypothesis of positive health "is that the experience of well-being contributes to the effective functioning of multiple biological systems, which may keep the organism from succumbing to disease, or, when illness or adversity occurs, may help promote rapid recovery" (Ryff et al., 2004, p. 1383).[32] Table 4 lists several notable contributions to the field of positive health.

[31] Positive psychology (and positive health) also drew on 'humanistic psychology' and, for example, William James' 1906 emphasis on the importance of the individual's subjective experience to optimal functioning and the 1954 publication of Abraham Maslow's *Motivation and Personality* that included a chapter titled 'Toward a Positive Psychology' (Froh, 2004).

[32] With the massive growth of the market for self-improvement books, many health psychologists are keen to distinguish their work from 'unscientific' populist self-help, but with some self-help authors borrowing concepts from the field and some psychologists seeking wider audiences, the boundaries are often blurred (Murray, 2014).

Table 4: Examples of contributions to the field of positive health

Year	Contributor	Contribution
1958	Marie Jahoda	In *Current Concepts of Positive Mental* Health, Jahoda reviewed relevant literature and identified six dimensions of positive mental health: 1. *Positive attitude toward self* – including sense of identity 2. *Capability for growth, development or self-actualisation* – including motivational processes and investment in living 3. *Integration* – a central synthesising psychological function; a unifying outlook on life (including spirituality) and resistance to stress 4. *Autonomy* – inner regulation and independent behaviour 5. *Perception of reality* – including empathy, tolerance of change and perception free from need-distortion 6. *Environmental mastery* – including an ability to adapt to situation requirements and problem solve, adequacy in interpersonal relations and work (Jahoda, 1958).
1976	Bill Hettler	In 1976, Hettler (co-founder of the US National Wellness Institute) proposed six dimensions of wellness – occupational, physical, social, intellectual, spiritual and emotional (Hettler, n.d.; NWI, 2020). Since then, many others have proposed lists of wellness dimensions that add to or subtract from these six dimensions, e.g., the US Substance Abuse and Mental Health Services Administration added 'environmental' and 'financial' (SAMHSA, 2012).
Late-1980s–	Carol Ryff	Ryff and colleagues (e.g., Ryff, 1989; Ryff & Singer, 1998) explored psychological wellbeing and proposed a concept of positive health and flourishing (grounded in the biopsychosocial agenda) as "engagement in living" with five components: Primary features: 1. *Leading a life of purpose* – a dynamic process of self-actualisation, locating meaning and coherence; often facilitated by work 2. *Quality connections to others* – a dynamic process of possessing fulfilling bonds with others and a sense of belonging Enhancers of primary features: 3. *Positive self-regard* – self-acceptance 4. *Mastery* – adaptive functioning Role of the negative: 5. *Perceptions of negative events as paths to meaning* – traumatic experience can offer gains in insight and strength, and contribute to achieving deeper meaning and purpose, closer ties to others, greater self-regard and heightened mastery (Ryff & Singer, 1998).
e.g., 1990	Mihaly Csikszentmihalyi	Csikszentmihalyi's concept of 'flow' referred to "the state in which people are so involved in an activity that nothing else seems to matter; the experience itself is so enjoyable that people will do it even at great cost, for the sheer sake of doing it" (Csikszentmihalyi, 1990, p. 4).
e.g., 2002	Martin Seligman	In 2000, Seligman and Csikszentmihalyi introduced their conception of positive psychology as "A science of positive subjective experience, positive individual traits, and positive institutions" (Seligman & Csikszentmihalyi, 2000, p. 5) and established Seligman as the spokesperson for a revitalised positive health movement. After proposing an authentic happiness theory with three elements (positive emotion, engagement and meaning) (Seligman, 2002), Seligman changed his approach to a five-element construct of wellbeing – PERMA – that located happiness within the positive emotion component: 1. ***P**ositive emotion* – feeling happy or content

Year	Contributor	Contribution
		2. ***E**ngagement* – developing strengths, finding flow 3. ***R**elationships* – positive, authentic connections 4. ***M**eaning and purpose* – sense of belonging to something bigger than the self 5. ***A**chievement* – positive accomplishments (Seligman, 2011).[33]
2011	Machteld Huber et al.	In 2009, participants at a symposium in the Netherlands discussed the inadequacy of the WHO definition of health (section 1.1) and proposed a dynamic conception of positive health as "the ability to adapt and self manage in the face of social, physical and emotional challenges" (Huber et al., 2011, 2016).

Positive psychology 2.0

Positive psychology and positive health have been criticised for:

- Overlooking the potential for excessive optimism to be detrimental to wellbeing, e.g., when linked to under-appreciation of risk or inflated self-esteem
- Overlooking the potential for negative events or states to enhance wellbeing, e.g., anger used constructively to change a situation that hinders wellbeing, capacity for post-traumatic growth or building resilience by overcoming negative conditions
- A Western-centric (distinctively North American) cultural approach of valorising positive emotions that lacks awareness of cross-cultural variation in perceptions of wellbeing
- Contributing to what sociologist William Davies (2015) termed 'the happiness industry' (e.g., Flemming & Manning, 2019; Lomas & Ivtzan, 2016; Wong, 2011).

