Motu Working Paper 26-07

Research review on the effectiveness of youth and rangatahi mental health early intervention and secondary prevention approaches

Motu economic & public policy research

Kate Prickett

June 2026

Document information

Author contact details

Kate Prickett

Motu Economic and Public Policy Research

Kate Prickett@motu.org.nz

Acknowledgements

The author would like to acknowledge the support of Te Hiringa Mahara - Mental Health and Wellbeing Commission in commissioning this research review and providing guidance and oversight throughout its development. In particular, Ella Cullen and Laura Ross for their advice and thoughtful feedback throughout the project. Special thanks to Alex Walker for facilitating engagement with young people during this project and feedback on the findings, and to Eden Grimwood for her advice on the findings and additional policy considerations. A final ngā mihi to Te Hiringa Mahara's Rangatahi and Youth Expert Advisory Group, and especially Hiran Thabrew, who provided feedback on the report draft.

Disclaimer

This research was funded by Te Hiringa Mahara - Mental Health and Wellbeing Commission. The views expressed in this paper are those of the author and do not necessarily reflect those of Te Hiringa Mahara - Mental Health and Wellbeing Commission. Any errors or omissions remain the responsibility of the author.

Motu Economic and Public Policy Research

PO Box 24390 info@motu.org.nz +64 4 9394250

Wellington www.motu.org.nz

New Zealand

© 2026 Motu Economic and Public Policy Research Trust and the authors. Short extracts, not exceeding two paragraphs, may be quoted provided clear attribution is given. Motu Working Papers are research materials circulated by their authors for purposes of information and discussion. They have not necessarily undergone formal peer review or editorial treatment. ISSN 1176-2667 (Print), ISSN 1177-9047 (Online).

DOI: 10.29310/WP.2026.07

Abstract

Adolescence and young adulthood are sensitive periods for the development of mental distress, and timely support can prevent early signs of distress from escalating. This review examines the effectiveness of early intervention and secondary prevention approaches for supporting the mental health and wellbeing of young people and rangatahi aged 12-24 years, with a particular focus on those experiencing low to moderate distress. The review draws on a structured scan of published and grey literature, identifying 20 evaluation papers covering 16 interventions across therapy-based brief interventions, community-based services, e-therapy, digital tools, and family-integrated approaches. Overall, the evidence suggests that many early intervention and secondary prevention supports, including brief and low-intensity approaches, can reduce distress and improve wellbeing, functioning, and coping. Effects were most consistent for broad outcomes such as distress, wellbeing, and functioning, while findings for anxiety and depressive symptoms were more mixed. Accessibility, youth-friendly delivery, sustained engagement, and co-design with young people emerged as important enablers of effectiveness. Culturally appropriate, co-designed, and Indigenous-led approaches also appear important for improving acceptability and engagement for rangatahi Māori. However, the evidence base remains uneven, with a need for stronger evaluation of what works best, for whom, and under what delivery conditions.

JEL codes

I10 Health: General; I12 Health Behaviour; I18 Government Policy; Regulation; Public Health; J13 Fertility; Family Planning; Child Care; Children; Youth; H51 Government Expenditures and Health.

Keywords

Youth mental health; rangatahi Māori; early intervention; secondary prevention; mental distress; wellbeing; digital mental health; e-therapy; co-design; culturally responsive services; Aotearoa New Zealand.

Summary haiku

Small signs met with care
Young voices shape the pathway
Stronger futures grow

Table of Contents

Executive summary

Purpose

- Research shows that adolescence through young adulthood (ages 12-24 years) is a sensitive time for the development of mental health conditions that can push well into later adulthood, and that timely and effective support can prevent distress from escalating.
- Prevention and early intervention approaches can reduce distress at a population level, and research indicates that targeted prevention, such as programmes being delivered to young people showing early signs of distress, tends to have stronger effects than universal approaches.
- This report presents a structured scan of published literature to examine effectiveness of early intervention and secondary prevention approaches on supporting the mental health and wellbeing of young people and rangatahi aged 12-24 years who experience early signs of distress.
- Findings from this scan will enable Te Hiringa Mahara to advise on what works to support young people earlier in their distress and inform policy and investment decisions.

Key findings

- ***Young adulthood is a sensitive period for the development of distress and mental health conditions***

  The research consistently highlighted how adolescence and young adulthood represent a sensitive period for the development of mental health conditions. Evidence pointed to a persistent gap in services designed specifically for this age group, particularly in the space between paediatric (typically from birth through age 17 years) and adult (18 years and older) mental health services. International reforms have increasingly focused on youth-friendly models that better align with young people's needs.

- ***A majority of the interventions, even very light-touch tools, were effective***

  Overall, this review found that early intervention and secondary prevention supports reduced mental distress and improved wellbeing and functioning for young people and rangatahi (Māori youth). Effects were most consistent for broad outcomes such as distress, wellbeing, and functioning, while findings for anxiety and depressive symptoms were more mixed. Many interventions were brief and low intensity, and effectiveness often extended to improved coping, confidence, and acceptability.

- ***Many young people with high levels of distress were accessing and benefiting from interventions aimed at those with lower levels of distress***

  Across several studies, services framed as early intervention often still served young people with high levels of distress. This likely reflects both high underlying need and the role of primary services as an entry point when specialist care is difficult to access. Despite this, many programmes still contributed to wellbeing

improvements even when baseline distress was high. It is important that these programmes can refer young people to appropriate supports for their level of distress.

- ***Accessibility and satisfaction with programmes and services generate engagement and are essential for improved mental health outcomes***

  Across the approaches reviewed, accessibility and engagement emerged as major enablers. Interventions with the most promising outcomes were often those that reduced barriers to entry, such as self-referral pathways, rapid assessment, flexible delivery settings, and free access. Where comparisons were available, young people who completed more programme content or attended more sessions tended to have better outcomes than those with lower levels of engagement.

- ***Co-design with young people is a critical part of developing acceptable and effective mental health supports for young people***

  Across the interventions reviewed, most incorporated co-design with young people to some degree in shaping programme content, delivery, and user experience. This emphasis on co-design was reflected in consistently high ratings in satisfaction and acceptability, even in studies where evidence of mental health improvements were limited. Iterative refinement based on youth feedback also appeared important for improving usability and perceived impact.

- ***Digital and online mental health tools improving mental health, pointing to effective lower-cost and scalable tools***

  Digital and online approaches showed promise as scalable early supports, particularly for young people with early signs of distress and when engagement was sustained long enough to provide a meaningful “dose” of content. These tools offer a relatively low-cost and accessible way to reach young people and can be adapted quickly in response to emerging needs. However, benefits depended heavily on uptake and adherence, with stronger outcomes among young people who engaged more frequently or completed more modules. It is important to recognise that young people are often early adopters of technology. As a result, some of the digital tools examined in this report may already be being overtaken by newer forms of supports, such as generative Artificial Intelligence (AI).

- ***Culturally appropriate, co-designed, and Indigenous-led approaches can improve acceptability and engagement for rangatahi Māori***

  Overall, the evidence suggests culturally appropriate, co-designed, and Indigenous-led approaches are likely to improve the acceptability and engagement of early intervention services for rangatahi Māori and other indigenous young people. None of the evaluations examined in this report directly tested whether culturally tailored programmes produced stronger symptom improvements. However, where cultural design elements were prioritised, user feedback highlighted their importance for relevance, safety, and engagement.

- ***More evaluative research is needed to better understand what is most effective for young people with early signs of distress***

  Despite promising findings, the evidence base remains uneven across service types and populations. Many studies relied on non-randomised designs, small samples, or limited subgroup analyses focused specifically on young people with early signs of distress. More robust evaluation is needed to identify which approaches work best, for whom, and under what delivery conditions, particularly for communities facing barriers to access.

Conclusion

Overall, this review highlights adolescence and young adulthood as a critical window for early intervention and secondary prevention. Across the evidence synthesised, many interventions, including low-intensity and “light touch” options, showed at least modest effectiveness in improving mental wellbeing and functioning and alleviating distress. In addition, the evidence suggests culturally appropriate, co-designed, and indigenous-led approaches are likely to improve the acceptability of and engagement with early intervention services for rangatahi Māori.

A key theme was that services designed for young people with early signs of distress often still support young people with high need, reinforcing the importance of accessible, youth-friendly, and culturally responsive entry points into care. From a system perspective, the findings support investment in rapidly accessible early intervention models and stronger evaluation practices to understand what works best for young people experiencing early signs of distress, and for who

Introduction

Young adulthood is increasingly recognised as a critical period for mental health and wellbeing, with experiences of distress in adolescence increasing the risk of experiencing one or multiple mental health conditions in adulthood (Gustavson et al., 2018). Early intervention services, an approach that has developed over the past three decades, have been evidenced as an effective tool for reducing the progression of early signs of distress into higher levels of distress or diagnosable mental health conditions (Malla & McGorry, 2019; McGorry & Mei, 2018).

Prevention and early intervention approaches can reduce distress at a population level, and research indicates that programmes being delivered to young people with early signs of distress (i.e., targeted intervention) tends to have stronger effects than universal approaches.

Given the widely-accepted evidence that adolescence is a critical period for the development of mental health conditions, these programmes and services are increasingly designed specifically for young people, moving outside the traditional medical system "paediatric-adult split" service delivery (McGorry & Mei, 2018). Often these services are flexible and targeted towards the individual, underpinned by a social determinants of mental health framework. This framework points to the ways that mental health can be influenced by a range of genetic, socioeconomic, and environmental factors (Allen et al., 2014; World Health Organization & Calouste Gulbenkian Foundation, 2014).[1]

Given the high rates of mental distress among young people, both in Aotearoa New Zealand and internationally, and high levels of unmet need, there has been particular interest in what works in terms of supporting young people with early signs of distress. The intent is that early or preventative treatment can reach young people before they transition to higher levels of distress and diagnosable mental health conditions that are harder to treat and have a greater impact on young people's quality of life.

This research review aims to examine international and Aotearoa New Zealand-based early intervention and secondary prevention approaches and their effectiveness in improving mental health outcomes among young people presenting with early signs of distress.

First, however, this introduction briefly discusses population-level trends in young people's mental health in Aotearoa New Zealand, further describes what early intervention and secondary prevention services are and provides examples of these services in Aotearoa New Zealand. It finishes by laying out the key aims of this review, including what it will and won't address.

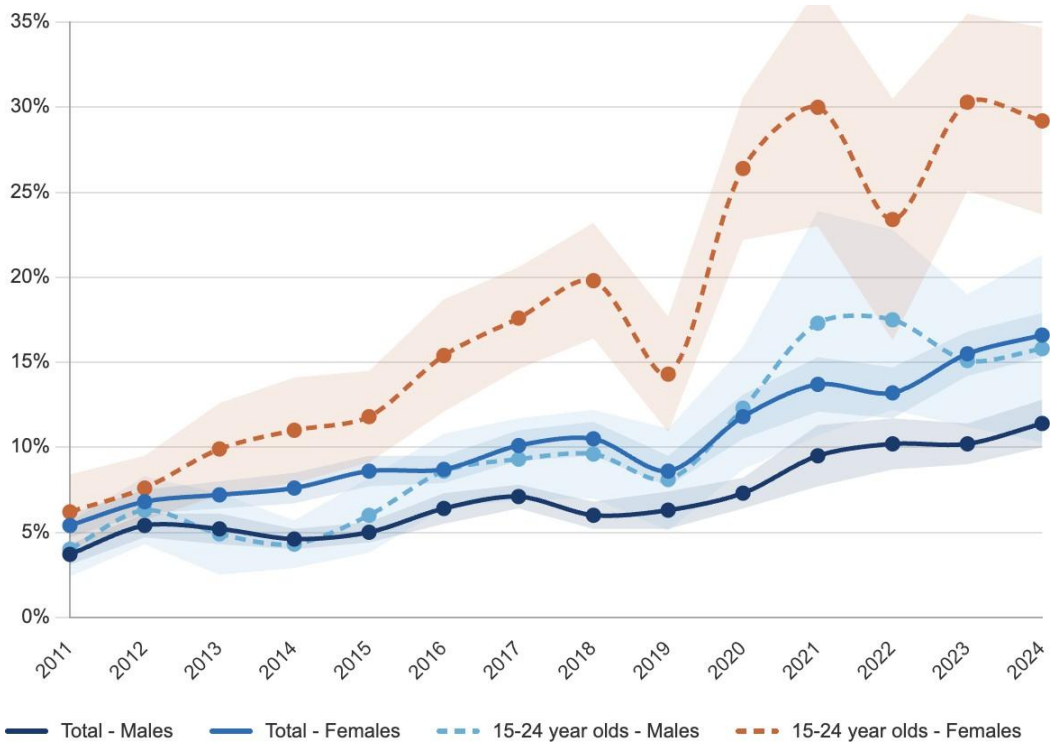
[1] In addition to the range of factors that affect an individual's mental wellbeing, the social determinants of mental health framework also stresses risk factors for poorer mental health that are associated with other social inequities and, thus, point to the ways broader societal level inequities persist. See Kirkbride, et al. (2024) for a discussion of preventative policies aimed at reducing population-level inequities (Kirkbride et al., 2024).

