Submission No 106

INQUIRY INTO EQUITY, ACCESSIBILITY AND APPROPRIATE DELIVERY OF OUTPATIENT AND COMMUNITY MENTAL HEALTH CARE IN NEW SOUTH WALES

Organisation: Dietitians Australia

Date Received: 8 September 2023



Upper House inquiry into the equity, accessibility and appropriate delivery of outpatient and community mental health care in NSW

Response to consultation September 2023

Recipient

Dr Amanda Cohn MLC, Chair Upper House Portfolio Committee 2 - Health portfoliocommittee 2@parliament.nsw.gov.au



About Dietitians Australia

Dietitians Australia is the national association of the dietetic profession with over 8500 members, and branches in each state and territory. Dietitians Australia is the leading voice in nutrition and dietetics and advocates for the profession and the people and communities we serve.

The Accredited Practising Dietitian program provides an assurance of safety and quality and is the foundation of self-regulation of the dietetic profession in Australia. Accredited Practising Dietitians (APDs) are uniquely trained to provide one-on-one medical nutrition therapy to patients in a clinical context across a broad range of disease and health conditions. Dietitians must hold the APD credential and meet continuing professional development and recency of practice standards annually to access Medicare, Department of Veterans Affairs, National Disability Insurance Scheme, worker's compensation schemes and most private health insurers. Accredited Practising Dietitians have an important role in the prevention, treatment and management of some mental illnesses and common comorbid physical illnesses, including diabetes and heart disease.

This submission was prepared by Dietitians Australia staff following the <u>Conflict of Interest</u> <u>Management Policy</u> and processes approved by the Board of Dietitians Australia.

Recommendations

Dietitians Australia recommends the NSW Government:

 allocate funding to provide comprehensive access to Accredited Practising Dietitians across all State-funded mental health services, including outpatient and community services, for the full spectrum of mental illnesses.

Discussion

Dietitians Australia welcomes the opportunity to comment on the equity, accessibility and appropriate delivery of outpatient and community mental health care in New South Wales.

This submission will focus on the following terms of reference:

- integration between physical and mental health services, and between mental health services and providers
- appropriate and efficient allocation of mental health care workers, including psychiatrists, nurses, psychologists, GPs, councillors, social workers, allied health professionals and peer workers



General comments

Half of all Australians will experience some form of mental illness in their lifetime.¹ Mental illness is a collective term that describes a wide array of conditions such as mood, anxiety, personality, psychotic, substance use and eating disorders.² Every year about 4 million Australian adults experience mental illness, and 14% of children and adolescents are estimated to have experienced a mental illness in the last 12 months.³ Anxiety disorders are the most common disorders (17% of Australians) followed by affective disorders such as depression (8%) and substance use (3%).^{1, 3, 4}

Mental and substance use disorders are the 4th leading cause of disease burden in the Australian population, representing 12% of the national burden of disease and the 2nd leading cause of non-fatal burden.^{3, 4, 7}

The life expectancy of people affected by mental illness is often shortened by as much as 30%. Eating disorders have one of the highest mortality rates of any mental illness. The incidence of premature death in people living with mental illness represents one-third of all preventable deaths.

Among the therapies demonstrated to be effective in the prevention, treatment and management of some mental illnesses and common comorbid physical illnesses are evidence-based dietary interventions delivered by Accredited Practising Dietitians. Currently, universal and equitable access to APDs is lacking.

Integration between physical and mental health services, and between mental health services and providers

Appropriate and efficient allocation of allied health professionals

Recommendation

The role of diet and Accredited Practising Dietitians in the prevention, treatment and management of the full spectrum of mental illnesses or common comorbid physical illnesses is poorly recognised in government-funded outpatient and community mental health services.

Dietary support should form part of the core treatment of mental illness. When used in ongoing treatment for mental illnesses like depressive disorders, dietary support can help to prevent, treat or manage symptoms.

Routine access to dietitians as part of mental health care will improve health outcomes and quality of life for consumers and reduce healthcare costs and costs to the economy from lost productivity.

Dietitians Australia recommends the NSW Government allocate funding to provide comprehensive access to Accredited Practising Dietitians across all State-funded mental health services, including outpatient and community services, for the full spectrum of mental illnesses.

Evidence

There is a strong and growing body of evidence to support the role of diet and dietary interventions in mental health and mental illness.

