KINNECTIONS
LITERATURE REVIEW

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EXECUTIVE SUMMARY

The most significant findings from this literature review are summarised below.

Mental ill health

GLOBALLY

Mental ill health is currently the most significant health issue for young people globally, and are considered to be the most common cause of disability in people aged 10-24. – McGory et al

ESTIMATED $9.1 BILLION

Spent on mental health services

PREVALENCE OF MENTAL HEALTH

Mental ill health accounts for 12% of the total the Australian burden of disease. 14% of young Australians have mental health problems. – Australian Institute for Health and Welfare (AIHW), 2019

One fifth to one third of young Australians at any given time experience significant psychological stress and distress. – Eckersley et al, 2005

RISKS OF MENTAL ILL HEALTH TO YOUNG PEOPLE

Are at an increased risk for suicidality and are more likely to engage in health risk behaviours. – Sawyer et al, 2007

Young people under-access professional mental health services. – Swayer et al, 2001

Positivity and hope:

The positivity of a young person's outlook could indicate the state of their mental health.

Positive thoughts about the future boost overall happiness and positivity, is linked to better mental health, and to better educational outcomes and a greater sense of life satisfaction and self-worth. – Jacobs et al, 2014

Hope is correlated with wellbeing, life satisfaction and flourishing mental health. It is related to feelings of self worth, life satisfaction and lower levels of depression. – Snyder, 2002 and Gallagher & Lopez, 2009

Social connectedness:

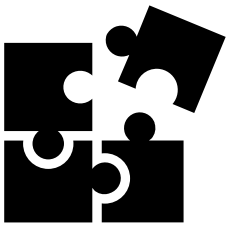
HOPE AT SCHOOL – SNYDER ET AL, 2003

Hope is related to success at school and social competence.
Students with low hope experience more anxiety, self-doubt and negative thoughts that interfere with educational outcomes.

Mental health is influenced by one's social and relational environment.

SOCIAL CONNECTEDNESS

Positive social interactions and a sense of social belonging are both signs of mental health. People who experience social connectedness are less likely to experience mental health problems. – Huppert et al, 2013



Young people with social connectedness and a sense of belonging are less likely to develop mental health problems. Social connectedness increases the chance of future mental health, and social support enhances mental health, by reducing stress and promote a sense of purpose in life. – Patel et al, 2007

POSITIVE RELATIONSHIPS

People who form positive relationships are more likely to thrive. Loneliness, communication difficulties or social isolation put people at greater risk of mental illness.

Having positive relationships is a sign of mental health.

– World Health Organization (WHO), 2013

SCHOOL AND SOCIAL CONNECTEDNESS

Schools play a major role in supporting young people with emotional and behavioural problems. – Patel et al, 2007

School connectedness is linked to positive adolescent health outcomes and to improved educational outcomes. Young people who experience school connectedness show signs of positive mental health. – Whitlock, 2006

School belongingness is related to positive mental health outcomes for young people.

Young people who experience closeness to others at school are more likely to experience positive mental health. – Goodenow, 1993

Boosting school belongingness is effective in promoting mental health in young people.

Adolescent mental health could be promoted by fostering a sense of belonging in schools.
– Vaz et al, 2014

1. INTRODUCTION AND BACKGROUND

"Kinnections" was born out of a desire to support teachers in the early identification of students who are at risk of mental illness. The purpose of the web-based platform and application is to allow teachers to track three different elements which have a significant impact on mental well-being in their students. The first of these elements is positive future focus, the second element is the social connectedness of students, and the third is their sense of safety. This report reports on the prevalence and social and financial impact of mental illness in youths in Australia. Further, it synthesizes the most significant literature on the two previously mentioned elements of mental well-being in children, and how they impact children and adolescents. Finally, it briefly summarizes the recommendations on early and school based intervention into mental health in children and adolescents.

It should be noted that the ever-increasing body of research on child and adolescent mental health indicates that the causes of mental health problems are multifactorial. It is important to note that while there are many factors that influence mental health, including socioeconomic factors, population groups, and geographic location, going into detail about these is beyond the scope of this literature review.

THE IMPORTANCE OF ENGAGING WITH MENTAL HEALTH

It is important to first understand what mental health, and by extension mental ill health, are, and why they are so important. The World Health Organization defines mental health as 'a state of wellbeing in which every individual realizes his or her own potential, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to her or his community'.[1] Mental health is not just the absence of mental illness; it is a state of wellbeing necessary for human life to function and flourish.[1,2,3] Mental health and wellbeing are what enable people to navigate the typical pressures of life and to experience what it means to be human. They underpin the ability of individuals to enjoy life and earn a living.[4] In order for people to fulfil their potential and contribute to their communities their mental health needs must be addressed.[5]

[1] World Health Organization 2005, 'Promoting Mental Health: concepts, emerging evidence, practice'.

[2] Keyes, CL 2005, 'Mental Illness and/or Mental Health? Investigating Axioms of the Complete State Model of Health', *Journal of Consulting and Clinical Psychology,* vol. 73, no. 3, pp. 539-548.