Mental health among young people and rangatahi Māori in Aotearoa New Zealand

Young people in New Zealand self-reported having higher levels and rates of psychological distress than older people, compared to a decade earlier, with 22.9% of people aged 15-24 years experiencing high or very high levels of psychological distress compared to 14.3% of all adults in 2024 (as captured in the New Zealand Health Survey [NZHS] during the 2024/2025 financial year; Ministry of Health, 2025).[2] Moreover, young women are almost twice as likely as young men to report high or very high levels of psychological distress (29.2% vs. 15.8% of women and men, respectively, in 2024/25).

This has not always been the case. Prior to 2012, rates of high or very high levels of psychological distress among young men and women were statistically similar to each other and with the general adult population. Over the remaining decade and the first half of the 2020s (Figure 1), however, rates of very high or high levels of psychological distress have risen three-fold for all men (from 3.7% in 2011 to 11.4% in 2024) and four-fold for all women (from 4.0% to 16.6%). For young men (15-24 year olds), this increase was almost three times greater (from 5.4% to 15.8%), and for young women close to a five-fold increase (from 6.2% to 29.2%).

Figure 1. Proportion reporting high or very high psychological distress from 2011-2024 among all adults and 15-24 year olds by gender



[2] Psychological distress is self-reported measure included in the New Zealand Health Survey. Distress is measured through the Kessler Psychological Distress Scale (K10), which is a validated 10-item screen instrument for screening symptoms commonly associated with anxiety and depression, such as restlessness, fatigue, and feeling depressed.

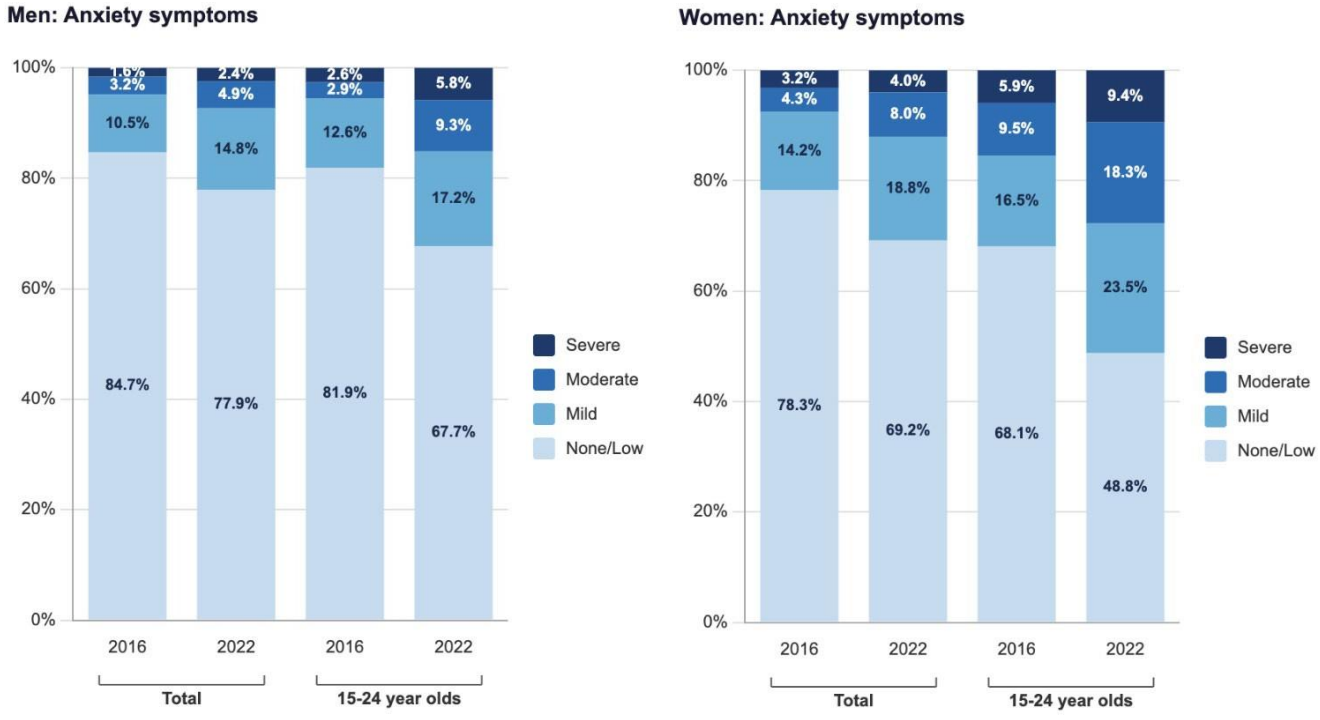
Note: Data from the New Zealand Health Survey (Ministry of Health, 2025). Shaded areas represent 95% Confidence Intervals.

Moreover, rates of moderate psychological distress have increased from 15.1% among young people experiencing in 2011 to 24.8% in 2024. In total, approximately 324,000 young people aged 15-24 years old are experiencing moderate to very high levels of psychological distress in Aotearoa New Zealand in 2024.

While the NZHS (which provides nationally-representative estimates of rates of psychological distress among young people) does not capture annual prevalence rates in anxiety and depressive symptoms, survey respondents in 2016 (2015/16 financial years) and 2022 (combining 2021/22 and 2022/23 years) were asked to report on their anxiety (using the Generalised Anxiety Disorder-7 [GAD-7] scale) and depressive (using the Patient Health Questionnaire-9 [PHQ-9]) symptoms.

Trends in anxiety and depressive symptoms are broadly similar to trends in distress (Ministry of Health, 2024). Figure 2 presents the proportion of men and women reporting anxiety symptoms, among the total adult population (15+ years) and among young people (15-24 years). While the total population of adults were reporting more anxiety symptoms in 2022 compared with 2016, the increase was larger among young people, generally, and young women, more specifically. Among young people, the groups experiencing mild and moderate levels of symptoms grew the most. For example, among young men and young women, the proportion reporting moderate symptoms during this time period tripled (from 2.9% of young men in 2016 to 9.3% in 2022) and doubled (from 9.5% to 18.3%), respectively.

Figure 2. Level of anxiety symptoms in 2016 and 2022 among all adults and 15-24 year olds by gender

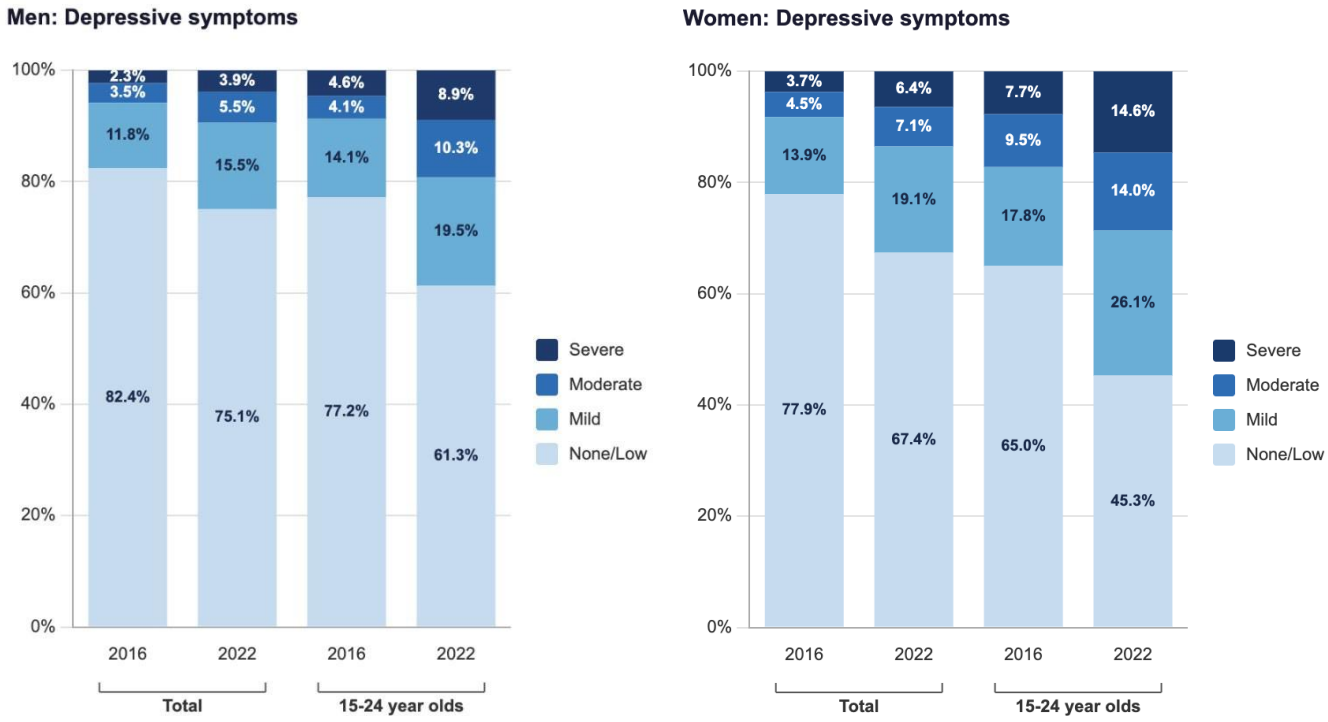


Note: Data from the New Zealand Health Survey 2015/16 and 2022/23 (Ministry of Health, 2024).

Overall, approximately 219,000 young people in Aotearoa New Zealand were experiencing mild to moderate levels of anxiety symptoms—the focus group of this report—in 2022, and a further 48,000 had severe symptoms.

A similar trend is found when examining depressive symptoms (Figure 3). Self-reported symptoms of depression increased from 2016 to 2022 among all groups, but more so among young people, and young women specifically. In total, approximately 225,000 young people reported mild to moderate levels of depressive symptoms and a further 76,000 reported severe symptoms in 2022.

Figure 3. Level of depressive symptoms in 2016 and 2022 among all adults and 15-24 year olds by gender



Note: Data from the New Zealand Health Survey 2015/16 and 2022/23 (Ministry of Health, 2024). "Moderately severe" and "severe" symptoms were combined into the "severe" category symptoms.

Further evidence of rising rates of depressive symptoms have been found in the Youth Surveys among the Aotearoa New Zealand secondary school population (Sutcliffe et al., 2023). In 2019 (the most recent year the survey was conducted), 22.8% of secondary school students (most aged between 13-17 years) reported clinically significant depressive symptoms. This was an increase from 13.0% in 2012. Among Māori secondary school students, 27.9% reported clinically significant depressive symptoms, an increase from 14.9% in 2012.