Diet and mental health

Systematic reviews clearly demonstrate that dietary patterns consistent with the Australian Dietary Guidelines and those that are typical of a Mediterranean-style diet can lower the risk of depression.¹⁰, 11



Large population-based studies, and reviews, have also shown strong associations between diet quality and mental health. One example is the large prospective SUN cohort study in Spain (with over 10,000 participants) that found a Mediterranean dietary pattern was associated with a reduced risk of developing depression. Other studies have demonstrated that high intakes of discretionary foods such as sweets, highly processed cereals, chips, fast-food and sugar sweetened drinks increases the risk of poor mental health. Other studies have demonstrated that high intakes of discretionary foods such as sweets, highly processed cereals, chips, fast-food and sugar sweetened drinks increases the risk of poor mental health.

Dietary interventions for prevention, treatment and management of mental illness

Dietary interventions delivered by an Accredited Practising Dietitian to promote the adoption of a healthy diet to improve mental health is supported by increasingly well-described links between nutritional status and mental wellbeing, ¹⁸⁻²⁰ the role of the microbiome in the functional changes leading to mental illness, ²¹ many studies supporting a link between nutrition and behaviour and mood ^{12, 13, 22} and evidence demonstrating the effectiveness of dietary intervention to improve symptoms and induce remission of depression. ^{19, 22-26}

Further, the nutritional care needs, including addressing clinical malnutrition, of people living with eating disorders and disordered eating are ideally addressed by Accredited Practising Dietitians as key members of the multidisciplinary team.²⁷ Additionally, the role of dietitians working in severe mental illness, and practice recommendations, are well-documented.^{28, 29}

Dietary interventions have been shown in studies to:

- be more effective than GP-led standard care in improving mental health and cognitive function,³⁰ and more effective when delivered by Accredited Practising Dietitians than by other healthcare providers³¹
- be more effective than social support. When led by Accredited Practising Dietitians, individual or group interventions lead to greater depressive symptom reduction, remission of depression in up to 36% of people and improved quality of life^{19, 23, 25, 32-34} (noting that groupbased peer support has been shown to be as effective as psychotherapy for treating depression³⁵)
- have equivalent rates of remission of depression as antidepressants, without the side effects of medication^{36, 37}
- be as effective as cognitive behavioural therapy-problem solving therapy for primary care for preventing episodes of major depression and mitigating depressive symptoms^{26, 38}
- be cost effective, resulting in substantially lower health sector and societal costs³⁹⁻⁴¹
- have no known harms and instead confer additional health benefits when the diet is consistent with the Australian Dietary Guidelines or food patterns typical of Mediterranean diets.

Relationship between mental and physical health

The relationship between mental and physical health is bi-directional. For instance, up to 40% of people with cardiovascular disease, metabolic conditions (like diabetes, insulin resistance and fatty liver disease) and other chronic medical conditions have depression.⁴² And depression is widely documented to lead to an adverse cardiovascular disease prognosis as well as poorer quality of life.^{43, 44} Depressive disorders and depressive symptoms have also been linked to a two-fold higher risk of death and a higher risk for subsequent major adverse cardiac events.⁴⁵

Eighty percent of people living with mental illness have comorbid nutrition-related physical illnesses, including cardiovascular disease, respiratory disease, metabolic disease, diabetes, osteoporosis, and dental problems. Improved diet quality is known to reduce symptoms and the rate of progression of



chronic physical illnesses.⁴⁶⁻⁴⁹ People living with mental illness often experience poor dietary intakes, poor hydration status, difficulty regulating food intake and food insecurity.^{25, 50} Poor diet quality, often characterised by foods high in energy and salt, can contribute to physical illness and is prevalent in people across the spectrum of mental illness, particularly in those living with severe mental illness.⁵¹

A common symptom of depression is change in appetite, which can include either a reduced interest in food or an increased appetite with cravings for sweet, salty and fatty foods. ⁵²⁻⁵⁴ From a behavioural perspective, those with mental illness may use food as a means of self-soothing and comforting. ⁵⁵ Depression is also commonly associated with fatigue and apathy, ⁵⁶ which may impact on a person's motivation to shop and cook, to care about themselves and their food choices. ⁵⁷

Cardiovascular and respiratory diseases are the leading causes of death in people living with severe mental illness. They are 6 times more likely to die from cardiovascular disease and 4 times more likely to die from respiratory disease than the rest of the population.⁴

Psychotropic medications, commonly prescribed in the treatment of conditions like anxiety, depression, psychosis and bipolar disorder, can stimulate appetite and excessive food intake leading to significant weight gain. Weight gain in the first year of treatment can be over 20kgs.⁵⁸ Medication side effects can also contribute to the onset of diabetes and heart disease.⁵⁹

The life expectancy of people experiencing mental illness and substance use disorders in Australia is 10-to-16 years shorter than the rest of the population, often due to poor physical health. Diet improvement is critical for both prevention and management of physical illness.