[3] Keyes, CL 2002, 'The mental health continuum: From languishing to flourishing in life', *Journal of health and social behavior*, vol. 43, pp.207-222.

[4] World Health Organization 2013, 'Investing in mental health: evidence for action'.

[5] Patel, V, Flisher, AJ, Hetrick, S & McGorry, P 2007, 'Mental health of young people: a global public-health challenge', T*he Lancet*, vol. 369, no. 9569, pp. 1302-1313.

According to collated international research on adolescent mental health produced by McGorry et al, mental ill health is currently the most significant health issue for young people globally and is now the most common cause of disability in people aged 10-24.[6]

THE MENTAL HEALTH OF YOUNG AUSTRALIANS

Mental ill health is a demonstrated issue in Australia, with 45% of the population aged 16-85 years experiencing a mental disorder at some point in their life. A study conducted in 2015 by the Australian Institute of Health and Welfare (AIHW), the Australian Burden of Disease Study showed that mental ill health was the cause of 12% of the total burden of disease among all Australians.[7] According to this study, mental and substance use disorders were the fourth most common disease group that caused burden. Furthermore, mental disorders accounted for 23% of the non-fatal disease burden in Australia in 2015 and were the second most prevalent non-fatal disease group after musculoskeletal disorders. The percentage of the disease burden made up by mental disorders was 12% in both the 2003 and 2015 surveys. The AIHW also found that young people in particular were affected by a range of mental disorders that accounted for a substantial proportion of the disease burden for their age group.

Results from the AIHW study showed that children aged 5-14 years experienced substantial burden from mental and substance use disorders, both among boys and girls. For girls, anxiety and depressive disorders were the second and third most common causes of burden, accounting for 19% of the total disease burden, while for boys, anxiety, conduct and depressive disorders collectively made up 23% of the total disease burden.[7]

The same study showed that after puberty there was a pronounced increase in the disease burden caused by mental and substance use disorders. For young men aged 15-24 mental and substance use disorders accounted for 36% of the total disease burden. For these young men the leading cause of burden was suicide and self-inflicted injuries, which accounted for 12.8% of the total disease burden. Other causes of burden among the top ten for this group were alcohol use disorders, depressive disorders, anxiety disorders, drug use disorders and bipolar affective disorder. Similarly to the young men, mental and substance use disorders accounted for 34% of the total disease burden for young women. For young women aged 15-24 the leading cause of burden was anxiety disorders, which accounted for 11.3% of the total disease burden. Depressive disorders were the second most common cause, accounting for 8.9% of the total burden.[7]

A significant number of children and adolescents are reported as currently or recently having mental health problems in a number of studies. Findings from the National Survey of Mental Health and Wellbeing (NSMHW) showed that 14% of young Australians aged 13-17 years

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[6] McGorry, PD, Goldstone, SD, Parker, AG, Rickwood, DJ & Hickie, IB 2014, 'Cultures for mental health care of young people: an Australian blueprint for reform,' *The Lancet Psychiatry*, vol. 1, no. 7, pp. 559-568.

[7] Australian Institute of Health and Welfare 2019, *Australian Burden of Disease Study: impact and causes of illness and death in Australia 2015*, Australian Institute of Health and Welfare, Canberra.

had mental health problems, while Eckersley et al state that at any one time between one fifth and one third of young Australians are experiencing significant psychological stress and distress.[8,9,10] A survey funded by the Australian Government Department of Health corroborated the evidence from the NSMHW reporting that 13.9% of children and adolescents aged 4-17 had experienced a mental disorder in the 12 months prior to the survey.[11] To give an idea of the scale of this issue, 13.9% of those aged 4-17 is equivalent to one in seven children or adolescents, and translates to an estimated 560 000 Australian children and adolescents affected by mental ill health in the 12 months prior to the survey..

The study by the Department of Health also demonstrated that young Australians experienced a range of mental health problems. As can be seen in Table 1, ADHD was the most common mental disorder, followed by anxiety disorders, major depressive disorder and conduct disorder. The study found that there was a significant rate of comorbidity in mental health problems, meaning that when mental health problems occur there is likely to be more than just one illness. Almost a third of young Australians who experienced a mental disorder had two or more mental disorders at the same time.[11]

Table 1: Table showing the results of a 2015 study on mental health among children and adolescents in Australia[11]

Mental disorder experienced in the year prior to the study	Prevalence among Australians aged 4-17
ADHD	7.4%
Anxiety disorders	6.9%
Major depressive disorder	2.8%
Conduct disorder	2.1%

Corroborating findings from the Australian Burden of Disease Study, the survey by the Department of Health also showed that adolescents are much more likely to experience mental health problems than children.[7,11] 12-17 year-olds were almost three times more

[8] Sawyer, MG, Kosky, RJ, Graetz, BW, Arney, F, Zubrick, SR and Baghurst, P, 2000. 'The National Survey of Mental Health and Wellbeing: the child and adolescent component', *Australian and New Zealand Journal of Psychiatry*, vol. 34, no. 2, pp. 214-220.