A more nuanced 'second wave' of positive psychology, or 'positive psychology 2.0' (PP 2.0; Wong, 2011), rejected a perceived shift to 'unscientific positivity' and the 'tyranny of the positive attitude' identified in Seligman's positive psychology movement, and instead insisted that wellbeing depends on harmonisation of positive and negative (Held, 2004; Lomas & Ivtzan; 2016; Wong, 2015). The role of the negative was clearly encompassed in, for example, Ryff and Singer's approach (see Table 4):

> [We] underscore the need to move beyond false dichotomies that separate positive and negative features of the human condition. … Human well-being is fundamentally about the joining of these two realms. … Positive psychology will fulfill its promise not by simply marking what makes people feel good, hopeful, and contented, but by tracking deeper and more complex processes. (Ryff & Singer, 2003, pp. 271, 279)

[33] Others have added elements to the model; for example, 'PERMAH' is sometimes used with reference to Butler and Kern's (2016) addition of Health; and Emiliya Zhivotovskaya from the Flourishing Center added Vitality, creating PERMA-V (O'Brien, 2014).

PP 2.0 proposed a more balanced and inclusive focus on "adaptive processes and positive outcomes in both positive and negative conditions"[34] for individuals and groups, with four pillars:

- *Virtue* – values, ethics and character strengths; inclusive of cultural differences and balancing individual and group-level virtues
- *Meaning* – motivational (Purpose), cognitive (Understanding), moral/spiritual (Responsibility) and evaluative/affective (Enjoyment) (PURE) components function together as part of the self-regulation process; sources include achievement, relationships, self-acceptance, happiness and fairness
- *Resilience* – a complex adaption process with cognitive, behavioural, social and cultural components; resources and coping strategies for responding to adversity; capacity to endure, bounce back and grow
- *Wellbeing* – happiness, health, flourishing and optimal functioning in both positive and negative conditions; shaped by culture and flows from virtue, meaning and resilience. (Wong, 2011).

PP 2.0 stresses the importance of integrating Indigenous positive psychology, particularly that of Eastern psychological systems, and rejects the notion that "concepts and research findings based on American PP can be uncritically accepted as 'universal truths' and transplanted into other cultures" (Wong, 2015). Importantly, "one group's conceptualization of the dimensions of wellbeing and their respective indicators may be different from another's, and as such, a 'one size fits all' approach will be limited" (Flemming & Manning, 2019, p. 1).

The Indigenous Australian concept of health is holistic and inextricably connected to community and country:

> Aboriginal health does not mean the physical wellbeing of an individual, but refers to the social, emotional, and cultural wellbeing of the whole community. For Aboriginal people this is seen in terms of the whole-life-view. (Gee, Dudgeon, Schultz, Hart & Kelly, 2014) … [T]he Aboriginal and Torres Strait Islander concept of health "encompass[es] mental health and physical, cultural and spiritual health. Land is central to wellbeing. (Swensen, Serafino & Thomson, 1995) (Australian Indigenous Health*InfoNet*, n.d.)

Positive psychology and, subsequently, PP 2.0 have "effectively changed the language and landscape of mainstream psychology" (Wong, 2011, p. 1.) Such a change in thinking is required when discussing health in the OHS context. Whether the terminology moves to

[34] "If the smiley face (☺) symbolizes PP 1.0, then the yin-yang symbol (☯) represents PP 2.0" (Wong, 2015).

‘positive health’ or ‘Health 2.0’ or remains ‘health’ with an adjusted interpretation and understanding of what constitutes health, a change is required.

With the goal of optimal functioning for workers, the biopsychosocial model of health can be updated to include PP 2.0 perspectives. Application of this model in the workplace is considered in section 4.3.

4 Health in today’s workplace

The role of work and the workplace in psychological health is now well recognised and it is accepted that the workplace has a role in supporting psychological health (see AIHS, 2020). Importantly, this role is in addition to, not at the expense of, an unrelenting focus on the physical health and safety of workers.

The OHS professional should be aware that the traditional biomedical-model underpinning of occupational health has resulted in preoccupation with the negative effects of work and a focus on prevention of ill-health as opposed to creation of wellbeing (Lunt et al., 2007). For Jain, Leka and Zwetsloot (2018), health and safety has become health, safety and wellbeing (HSW), requiring a shift from risk and disease towards resources for health and life. This demands new ways of addressing workplace OHS.

After briefly considering some international approaches to workplace health and the concept of a psychosocial safety climate, this section addresses the role of OHS professionals in workplace health and provides a model for conceptualising the biopsychosocial holistic health paradigm in workplaces.