Early access to an Accredited Practising Dietitian can help prevent onset of common comorbid physical illnesses.

Role of Accredited Practising Dietitians

Accredited Practising Dietitians are university-qualified nutrition experts, uniquely trained in the delivery of medical nutrition therapy. Medical nutrition therapy provides for a systematic and evidence-based approach to the clinical management of chronic conditions, including mental illnesses and comorbid physical illnesses like diabetes and heart disease, through diet. ⁶⁰ The optimum dietary intervention is individualised and developed in partnership with the consumer, taking into consideration the consumer's health needs and goals and individual preferences.

Although general practitioners are expected to apply nutrition knowledge in practice, nutrition competencies have yet to be included in Australian medical courses.^{61, 62} Other health practitioners have a role in reinforcing general nutrition messages, but provision of medical nutrition therapy is not in scope of practice.^{63, 64}

The role of diet and dietitians in mental illness is underscored by the recommendations of the 2020 Royal Australian and New Zealand College of Psychiatrists' (RANZCP) Clinical Practice Guidelines for Mood Disorders⁶⁵ and the RANZCP Eating Disorders Clinical Practice Guidelines.⁶⁶ The former calls for lifestyle approaches, including diet, to form the first line of treatment for mood disorders. A multidisciplinary approach that includes medical, dietetic and psychological practitioners is called for in the eating disorders clinical practice guidelines to maximise the chances of a person's full recovery.

Detailed descriptions of the roles of Accredited Practising Dietitians in mental health and in eating disorders can be found in their respective <u>role statements</u>.

Ensuring Australians have early access to Accredited Practising Dietitians as a routine part of their mental health care can help equip them with essential preventative tools they can use to help combat the typical effects of mental illness, the side effects of drugs used in treatment and the impacts of comorbid physical illness. Providing access to Accredited Practising Dietitians early in treatment can bolster a person's ability to prevent and manage long-term illnesses with much greater effectiveness.



Current limitations and opportunities to improve consumer access to Accredited Practising Dietitians

Australians living with mental illness and comorbid chronic diseases can access Accredited Practising Dietitians through Medicare's Chronic Disease Management (CDM) program. But access to effective, holistic, multidisciplinary healthcare that is essential to the prevention, treatment and management of chronic diseases is limited. Medicare's CDM program only allows for a maximum of 5 services per calendar year shared across all 13 eligible allied health professions.⁶⁷ This allocation does not align with best practice clinical guidelines and is insufficient to meet the holistic needs of people living with mental illness. State services, in contrast, offer an invaluable opportunity to provide comprehensive, holistic, multidisciplinary care to optimise outcomes for people living with mental illness and comorbid physical illness.

Adjunctive dietary interventions lead by Accredited Practising Dietitians offer cost-effective approaches to managing mental health symptoms and physical health.^{39, 40, 68-71} Early dietary intervention is fundamental to reduce disease burden and minimise the impact of physical illnesses. It can mitigate costs to the local and national economy, to individuals, their carers/families and communities by preventing progression and enhancing the management of disease.^{4, 72, 73}

ALIGNMENT WITH GOVERNMENT PLANS

The importance of addressing the physical health of those with mental illness is made explicit in the Equally Well Consensus Statement 2016 and the Fifth National Mental Health and Suicide Prevention Plan 2017. The NSW Government is committed to implementing the recommendations of both documents. The Equally Well Consensus Statement 2016 called stakeholders to commit to "making changes towards improving the physical health of people living with mental illness". ⁴ The Fifth National Mental Health and Suicide Prevention Plan 2017 made "improving the physical health of people living with mental illness and reducing early mortality" one of its 8 priority areas. ⁹

NSW's health plan, *Future Health: the next decade of health care in NSW 2022-2032* calls for investment in keeping people healthy and preventing illness, including supporting the mental health and wellbeing of the whole community.⁷⁴ A healthy diet is key to ensuring people stay both physically and mentally well. Broadening access to Accredited Practising Dietitians in State-funded outpatient and community mental health services for the full spectrum of mental illnesses will help the NSW Government achieve its own objectives set under its health plan.