[9] Sawyer, MG, Arney, FM, Baghurst, PA, Clark, JJ, Graetz, BW, Kosky, RJ, Nurcombe, B, Patton, GC, Prior, MR, Raphael, B & Rey, JM 2001, 'The mental health of young people in Australia: key findings from the child and adolescent component of the national survey of mental health and wellbeing', *Australian and New Zealand Journal of Psychiatry*, vol. 35, no. 6, pp. 806-814.

[10] Eckersley, RM, Wierenga, A & Wyn, J 2005, 'Life in a time of uncertainty: optimising the health and wellbeing of young Australians', *Medical Journal of Australia,* vol. 183, no. 8, pp. 402-404.

[11] Lawrence, D, Johnson, S, Hafekost, J, Boterhoven De Haan, K, Sawyer, M, Ainley, J & Zubrick, SR 2015, *The mental health of children and adolescents: Report on the second Australian child and adolescent survey of mental health and wellbeing*, Department of Health, Canberra.

likely to have a severe mental disorder than 4-11 year olds, amounting to 19.9% of adolescents aged 11-17 years experiencing high or very high psychological distress.[11] Similarly, the NSMHW found that at more than a quarter (26%) of those aged 16-24, young people experienced the highest rates of mental disorder in the year prior the survey compared to all other age groups.[12] Rates of disorder decreased with age as evidenced by the fact that fewer (5.9%) of those aged 75-85 years experienced a mental disorder in the year before the survey.[12]

A danger posed by this high prevalence of mental illness is that young people with mental health problems are at an increased risk for suicidality and are more likely to engage in behaviours putting their future health at risk.[13] Those with mental health problems were more likely to smoke, binge drink and engage in other substance use. Substance abuse can trigger and aggravate serious mental health problems.[14] These health risk behaviours are of particular concern in young people as the adolescent brain is susceptible to the harmful effects of alcohol abuse, as well as the danger that the risk of becoming alcohol dependent rises the younger a person is when they start drinking.[15] Parker and Ricciardi further confirm the strong relationship between mental health problems and health risk behaviours in Australian young people in their recently published study.[16]

An additional element that further stresses the importance of identifying mental health problems early and referring them to the appropriate help is that many young people in Australia with mental health problems are not accessing mental health services. The NSMHW revealed that only 25% of surveyed youth with mental health problems accessed professional mental health services in the six months before the survey.[9] Similar results were found in the psychological health survey of 1776 students at private schools in Sydney carried out by Parker and Riccardi.[16] The study showed that 95% of students who were assigned a melancholia diagnosis and 100% of those with a bipolar disorder had contemplated suicide in the last year. However, of those with melancholia only 32% had consulted a psychologist and 28% a psychiatrist and of those with a bipolar disorder only 20% had consulted a psychologist and 20% a psychiatrist. The study specifically identified 52 students who had never received a psychiatric consultation and were suicidally preoccupied. In a similar vein, a meta-analysis of studies done in the United States showed that it was common for people with mental health problems to experience significant delays in

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[12] Australian Bureau of Statistics 2007, 'National survey of mental health and wellbeing: Summary of results', cat. no. 4326.0, Australian Bureau of Statistics, Canberra.

[13] Sawyer, MG, Miller-Lewis, LR & Clark, JJ 2007, 'The mental health of 13–17 year-olds in Australia: Findings from the national survey of mental health and well-being', *Journal of Youth and Adolescence*, vol. 36, no. 2, pp. 185-194.

[14] The Royal Australian and New Zealand College of Psychiatrists 2016, *The economic cost of serious mental illness and comorbidities in Australia and New Zealand,* The Royal Australian and New Zealand College of Psychiatrists, Melbourne.

[15] COAG Health Council 2015, 'Healthy, Safe and Thriving: National Strategic Framework for Child and Youth Health', *Australian Health Ministers' Advisory Council*.

[16] Parker, G & Ricciardi, T 2019, 'The risk of suicide and self-harm in adolescents is influenced by the "type" of mood disorder', *The Journal of nervous and mental disease*, vol. 207, no. 1, pp. 1-5.

receiving a diagnosis or treatment, with early onset of mental ill health being one of the predictors for greater delays.[17] The consistently low rate of adolescent access to professional mental health services shows that there is a greater need for early intervention to ensure positive mental health outcomes for young people, both for immediate and long-term health outcomes.

As McGorry et al note, mental health problems in young people are connected to poor educational outcomes, impaired social functioning, substance misuse, violence and unemployment.[6] This can develop into a cycle of mental ill health, dysfunction and disadvantage that can be difficult to disrupt. Eckersley et al note that young people in Australia suffer mental ill health at a higher rate than the rest of the population and that they retain an increased risk of mental health problems beyond adolescence into adulthood.[10] If the mental health of young people is supported appropriately from an early age, there will be long-term benefits to individual and collective health and wellbeing into the future. These economic and social impacts will be discussed in more detail in the next section.