4.1 International approaches to a healthy workplace

In 2010, the World Health Organization produced a *WHO Healthy Workplace Framework and Model*, which proposed the following definition of a healthy workplace:

> A healthy workplace is one in which workers and managers collaborate to use a continual improvement process to protect and promote the health, safety and well-being of all workers and the sustainability of the workplace by considering the following, based on identified needs:
>
> - health and safety concerns in the physical work environment;
> - health, safety and well-being concerns in the psychosocial work environment, including organization of work and workplace culture;

- personal health resources in the workplace; and
- ways of participating in the community to improve the health of workers, their families and other members of the community. (WHO, 2010, p. 6)

The American Psychological Association (APA) describes the psychologically healthy workplace as:

> …one in which an organization's culture emphasizes the development of long-term win-win scenarios (optimizing stakeholder value), not one in which the culture emphasises the maximisation of short-term profit (maximising shareholder value). … [I]t is a dynamic process whereby the organization assesses its needs, develops and implements evidence-based practices that meet those needs, and evaluates its efforts in an ongoing manner, which provides feedback that is used for continuous improvement (Grawitch & Ballard, 2016, p. 5, 7-8).

OHS professionals should be aware that creating a psychologically healthy workplace "requires far more than simply offering a wellness program, conducting an annual employee survey, allowing telecommuting, facilitating the occasional team-building exercise, or giving employees awards for years of service" (Grawitch & Ballard, 2016, p. 8). According to the APA, it requires:

- *Employee involvement* – greater autonomy and opportunities for inclusion in organisational decision making
- *Work–life balance* – greater flexibility in the when, where and how of work, and assistance in managing non-work demands
- *Employee growth and development* – upskilling, mentoring, job enrichment, and career development and counselling
- *Employee recognition* – monetary and non-monetary performance-based appreciation, verbal appreciation from supervisors, and celebration of major life events
- *Health and safety* – prevention, assessment and treatment of potential health risks and problems as well as encouragement and support of healthy lifestyle and behaviour choices. (Grawitch & Ballard, 2016)

The US National Institute for Occupational Safety and Health (NIOSH) Future of Work Initiative applies the *Total Worker Health* (TWH) concept (see Table 3).[35]

> *Total Worker Health* is defined as policies, programs, and practices that integrate protection from work-related safety and health hazards with promotion of injury and illness-prevention efforts to advance worker well-being (NIOSH, 2016, p. 1).

There are five defining elements of TWH:

1. Demonstrate leadership commitment to worker safety and health at all levels of the organization.

[35] See https://www.cdc.gov/niosh/twh/ and https://www.cdc.gov/niosh/docs/2018-152/pdfs/2018-152.pdf

2. Design work to eliminate or reduce safety and health hazards and promote worker well-being.
3. Promote and support worker engagement throughout program design and implementation.
4. Ensure confidentiality and privacy of workers.
5. Integrate relevant systems to advance worker well-being. (NIOSH, 2016, p. 3)

The transdisciplinary Future of Work Initiative is an integrated approach for addressing worker safety, health and wellbeing in response to the rapid change impacting the workplace, work and workforce, including "workplace developments in organizational design, technological job displacement, and work arrangements; work advances in artificial intelligence, robotics, and technologies; and workforce changes in demographics, economic security, and skills" (Tamers et al., 2020, p. 1065). The NIOSH graphic titled 'Issues Relevant to Advancing Worker Well-Being Using *Total Worker Health* Approaches'[36] includes a multitude of issues relevant to worker safety, health and wellbeing, reflecting the expanded OHS focus and the necessity for a holistic approach. For more information see Tamers et al. (2020) and the US Centers for Disease Control and Prevention website.[37]

4.2 Psychosocial safety climate

Australian research has identified *psychosocial safety climate* (PSC) as a dimension of organisational climate. Defined as "shared perceptions regarding policies, practices, and procedures for the protection of worker psychological health and safety" (Dollard, 2019), PSC has been referred to as a 'cause of the causes' of work stress and seeks a balance between the competing values associated with organisational productivity and worker health (Bailey et al., 2015; Becher & Dollard, 2016; Dollard, 2019). PSC is a measurable predictor of work conditions and worker health and engagement (Dollard & Bakker, 2010) and there are calls for its use as a lead indicator of work health (e.g., Dollard, 2019; Potter et al., 2017).[38]

In 2016, SafeWork Australia published *Psychosocial Safety Climate and Better Productivity in Australian Workplaces: Costs, Productivity, Presenteeism, Absenteeism* (Becher & Dollard, 2016), a report that provided strong financial impetus for organisations to mitigate psychosocial hazards by establishing and maintaining a good PSC.[39] In 2020, lead PSC researcher Professor Maureen Dollard was awarded an Australian Laureate Fellowship to:

> …assist Australia meet its UN Sustainable Development Goal to promote decent and safe work by producing new knowledge to support radical reform to Australia's corporate

[36] https://www.cdc.gov/niosh/twh/priority.html#anchor_1578410183952

[37] https://www.cdc.gov/niosh/topics/future-of-work/default.html

[38] PSC is discussed further in *OHS Bok* 19 Psychosocial Hazards.