Finally, New Zealand has some of the highest rates of youth suicide in the developed world (OECD, 2025; Te Whatu Ora | Health New Zealand, 2025). While rates of suicide in Aotearoa New Zealand have remained statistically unchanged over the last two decades, there are inequities in suicide: suicide rates among Māori males (28.1 per 100,000) are twice that of non-Māori males (14.2 per 100,000), and the

rate among Māori females (8.6 per 100,000) 1.7 times that of non-Māori females (5.1 per 100,000) (Te Whatu Ora | Health New Zealand, 2025).

What are early intervention and secondary prevention mental health services?

Mental distress refers to emotional suffering or psychological discomfort, such as feelings of stress, sadness, or anxiety, that may arise in response to life circumstances or social conditions (Summerfield, 2001). While distress can affect wellbeing and functioning, it does not necessarily indicate the presence of a diagnosable mental disorder (The Mental Health Foundation, 2016). This matters for service design, because many young people first experience early signs of distress, and there is a clear opportunity to intervene early before distress escalates and becomes more difficult to treat.

Research indicates that targeted prevention, such as programmes being delivered to young people experiencing early signs of distress, tends to have stronger effects than universal approaches (Thapar et al., 2022). Thus, providing intervention and prevention services to people experiencing early signs of distress is widely seen as a more effective and "lighter touch" approach to preventing distress from progressing to high levels of distress and diagnosable mental health disorders.

Early intervention

Early intervention in mental health refers to processes that identify and provide proactive support to people who are experiencing early signs of mental health conditions, or who are at increased risk of developing them. People may not have had engagement in mental health services or a formal diagnosis. The goal of early intervention is to prevent early signs of distress from escalating and to promote mental wellbeing.

These types of supports for young people include services such as early assessment and screening, brief psychological interventions (e.g., short-term counselling or cognitive behavioural strategies), mental health literacy programmes, support for managing stress and emotional regulation, family or whānau-based support, school-based wellbeing services, peer support programmes, and youth-friendly drop-in services that provide low-barrier access to advice and care. Kaupapa Māori services also provide early intervention as a component of their holistic models.

Secondary prevention

Secondary prevention in mental health refers to approaches that support people who are already experiencing distress, with the goal of reducing the likelihood that distress worsens or become more persistent. The aim is to intervene as soon as possible when there are symptoms of distress, doing so by encouraging individuals to implement personal strategies to prevent and manage their symptoms. Similar to early intervention, secondary prevention targets individuals whose symptoms are at a low to moderate level and may not meet criteria for a formal clinical diagnosis.

Although there is significant overlap in the types of approaches that are considered as early intervention and secondary prevention, secondary prevention services also include responses to early signs of distress (e.g., guided self-help or structured brief

therapy), stepped-care programmes that provide increasing levels of support depending on need, monitoring and follow-up to detect escalation, targeted interventions for higher-risk groups (such as young people experiencing bullying, family stress, or substance use), relapse prevention and coping plans, coordination with schools and primary care, and referral pathways into more specialised services if the need intensifies.

Aotearoa New Zealand mental health service landscape for young people

Aotearoa New Zealand's mental health system for young people includes a broad mix of primary prevention, early intervention, secondary prevention, and specialist clinical services provided by government, non-governmental organisations (NGOs), primary care, and community partners (Buckley et al., 2013). Youth mental health services aim to respond to the high prevalence of mental distress among young people and rangatahi Māori, who experience high levels of need relative to other age groups but often face barriers to accessing formal care.

A major focus in recent years has been on expanding low-threshold, youth-friendly support that can intervene early, and on increasing access to culturally responsive care across regions and communities. Programmes are delivered in different settings, including online (e.g., The Lowdown), telephone and texting helplines (e.g., 0800 What's Up, "Need to Talk?"), community outreach and system navigation (e.g., Hāpai Ngā Rangatahi), school-linked support (e.g., Building Resilience And Voicing Empowerment [B.R.A.V.E]), and mobile youth services (e.g., EaseUp).

These services range from information only (e.g., The Lowdown), access to counselling services directly (e.g., Gumboot Friday, Access & Choice, Te Tauihu Youth Wellbeing Service, Whakaata Tohu Tohu Mirror Counselling Service), youth-friendly hubs for engagement (EaseUp), youth one-stop shops (e.g., Evolve, Te Tahi Youth), and other services that provide a variety of services and/or connection to services (e.g., Youthline).

Despite recent reform efforts, there is still high unmet need for mental health services among young people in Aotearoa New Zealand. In 2016, 9.1% of young adults could not access mental health care when they needed it. This rose to 13.5% in 2025 (Ministry of Health, 2025). This need is confirmed by psychiatrists in Aotearoa New Zealand, with 89% of those specialising in child and adolescent psychiatry saying patients were unable to access mental health care when they needed it because of resourcing constraints (Every-Palmer et al., 2024). Among all psychiatrists, most (94%) believe that mental health and addiction services, for the population in general, have been neglected during the most recent reforms.

Aims of this effectiveness review

The following report is a synthesis of the research evidence around the effectiveness of approaches aimed at early intervention and secondary prevention with young people aged between 12-24 years who are experiencing early signs of mental distress and/or problematic substance use.

This report examines both existing and newly developed programmes and interventions, however it primarily focuses on research evidence published in the past decade. While not all interventions included in this report are specifically targeted at those young people experiencing early signs of distress, where possible the findings focus on the effectiveness for this particular group of young people.

'Effectiveness' in this report primarily focused on whether and to what extent these interventions were associated with change in young people's mental health outcomes, such as mental distress, and anxiety and depressive symptoms. As such, this was a criterion (i.e., evaluations that examined the association between young people's participation or engagement with a mental health support and their mental health condition outcomes) for being included in the report. In addition, and when reported and appropriate, secondary outcomes, such as general wellbeing and social functioning conditions, as well as mental health literacy, which has been shown to be an important factor helping people seek out and engage in mental health support,[3] are also discussed.

Effectiveness, however, also includes the acceptability and safety of interventions for young people. Regarding acceptability, this includes young people's experiences and satisfaction with using services or participating in programmes, as well as their cultural acceptability. Where reported by the studies, young people's acceptability, satisfaction, and engagement with these supports are discussed in this report. Regarding safety, unintended consequences or the extent to which young people's conditions worsened were not typically discussed in the evaluation studies. However, studies often discussed the process for triaging and escalating support for young people in high or immediate risk because of their mental health symptoms. Again, where described and appropriate, these processes are described in this report.

Out of scope

This review is focused on services aimed at those with affective mood (e.g., depression) and anxiety disorders (e.g., generalised anxiety disorder, social anxiety disorder), with early signs of problematic substance use, and those experiencing suicidal distress. While generally considered under the broad umbrella of mental health and disorders, this review does not examine services targeted primarily at young people who are diagnosed with or exhibiting pre-diagnostic symptoms of psychotic disorders (e.g., schizophrenia, delusional disorder), neurodevelopmental diagnoses (e.g., autism, ADHD), somatic symptom disorders (e.g., psychological symptoms not fully explained by a medical condition), trauma- and stressor-related disorders (e.g., post-traumatic stress disorder, acute stress disorder), personality disorders (e.g., borderline personality), sleep-wake disorders (e.g., insomnia), eating and feeding disorders (e.g., anorexia, bulimia), neurocognitive disorders (e.g., mild cognitive impairment), impulse control and conduct disorders (e.g., oppositional defiant disorder), and gambling addiction, as these more complex mental health conditions generally require specialist responses.

We acknowledge that there are high rates of comorbidity of distress, depression, and anxiety with other mental health conditions that are considered out of scope (Sander

[3] Mental health literacy refers to the understanding and beliefs that people have about mental health that allows them to prevent, recognise, and manage mental disorders, including how to seek mental health information (Jorm et al., 1997).

et al., 2021). As such, supports in this report that might treat conditions considered out of scope, are still included so long as supporting mental health and wellbeing is a focus of the intervention and depressive and anxiety symptoms and/or mental distress are examined as outcomes.

It is also important to note there are many existing and emerging interventions, both internationally and in Aotearoa New Zealand, aimed at young people with emerging need, that are not discussed in this report. This was primarily due to not having publicly available evaluations, or evaluations that were solely focused on describing engagement, design and process elements, or the profile of participants. Because they did not examine mental health as an outcome they could not be included in this report, even though many of these programmes are using evidence-backed design and processes (in terms of what existing literature has shown matters for support young people in low to moderate mental distress).

In addition, supports that were designed to be delivered exclusively within school settings were excluded. School supports have been reviewed extensively, and this review focuses on interventions that could be implemented in community, clinical, or digital environments that are also accessible to young people outside the school system. This is particularly important given the proportion of young people who are not participating in educational settings in young adulthood (Tertiary Education Commission, 2022).

A better understanding of the effectiveness of different types of early intervention and secondary prevention services for young people and rangatahi with early signs of mental distress can help inform government investments in support of the government's mental health targets (Minister of Health, 2024). This includes strengthening focus on prevention and early intervention services and improving the effectiveness of these supports.

Review method

Steps were taken to source the potential literature to be included, scanning the literature for inclusion, and cataloguing the literature to be examined. This section briefly outlines those steps. A more detailed description of the methodological approach be found in Appendix 2.

Literature sourcing

Several approaches were taken to sourcing the literature. This included:

- *Targeted word search:* A targeted word search through Google Scholar (a more extensive search engine, and more likely to capture "grey" literature) and JSTOR (a more traditional digital academic library), using key terms such as "secondary prevention young people mental health", "early intervention young people", "suicide prevention young people", and "addiction intervention young people."
- *Intervention targeted search:* Google Scholar and JSTOR were again used to locate studies that examine known prevention and intervention approaches aimed at supporting young people's mental health, including "community hubs", "peer support", and "e-therapy" (among others), along with "young people" and "mental health."
- *Aotearoa New Zealand targeted search:* A more targeted search was conducted to uncover evaluations of Aotearoa New Zealand-based interventions by searching more broadly "New Zealand" and "mental health," along with visiting websites where grey material may be, such as New Zealand-based mental health service websites and government entities.
- *Indigenous approaches targeted search:* Google Scholar and JSTOR were again used to uncover Māori- and Indigenous-led interventions and evaluations.
- *Cited paper referrals:* Additional papers were added through identifying evaluations cited by the papers that were already being scanned.

Literature scanning

In total, several hundred short abstracts were scanned during the literature sourcing process. Long abstracts were then read for papers which appeared within scope, or their scope undetermined. These articles and reports were included in a Zotero library for further examination. In total, 120 papers were added to the Zotero library.

Literature cataloguing

To identify the research that fit the criteria for inclusion as an evaluation, research was then catalogued in a flexible literature matrix, whereby columns contained basic metadata (e.g., authors, date, title), as well as indicators of populations served, programme/intervention type, whether the research was an evaluation of health outcomes, etc. An indicator of whether the literature was considered in scope for analysis, or whether it should be included as contextual material, was included.

In total, of the 120 papers catalogued, 20 evaluation papers examining 16 interventions were included in the analysis. Many of the papers excluded from the analysis were still pertinent to describing programmes or outcomes and have still been cited in the report.

The most common reasons for eliminating papers were:

- The intervention focuses (wholly or mostly) on children and young people outside the 12-24 year old age range;
- That participants in the study primarily have moderate-to-high levels of psychological distress, or analysis does not distinguish outcome results for those with lower levels of symptoms;
- It primarily describes a range of approaches without evaluative discussion or depth;
- Only describes programme/service process and/or implementation, without evaluating mental health outcomes (and programme/service not currently discussed in an evaluative study);
- That the intervention focused *solely* on mental health conditions outside the scope of this proposal; and,
- The programmes were only school-based (although they can be delivered within the community *and* school, so long as the programme could be feasibly implemented within the community rather than only in a school setting).

Analysis

The papers included for description and analysis were organised into service and intervention approaches (e.g., e-therapy, digital tools, community hubs), while also noting that many interventions could be considered to fall within two or more approaches. Interventions were discussed individually, with overall effectiveness discussed within each approach area.