THE ECONOMIC COST OF MENTAL ILL HEALTH AND PREVENTION

Mental ill health comes with both social and economic costs, beyond simply the harm to the sufferers. According to a statement made by the Australian Government National Mental Health Commission in 2016, mental ill health costs Australia over $60 billion per year, or about $4,000 per taxpayer each year.[18] This report echoed an estimate from the Royal Australian & New Zealand College of Psychiatrists that severe mental illness alone costs Australia $56.7 billion per year.[14] This figure was calculated based on the direct costs of access to health and other services, as well as the cost of lost productivity and efficiency due to sufferers of severe mental illness being unable to work and being less likely to finish school. This cost to the economy is based on data relating only to severe mental illness, which affected over 400,000 Australians in 2010. In 2016–17 the Australian Government spent an estimated $3 billion on mental health related services. Over 55% of that total expenditure consisted of subsidised mental health services and medications provided through the Pharmaceutical Benefits Scheme. In the same year, 2.9 million Australians received a total of 24.8 million prescriptions for antidepressants. An estimated $9.1 billion was spent on mental health services from government and non-government sources.[19]

Mental ill health compromises quality of life and presents a significant economic cost. Promotion, prevention and early intervention measures (Table 2) can be implemented to

[17] Insel, TR & Fenton, WS 2005, 'Psychiatric epidemiology: it's not just about counting anymore', *Archives of general psychiatry*, vol. 62, no. 6, pp. 590-592.

[18] Australian Government National Mental Health Commission 2016, *Economics of Mental Health in Australia*, URL: https://www.mentalhealthcommission.gov.au/media-centre/news/economics-of-mental-health-in-australia

[19] Australian Institute of Health and Welfare 2019, *Mental Health Services in Australia web report,* URL: https://www.aihw.gov.au/reports/mental-health-services/mental-health-services-in-australia/report-contents/summary-of-mental-health-services-in-australia

avoid and combat mental ill health. These measures can be a cost effective investment in the future mental health and wellbeing of the population, thereby reducing long-term health care costs and supporting labour market participation and productivity.[20]

Table 2: Description of Promotion, Prevention and Early Intervention (PPEI) in Mental Health [20]

PPEI Measure	Purpose	Example
Promotion	• Improves individual wellbeing, regardless of health status • Develops supportive and positive environments that are good for everyone	• Promoting overall health and wellbeing • Improving mental health indirectly through housing or education initiatives
Primary Prevention	• Aims to reduce risk factors • Aims to enhance protective factors • Promotes healthy lifestyles	• Public awareness campaigns on mental health and illness and treatment options • Promoting work life balance
Secondary Prevention	• Targets early detection and intervention • Promotes precautionary treatment of chronic illness	• Screening for mental illness • Health checks • Early intervention where appropriate
Tertiary Prevention	• Treats established conditions to improve outcomes and minimise symptoms	• Prescription medication • Cognitive behaviour therapies • Lifestyle management
Early Intervention	• Targets people displaying early symptoms and signs of mental health problems	• Early assessment of mental illness or risk factors • Appropriate specialist intervention or treatment

Mental health promotion and primary prevention measures aim to increase protective factors and reduce risk factors and are usually delivered to an entire demographic. Effective promotion and primary prevention measures will both reduce the risk of future problems and increase overall wellbeing. [20,21] In an analysis of primary intervention mental health programs for children and adolescents, 225 controlled outcome studies showed that interventions made significant positive impacts on young people and their mental health and that the effects of interventions were lasting.[2122]

[20] Urbis Pty Ltd 2015, 'Invest now, save later: the economics of promotion, prevention and early intervention in mental health'.

[21] Durlak, JA & Wells, AM 1997, 'Primary prevention mental health programs for children and adolescents: A meta-analytic review', *American journal of community psychology*, vol. 25, no. 2, pp. 115-152.

Secondary prevention focuses on early detection and intervention as well as precautionary screening processes.[22] Typically in a secondary prevention measure a population is screened and individuals demonstrating symptoms are given further targeted early intervention. Secondary prevention measures may decrease the prevalence of established mental illness in a targeted population.[20] In an Australian study of the cost-effectiveness of two early intervention measures designed to prevent depression, it was found that both interventions were good value for money and a good use of healthcare resources.[23] A study of the economic value of existing evidence-based mental health interventions in the United Kingdom showed that many interventions generated significant economic benefits in addition to improving mental health and quality of life.[24]

As has been established, adolescence is the life stage at which people are most at risk of developing mental health problems.[6] Most mental disorders begin in youth, between the ages of 12-24 years, but many people are not diagnosed until later in life.[5] McGorry et al suggest that early interventions for mental health that target young people have the most capacity to benefit the community, as these measures have great potential to improve adolescents' mental health and wellbeing, their productivity, and fulfilment.[6] Slee et al agree that early interventions in this stage of life are key to successful mental health outcomes for young people.[25] In their analysis of Australian mental health promotion programs, Slee et al suggest that school settings are ideal for implementing early intervention measures for the mental health of young people, as universal preventive programs can be delivered to all students in a school ensuring that as many young people as possible have the potential to benefit.[25]