References

- 1. Australian Bureau of Statistics. National Survey of Mental Health and Wellbeing: Summary of Results. ABS; 2007 [Available from: https://www.abs.gov.au/statistics/health/mental-health/national-survey-mental-health-and-wellbeing-summary-results/latest-release.
- 2. American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders. Fifth ed. Arlington VA: American Psychiatric Publishing; 2013.
- 3. Australian Institute of Health and Welfare. Mental Health: prevalence and impact of mental illness. 2023 [Available from: https://www.aihw.gov.au/reports/mental-health-services/mental-health#Common.
- 4. National Mental Health Commission. Equally Well Consensus Statement: improving the physical health and wellness of people living with mental illness in Australia. Sydney NMHC 2016.
- 5. Ritchie H, Roser M. Mental Health. Our World in Data; 2018 [Available from: https://ourworldindata.org/mental-health.
- 6. Australian Bureau of Statistics. National Health Survey: First results, 2014-15. 2015 [Available from: https://www.abs.gov.au/ausstats/abs@.nsf/lookup/by%20subject/4364.0.55.001~2014-15~main%20features~mental%20and%20behavioural%20conditions~32.
- 7. Australian Institute of Health and Welfare. Australian Burden of Disease Study. 2015 [Available from: https://www.aihw.gov.au/reports/australias-health/burden-of-disease.
- 8. Arcelus J, Mitchell AJ, Wales J, Nielsen S. Mortality rates in patients with anorexia nervosa and other eating disorders: a meta-analysis of 36 studies. Archives of general psychiatry. 2011;68(7):724-31
- 9. Commonwealth of Australia Department of Health. The Fifth National Mental Health and Suicide Prevention Plan. Department of Health; 2017.
- 10. Opie R, Itsiopoulos C, Parletta N, Sánchez-Villegas A, Akbaraly TN, Ruusunen A, et al. Dietary recommendations for the prevention of depression. Nutritional neuroscience. 2017;20(3):161-71
- 11. Li Y, Lv M-R, Wei Y-J, Sun L, Zhang J-X, Zhang H-G, et al. Dietary patterns and depression risk: a meta-analysis. Psychiatry research. 2017;253:373-82
- 12. Lai JS, Hiles S, Bisquera A, Hure AJ, McEvoy M, Attia J. A systematic review and meta-analysis of dietary patterns and depression in community-dwelling adults. The American journal of clinical nutrition. 2014;99(1):181-97
- 13. Psaltopoulou T, Sergentanis TN, Panagiotakos DB, Sergentanis IN, Kosti R, Scarmeas N. Mediterranean diet, stroke, cognitive impairment, and depression: a meta-analysis. Annals of neurology. 2013;74(4):580-91
- 14. Sánchez-Villegas A, Delgado-Rodríguez M, Alonso A, Schlatter J, Lahortiga F, Majem LS, et al. Association of the Mediterranean dietary pattern with the incidence of depression: the Seguimiento Universidad de Navarra/University of Navarra follow-up (SUN) cohort. Archives of general psychiatry. 2009;66(10):1090-8
- 15. Lassale C, Batty GD, Baghdadli A, Jacka F, Sánchez-Villegas A, Kivimäki M, et al. Healthy dietary indices and risk of depressive outcomes: a systematic review and meta-analysis of observational studies. Molecular psychiatry. 2019;24(7):965-86
- 16. Firth J, Marx W, Dash S, Carney R, Teasdale SB, Solmi M, et al. The effects of dietary improvement on symptoms of depression and anxiety: a meta-analysis of randomized controlled trials. Psychosomatic medicine. 2019;81(3):265