[39] Becher and Dollard (2016) determined that workers in organisations with low PSC took 43% more sick days per month and exhibited 72% greater loss of work performance (presenteeism) compared to workers in high PSC environments; this equated to an annual cost of $1887 per employee, with total annual cost of low PSC to Australian employers estimated at $6 billion.

climate. Only 52% of Australian workers report that their workplace is psychologically healthy. Bullying rates are high, work pressure is increasing. The Fellowship will establish the world's first Psychological Safety Climate Observatory, a research platform to gather, analyse and synthesise, national and international data. By inspiring world-class researchers to build state of the art knowledge and tools for work climate change, Australia will be an authoritative leader in human-centred, more psychologically healthy, innovative and productive workplaces. (ARC, 2020)

4.3 An integrated model of workplace health

As part of their transdisciplinary approach to health and safety, OHS professionals require a model for health that will help them design or test health and wellbeing initiatives and leverage the health benefits of good work to enhance worker wellbeing. While there is no one-size-fits-all organisational approach, Figure 3 is a conceptual model of workplace health that OHS professionals can adapt to suit their organisations.

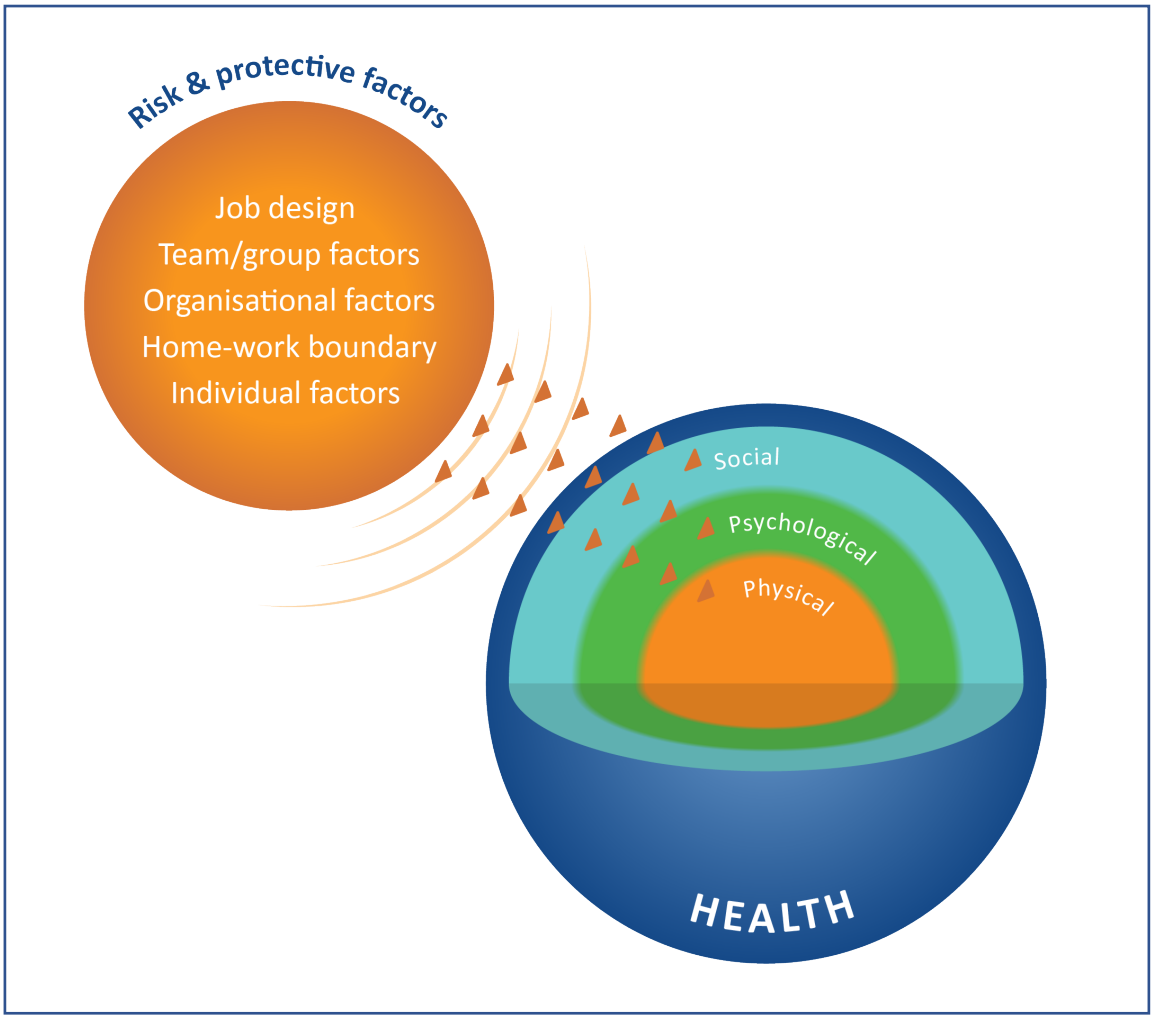

Figure 3: An integrated model of workplace health

The model draws on:

- Engel's (1977) biopsychosocial model infused with the dynamism introduced by Lehman et al. (2017) (section 3.1) and positive psychology 2.0 perspectives (section 3.2)
- Levels of risk and protective factors identified by Harvey et al. (2014) that can help elucidate links between work and holistic health.