A note on effect size interpretation

Where noted by the authors of the research, the effect sizes were discussed in this report as they were reported by the authors of the studies. If the authors did not label effect size, conventional cut-offs (in the case of Cohen's *d* and Cohen's f^2 statistics) were used to talk about the magnitude of the effect. In key studies that did not calculate effect size statistics, this report used the information available to calculate a simple difference as a proportion of the baseline standard deviation to approximate an effect size. For studies that did not provide their own effect size interpretations, Cohen's *d* cut-offs were used to label effect sizes (i.e., 0.00-0.20 = marginal; 0.21-0.49 = small; 0.50-0.79 = moderate; =>0.80 = large).

International and national evidence

This section summarises evidence from evaluations of the effectiveness of early intervention and secondary prevention mental health programmes and services for young people and rangatahi aged 12-24 years in terms of supporting mental health. A particular focus is on young people with low to moderate mental distress.

Findings are organised by broad approach type, recognising that many interventions overlap in delivery approach, setting, and target population, and that effectiveness often depends on who the service reaches and how it is implemented.

In total, 20 evaluations of 16 services or programmes were identified within the scope of this report and are discussed here.

Therapy-based brief intervention approaches

Therapy-based brief intervention models refer to services that offer young people a small number of targeted psychological therapy sessions (often between one and eight sessions), usually delivered rapidly after referral or first contact. These approaches are designed to provide enough support, early enough to reduce distress, build coping skills, and improve functioning, without requiring young people to enter longer-term specialist mental health care. Brief intervention models are particularly relevant for early intervention and secondary prevention because they aim to match service intensity to low to moderate need. These models mirror real-world engagement patterns which often show that young people do not attend many sessions even when longer treatment is offered. This section discusses three evaluated brief intervention therapy models.

headspace Brief Intervention Clinics (Australia)

As part of Australia's broader *headspace* initiative, Brief Intervention Clinics (BIC) are an approach whereby, after initial assessment, young people who experience low to moderate mental distress and without complex health presentations were offered a small number (on average, four, with a maximum of six) of targeted therapy sessions (Schley et al., 2019). Treatment typically began within 2-3 weeks of a young person's referral to the BIC, and sessions occurred on a weekly basis.

BICs were explicitly created to provide a service for young people with low to moderate need. This was a group identified as lacking services because of an existing emphasis on targeting resources towards young people with highly complex needs and in high to very high mental distress. The programme modules, developed in consultation with young people, were based in Cognitive Behavioural Therapy (CBT)-informed approaches, aiming to help young people manage their distress through coping strategies and practical skills (e.g., managing sleep, stress, anxiety). The programme also included a module on exercise, based on an earlier Australian-based study that found better outcomes among young people who received a physical activity intervention in addition to the psychological intervention, compared to those who only received the psychological intervention (Parker et al., 2016).

An evaluation of the BICs (*n [number of people in the analysis sample]* = 122; aged between 12-25 years) found improvements across a range of mental health and

wellbeing indicators (Schley et al., 2019). This included declines in psychological distress (average decline of 5.68 points on the Kessler Psychological Distress Scale 10 [K10]—a large effect), depressive symptoms (average decline of 3.46 points on the Quick Inventory of Depressive Symptoms [QIDS]—a moderate effect), and anxiety symptoms (average decline of 2.57 points on the Overall Anxiety Severity and Impairment Scale [OASIS]—a moderate effect). Increases in social functioning were also found (average increase of 5.31 points on the Social and Occupational Functioning Assessment Scale [SOFAS]—a moderate effect).

A range of subjective experience questions, which were developed in consultation with young people, showed very high agreement in terms of the acceptability, positivity, and approval of the programme among those who had completed the BICs. In qualitative responses from young people in the evaluation, the therapeutic relationship (e.g., feeling heard and supported, feeling comfortable talking), learning coping strategies and problem solving skills, feeling that the programme was helping them (e.g., young people noticed reductions in their distress, felt like they were handling current problems), and the content of the BICs (e.g., able to choose types of modules, interactive psychological sessions) came through as important themes for what young people liked most about the programme.

Jigsaw brief intervention model (Ireland)

Similarly, Ireland, as part of their Jigsaw mental health service delivery programme for young people, operates a brief intervention model that offers up to eight psychological therapy sessions (average 5.9 sessions). Sessions can be delivered in-person, online, or over the phone by a clinician. A variety of therapeutic approaches (e.g., cognitive behavioural, compassion-focused, solution-focused) are used by clinicians, depending on the needs of the young person being treated. Services are free and professional referrals are not required. Approximately 30% of those who engage with the brief intervention model had low to moderate distress (O'Keeffe et al., 2015). While no studies have examined the effectiveness of the brief intervention model for lowering distress among young people with low levels of distress only, the programme has been shown to be effective, on average, in relieving distress within a total sample of participants (n = 2,420). Participants aged between 17-25 years, whose psychological distress was measured using the Clinical Outcome Routine Evaluation-10 (CORE-10), scored an average of 20.3 upon beginning the programme. At post-intervention, symptoms had lowered to 7.6, on average (a decline of 12.7; Cohen's d = 0.8—a large effect). Among participants aged 12-16 years who were assessed using the Young Person's-CORE (YP-CORE), scores declined from 19.6 to 9.0 from pre- to post-intervention, on average (Cohen's d = 0.7—a moderate effect).

One study found goal-based outcome (GBO) therapy included in Jigsaw's brief intervention model has been particularly effective in supporting young people in reaching their goals of developing coping mechanisms, personal growth, and managing interpersonal difficulties (O'Reilly et al., 2022). In this study (n = 4,839; aged 12-25 years), participants' aggregated GBO scores increased from 2.7 pre-intervention, on average, to 7.3 post-intervention—a large effect size. While the study did not examine whether results differed by level of presenting distress, other studies have independently found that GBO in therapy may be a particularly effective

tool for young people experiencing low to moderate levels (e.g., not high levels) of anxiety and depressive symptoms (Jacob et al., 2022).

Mindspace Mayo (Ireland)

As another example, *Mindspace Mayo* is a community-based early and brief therapy intervention in rural Ireland that supports young people aged 12-25 years (Corley et al., 2024).[4] The service was established in 2015 and operates as a primary-care style youth mental health model, designed to provide early access to brief therapeutic support for young people experiencing emerging mental health needs, particularly mood- and anxiety-related needs. Mindspace is delivered via a central hub, with two additional outreach sites, and aims to provide accessible support outside of specialist child and adult mental health services.

Mindspace Mayo functions as a brief, evidence-informed intervention service, rather than one standardised therapy programme. The therapeutic approaches used vary depending on clinician background, but often include CBT, solution-focused brief therapy, motivational interviewing, psychoeducation, mindfulness-based approaches, relapse prevention and harm reduction. Referrals can be made by young people themselves, or by family members, schools, GPs, and other health or community agencies. The intake process is a two-session assessment which includes a mental state examination and a thorough risk assessment. Following assessment, young people are offered up to eight further sessions of goal-focused therapeutic support (with an average of 5.9 sessions). Young people whose needs are assessed as high or very high (beyond the service scope) are referred on to Child and Adolescent Mental Health Services (CAMHS) or adult mental health services.

The evaluation of *Mindspace Mayo* draws on routinely collected electronic service data for 1,184 young people who engaged with *Mindspace Mayo* between February 2015 and February 2022 (average age 17.9 years) (Corley et al., 2024). Most referrals were made either by a parent (40%) or via self-referral (38%). The most common presenting issues were mood- and anxiety-related needs, alongside family/relational and school stressors.

In terms of baseline symptom severity, while the intervention was aimed at young people with low levels of distress, a majority (59%) of the young people in the sample were classified as presenting with moderate to high distress at referral. By post-intervention, however, this had declined to 19%. Average psychological distress (as measured through CORE for young people aged 17 years and older, and through the YP-CORE for young people aged 12-16 years) declined from baseline to post-intervention. The average score declined by 8.0 points (from 17.6 to 9.6; a 1.1 standard deviation difference [relative to baseline]—a large effect) among 12-16 year olds and an average score decline of 7.3 points (from 16.9 to 9.6; a 1.1 standard deviation difference—a large effect) among young people aged 17-25 years old.

Overall, *Mindspace Mayo* provides an example of an effective, brief, community-based youth mental health model that appears to be functioning as an appropriate

[4] While similarly aligned with Ireland's *Jigsaw* network, *Mindspace Mayo* is a stand-alone, community-based youth mental health service in County Mayo, with a different funding model.

access point for young people and families (evidenced by the high rates of self- and parent-referral).

Summary

Taken together, these therapy-based brief intervention models were generally associated with improvements in mental distress and functioning, and young people and families tended to report high satisfaction with the support they received. However, a consistent theme across services is that even where services are designed for low to moderate need, many young people still enter with high or very high levels of distress.

Community-based approaches

Community-based supports include youth mental health services and programmes that are delivered outside traditional primary care and specialist or other clinical mental health settings. These models often aim to improve access by providing youth-friendly environments, reducing stigma, and offering support in places that feel familiar and acceptable to young people and whānau. Community-based supports can include “one-stop shop” youth hubs, drop-in centres, navigation services, and programmes embedded within settings such as sport clubs or other youth-facing organisations. These approaches are particularly relevant for early intervention because they can provide a softer entry point into care and reach young people who might not otherwise seek formal mental health support.

One-stop shops

headspace (Australia)

There have been several well-studied international youth mental health service reforms in the past two decades, including in Australia and Canada. An important component of these reforms has been the development of community-based ‘one-stop shops,’ whereby young people with a wide spectrum of mental health needs can easily access timely assessment and be provided the appropriate services. In prior studies across diverse populations with different levels of need, these hubs have been found effective in reaching large numbers of young people, including those who might have otherwise sought help (Hetrick et al., 2017; McGorry et al., 2013).

Australia’s initiative, called *headspace*, consists of over 100 centres, supporting young people aged between 12-25 years. *headspace* centres, while differing across regions, offer a range of services (free or low cost) in one place. This includes mental health assessments, counselling and therapy, physical and sexual health services, addiction support, peer workshop and support programmes, family counselling, and work and study support. A core principle of *headspace* is youth participation, which includes the development of the *headspace* model at the strategic and operational planning level, ongoing service development at the centre level, and young people’s participation in the development of their own treatment plans (Rickwood et al., 2019).

A key feature of these centres is accessibility in terms of young people being able to book appointments or attend drop-in hours for rapid initial assessment and

development of an appropriate course of action for their needs. Approximately one-third of young people receive an appointment in less than one week, with a further 47% receiving an appointment within 1-2 weeks. Young people have reported high levels of satisfaction with the service, particularly due to the youth-friendly environment, staff being friendly and non-judgemental, services being free or low cost, and there being a wide range of services and novel modes of engagement (e.g., youth-friendly events, use of technology for information and communication) (Hilferty et al., 2015).

Even though *headspace* centres offer a range of integrated services beyond those that target mental health, a large majority of young people who come to the centres do so primarily because of their mental health needs (Hilferty et al., 2016; Rickwood et al., 2014). Although a majority of young people presenting at the centres have high or very high levels of distress, approximately one-quarter of young people who use the centres have low or moderate levels of distress, indicating that the centres are effective in reaching those with emerging need (Hilferty et al., 2015).

Due to wide differences in needs, services are tailored towards the level of need and type of needs of the young person. Young people presenting with low to moderate distress (Stage 1a - “help seeking subjects with mild symptoms and mild functional impacts”) are much more likely to receive case management only or case management in addition to therapy services than those with high or very high distress, who were more likely to receive medication in addition to therapy (Cross et al., 2016). One evaluation of therapy through *headspace* for young people with low to moderate distress (*n* = 890) found declines in distress after completing six therapy sessions (approximately one-quarter of a standard deviation change in the K10—a small effect) (Cross et al., 2016). An additional decline was found between six and ten sessions, although the effect of these additional sessions was approximately one-third of that for the first six sessions. There was no statistically significant change in social and occupational functioning. Declines in distress were similar among those young people who initially presented with higher levels of distress, however this group experienced large and statistically significant improvements in social and occupational functioning.