- 17. Firth J, Solmi M, Wootton RE, Vancampfort D, Schuch FB, Hoare E, et al. A meta-review of "lifestyle psychiatry": the role of exercise, smoking, diet and sleep in the prevention and treatment of mental disorders. World Psychiatry. 2020;19(3):360-80
- 18. Kaplan BJ, Crawford SG, Field CJ, Simpson JSA. Vitamins, minerals, and mood. Psychological bulletin. 2007;133(5):747
- 19. Parletta N, Zarnowiecki D, Cho J, Wilson A, Bogomolova S, Villani A, et al. A Mediterranean-style dietary intervention supplemented with fish oil improves diet quality and mental health in people with depression: A randomized controlled trial (HELFIMED). Nutritional neuroscience. 2019;22(7):474-87
- 20. Rao TS, Asha M, Ramesh B, Rao KJ. Understanding nutrition, depression and mental illnesses. Indian journal of psychiatry. 2008;50(2):77
- 21. Horn J, Mayer D, Chen S, Mayer E. Role of diet and its effects on the gut microbiome in the pathophysiology of mental disorders. Translational psychiatry. 2022;12(1):164
- 22. Sánchez-Villegas A, Martínez-González MA, Estruch R, Salas-Salvadó J, Corella D, Covas MI, et al. Mediterranean dietary pattern and depression: the PREDIMED randomized trial. BMC medicine. 2013;11(1):1-12
- 23. Bayes J, Schloss J, Sibbritt D. The effect of a Mediterranean diet on the symptoms of depression in young males (the "AMMEND: A Mediterranean Diet in MEN with Depression" study): A randomized controlled trial. The american journal of clinical nutrition. 2022;116(2):572-80
- 24. Francis HM, Stevenson RJ, Chambers JR, Gupta D, Newey B, Lim CK. A brief diet intervention can reduce symptoms of depression in young adults—A randomised controlled trial. PloS one. 2019;14(10):e0222768
- 25. Jacka FN, O'Neil A, Opie R, Itsiopoulos C, Cotton S, Mohebbi M, et al. A randomised controlled trial of dietary improvement for adults with major depression (the 'SMILES'trial). BMC medicine. 2017;15(1):1-13
- 26. Stahl ST, Albert SM, Dew MA, Lockovich MH, Reynolds III CF. Coaching in healthy dietary practices in at-risk older adults: a case of indicated depression prevention. American Journal of Psychiatry. 2014;171(5):499-505
- 27. Jeffrey S, Heruc G. Balancing nutrition management and the role of dietitians in eating disorder treatment. Journal of eating disorders. 2020;8(1):64
- 28. Teasdale S, Samaras K, Wade T, Jarman R, Ward P. A review of the nutritional challenges experienced by people living with severe mental illness: a role for dietitians in addressing physical health gaps. Journal of human nutrition and dietetics. 2017;30(5):545-53
- 29. Teasdale SB, Latimer G, Byron A, Schuldt V, Pizzinga J, Plain J, et al. Expanding collaborative care: integrating the role of dietitians and nutrition interventions in services for people with mental illness. Australasian Psychiatry. 2018;26(1):47-9
- 30. Endevelt R, Lemberger J, Bregman J, Kowen G, Berger-Fecht I, Lander H, et al. Intensive dietary intervention by a dietitian as a case manager among community dwelling older adults: the EDIT study. The journal of nutrition, health & aging. 2011;15:624-30
- 31. Teasdale SB, Ward PB, Rosenbaum S, Samaras K, Stubbs B. Solving a weighty problem: systematic review and meta-analysis of nutrition interventions in severe mental illness. The British Journal of Psychiatry. 2017;210(2):110-8