Individual elements of the model are detailed below.

Health dimensions

- *Physical health* (including, for example, biological, chemical and ergonomic factors). This is the aspect of health traditionally associated with safety in OHS. While the OHS professional focus is still on injury prevention and protection of health from hazards, in the biopsychosocial approach to occupational health this can coexist with the more subjective and comprehensive concept of occupational wellbeing that results from complex interactions between the work environment and an individual's health dimensions. Workplace interventions now extend to supporting overall physical health through good nutrition, weight management, exercise, sleep and addressing unhealthy habits such as drug and alcohol abuse. While physical health is desirable, it is not a necessary condition for a state of wellbeing at work (Lunt et al., 2007), which an individual with an injury or disease may achieve through the "ability to adapt and self manage" (Huber et al., 2011).
- *Psychological health* (including, for example, mental, emotional and spiritual health). As with physical health, the primary focus for psychological health in the workplace is on prevention of harm. Psychological hazards such as high job demands and low autonomy or control have been linked to both psychological health problems (e.g., depression and anxiety) and physical health problems (e.g., cardiovascular disease). Fundamental to psychological health are an individual's sense of purpose and meaning, resilience levels and coping mechanisms.
- *Social health.* Positive connections to others are crucial for social health. Significant protective factors in the workplace include a good psychosocial safety climate, teams characterised by trust and social support, contributions to community, and positive and supportive organisational policies. On the other hand, interpersonal conflict and bullying in the workplace have been demonstrated to negatively impact both psychological and physical health.

Levels of risk and protective factors

- *Job design.* Designing work to minimise harm involves, for example:
    - Assessing and, if necessary, adjusting job characteristics (e.g., flexibility, role clarity, task significance and variety, autonomy, level of exposure to physical risk or trauma)
    - Ensuring a safe physical environment and reducing known risk factors

    - Providing resources and support to match physical, emotional and cognitive job demands
    - Facilitating job enrichment and career development; PP 2.0 takes a meaning-centred approach to 'good work' (Wong et al., 2017)
    - Encouraging employee participation.

- *Team/group.* Organisational culture and psychosocial safety climate are fundamental to team-level protective factors, including:
    - Promoting safe and healthy behaviours and team-based interventions
    - Developing worker potential and empowering with intrinsic and extrinsic motivation
    - Modelling effective leadership and providing manager and leadership training
    - Cultivating positive interpersonal relationships and a sense of belonging.

- *Organisation.* A safe physical and psychological work environment, positive culture and good psychosocial safety climate emanate from the organisational level, providing capacity for:
    - A meaning-centred approach to organisational functioning with a model of servant leadership (e.g., Searle & Barbuto, 2011) that emphasises integrity and development of worker potential (Wong et al., 2017); corporate social responsibility, organisational justice, management support for health initiatives and mobilisation of worker involvement based on core values
    - Effective change management and communication
    - Systems for recognising and rewarding good performance
    - Provision of personal health resources and return-to-work programs.

- *Home–work boundary.* This level emphasises the importance of recognising that work and nonwork factors are interrelated in health and wellbeing. The goal should be to seek enrichment of both work and life rather than negative spill-over between work and life demands. Protective factors include:
    - Supportive organisational culture
    - Appropriate support from supervisors and colleagues
    - Consideration of options such as enhanced flexibility and job redesign.

- *Individual.* An individual's biopsychosocial health (e.g., physical health, personality traits, coping styles, behavioural patterns, family history) interacts with work and nonwork factors. While risks can be inherent in any aspect of an individual's health, workplaces can provide:
    - Development programs and opportunities
    - Provision of strategies for boosting resilience
    - Encouragement of early help-seeking
    - Support for recovery from physical or mental illness at organisational and team levels.

The levels of risk and protective factors provide perspectives from which to consider:

- Prevention of workplace health risks and hazards
- Protection of workers against physical, psychological and social factors hazardous to health
- Promotion of workers' health and work ability

- Provision of health services to workers (particularly with reference to occupational and work-related diseases, acute health events, accidents and emergencies)
- Worker guidance in rehabilitation services, healthy working practices and healthy lifestyles (Rantanen et al., 2020).

The power of the model is in the integration of the elements in a manner that can support optimal functioning of workers. It implies a shift from the traditional problem-solving OHS approach to a broader, more positive and proactive, added-value approach that can be mainstreamed as part of 'normal' business and reflected in organisational values (Jain et al., 2018). In alignment with the WHO Healthy Workplace Model, the APA Psychologically Healthy Workplace model and the NIOSH Total Worker Health approach, it combines the often-separated fields of traditional OHS and workplace health promotion.

To illustrate application of the model, Table 5 focuses on some of the workplace impacts of the COVID-19 pandemic and associated protective practices. The pandemic provides stark evidence of the constantly changing profile of workplace health risks and the level of complexity that can accompany emerging risks.