A national evaluation of *headspace,* while not conducting separate analyses by young people’s level of distress, found a similar pattern of results (Hilferty et al., 2015). That is, larger declines in distress up to six sessions, with continued but decreasing returns to relieving distress up to ten sessions. Service use appeared to have a greater impact on alleviating distress compared to other wellbeing indicators, such as social and occupational functioning and social inclusion.

Young people interviewed as part of the evaluation overwhelmingly attributed attending *headspace* as the reason for improvements in their mental health, saying that the programme led them to experience fewer or no depressive episodes, improved their confidence, and decreased their suicidal ideation (Hilferty et al., 2015). Many reported that the skills they learned through their sessions, such as recognising their symptoms when they were experiencing them and strategies for managing those symptoms when they appeared, had helped them continue to support their mental health independently. *headspace* centre managers reported that

offering other services, such as general health support, was an important soft entry point for helping increase young people's acceptance of mental health support.

A key overarching theme from the development of these national-level programmes (despite being community-specific), was the need for a transformation of the way services were delivered, not just more resourcing (e.g., clinicians, sessions) of the existing status quo (McGorry et al., 2013).

Mental health system navigation support

Your Choice (Aotearoa New Zealand)

The *Your Choice* programme was developed in Auckland (Waitematā DHB region) as a pragmatic, community-based early intervention response for young people aged 10-24 years who were experiencing low to moderate mental health concerns, but who were often falling through the cracks of existing systems (Clark et al., 2014). The programme was designed to help young people with low to moderate concerns to access counselling quickly, without cost barriers, and without having to navigate the system on their own. The service was not intended for young people with high or very high need (those who met criteria for more serious concerns were excluded and directed towards specialist CAMHS).

Your Choice functioned as a coordinated access and triage model. Referrals could come from a wide range of sources, including primary care, schools, community organisations, secondary services, whānau and families, and young people themselves. The programme relied on a dedicated coordinator (a social worker) who acted as the single point of entry, completing an initial triage to ensure the referral was appropriate and that the young person was willing to engage.

Following initial triage, referrals were reviewed by a multidisciplinary and cross-agency triage team, which included primary and secondary care clinicians (e.g., nurses, GPs, youth health clinicians, CAMHS clinicians, psychiatrists). The team's role was to recommend the most appropriate care package for each young person (e.g., individual counselling, group work, family therapy). Counselling was delivered by contracted and qualified counsellors and therapists. Sessions were delivered in settings that were convenient for the young person, including schools, homes, and within community-based services. The programme also aimed to match young people to providers in ways that supported engagement, including preferences around counsellor's gender, location, and cultural fit.

In the evaluation (Clark et al., 2014), outcomes were reported for 581 young people who completed the intervention between 2008 and 2010. Most participants were aged 10-14 years (48%), followed by those aged 15-19 years (43%) and 20-24 years (9%). The programme reached a culturally diverse group, with a relatively high proportion of rangatahi Māori (31%) and young people living socioeconomically deprived neighbourhoods (51% of young people lived in the most highly deprived neighbourhoods [NZDep deciles 8-10]). Most young people received individual counselling (63%), with around 30% participating in group work. Individual counselling typically involved around eight sessions, delivered over a median period of approximately ten weeks.

Baseline symptom scores indicated that this cohort were, on average, experiencing psychological difficulties that were slightly raised (as per the Strengths and Difficulties Questionnaire [SDQ]). At baseline, the study cohort had an average SDQ score of 15.6. This decreased to an average of 12.3 post-intervention (approximately 58% of a standard deviation difference—a moderate effect size). This moved the cohort average from having symptoms that indicated slightly raised difficulties to it being considered it unlikely that there were clinically significant problems.

A similar pattern was found when examining functioning (measured through the Children's Global Assessment Scale Difficulties Score [C-GAS]), whereby functioning increased from an average scale score of 62.7 at baseline to 72.7 post intervention (an 89% of a standard deviation difference—a large effect size). This shift represented a change from the "young person may have difficulty in a single area, but generally functioning well" diagnostic category to the "no more than slight impairments in functioning at home, at school, or with peers" category, on average.

Finally, a similar pattern was found on an indicator of problematic substance use (the Substance Abuse Choices Scale [SACS]), where the average score shifted from 4.2 points (on a 20-point scale) at baseline to 2.9 points post-intervention (a 22% of a standard deviation difference—a small effect).

These findings were supported by feedback from young people and whānau, who described the service as easy to engage with, culturally appropriate, and helpful for developing coping skills and improving communication.

Overall, *Your Choice* is an example of an approach that does not rely on one specific therapeutic modality, but instead, strengthens outcomes through rapid access, coordinator-supported navigation, and flexible matching to free counselling options.

Sports-embedded mental health interventions

RISE (Australia)

Three Australian studies evaluated a multipronged mental health programme delivered through organised youth sport settings, which uses community sport as an entry point for mental health promotion, early identification, and prevention. Embedded within existing sporting contexts (community sports clubs and junior rugby league development programmes), these programmes aim to reduce stigma and improve access to support by delivering interventions in a setting that is familiar, socially connected, and highly acceptable to young people and their families.

In the first two studies, a mental health programme was embedded within a junior rugby league development programme for boys aged 12-15 years (Dowell et al., 2021; Waters et al., 2025). The pilot programme was delivered in both an urban and rural community setting and used a structured three-step approach called The Life-Fit-Learning System. This three-step programme first assessed participants on their mental health (Step 1), provided individual feedback to the participants and their parents and group-level feedback to programme coordinators (Step 2), and connected participants and their parents to a multi-component intervention that

included both online resources and group workshop programme (four 30-minute sessions) (Step3). Individual-level follow-up was provided for participants that were at high risk for mental health conditions.

The group programme modules were framed in youth-friendly, strengths-based language and aligned with sport performance and wellbeing goals, including: Strong Minds (grit, optimism), Keep Cool (emotional self-control, physiological regulation strategies such as breathing and relaxation), Stay Connected (kindness, gratitude, relationships), and Healthy Habits (sleep, nutrition, social media/technology).

In the pilot outcome evaluation, analyses focused on the subset of boys who completed both pre- and post-assessments (*n* = 36) (Dowell et al., 2021). A majority of the sample (78%) had no or mild presenting depressive and/or anxiety symptoms at the pre-assessment, with eight of the participants (22%) in the high-risk range. A similar range of symptoms were detected among the larger second evaluation (*n* = 176), which used a treatment-control group study design (Waters et al., 2022).

From pre- to post-programme, participants in the pilot study reported a statistically significant decline in anxiety symptoms (from a raw scale score of 7.0 to 5.6 on the Revised Children's Anxiety and Depression Scale [RCADS-25] Anxiety Subscale; 38% of a standard deviation difference from the baseline standard deviation—a small effect size) and marginally significant decline in depressive symptoms (from a raw scale score of 5.6 to 4.9 on the RCADS-25 Depression Subscale; approximately 25% of a standard deviation difference—a small effect size). There were no statistically significant changes in anger or externalising behaviours.

Among secondary wellbeing outcomes, there was an increase in prosocial behaviours, efficacy in managing negative emotions, and levels of 'grit' (within the urban cohort only), but no significant changes in measures of optimism or gratitude.

A similar pattern of results was found in the larger treatment-control study whereby boys who had relatively high-risk symptoms reported declines in anxiety. However boys with high-risk symptoms in the control group (i.e., rugby league players who didn't receive the intervention) experienced statistically similar declines in anxiety, also (Waters et al., 2022). This indicates that declines in anxiety may not be attributable to the programme, but to participation in sports as the season goes on, more generally. This differed from depressive symptoms, where those with high-risk symptoms experienced declines in depressive symptoms, but those players in the control group reported no change. This finding replicated when examining anger and externalising problems (whereas there was no statistical change in the pilot study).

Among the secondary wellbeing outcomes, the findings were more mixed in the larger treatment-control study than the pilot study, with self-satisfaction improving for those in the treatment group compared with those in the control group, but no significant differences in prosocial behaviours or grit.

Overall, then, in the subsequent community-matched evaluation with a comparison group, the overall symptom profile at baseline was similar (around one-quarter of boys screened high-risk), but programme effects were most apparent among high-risk participants. That is, depressive symptoms and behavioural problems improved

in the intervention group but not the comparison group among these high-risk participants. In contrast, reductions in anxiety were observed in both high-risk groups (i.e., treatment and control), suggesting anxiety improvements may not be specific to programme participation but involvement in sports more generally.

In the third evaluation (Waters et al., 2025), the authors examined whether mode of delivery mattered for effectiveness (in terms of improving mental health literacy and wellbeing). They tested four modes: 1) in-person delivery only; 2) in-person delivery plus remote real-time (i.e., video conference); 3) in-person delivery plus remote prerecorded videos; and, 4) remote delivery only (video conference and/or video recorded). Players with elevated anxiety and depressive symptoms and behavioural problems reported statistically significant declines in their symptoms from pre- to post-programme, regardless of how the programme was delivered. Those players in the healthy range reported no change.

Overall, participants were overwhelmingly positive about the programme, with high satisfaction with the helpfulness and enjoyment of the workshops, the ease of understanding content, and the usefulness of the workbook content (Dowell et al., 2021). Participants rated their enjoyment higher when the programme was delivered in-person with remote real-time video conferencing and remote delivery only, compared with the in-person delivery only condition (Waters et al., 2025). It is important to note that the in-person only delivery was conducted by local rugby league personnel, whereas remote content was facilitated by psychologists, indicating it may be important for mental health content to be delivered by mental health experts in order to increase young people's acceptability and satisfaction of the programme.

Summary

Across the community-based supports reviewed, a key strength was accessibility and acceptability. These services often reached large numbers of young people, including those who may not have engaged with traditional mental health care services. Evidence of mental health improvement was mixed and depended heavily on the evaluation design and the baseline profile of participants. In several cases, programmes framed as early intervention still served young people with high to very high distress. This suggests that low-threshold services may naturally become a point of entry for higher-need groups when other parts of the system are difficult to access. Overall, community-based supports appear valuable as engagement and access pathways, but outcomes tend to vary by the level of young people's needs.

E-therapy mental health approaches

E-therapy interventions refer to services that use digital tools to deliver psychological support (such as online CBT modules) and/or to identify and triage need through online screening and monitoring. These approaches are designed to support early intervention at scale by reducing reliance on in-person clinician time and allowing young people to access support privately and flexibly. In many cases, e-therapy programmes combine self-guided digital content with some form of human support (such as peer coaching, clinician moderation, or brief therapist check-ins) and can operate as part of stepped-care systems that match intensity to level of need. This

section discusses evaluations of programmes where therapy or coaching is delivered by clinicians or other trained people online.

Engage Young People Early (Netherlands)

Engage Young People Early (ENYOY) is a Netherlands-based digital, transdiagnostic, clinically- and peer-moderated treatment platform designed for young people experiencing emerging mental health conditions (Doorn et al., 2023). *ENYOY* is based on the *Moderated Online Social Therapy (MOST)* model developed in Australia. The programme was explicitly framed as indicative prevention, aiming to support young people early on before their needs escalate.

ENYOY combines several integrated components. These include guided therapy journeys tailored via a questionnaire and algorithm (grounded in CBT and other related approaches), a personalised therapy toolkit, a moderated digital social network where young people could interact and support one another, and professional digital support from both peer workers and clinical moderators. The platform included a structured safety system including automated alerts for potential self-harm or suicide risk and regular moderator screening.

The study, using a repeated-measures within-subjects design, followed Dutch-speaking young people aged 16-25 years (n = 131; average age 21.6 years) who participated in *ENYOY* over a 6-month intervention period (Doorn et al., 2023). Outcomes were assessed at baseline, three months (halfway through the intervention), six months (at intervention competition), and at a 12-month follow-up. Young people were eligible if they were experiencing low to moderate distress.