- 32. Opie RS, O'Neil A, Jacka FN, Pizzinga J, Itsiopoulos C. A modified Mediterranean dietary intervention for adults with major depression: Dietary protocol and feasibility data from the SMILES trial. Nutritional neuroscience. 2018;21(7):487-501
- 33. Parletta N. A Mediterranean-style dietary intervention supplemented with fish oil improves diet and mental health in people with depression: a 6-month randomized controlled trial (HELFIMED). BMC Medicine. 2017;Under review
- 34. Zarnowiecki D, Cho J, Wilson A, Bogomolova S, Villani A, Itsiopoulos C, et al. A 6-month randomised controlled trial investigating effects of Mediterranean-style diet and fish oil supplementation on dietary behaviour change, mental and cardiometabolic health and health-related quality of life in adults with depression (HELFIMED): study protocol. BMC Nutrition. 2016;2(1):1-10
- 35. Pfeiffer PN, Heisler M, Piette JD, Rogers MA, Valenstein M. Efficacy of peer support interventions for depression: a meta-analysis. General hospital psychiatry. 2011;33(1):29-36
- 36. Frank E, Novick D, Kupfer DJ. Antidepressants and psychotherapy: a clinical research review. Dialogues in clinical neuroscience. 2022
- 37. Pinquart M, Duberstein PR, Lyness JM. Treatments for later-life depressive conditions: a meta-analytic comparison of pharmacotherapy and psychotherapy. American Journal of Psychiatry. 2006;163(9):1493-501
- 38. Reynolds III CF, Thomas SB, Morse JQ, Anderson SJ, Albert S, Dew MA, et al. Early intervention to preempt major depression among older black and white adults. Psychiatric services. 2014;65(6):765-73
- 39. Chatterton ML, Mihalopoulos C, O'Neil A, Itsiopoulos C, Opie R, Castle D, et al. Economic evaluation of a dietary intervention for adults with major depression (the "SMILES" trial). BMC Public Health. 2018;18(1):1-11
- 40. Segal L, Twizeyemariya A, Zarnowiecki D, Niyonsenga T, Bogomolova S, Wilson A, et al. Cost effectiveness and cost-utility analysis of a group-based diet intervention for treating major depression—the HELFIMED trial. Nutritional neuroscience. 2020;23(10):770-8
- 41. Dietitians Association of Australia and Australian Diabetes Educators Association. Position Statement: The role of Credentialled Diabetes Educators and Accredited Practising Dietitians in the delivery of diabetes self management and nutrition services for people with diabetes. DAA and ADEA; 2015.
- 42. Read JR, Sharpe L, Modini M, Dear BF. Multimorbidity and depression: a systematic review and meta-analysis. Journal of affective disorders. 2017;221:36-46
- 43. Rumsfeld JS, Ho PM. Depression and cardiovascular disease: a call for recognition. Am Heart Assoc; 2005. p. 250-3.
- 44. Huffman JC, Celano CM, Beach SR, Motiwala SR, Januzzi JL. Depression and cardiac disease: epidemiology, mechanisms, and diagnosis. Cardiovascular psychiatry and neurology. 2013;2013
- 45. Tully PJ, Winefield HR, Baker RA, Denollet J, Pedersen SS, Wittert GA, et al. Depression, anxiety and major adverse cardiovascular and cerebrovascular events in patients following coronary artery bypass graft surgery: a five year longitudinal cohort study. BioPsychoSocial medicine. 2015;9:1-10
- 46. Gold SM, Köhler-Forsberg O, Moss-Morris R, Mehnert A, Miranda JJ, Bullinger M, et al. Comorbid depression in medical diseases. Nature Reviews Disease Primers. 2020;6(1):69



- 47. Aridi YS, Walker JL, Roura E, Wright OR. Adherence to the Mediterranean diet and chronic disease in Australia: national nutrition and physical activity survey analysis. Nutrients. 2020;12(5):1251
- 48. Guillermo C, Boushey CJ, Franke AA, Monroe KR, Lim U, Wilkens LR, et al. Diet quality and biomarker profiles related to chronic disease prevention: the Multiethnic Cohort Study. Journal of the American College of Nutrition. 2020;39(3):216-23
- 49. Petersen KS, Kris-Etherton PM. Diet quality assessment and the relationship between diet quality and cardiovascular disease risk. Nutrients. 2021;13(12):4305
- 50. Dietitians Australia. Mental health briefing paper. 2020.
- 51. Teasdale SB, Ward PB, Samaras K, Firth J, Stubbs B, Tripodi E, et al. Dietary intake of people with severe mental illness: systematic review and meta-analysis. The British Journal of Psychiatry. 2019;214(5):251-9
- 52. Konttinen H, Männistö S, Sarlio-Lähteenkorva S, Silventoinen K, Haukkala A. Emotional eating, depressive symptoms and self-reported food consumption. A population-based study. Appetite. 2010;54(3):473-9
- 53. Agurs-Collins T, Fuemmeler BF. Dopamine polymorphisms and depressive symptoms predict foods intake. Results from a nationally representative sample. Appetite. 2011;57(2):339-48
- 54. Appelhans BM, Whited MC, Schneider KL, Ma Y, Oleski JL, Merriam PA, et al. Depression severity, diet quality, and physical activity in women with obesity and depression. Journal of the Academy of Nutrition and Dietetics. 2012;112(5):693-8
- 55. Uvnäs-Moberg K, Handlin L, Petersson M. Self-soothing behaviors with particular reference to oxytocin release induced by non-noxious sensory stimulation. Frontiers in psychology. 2015;5:1529
- 56. Targum SD, Fava M. Fatigue as a residual symptom of depression. Innovations in clinical neuroscience. 2011;8(10):40
- 57. Anton SD, Miller PM. Do negative emotions predict alcohol consumption, saturated fat intake, and physical activity in older adults? Behavior modification. 2005;29(4):677-88
- 58. Schneider M, Pauwels P, Toto S, Bleich S, Grohmann R, Heinze M, et al. Severe weight gain as an adverse drug reaction of psychotropics: Data from the AMSP project between 2001 and 2016. European Neuropsychopharmacology. 2020;36:60-71
- 59. Sepúlveda-Lizcano L, Arenas-Villamizar VV, Jaimes-Duarte EB, García-Pacheco H, Paredes CS, Bermúdez V, et al. Metabolic Adverse Effects of Psychotropic Drug Therapy: A Systematic Review. European Journal of Investigation in Health, Psychology and Education. 2023;13(8):1505-20
- 60. Forouhi NG, Misra A, Mohan V, Taylor R, Yancy W. Dietary and nutritional approaches for prevention and management of type 2 diabetes. Bmj. 2018;361
- 61. Nowson C, Roshier-Taks M, Crotty B. Nutrition competencies for the prevention and treatment of disease in Australian medical courses. The Medical Journal of Australia. 2012;197(3):147
- 62. Crowley J, Ball L, Hiddink GJ. Nutrition in medical education: a systematic review. The Lancet Planetary Health. 2019;3(9):e379-e89
- 63. Mahony G, Haracz K, Williams LT. How mental health occupational therapists address issues of diet with their clients: a qualitative study. Australian Occupational Therapy Journal. 2012;59(4):294-301