Table 5: Biopsychosocial health workplace impacts during the COVID-19 pandemic[40]

Level of risk / protective factors	Workplace impacts	Protective practices
Job design	The pandemic[41] brought unprecedented levels of job disruption and working arrangements that increased the potential for worker exposure to physical injury and psychological harm, for example: • With the abrupt instigation of work from home (WFH) arrangements, it became obvious that WFH suits some jobs but not others; many jobs required adaptation. The risk of musculoskeletal disorders (MSDs) increased with physical inactivity and for	More than ever, good work that aligns with the AFOEM definition (section 2.2.4) and is good for wellbeing required safe and healthy practices, clear roles, a reasonable workload, sufficient job resources, worker input in how work gets done, positive relationships and consultation during change.[42] Flexibility,

[40] The table includes Harvey et al.'s (2014) levels of risk and protective factors and the table content is informed by APS (2020); Burgard and Lin (2013); Emmett et al. (2020); Grasso (2020); Harvey et al. (2014); Huff (2021); Jain et al. (2018); Kniffin et al. (2020); Lyra Health & NAHPC (2020); NMHC (2021); SuperFriend (2018, 2020); Tamers et al. (2020); WHO (2019); Wong (2020); and *OHS BoK* 37.4 Workers Working From Home.

[41] Recently, COVID-19 has been called a 'syndemic' because of its extensive interaction with biological and social factors (Horton, 2020; Mendenhall, 2020).

[42] See the RACP's Health Benefits of Good Work initiative: https://www.racp.edu.au/advocacy/division-faculty-and-chapter-priorities/faculty-of-occupational-environmental-medicine/health-benefits-of-good-work

Level of risk / protective factors	Workplace impacts	Protective practices
	workers without ergonomically suitable home workstations. • Job insecurity exacerbated the general rise in nonstandard work hours that has been linked to sleep disorders and physical health problems, and psychosocial stressors such as job strain. As the labour market was characterised by rising unemployment and underemployment, some workers in 'essential' industries were required to work longer hours than normal – both increases and decreases to workload or work hours can negatively impact health. • An increase in stress levels was associated with the potential for exposure to COVID-19 through work or commuting, particularly for 'essential' workers. • Social isolation due to physical distancing and lockdowns negatively impacted the psychosocial health of some workers.	role adjustments and scrutiny of job demands, early interventions, appropriate support (including technical training for remote work) and return-to-work interventions,[43] and a foundation of fairness and respect have helped employees transition to new work duties/processes. Many organisations approached job design in innovative and more holistic ways during 2020 and rapidly instigated changes, including increased flexibility, that could otherwise have taken years.
Team/group	The pandemic highlighted the importance of effective leadership, two-way trust between managers/supervisors and workers, and management of work to minimise harm. Isolation from peers necessitated new strategies for team connectedness and communications that foster a sense of belonging. For many organisations, WFH arrangements required changes to supervision methods (e.g., establishment of a network of teams). WFH can make it more difficult to detect mental health strain and managers/supervisors were challenged to create an environment in which it is okay to talk about psychological wellbeing by, for example, demonstrating empathy, leading by example, promoting casual wellness check-ins, reinforcing a sense of purpose and reminding workers of available mental health resources.	Good practices include building a good psychosocial safety climate (section 4.2), manager training, compassionate management, bounded optimism, personalised interventions, praise and recognition for good performance, flexibility in timing of tasks and meetings, and sensitivity to the needs of workers with children or other dependents. Leaders should model appropriate behaviour, including taking leave when ill. The importance of a continuing OHS focus on social support for workers to prevent long-term health consequences has been recognised.[44] The National Mental Health Commission provides toolkits for *Mentally Healthy*

[43] See *OHS BoK* 35 Mitigation of Health Impacts for Foreman et al.'s (2006) adaptation of the WHO ICF biopsychosocial model to include return-to-work interventions.

[44] For example, Godderis and Luyten (2020, p. 511) identified workers' need for continued social support as an opportunity for OHS professionals "to translate their valuable insights on the complex relationship between work and health into workable action."

Level of risk / protective factors	Workplace impacts	Protective practices
		Workplaces During COVID-19.[45]
Organisation	Organisations have an obligation to address the health and safety of workers – whether on-site or WFH – while maintaining productivity. The pandemic challenged organisations' ability to ensure a safe work environment. Clearly marked walkways, hand-sanitising stations, physically distanced stand-here stickers became commonplace. Beyond these more tangible changes, organisations grappled with mitigating worker uncertainty related to infection risk and job security and providing holistic guidance beyond the physical conditions of the work environment. Although some events were outside organisational control, the 2020 workplace was recognised as an important source of mental health support for workers and the number of employers taking action to support the psychological wellbeing of workers continues to grow. In the US, nearly half of large organisations train their managers to recognise symptoms of depression and anxiety and an additional 18% plan to do so in 2021. Some employers offered Covid-related paid leave to support families. Survey respondents who indicated that their organisations responded well to the crisis were four times more likely to be engaged and six times more likely to report a positive state of wellbeing than respondents who were dissatisfied with their organisations' responses.[46] In Australia, a 2020 survey revealed that while a greater number of workers were experiencing mental health issues,[47] workplace connectedness *increased* (particularly for remote workers)[48] as did a sense of shared purpose, and workers embraced psychological health initiatives.	Protective factors include building and maintaining a good psychosocial safety climate (section 4.2) and providing workplace programs and resources to improve physical and mental health and wellbeing, team-based interventions, manager and leadership training, organisational justice, anti-bullying policies, effective change management, consistent messaging and sensemaking, and promoting protective factors at an organisational level to maximise resilience. During 2020, nearly one in three Australian workplaces (30%) implemented new initiatives (e.g., paid mental health days off, sick pay for casual workers, meeting-free blocks and longer breaks) to support workers' mental health and wellbeing.[49] Important organisational focus areas for helping employees thrive were safety and security, relationships, culture and purpose.