The decisions that young people make will impact them into adulthood, such as pursuing education, employment and romantic relationships. Mental ill health can jeopardise the outcomes of these pursuits by contributing to educational underachievement and reducing the probability of success in other areas.[5] When young people experience mental health problems their future social and economic outcomes are affected, which in turn impacts their communities.[5] The World Health Organization posits that promoting mental health should lower rates of mental illness and improve physical health and also advance educational outcomes, increase worker productivity, improve family relationships and increase the safety of communities.[1]

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[22] Durlak, JA 1998, 'Primary prevention mental health programs for children and adolescents are effective', *Journal of Mental Health*, vol. 7, no. 5, pp. 463-468.

[23] Mihalopoulos, C, Vos, T, Pirkis, J, Smit, F & Carter, R 2010, 'Do Indicated Preventative Interventions For Depression Represent Good Value For Money?', *Australian and New Zealand Journal of Psychiatry*, vol. 45, no. 1, pp. 36-44.

[24] Knapp, M, McDaid, D & Parsonage, M 2011, *Mental health promotion and mental illness prevention: The economic case*, Department of Health, London.

[25] Slee, PT, Dix, KL & Askell-Williams, H 2011 'Whole-school mental health promotion in Australia', The International Journal of Emotional Education, vol. 3, no. 2, pp. 37-49.

MENTAL HEALTH DEFINITIONS AND MODELS

There are numerous models for describing and measuring mental health and mental disorders. A model proposed by Keyes describes mental health as a combination of emotional, psychological and social wellbeing.[2,3] Keyes describes mental health as not merely the absence of mental illness, but rather a positive state in which an individual flourishes. Galderisi et al agree that social skills and interactions are an important part of mental health, but argue for a broader definition that includes an emphasis on adaptability to cope with adverse life events.[26] They posit that mentally healthy individuals do not and should not always feel positive, particularly when experiencing hardship, but mentally healthy individuals are able to be flexible and cope with negative events. Huppert et al refer to 'flourishing' as a term that epitomises mental health; they suggest it is a combination of functioning well and feeling good.[27] Huppert's model of flourishing incorporates a selection of Keyes' criteria for wellbeing and includes a measure of resilience similar to the notion of adaptability in hardship that Galderisi et al suggest is important.[3,26,27] The indicators of mental health recommended by Huppert et al comprise a list of ten factors: competence, emotional stability, engagement, meaning, optimism, positive emotion, positive relationships, resilience, self-esteem and vitality. Of particular interest to this report are the indicators optimism, positive emotion and positive relationships, with Section 2 focussing on optimism and positive emotion and Section 3 focussing on positive relationships.[27]

There are biological, psychological and social factors that determine the likelihood that young people will experience mental health problems. These determinants can be further divided into protective factors and risk factors.[5] Protective factors for mental health are attributes or environmental factors that mitigate the risk of future mental health problems. Protective factors can modify or even eliminate the effect of risk factors. Some protective factors for mental health include but are not limited to connectedness to community, rewards for community involvement and opportunities for involvement in school life.[5] Risk factors for mental health are attributes or environmental factors that put people at greater risk of mental health problems. Social risk factors for the mental ill health of young people include but are not limited to bullying and discrimination, family conflict and failure of schools to support attendance and learning.[5] Both positive future focus and social connectedness can be understood as protective factors for mental health, thereby reducing the risk of future mental health problems.

POSITIVE FUTURE FOCUS AND MENTAL HEALTH

The first of the two elements for which the literature was reviewed and collated is the relationship between positive future focus and mental health. Positive future focus occurs when an individual is optimistic, hopeful and looks forward to their future with positivity. In this report positive future focus will be examined with regard to various models of mental

[26] Galderisi, S, Heinz, A, Kastrup, M, Beezhold, J & Sartorius, N 2015, 'Toward a new definition of mental health', *World Psychiatry*, vol. 14, no. 2, pp. 231-233.

[27] Huppert, FA & So, TT 2013, 'Flourishing across Europe: Application of a new conceptual framework for defining well-being', *Social indicators research*, vol. 110, no. 3, pp. 837-861.

health and flourishing and their indicators such as positive outlook, optimism, hope and positive emotion. Positive future focus is understood as both an indicator and protective factor for mental health. Individuals who experience or engage in positive future focus are more likely to experience positivity and wellbeing.[29,30]

POSITIVE OUTLOOK

In a study that assessed the influence of four different models on depressive symptoms in adolescents, it was found that positive outlook was the strongest predictor for change in the severity of depression over 36 weeks.[28] In this study, positive outlook was defined as positive future focus and positive views of oneself and the world. Findings from the study suggested that monitoring the positivity of a young person's outlook could offer a useful indicator of their mental health status. The results also indicated that intervention measures that focus on improving levels of hope and positive thinking could be more effective in decreasing symptoms of depression in adolescents than measures targeting the reduction of negative thinking. The effect of positive thinking on happiness was observed by Quoidbach et al in a study that examined positive, neutral and negative thoughts about the future and the consequent effect on happiness and anxiety.[29] The results of the study showed that engaging in positive thoughts about the future boosted overall happiness and positivity. It was also demonstrated that engaging in neutral thoughts about the future reduced anxiety.