- 64. McKean MR, Slater G, Oprescu F, Burkett BJ. Do the nutrition qualifications and professional practices of registered exercise professionals align? International journal of sport nutrition and exercise metabolism. 2015;25(2):154-62
- 65. Malhi GS, Bell E, Bassett D, Boyce P, Bryant R, Hazell P, et al. The 2020 Royal Australian and New Zealand College of Psychiatrists clinical practice guidelines for mood disorders. Australian & New Zealand Journal of Psychiatry. 2021;55(1):7-117
- Hay P, Chinn D, Forbes D, Madden S, Newton R, Sugenor L, et al. Royal Australian and New Zealand College of Psychiatrists clinical practice guidelines for the treatment of eating disorders. Australian and New Zealand Journal of Psychiatry. 2014;48(11):1-62https://www.ranzcp.org/getmedia/0ee7d923-af5f-44ad-b411-46edf10ba0b8/eating-disorders-

62https://www.ranzcp.org/getmedia/0ee7d923-af5f-44ad-b411-46edf10ba0b8/eating-disorders-cpg.pdf

- 67. Services Australia. Chronic disease individual allied health services Medicare items. Services Australia; 2022 [Available from: https://www.servicesaustralia.gov.au/chronic-disease-individual-allied-health-services-medicare-items?context=20.
- 68. Holt RI, Hind D, Gossage-Worrall R, Bradburn MJ, Saxon D, McCrone P, et al. Structured lifestyle education to support weight loss for people with schizophrenia, schizoaffective disorder and first episode psychosis: the STEPWISE RCT. Health Technology Assessment (Winchester, England). 2018;22(65):1
- 69. Meenan RT, Stumbo SP, Yarborough MT, Leo MC, Yarborough BJH, Green CA. An economic evaluation of a weight loss intervention program for people with serious mental illnesses taking antipsychotic medications. Administration and Policy in Mental Health and Mental Health Services Research. 2016;43(4):604-15
- 70. Osborn D, Burton A, Hunter R, Marston L, Atkins L, Barnes T, et al. Clinical and cost-effectiveness of an intervention for reducing cholesterol and cardiovascular risk for people with severe mental illness in English primary care: a cluster randomised controlled trial. The Lancet Psychiatry. 2018;5(2):145-54
- 71. Verhaeghe N, De Smedt D, De Maeseneer J, Maes L, Van Heeringen C, Annemans L. Costeffectiveness of health promotion targeting physical activity and healthy eating in mental health care. BMC Public Health. 2014;14(1):1-9
- 72. Mental Health Australia. Investing to save: the economic benefits for Australia of investment in mental health reform: Mental Health Australia; 2018.
- 73. Productivity Commission. Mental health report no. 95, Canberra. 2020. 2022.
- 74. NSW Government. Future Health: guiding the next decade of care in NSW 2022-2032. 2022.