[45] https://www.mentalhealthcommission.gov.au/mental-health-reform/national-workplace-initiative/mentally-healthy-workplaces-during-covid-19

[46] For US worker data, see for example Emmett et al. (2020), Huff (2021), and Lyra Health and NAHPC (2020).

[47] Three in five workers experienced a mental health condition in 2020 (an increase of 8.9% from 2019 to 59.5%); of these, more than a quarter (27.8%) experienced their first mental health condition during the pandemic (SuperFriend, 2020).

[48] Similarly, in the US, surveyed employees working remotely were more engaged and had a stronger sense of wellbeing than those in nonremote jobs with little flexibility (Emmett et al., 2020).

[49] For Australian worker data, see for example AIHW (2020) and SuperFriend (2020).

Level of risk / protective factors	Workplace impacts	Protective practices
Home–work conflict	The boundaries between work and personal lives can be sites of tension. To varying degrees around the world, one outcome of the pandemic was a blurring of the boundary between work and nonwork roles. While accommodation of care commitments (e.g., children or elderly parents) is a major contributor to such conflict, there were other potential performance and productivity complications such as finding a quiet space to work during lockdown, ensuring adequate internet bandwidth and finding it harder to 'switch off.' While no doubt keen to ensure home life did not interfere with work, it was important for employers to maintain duty of care. It has been clearly demonstrated that negative spill-over from work into home life has a negative impact on the psychological and physical health of workers, and is linked to an increase in risky behaviours (e.g., decreased physical activity, increased consumption of unhealthy foods, alcohol/drug abuse or dependence). Negative spill-over can also push people out of the workforce.	Protective practices include support for work–life balance, ensuring suitable breaks, flexible work policies and thoughtful, holistic job design. Regarding WFH, 'segmenters,' who prefer clear boundaries between work and home life, may have benefited from strategies for tolerating nonwork interruptions during work hours and 'integrators,' who often toggle between boundary-crossing activities, may have benefited from some segmentation of time and space.
Individual	Workplace changes during the pandemic affected workers in widely divergent ways; while some struggled, others thrived. There is evidence that, for example, WFH workers were more likely to have a positive state of wellbeing than nonremote workers and that the impact on working mothers was quite different to the impact on working fathers.[50] As individuals coped with varying levels of stress and uncertainty, their biopsychosocial health dictated their resilience. Of relevance is that biopsychosocial dynamics are influenced by socioeconomic status, geographic location and culture. For some workers, WFH provided an opportunity to exercise more and improve physical health while others became more inactive and gained weight (the link between physical and psychological health is important here). A reported increase in domestic violence revealed that some individuals faced increased risk of physical and psychological harm.[51] It was widely declared that the pandemic created a mental health crisis – at a time of great uncertainty, job insecurity and fear of the virus,	Of importance are healthy relationships and social support, and the extent to which an individual worker's need for autonomy, mastery and purpose is met. Wellbeing programs in the workplace can provide individuals with an integrated understanding of their biopsychosocial health and encourage them to make positive choices for positive outcomes. Safe Work Australia provides information (including codes, guides, reports, case studies and podcasts) relevant to mental health in the workplace;[52] a People at Work psychosocial risk assessment process is available from

[50] See, for example, the Grattan Institute report, *Women's Work: The Impact of the COVID Crisis on Australian Women* (Wood et al., 2021).

[51] For example, Fitz-Gibbon et al. (2020), Xue et al., (2020) and WorkSafe Victoria's guidance at https://www.worksafe.vic.gov.au/addressing-family-violence-workplace

[52] https://www.safeworkaustralia.gov.au/topic/mental-health

Level of risk / protective factors	Workplace impacts	Protective practices
	people faced isolation and abandonment of social rituals, and many experienced anxiety, depression and loneliness. From a positive psychology 2.0 perspective (section 3.2), it is important to consider the macro world-condition factors as well as micro factors such as an individual's resilience and limitations, i.e., individual flourishing is not just about being positive and doing the right things – it is dependent on coping with negative external forces.	WorkSafe.qld.gov.au;[53] SuperFriend provides a COVID-19 Support Guide;[54] the ACTU Centre for Health and Safety provides a Workplace Checklist for Union Delegates and Health and Safety Representatives;[55] and the Future of Work Institute at Curtin University has a Thrive at Work initiative that includes COVID-19 resources.[56]

4.4 The role of OHS professionals in workplace health

4.4.1 Wellbeing as integral to health

Many OHS professionals are employed in roles that carry inclusive position titles such as 'Health, Safety and Wellbeing.' Rather than 'wellbeing' (or 'wellness') existing as a separate function, this chapter has shown that a holistic approach includes wellbeing as integral to biopsychosocial health.