Across the intervention period, statistically significant improvements were made over time in both psychological distress (measured with the K10) and daily functioning (using the SOFAS). Distress scores improved between baseline and three months (a decline of 3.48; Cohen's d = 0.62—a moderate effect) and again between three and six months (a decline of 2.10; Cohen's d = 0.37—a small effect). While there were no further improvements after the intervention, the gains in alleviating distress during the programme were maintained at the 12-month follow-up.

Social and occupational functioning showed a similar pattern, with significant gains during the active intervention period and stability thereafter. Functioning improved between baseline and three months (an increase of 4.30; Cohen's d = 0.50—a moderate effect), followed by a similar increase between three and six months (increase of 4.33; Cohen's d = 0.50—a moderate effect). These gains in functioning were maintained at the 12-month follow-up.

Improvements were also observed for secondary outcomes that were examined, including mental wellbeing, quality of life, and meaningfulness, which increased during the intervention period with the gains sustained at the 12-month follow-up.

Beyond average changes, the authors also examined individual-level change. Using a Reliable Change Index approach, they reported that a meaningful proportion of participants showed reliable improvement by six months (around 38% of participants for distress and 50% for functioning), while only a small minority worsened.

Importantly, a subgroup of young people experiencing moderate distress at the beginning of the intervention showed a higher likelihood of worsening distress at the 12-month follow-up compared with those who were help seeking with mild distress. This finding highlights that young people presenting with moderate need may require greater continuity of support beyond the initial intervention window.

Overall, this study provides supportive evidence that a digital, peer- and clinician-moderated transdiagnostic platform can be a promising model for early intervention among young people with low to moderate distress. This may be particularly important in the context of systems facing long waitlists and barriers to accessing timely care. However, the authors emphasised that the study was not a randomised controlled trial, which limits causal conclusions, and noted a clear sample bias towards female and highly educated participants, which may limit generalisability.

Aprende a Manejar tus Emociones / Learn to Manage your Emotions (Spain)

A similar programme, the Aprende a Manejar tus Emociones / Learn to Manage your Emotions (AMTE), is an internet-delivered transdiagnostic CBT programme. This programme was especially designed as an indicated prevention intervention for adolescents with emerging symptoms of anxiety and/or depression (Schmitt et al., 2022). Based in Spain, this programme aims to address common underlying processes that cut across anxiety and depressive symptoms (including emotion regulation difficulties, avoidance, and anxiety sensitivity).

AMTE is a 7-week self-directed online programme (plus structured phone support) consisting of eight modules delivered in a flexible modular format. Modules include building motivation, learning about emotions, increasing positive activities, emotional awareness, cognitive flexibility, coping with body sensations, coping with emotional situations, and relapse prevention/maintenance. Young people were expected to complete one module per week, with each module lasting around 30 minutes. Modules were delivered through a web-based platform that included videos, exercises, and homework tasks, presented in a youth-friendly format.

A key feature of AMTE is that it is not purely self-guided. Participants and their parents received regular therapist phone calls (nine calls during the programme), including separate check-ins with both the young person and the parent. Parents also had access to a dedicated section on the platform where they could monitor progress and download summaries of modules to support their young person's learning at home.

An evaluation was conducted in Spain during 2020-2021, with 30 participants aged 12-18 years recruited from four public secondary schools (Schmitt et al., 2022). School counsellors referred young people who appeared to have anxiety and depressive symptoms. Young people completed online screening questionnaires and a diagnostic interview (Mini International Neuropsychiatric Interview for Children and Adolescents [MINI-KID]) via video call. Young people were only eligible to participate if they showed need upon screening, but were excluded if they met criteria for a mental health condition, had high or very high mental distress, or were already receiving psychological treatment.

The evaluation used a pre-post design with a 3-month follow-up, and included 30 adolescents at baseline (average age 14 years; 56.7% female). Attrition was relatively low for a digital programme, with 26 participants completing post-treatment assessment and 24 completing the follow-up. Across the study period, young people reported statistically significant improvements in several mental health outcomes. This included reductions in: self-reported anxiety and depressive symptoms (e.g., RCADS-30 total and selected subscales—moderate effect sizes); general depressive symptoms (moderate effect size); pathological worry (small effect size); clinician-rated symptom severity (large effect size); and, the severity of young people's self-identified "top problems" (as rated by both the young people and their parents). Acceptability of the programme was high, with strong ratings of usability, satisfaction, and the quality of the relationship with their therapist, from both the young people and their parents.

Overall, this study provides promising early evidence that a structured internet-delivered transdiagnostic CBT programme with therapist and parent support can be feasible and acceptable for adolescents with subclinical symptoms and may help reduce emerging anxiety and depressive symptoms over time.

Screening and Treatment for Anxiety and Depression (USA)

Screening and Treatment for Anxiety and Depression (STAND) is a digitally supported, stratified stepped-care model developed to improve scalable access to prevention and early intervention for anxiety and depression in emerging adults (18-25-year olds) (Wolitzky-Taylor et al., 2026). *STAND* has been implemented within an initial set of U.S. tertiary education settings, although given digital delivery of the programme, it could be implemented outside education settings. The programme was designed to reduce barriers to care by combining online screening, measurement-based triage, and digitally delivered CBT content. Care intensity is matched to symptom severity and ongoing monitoring to support steps-up or steps-down in support as needed.

Young people complete online symptom screening (including suicidality and basic needs, like food insecurity) and are then allocated to a tier of care using the Computerized Adaptive Test for Mental Health (CAT-MH), an assessment brief enough to be repeated weekly. Tiering is based on level of distress, with the goal of supporting young adults before they progress into crisis-level need.

Young people assessed as having low or no anxiety or depression symptoms are considered Tier 1, and are provided a self-directed digital CBT prevention programme, targeted at repetitive negative thinking (adapted from rumination-focused CBT). Content includes practical CBT-informed skills such as problem solving, concrete thinking, relaxation, mindfulness, self-compassion, and interpersonal effectiveness/assertiveness. Those in Tiers 2 (young people assessed as having mild to moderate depression and/or up to severe anxiety) and 3 (severe depression and/or elevated suicide risk) are offered clinician-delivered therapy. Young people in Tier 3 also receive psychiatric medication, when needed.

Focusing on those young people with low to no symptoms (Tier 1), one study evaluated whether the self-directed digital CBT prevention programme alleviated symptoms for this group (Wolitzky-Taylor et al., 2023). At one university (n = 180),

where participants completed 4.2 lessons on average, they found that anxiety and depression scores declined significantly over time (large effect sizes using the Computerized Adaptive Test [CAT]-Anxiety Inventory and CAT-Depression Inventory, respectively). In contrast, however, in a smaller community college pilot with only 16 participants, they found only marginal drops in anxiety and no changes in depressive symptoms. Engagement in the programme, however, was lower (1.7 lessons, on average) than the larger pilot study, suggesting that the programme is likely most effective when engagement is high enough to deliver a meaningful "dose" of prevention content, and/or when implemented in contexts where uptake and sustained participation are more feasible.

The study also found meaningful and significant reductions in distress among those in the Tier 2 treatment (i.e., those with moderate to high symptoms who received the same digital content as Tier 1 participants plus online peer-coaching), demonstrating that the intervention may be intensive enough to support meaningful improvement, while still being delivered largely through digital tools with peer support rather than clinician-only care.

Overall, STAND provides an example of a structured, scalable system, delivered online, that links screening to targeted interventions.

Summary

E-therapy interventions showed promising evidence of improved outcomes over time, particularly for psychological distress, anxiety, and depression, and were often positioned as scalable models for early intervention. However, the evidence base is still developing, with many studies relying on open trials without control groups, making it difficult to draw strong causal conclusions. A recurring theme is that engagement matters. That is, digital interventions are most likely to show benefits when young people complete enough content to receive an adequate "dose" of the programme.

Digital mental health approaches

Digital mental health tools include apps, chatbots, websites, and online programmes designed to support young people's wellbeing and provide low-intensity strategies for managing stress, anxiety, and low mood. These tools are often positioned as "light touch" interventions that can be accessed quickly, anonymously, and at no cost, making them appealing as early intervention or prevention supports. Digital tools vary widely in their structure and intensity, ranging from short daily chatbot activities to more structured multi-week programmes grounded in CBT or positive psychology. Importantly, because many digital tools are opt-in and self-directed, they often attract young people who are already experiencing some level of distress, even when designed to be universal supports.

Chatbots

Headstrong (Aotearoa New Zealand)

Headstrong is an Aotearoa New Zealand-based digital wellbeing app that teaches young people mental health skills through "dialog agent"/chatbot" conversations and short interactive activities (Holt-Quick et al., 2021). Within the *Headstrong* ecosystem, there were two chatbot programmes that were evaluated independently: 1) a 3-week de-stress intervention for undergraduate students called *21-Day Stress Detox*; and, 2) *Aroha*, a chatbot aimed at supporting young people's wellbeing during the COVID-19 pandemic (but which, today, functions as a chatbot guide within the *headstrong* ecosystem, more generally).

21-Day Stress Detox was implemented as a brief, low-intensity digital wellbeing programme delivered via a chatbot through Facebook Messenger (Williams et al., 2021). The programme was developed to provide young adults with short, practical strategies for managing stress and anxiety in everyday life. It is positioned as a universal, self-guided support tool, designed to be easy to access and to fit into daily routines.

The intervention consists of 21 daily sessions, with each session intended to take around 5-7 minutes, and structured into three themed weeks (i.e., feelings, thinking, and actions). Content is delivered in a conversational style (as if messaging with a friend), using brief text-based prompts and interactive "quick option" responses (e.g., yes/no; "tell me more"). Sessions include a mix of psychoeducation and skills-based activities drawn mainly from CBT, with additional positive psychology elements such as gratitude journalling and building positive habits. The programme also uses short audio tracks (e.g., relaxation, mindfulness), GIFs and humour, reflective exercises, and simple challenges to support engagement.

The chatbot was evaluated in an open-label single-arm trial with University of Auckland students aged 18-24 years, recruited in late 2019 (Williams et al., 2021). The study was advertised to students who self-identified as "stressed." On average, participants had a World Health Organization-Five Well-Being Index (WHO-5) score of 42.2/100, whereby 50 is a typical cut-off for possible depression, and an average of 8.7 points on the Generalised Anxiety Disorder-7 (GAD-7), whereby scores in the range of 5-9 are considered mild. Taken together, the programme may be best thought of as a universal tool that is likely to attract young people who are already feeling stressed or struggling, with a majority with low to moderate levels of distress.

In total, 124 participants completed baseline measures, 110 commenced the chatbot, and 64 completed the post-intervention assessment. Engagement with the chatbot averaged 11 days out of the maximum 21 days. Participants generally reported the chatbot was easy to use and acceptable, and qualitative feedback suggested the programme's convenience and relatable tone were key strengths.

From baseline to post-intervention, participants showed statistically significant improvements in wellbeing (Cohen's d = 0.49—a small effect size) and reductions in perceived stress (measured through the Perceived Stress Scale-10 [PSS-10]; Cohen's d = 0.38—a small effect size). There was no statistically significant change in anxiety symptoms.

Conducting the analyses with two separate groups based on their baseline anxiety scores (those with GAD-7 scores 10 or higher [i.e., those with high levels of anxiety] vs. those with GAD-7 scores lower than 10 at baseline [i.e., those with low to moderate levels of anxiety—no users had a GAD-7 score of 0]) found the pattern of results stronger for those with higher levels of anxiety. There were, however, still improvements in wellbeing and perceived stress among the group of young people with low to moderate levels of anxiety.