Another study aimed to create positive future expectancies in participants by asking them to imagine and write about their best possible self.[30] Imagining a positive scenario increased both positive affect and positive future expectancies. The study proposed that mental simulation and expectancy of a positive scenario led to the same outcomes that real progress towards a goal achieves: increased positive affect, optimism and confidence.

OPTIMISM

Optimism is the tendency to believe that one will experience good things. Research on optimism shows that optimistic people experience higher levels of positive affect, greater health and wellbeing and more resilience to negative events.[30]

The mental health indicator of optimism is defined as feeling optimistic or hopeful about the future.[27] The indicators in this model of mental health were developed by choosing terms to represent the opposite of mental ill health indicators on existing diagnostic tools. One of the indicators of depression is a bleak and pessimistic view of the future, so the concept of

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[28] Jacobs, RH, Becker, SJ, Curry, JF, Silva, SG, Ginsburg, GS, Henry, DB & Reinecke, MA 2014, 'Increasing positive outlook partially mediates the effect of empirically supported treatments on depression symptoms among adolescents', *Journal of cognitive psychotherapy*, vol. 28, no. 1, p. 3.

[29] Quoidbach, J, Wood, AM & Hansenne, M 2009, 'Back to the future: The effect of daily practice of mental time travel into the future on happiness and anxiety', *The Journal of Positive Psychology*, vol. 4, no. 5, pp. 349-355.

[30] Peters, ML, Flink, IK, Boersma, K & Linton, SJ 2010, 'Manipulating optimism: Can imagining a best possible self be used to increase positive future expectancies?', *The Journal of Positive Psychology*, vol. 5, no. 3, pp. 204-211.

optimism: feeling optimistic or hopeful about the future, was developed as an indicator for mental health. Optimism, along with calmness and competence, is also listed as the opposite to apprehension, which is a symptom of anxiety. Optimism in this sense is described as being at ease and feeling optimistic and calm about the future, as opposed to feeling on edge or worrying about future adversities.

According to the model of flourishing and this particular indicator, mental health is not merely the absence of bleak, pessimistic thoughts or apprehension and excessive worry, mental health is the presence of a positive and hopeful view of the future that enables the individual to feel at ease. An individual exhibiting optimism and positive emotion may be mentally healthy, but the model requires multiple symptoms of mental health to be present in order for a person to be described as flourishing.[27]

HOPE

According to Snyder's Theory of Hope, hope is a positive motivational state based on one's perceived ability to successfully plan for and achieve goals.[31] Hope reflects an individual's perception of their ability to make goals, to create strategies to reach those goals and to find and maintain the motivation to achieve them.[33] Hope is a positive future focus on any kind of goal, including long-term goals about significant life events and mundane short-term goals. Goals can be anything that an individual desires to do, make, experience, acquire or become; they are future experiences or attainments that individuals look forward to.[32] Hopeful individuals look forward to these future events with a sense of agency and optimism.

Hope, according to Snyder's model, represents how individuals relate to and experience positive expectancies.[31] According to analyses of hope and optimism, individuals with high hope are more likely to achieve positive outcomes in mental health.[33] High levels of hope are correlated with wellbeing, life satisfaction and flourishing mental health. Hopeful people also reported feelings of self-worth and life satisfaction and lower levels of depression.[32] Hope has an effect on positive affect.[33] Positive affect, or positive emotion, tends to correlate with measures of high life satisfaction, and is characterised by being regularly cheerful, calm, satisfied and full of life.[3,27,31] Positive affect is also an important predictor of wellbeing. In a study by Teismann et al it was shown that the positive affect experienced by people with positive mental health was a protective factor against suicide ideation.[34]

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[31] Snyder, CR 2002, 'Hope theory: Rainbows in the mind', *Psychological inquiry*, vol. 13, no. 4, pp. 249-275.

[32] Snyder, CR, Lopez, SJ, Shorey, HS, Rand, KL & Feldman, DB 2003, 'Hope theory, measurements, and applications to school psychology', *School psychology quarterly*, vol. 18, no. 2, p. 122.

[33] Gallagher, MW & Lopez, SJ 2009, 'Positive expectancies and mental health: Identifying the unique contributions of hope and optimism', *The Journal of Positive Psychology*, vol. 4, no. 6, pp. 548-556.