Health and wellbeing are clearly linked in the positive health hypothesis (presented in section 3.2) that "well-being contributes to the effective functioning of multiple biological systems, which may keep the organism from succumbing to disease, or, when illness or adversity occurs, may help promote rapid recovery" (Ryff et al., 2004, p. 1383). The concept of wellbeing has become more nuanced through the work of proponents of positive psychology 2.0 (PP 2.0). As explained in section 3.2, rather than being focused on excessive optimism and 'the happiness industry,' wellbeing is about "adaptive processes and positive outcomes in both positive and negative conditions" (Wong, 2011). In his four-pillar description of PP 2.0, Wong (2011) posited that wellbeing flows from the other three pillars of virtue, meaning and resilience. While he conceptualised wellbeing as happiness, health, flourishing and optimal functioning in both positive and negative conditions, Wong

[53] https://www.worksafe.qld.gov.au/safety-and-prevention/mental-health/people-at-work

[54] https://superfriend.com.au/resources/covid-19-support/

[55] https://www.actu.org.au/media/1448937/coronavirus_workplace_checklist.pdf

[56] https://www.thriveatwork.org.au/

warned that concepts of wellness based on research in one culture cannot be uncritically applied to other cultures. (See section 3.2.)

Irrespective of whether an OHS professional's position title includes 'wellbeing,' the biopsychosocial model of health and the exploration of tenets of positive psychology and positive health have shown that wellbeing is integral to our holistic view of health and so is within the purview of all OHS professionals. As depicted in the integrated model of workplace health (Figure 3), physical, psychological and social elements are all important to health; they interact and impact on each other and cannot be siloed.

4.4.2 Multidisciplinary engagement role

Many variables will impact the role of the OHS professional in workplace health, including the size of the organisation and whether occupational health services are internal or external. Large organisations or organisations where workers are exposed to a greater psychological risk are more likely to require complex and sophisticated risk management processes (SWA, 2019b).

Protecting workers against a multitude of hazards, developing OHS programs to proactively address both traditional and emerging risks, and optimising return to work are massive multidisciplinary undertakings. Importantly, the OHS professional is part of a team of professionals with interest and expertise in worker health. Cooperation is required with, for example, general medical practitioners, occupational physicians, occupational health nurses and psychologists, allied health professionals and return-to-work coordinators. With the rising profile of the health, safety and wellbeing of workers and a trend towards strategic integration and mainstreaming of initiatives (Jain et al. 2018),[57] it is imperative that the OHS professional role is not siloed. Indeed, it is becoming common for OHS professionals to serve as integral members of organisational teams with involvement of senior leadership, human resource department representatives, safety engineers, worker representatives and others.

5 Summary

This chapter described the expansion of the concept of health that has seen the traditionally dominant safety paradigm replaced with a holistic health paradigm inclusive of safety.

[57] Jain et al. (2018, p. 227) provide a table of "Strategies for mainstreaming health, safety and well-being."

Section 1 presented definitions of health and occupational health, drawing attention to the evolution of the concept of health from 'absence of disease' to more positive definitions informed by both biomedical and biopsychosocial models.

Section 2 explained the development of the safety paradigm and the subsequent rise of a new era of workplace health as the safety focus expanded to include health monitoring, psychological health, changes in attitude towards rehabilitation and disability, and an emphasis on positive associations between work and health.

Section 3 described the increasingly relevant and influential biopsychosocial model that takes a holistic and positive view of health as dynamic interactions between physical, psychological and social factors. Diffusion and acceptance of this model and positive psychology perspectives have encouraged the linkage of 'health' and 'wellbeing' and the pursuit of optional human functioning.

Section 4 examined health in today's workplace. After considering some international approaches to healthy workplaces and the concept of a psychosocial safety climate, it presented an integrated model of workplace health then applied the risk/protective factors identified in this model to a review of workplace impacts during the Covid-19 pandemic. Finally, it stressed the importance of including wellbeing in concepts of health and the need for generalist OHS professionals to engage with other professionals across a multidisciplinary spectrum in managing the health component of OHS.

The chapter emphasised the symbiotic relationship between worker health/wellbeing and organisational effectiveness: worker health and wellbeing is good for business. With sustainability requiring "a business philosophy that focuses on optimising the interplay between employee and organizational outcomes" (Grawitch & Ballard, 2016, p. 4), OHS professionals have an important role to play in ensuring that productivity is balanced with a biopsychosocial safety climate that prioritises worker health and wellbeing.

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