Similarly, *Aroha* was a brief, low-intensity digital mental health support chatbot. It was rapidly adapted and launched during the first COVID-19 lockdown in Aotearoa New Zealand to provide young people with practical strategies for managing pandemic-related worry and stress. *Aroha* used evidence-based approaches drawn from CBT and positive psychology, and was co-designed with young people, particularly Pacific youth and rangatahi Māori.

Aroha was delivered via Facebook Messenger, meaning young people could access it using a familiar platform without needing to download a separate app. The chatbot was designed with a friendly, relatable persona ("*Aroha*" meaning caring and kind, as well as love), and developed using a bicultural approach grounded in Te Tiriti o Waitangi, with Māori input guiding both process and content so that it would feel relevant and acceptable for rangatahi Māori and their whānau.

Unlike "day-by-day" programmes that prescribe a fixed sequence, *Aroha* was designed to be more user-led, allowing young people to choose the type of support they wanted after a short onboarding and brief check-in. The chatbot content was organised into short modules that could be repeated, and included practical wellbeing and anxiety-management strategies such as staying connected, calming activities, gratitude, spirituality, getting active, and general wellbeing tips (including self-care, routine, sleep protection, and alcohol/drug use). The chatbot used a combination of text, images, "poster-style" advice content, and interactive elements to support engagement.

The rapid rollout during the pandemic limited the ability to develop a strong evaluation alongside the release of the chatbot, but an open online recruitment call that brought users to the chatbot showed some modest decline in COVID-19-specific anxiety among the users who completed the baseline and exit feedback forms (n = 30) (Ludin et al., 2022).

Overall, the findings suggest that brief, conversational chatbot formats may be a feasible and acceptable way of delivering low-intensity psychological support for young people.

It is important to note that the chatbots discussed above are primarily pre-programmed with a limited set of responses designed by real people. Many newer chatbots are increasingly using AI to increase engagement, with some also experimenting with generative AI.

Website-based programmes

Bite Back (Australia)

Bite Back is a self-guided, web-based positive psychology programme co-designed with young people (Manicavasagar et al., 2014). The programme aims to improve young people's wellbeing and reduce symptoms of psychological distress by building strengths and skills across multiple positive psychology domains. Delivered entirely online, the programme included interactive exercises and information across nine domains: gratitude, optimism, flow, meaning, hope, mindfulness, character strengths, healthy lifestyle, and positive relationships. The website also provides links to additional resources and includes moderated opportunities for young people to post comments and engage in online discussion.

The programme was evaluated in a randomised controlled trial with young people (*n* = 154) aged 12-18 years living in Australia, recruited through schools and youth organisations (Manicavasagar et al., 2014). Participants were randomised to either the *Bite Back* programme or a control condition consisting of neutral entertainment-based youth websites that contained no mental health or wellbeing content. Participants in both groups were asked to use their assigned website over a 6-week period, with weekly reminder emails encouraging engagement.

Baseline anxiety symptom levels were generally low-to-mild, with average baseline scores 8.9 for depression (normal/no symptoms considered in the 0-9 range), 6.4 for anxiety (anxiety symptoms considered normal in the 0-7 range), and 10.6 for stress (considered normal in the 0-14 range) on the Depression, Anxiety, and Stress Scale-Short form (DASS-21) subscales (converted to DASS-42 scoring). Hence, young people in the study had, on average, low levels of distress.

Overall, programme effects were modest in the full intervention group, but stronger benefits were concentrated among young people who engaged more frequently or for longer durations. Participants who used *Bite Back* showed statistically significant reductions in depressive symptoms and stress, and improvements in wellbeing from baseline to six weeks, while the control group did not show any changes over time. There were no statistically significant changes in anxiety symptoms.

Importantly, the programme appeared to require a minimum dose of engagement. That is, improvements were primarily observed among those who used *Bite Back* for 30 minutes or more per week or visited the website three or more times per week. Users with low adherence did not show meaningful change. Among high frequency users, depressive symptoms declined on average from 11.8 points to 6.4 points (approximately 55% of a standard deviation difference from the baseline standard deviation among this group—a moderate effect) and anxiety symptoms declined from 8.1 to 5.7 (a 33% standard deviation difference—a small effect). Moreover, stress declined from 10.8 to 7.6 (as measured through DASS-21; a 50% standard deviation difference—a moderate effect) and wellbeing improved from 23.0 to 26.3 (as measured by the Short Warwick-Edinburgh Mental Well-Being Scale [SWEMWBS]; a 50% standard deviation difference—a moderate effect).

Acceptability of *Bite Back* was high among participants who used the programme, with most young people describing it as fun, interesting, and easy to use, and the

majority reporting they would continue using it after the study ended. However, adherence and attrition were notable challenges, with time constraints, technical issues, and perceived lack of relevance (particularly among older adolescents) reported as common barriers to engagement.

Mobile apps

Whitu: seven ways in seven days (Aotearoa New Zealand)

Whitu: seven ways in seven days is a free mobile app aimed at, and co-designed by, young people of high school age in Aotearoa New Zealand (Serlachius et al., 2021; Thabrew et al., 2022). The app contains seven different modules, including calming techniques, identifying and coping with emotions, identifying self-compassion, physical health and healthy routines, and goal setting, which are grounded in positive psychology, CBT, and psychoeducation therapeutic approaches. Each module can be completed within a week. Users can choose from a range of strategies and are encouraged to engage with the app through daily notifications and badge awards.

In a randomised control trial, participants (n = 90) could opt-in to the trial if they considered themselves healthy and weren't currently receiving any mental health treatment (Thabrew et al., 2022). A range of mental health outcomes (i.e., emotional wellbeing, depressive symptoms, anxiety symptoms, self-compassion, stress, sleep quality) were assessed at baseline, after four weeks of app participation, and three months after the baseline assessment. On average, participants in the trial had an averageGAD-7 score of 9.4 and average 20-item Centre for Epidemiological Studies Depression Scale (CES-D) score of 20.7, indicating participants had, on average, no or low levels of anxiety and depressive symptoms on the lower end of those with moderate symptoms.[5]

Compared to the control group (study participants who were not given access to the app and asked not to use any other mental health support apps during the 3-month study period), young people who used the app had improvements in their emotional wellbeing (an increase of 13.2 points on the WHO-5)—a small effect [Cohen's f^2 = 0.05]), mental wellbeing (a 2.4-point difference on the SWEMWBS—a small effect [Cohen's f^2 = 0.08]), self-compassion (a 0.6-point difference on the Self-Compassion Scale-Short Form—a small effect [Cohen's f^2 = 0.09]), and sleep quality (a 1.1 point difference on the Sleep Quality Scale—a small effect [Cohen's f^2 = 0.08]). Moreover, those who used the app (compared to those in the control group) reported fewer depressive symptoms (a 5.3-point difference on the CES-D—a small effect [Cohen's f^2 = 0.05]) and lower levels of stress (a 4.7-point difference on the PSS-10—a small effect [Cohen's f^2 = 0.11]). Although there was a statistical decline in anxiety symptoms for those using the app (as measured through the GAD-7), there was no statistical difference (at traditional levels) compared to symptoms reported by the control group of users not using the app.

Importantly, these improvements were sustained at the 3-month follow-up among those who used the app, and the differences between these users and the control group persisted. In addition, at the three-month follow-up, anxiety symptoms had

[5] Scores below 10 on the GAD-7 and below 16 on the CES-D are generally thought of as having no or low anxiety and depressive symptoms, respectively.

continued to decline for those who had used the app to the point that this group was now reporting fewer anxiety symptoms compared to the control group at statistically significant levels.

Overall, young people using the app were positive about their experience, especially the type of module content. User engagement with the app was high. Rangatahi Māori users made special mention of the cultural design elements. Indeed, although this app was co-designed, additional refinements were made based on feedback from young people in the pilot study (Serlachius et al., 2021). Subjective app quality scores went up significantly between the pilot and the version of the app used in the randomised control trial. These scores increased not only in terms of overall usability and experience, but also in the perceived impact the app was having on their mental health awareness and knowledge (Serlachius et al., 2021; Thabrew et al., 2022).

Video-game based programmes

SPARX (Aotearoa New Zealand)

SPARX (Smart, Positive, Active, Realistic, X-factor thoughts) is a 7-module, unguided, internet-based cognitive behavioural therapy programme developed in Aotearoa New Zealand for adolescents experiencing mild to moderate depression (Fleming et al., 2025). *SPARX* is delivered in a video game format, where young people complete CBT-informed modules within a fantasy-based interactive environment. The programme integrates psychoeducation, behavioural activation, emotional regulation, problem solving, and cognitive restructuring strategies. *SPARX* was originally evaluated in a randomised controlled trial showing non-inferiority compared to treatment as usual in primary care settings (Merry et al., 2012).

From 2014, *SPARX* was made freely available nationwide as a self-help digital intervention, accessible without referral to anyone with a New Zealand-based IP address. The implementation model was intentionally low barrier, not requiring a professional referral and young people could self-register online. The programme embedded the Patient Health Questionnaire for Adolescents (PHQ-A) at the beginning of modules 1, 4, and 7 to monitor depressive symptoms over time.

Between 2014 and 2021, 21,310 young people aged 12-19 years registered to use *SPARX* (approximately 2% of the national adolescent population), with 13,564 (63.7%) of those young people beginning the programme (Fleming et al., 2025). Engagement declined across the modules. Of those who started *SPARX*, 51.1% completed the first module, 7.4% completed at least four modules, and 3.1% completed all seven modules.

SPARX was designed for young people with mild to moderate depressive symptoms, however baseline data showed that 46.7% of those who began the programme reported moderately severe or severe symptoms, 37.4% reported mild to moderate symptoms (the intended target group), and 16.1% reported minimal symptoms.

Among young people who completed at least two PHQ-A assessments (at module 1 and then again at modules 4 and/or 7), depressive symptoms declined significantly over time. For those completing modules 1 and 4, the mean PHQ-A score declined from 14.0 to 11.8 (average difference of 2.2 points; Cohen's *d* effect size = 0.38—a

small effect). For those completing all seven modules, mean scores declined from 14.1 to 10.5 (average difference of 3.6 points; Cohen's *d* effect size = 0.51—a moderate effect). These declines were similar to those found in the initial randomised control trial of the *SPARX* pilot study, where young people who were assigned to completing the *SPARX* programme were compared to young people assigned to face-to-face counselling delivered by trained counsellors and clinical psychologists (i.e., treatment as usual) (Merry et al., 2012).

Overall, *SPARX* provides strong Aotearoa New Zealand-based evidence that a freely accessible, unguided digital CBT intervention can reduce depressive symptoms among adolescents who engage with it. Moreover, *SPARX* was able to reach a meaningfully large proportion of the population. Effectiveness, however, likely relies on consistent engagement with the programme.

Starship Rescue (Aotearoa New Zealand)

Starship Rescue was a co-designed cognitive behavioural therapy and biofeedback-based eHealth game, which aimed to support the mental health of young people with long-term physical conditions (Thabrew et al., 2021). The video game consisted of five modules, with each taking between 15-30 minutes to complete. These modules used CBT approaches to teach young people about recognising and managing anxiety symptoms and support problem solving skills.

Based in Aotearoa New Zealand, a pre-post evaluation was conducted among users aged 10-17 years (*n* = 24) with long-term physical conditions. Participants had to also have some anxiety symptoms. The average pre-intervention anxiety score was 9.9 on the GAD-7, indicating participants had, on average, low to moderately low levels of anxiety symptoms. Anxiety was measured at intake, upon completion of the whole game (which took, on average, 79 days for users to complete, with the quickest finishing in 12 days and the longest in 244 days), and three months after competition of the game.

Overall, users reported fewer anxiety symptoms immediately post intervention across three different measures of anxiety (GAD-7, Spence Children's Anxiety Scale, Likert visual analog scale). Users also reported higher quality of life (as measured through the Pediatric Quality of Life Inventory Scale). These gains were maintained 3-months post-intervention.