[34] Teismann, T, Brailovskaia, J & Margraf, J 2019, 'Positive mental health, positive affect and suicide ideation', *International journal of clinical and health psychology*, vol. 19, no. 2, pp. 165-169.

In a summary of ten years of research on hope theory, Snyder et al concluded that children with high hope draw on their memories of past positive experiences to create personal narratives of success and overcome obstacles to their goals.[32] Positive experiences are an important resource for sustaining hope in hard times.[32] The research also found that children who engaged in activities involving teamwork had elevated levels of hope, suggesting that positive social interactions are related to feeling hopeful. It was also demonstrated that a higher level of hope in students was related to success at school and social competence. Students with high levels of hope who experienced failure did not allow their experiences to affect their self-worth, rather they were able to receive feedback and adapt with a view to future success. Snyder et al stated that those with high levels of hope are more likely to look forward to the success of their future goals instead of focusing on potential failure. It is also suggested that higher levels of hope are linked to a greater perceived life purpose.[32]

In the summary of research it was found that students with low hope experienced more anxiety, especially in test or competition situations. These individuals experienced self-doubt and negative thoughts that interfered with overall study and educational outcomes. It was also noted that children who had less hopeful thinking were more likely to exhibit depressive symptoms.[32] Looking toward the future with hope, or positive future focus, is linked to better mental health, a greater sense of life satisfaction and self-worth and better educational outcomes.

2. SOCIAL CONNECTEDNESS AND MENTAL HEALTH

The second element of interest to this report is the relationship between social connectedness and mental health. According to the World Health Organization, a person's mental health is deeply influenced by their social and relational environment.[4] People who are enabled to form relationships and engage with family, friends and others around them are more likely to thrive, while an individual is at greater risk of developing a mental illness, or of prolonging existing mental illness, when they experience loneliness, communication difficulties, or social isolation.[4]

An individual experiences social connectedness when they have and maintain positive relationships with the people around them. According to Huppert et al, positive relationships are an indicator, or symptom, of a current state of mental health and wellbeing.[27] An individual who experiences positive relationships is exhibiting a symptom of mental health and wellbeing. These positive relationships may happen in family, school, and community contexts, and the resulting social connectedness is a protective factor against mental health problems.[5]

Table 3: Keyes' Social Wellbeing Symptom Descriptions for Mental Health (Flourishing)[2]

Mental health indicator	Definition
Positive relations with others	"Has warm, satisfying, trusting personal relationships and is capable of empathy and intimacy"
Social integration	"Has a sense of belonging to a community and derives comfort and support from community"
Social coherence	"Interested in society or social life; feels society and culture are intelligible, somewhat logical, predictable, and meaningful"
Social contribution	"Feels that one's life is useful to society and the output of one's own activities are valued by or valuable to others"
Social actualisation	"Believes that people, social groups, and society have potential and can evolve or grow positively"

Social acceptance	"Has positive attitude toward others while acknowledging and accepting people's differences and complexity"

Keyes developed a comprehensive list of mental health indicators, including the psychosocial wellbeing indicators outlined in Table 3.[2] These diagnostic criteria further develop the indicator of positive relationships listed by Huppert et al and provide a more comprehensive view of how an individual exhibits signs of positive mental health in a social context.[2,27] What is clear from Keyes' list of indicators is that positive social interactions and a sense of social belonging are both signs of a mentally healthy person.

Social connectedness is a protective factor that increases the likelihood of future positive mental health. Patel et al collated both risk and protective factors for worldwide adolescent mental ill health.[5] Social skills, connectedness to community, family attachment, identity with school, opportunities for involvement in school life, and opportunities for positive involvement in family were all identified as protective factors for adolescent mental health.[5] Young people with points of relational connection and a sense of belonging were found to be at lower risk of developing mental health problems. The research also listed the social factors that put young people at greater risk of mental health problems, including: family discord, abuse and violence, bullying, discrimination, loneliness and isolation.

In a paper discussing research into social relationships and health, it was shown that relationships that involve social support enhance mental health and overall health outcomes.[35] Social support is the emotionally sustaining sense of being cared for in a relationship. It is suggested that social support positively impacts mental health by reducing stress and promoting meaning and a sense of purpose in life. The study recommends that positive social relationships improve health outcomes for those with serious health conditions and can also serve as a measure of prevention, maintaining quality of life.[35]

SOCIAL CONNECTEDNESS AT SCHOOL

Results from the second Australian Child and Adolescent Survey of Mental Health and Wellbeing showed that schools play a major role in supporting young people with emotional and behavioural problems.[11] The survey indicated that schools are often where symptoms of mental disorders are first identified. School staff members were among those who suggested help was needed for students with emotional or behavioural problems in over 40% of cases. Schools often play a role in early intervention for mental health, but they also have the potential to provide an environment that increases mental health protective factors.[5]

School connectedness is described as a psychological state of belonging in which young people perceive that they are individually and collectively cared for, respected and trusted

[35] Umberson, D & Karas Montez, J 2010, 'Social relationships and health: A flashpoint for health policy', *Journal of health and social behavior*, vol. 51, no. 1, pp. S54-S66.

by adults with authority in their schools.[36] School connectedness is linked to positive adolescent health outcomes, as well as engagement, achievement and educational results. It has been identified as a protective factor against adolescent health risk behaviours such as violence, drug use and risky sexual activity. School disconnectedness predicts participation in violence. Whitlock et al promote a reciprocal model of school connectedness in which there is mutual respect, care and trust between young people and the adults in their schools.[36] This description of care, respect and a sense of belonging is consistent with Keyes' indicator of social integration, suggesting that young people who experience school connectedness are exhibiting signs of positive mental health.[2]

In a study that examined the relationship between school connectedness, hope, life satisfaction and bullying it was shown that being bullied hindered an individual's sense of agency and progress towards goals, thereby undermining their hope as well as their positive social relations with peers.[37] An individual who experienced ongoing bullying was at an increased risk of depression and hopelessness. Individuals who experienced bullying at school had lower levels of school connectedness and hope, which are associated with lower life satisfaction and poorer mental health outcomes. With both hope and school connectedness undermined by bullying, individuals who are victims may experience less resilience. The more chronic the experience of bullying is, the more difficult it becomes for individuals to trust their peers and build positive social connectedness. Engaging in positive relationships outside of the school context may mitigate the risk factor of bullying, as other forms of social connectedness are protective factors for positive mental health outcomes.[5]

In an analysis by Vaz et al, school belongingness was described as a student's belief that they are 'personally accepted, respected, included, and supported by others in the school social environment'.[38,39] School belongingness is related to positive mental health outcomes for young people. When young people experience a sense of belonging and closeness to others at school they are more likely to experience positive future mental health functioning. Results from Vaz et al showed that experiencing a sense of belonging at primary school contributed to students' subsequent positive mental health functioning. Students who experienced a sense of belonging at school were more likely to have positive relationships and better mental health. They were more likely to engage in activities that reinforced a sense of school belongingness and experienced fewer mental health problems than their

[36] Whitlock, JL 2006, 'Youth perceptions of life at school: Contextual correlates of school connectedness in adolescence', *Applied Developmental Science*, vol. 10, no. 1, pp. 13-29.

[37] You, S, Furlong, MJ, Felix, E, Sharkey, JD, Tanigawa, D & Green, JG 2008, 'Relations among school connectedness, hope, life satisfaction, and bully victimization', *Psychology in the Schools*, vol. 45, no. 5, pp. 446-460.

[38] Goodenow, C 1993, 'The psychological sense of school membership among adolescents: Scale development and educational correlates', *Psychology in the Schools*, vol. 30, no. 1, pp. 79-90.

[39] Vaz, S, Falkmer, M, Parsons, R, Passmore, AE, Parkin, T & Falkmer, T 2014, 'School belongingness and mental health functioning across the primary-secondary transition in a mainstream sample: Multi-group cross-lagged analyses', *PloS one*, vol. 9, no. 6, p.e99576.

peers who participated less actively in the community. The study confirmed that boosting school belongingness is effective in promoting mental health in young people.[39]

Evidence from the National Longitudinal Study of Adolescent Health in the United States showed that young people who felt like they were a part of their school and felt cared for by people at their school reported higher levels of emotional wellbeing.[40] Students who felt connected in this way were also less likely to engage in behaviours such as substance use, violence and early sexual activity. Results from the study suggested that adolescent health, including mental health, could be promoted by fostering a school environment that enabled adolescents to feel a sense of belonging and feel cared for by people at their school. These results integrate with Keyes' criteria for social wellbeing and mental health, which say that one sign of an individual's mental health is their sense of belonging to a community in which they feel supported.[2]

[40] McNeely, CA, Nonnemaker, JM & Blum, RW 2002, 'Promoting school connectedness: Evidence from the national longitudinal study of adolescent health', *Journal of school health*, vol. 72, no. 4, pp. 138-146.

3. RECOMMENDATIONS FROM THE RESEARCH

IMPROVED COLLECTION OF DATA ON YOUTH MENTAL HEALTH

In the 2015 National Strategic Framework for Child and Youth Health, the Council of Australian Governments (COAG) Health Council highlighted the need for quality and current research on the health of children and young people, including intervention outcomes. Policy must be based on sound and up to date data in order to be effective in positively impacting the health and mental health outcomes of young Australians.[15]

SCHOOL-BASED INTERVENTIONS

A study of global youth mental health recommended that milder early-stage disorders with the potential to be serious could respond to measures such as psychosocial support and self-help strategies.[5] Preferably these interventions would be administered through non-clinical channels, such as through schools. The study suggests that schools are uniquely able to support protective factors and minimise risk factors.

In their review of mental health promotion in Australian schools, Slee et al concluded that a key strategy for achieving positive mental health results is effective intervention in the early stages of a mental health problem developing. They recommended schools as an ideal setting for implementing universal early intervention measures to best address children's mental health needs.[25]

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