Summary

Taken together, the digital tools reviewed were generally acceptable to young people and often showed small-to-moderate improvements in wellbeing or stress-related outcomes, particularly when engagement was sustained. Effects on anxiety and depressive symptoms were more mixed, with several studies finding stronger benefits for positive wellbeing outcomes than for symptom reduction. A consistent pattern across digital interventions is that outcomes depend on adherence, with improvements more likely when young people completed enough sessions or used the tools frequently. Overall, digital tools appear most useful as scalable early supports and entry points into care.

Family-integrated approaches

Family-integrated approaches include interventions that directly involve parents, caregivers, or whānau and family as part of early intervention and secondary prevention for young people's mental health. These approaches recognise that adolescent mental health is shaped by family relationships, communication, and support systems, and that engaging families early can strengthen outcomes and improve the sustainability of change. It should be noted that other interventions discussed also included elements of family involvement (e.g., clinician follow-up with parents/caregivers, parent monitoring of programme engagement), however family involvement was not the primary focus of those interventions.

headspace single-session family therapy (Australia)

Single-session family therapy (*SSFT*) was integrated into *headspace* centres in Australia, in response to the persistent challenge that while *headspace* operates a soft entry point to mental health care, it often means that many young people only have limited involvement with *headspace* services, such as attending a therapy session only once or twice (Hopkins et al., 2017). Thus, traditional multi-session models don't meet the needs of substantial proportion of the young people engaging with *headspace* centres. *SSFT* was designed as a brief, family-focused intervention that could be delivered early (including at first contact) and still provide meaningful support to both the young person and their family/caregivers.

SSFT involved young people attending with parents and/or family members either at their first point of contact with *headspace*, or via referral from their existing *headspace* clinician. Prior to the session, families were mailed a short questionnaire to help them clarify what they wanted to work on and to support their preparedness for their session. The intervention itself was delivered as a single structured therapeutic session, sometimes using a reflecting team approach (where additional clinicians observe from behind a screen and contribute reflections on communication patterns), with the family's consent. At the end of the session, families received a written summary outlining key issues and solutions, and a follow-up phone call occurred 4-5 weeks later to check whether further support was needed.

The evaluation was a quantitative analysis of routinely collected service data from *SSFT* sessions delivered between January 2014 and July 2015 (over 19 months) (Hopkins et al., 2017). During this period, 175 *SSFT* sessions took place. Session experience data were available for 265 participants and participants' family members/caregivers across 102 sessions. Matched pre- and follow-up outcome data were available for 43 individuals across 37 sessions (i.e., young people and family members who completed the same measure at baseline and again at follow-up).

Two primary outcomes were examined. First, whether functioning improved (through the Outcome Rating Scale [ORS]—a measure of young person's state of functioning across individual, interpersonal, social role, and overall functioning) as reported by the young person and each family member attending the session. Second, participants' satisfaction with the *SSFT* session (measured through the Session Rating Scale [SRS]), which captures their sense of the usefulness and effectiveness of the session, in addition to the quality of their relationship with their clinician).

Among the subset of participants who had completed both pre- and post-session (*n* = 43) functioning scores, participants reported a statistically significant improvement from pre-session to follow-up (4-5 weeks later; small effect size), indicating that both young people and family members perceived improvements in the young person's functioning and wellbeing after *SSFT*. The authors did not find evidence that improvement differed by who was completing the ratings (i.e., young people and parents reported similar patterns of improvement over time), although mothers tended to rate the young person's functioning as lower overall compared with young people themselves.

Overall, participants rated *SSFT* sessions highly (an average SRS score of 33.75 out of 40), although just over half of participants scored below 36 (a threshold suggested by the measure authors as a possible indicator of concern). Mothers and fathers both rated sessions more positively than young people.

Summary

Taken together, the findings suggest that a single-session, family-based intervention delivered at the point of entry can be acceptable to families and may contribute to short-term improvements in young people's mental health and wellbeing. The study provides a useful example of how brief, family-inclusive models can be embedded into routine youth mental health service delivery, particularly in settings where engagement is often brief.

Summary of approaches

Table 1 summarises the programme evaluations discussed in the Findings section, grouped by broad approach type. A more comprehensive table of summary details can be found in Table A1 in the Appendix.

Table 1. Evaluation studies: Summary of features and effectiveness

Name	Approach	Sample	Health outcome	Improvement	Evidence strength
Therapy-based brief intervention approaches					
headspace Brief Intervention Clinics (Australia) (Schley et al., 2019)	Brief intervention clinics, small number (4-6 targeted therapy sessions)	122 12-25 year olds	Psychological distress	Large	Emerging
			Depressive symptoms	Moderate	
			Anxiety symptoms	Moderate	
			Social functioning	Moderate	
Jigsaw (Ireland) (O'Keeffe et al., 2015)	Brief therapy clinics, small number (average of six) therapy sessions	315 12-25 year olds	Psychological distress (17-25 year olds)	Large	Emerging
			Psychological distress (12-16 year olds)	Moderate	
Jigsaw (Ireland) (O'Reilly et al., 2022)	Goal-based therapy in BIC, small number (average of six) therapy sessions	3,310 12-25 year olds	Goal achievement	Large	Emerging
Mindspace Mayo (Ireland) (Corley et al., 2024)	Brief therapy clinics, small number (average of six) therapy sessions	1,184 12-25 year olds	Psychological distress	Large	Emerging
Community-based approaches					
headspace one-stop shops (Australia) (Cross et al., 2016)	One-stop shops, with six therapy sessions; highly accessible community-based centres offering a variety of services	26,058 12-25 year olds	Psychological distress	Small	Emerging
			Social and occupational functioning	No change	
headspace one-stop shops (Australia) (Hilferty et al., 2015)	One-stop shops, across all types of visits; highly accessible community-based centres offering a variety of services	581 10-24 year olds	Psychological distress	Small	Emerging
			Social functioning	Small	
Your Choice (Aotearoa New Zealand) (Clark et al., 2014)	Mental health system navigation; coordinated triage model connecting people to therapy services (average eight sessions)	581 10-24 year olds	Psychological difficulties	Moderate	Emerging
			Functioning	Large	
			Substance abuse	Small	
RISE (Australia) (Dowell et al., 2021)	Sports-imbedded approach; online and in-person delivery, with follow up for those at high risk	36 12-15 year old boys	Anxiety symptoms	Small	Emerging
			Depressive symptoms	Small	
RISE (Australia) (Waters et al., 2022)	Sports-imbedded approach; online and in-person delivery, with follow up for those at high risk	176 12-15 year old boys	Anxiety symptoms	No change	Moderate
			Depressive symptoms	Small (among "higher risk" only)	
RISE (Australia) (Waters et al., 2025)	Sports-imbedded approach; RISE programme delivered in different formats	671 12-15 year old boys	Anxiety symptoms (among those with elevated symptoms)	Moderate	Moderate
			Depressive symptoms (among those with elevated symptoms)	Moderate	
E-therapy and e-screening mental health approaches					
ENVOY (Netherlands) (Doorn et al., 2023)	Moderated digital platform; 6-month guided therapy programme, social network	131 16-25 year olds	Psychological distress	Moderate	Emerging
			Social functioning	Moderate	
AMTE (Spain) (Schmitt et al., 2022)	Online CBT with guidance; 7-week self-directed online programme, containing 8 30-minute modules, with therapist phone calls	30 12-18 year olds	Depressive symptoms	Moderate	Emerging
			Anxiety symptoms	Moderate	
STAND (US) (Wolitzky-Taylor et al., 2023)	Digital stepped care; online screening with digitally delivered CBT content	377 18-25 year olds	Anxiety symptoms	Large	Emerging
			Depressive symptoms	Large	
Digital mental health tools					
Headstrong: 21-Day Stress Detox (ANZ) (Williams et al., 2021)	Conversational style chatbot on Facebook	64 18-24 year olds	Perceived stress	Small	Emerging
			Anxiety symptoms	Small	

	Messenger (FM); delivers 21 5-7 minute sessions				
Headstrong: Aroha Chatbot (ANZ) (Ludin et al., 2022)	Conversational style chat-bot on FM; user-led chat support in short modules	30 13-24 year olds	COVID-19-related anxiety	Small	Emerging
Bite Back (Australia) (Manicavasagar et al., 2014)	Self-guided, web-based positive psychology programme; activities with social online engagement	154 12-18 year olds	Depressive symptoms	Moderate	Good
			Anxiety symptoms	Small	
			Perceived stress	Moderate	
Whitu (ANZ) (Serlachius et al., 2021; Thabrew et al., 2022)	Mobile app grounded in multiple therapeutic approaches; seven modules with notifications	90 16-30 year olds (*M* = 24 years)	Depressive symptoms	Small	Good
			Anxiety symptoms	No change	
			Perceived stress	Small	
SPARX (ANZ) (Fleming et al., 2025; Merry et al., 2012)	Video-game based unguided CBT programme consisting of 7 modules	1,004 12-19 year olds	Depressive symptoms (4-module completion)	Small	Good
			Depressive symptoms (7-module completion)	Moderate	
Starship Rescue (ANZ) (Thabrew et al., 2021)	Video-game based CBT programme (5 15-30-minute modules) for young people with long-term physical conditions	24 10-17 year olds	Anxiety symptoms (measured with multiple measures)	Moderate-to-large	Emerging
Family-integrated approaches					
headspace (Australia) (Hopkins et al., 2017)	Single structured therapy session with young person and their family	43 young people	Social functioning	Small	Emerging

Note. ANZ = Aotearoa New Zealand.

Symptom improvement by effect size:[6]	No/marginal change Cohen's *d* = *0.00-0.20*	Small Cohen's *d* = 0.21-0.49	Moderate Cohen's *d* = 0.50-0.79	Large Cohen's *d* => 0.80
Evidence strength: [7]	Emerging	Moderate	Good	

[6] See the Methods section for a note on how effect sizes were presented and/or calculated across studies.

[7] Evidence strength ratings were assigned using an adapted hierarchy based on established levels-of-evidence frameworks (e.g., Oxford Centre for Evidence-Based Medicine [OCEBM]; National Health and Medical Research Council [NHMRC]), with randomised controlled trials considered "good" evidence, controlled non-randomised studies "moderate," and uncontrolled or observational evaluations "emerging."

Discussion

Building on the growing recognition that mental health conditions often emerge during adolescence and early adulthood, and that timely support can prevent distress from escalating, this report examined the effectiveness of early intervention and secondary prevention mental health services for young people and rangatahi aged 12-24 years. Drawing on a structured scan of the published literature, studies were screened for relevance and prioritised where they evaluated the impact of services or programmes on mental health outcomes. A particular focus on interventions aimed at, or including, young people with low to moderate mental distress at baseline. In total, there were 20 evaluations of 16 programmes or services. Evidence was then synthesised into a narrative review and organised by broad service model type to support interpretation across diverse delivery settings and approaches. Several key findings emerged.

Young adulthood is a sensitive period for the development of distress and mental health conditions, with a gap in targeted, age-appropriate service provision

The research consistently highlighted how adolescence, and particularly the transition to young adulthood, represent a sensitive period in the development of mental health conditions compared to adulthood and childhood. The research emphasises that the range and resourcing of services aimed at this age group is lacking given the importance of this lifecourse stage. It has only been more recently (e.g., past 10-15 years) that there has been an increasing recognition of the need for services that are age-appropriate and occupy a systems-level space between paediatric and adult mental healthcare provision. The interventions and programmes discussed in this report demonstrated that there is a high level of need for services, as well for those services to be tailored towards the emerging adulthood period.

Indeed, in Aotearoa New Zealand, young people have been explicit in the ways that the transition from youth services to adult services feels like a stepped and severe transition, with these services being less supportive or whānau and family inclusive, and lacking continuity (Te Hiringa Mahara, 2023). This finding is replicated internationally, with young people highlighting that preparation for the transition, flexibility around transition timing, individualised plans, and informational continuity between providers would make the transition between children and youth and adult systems a more positive experience (Broad et al., 2017).

A majority of the interventions, even very light-touch tools, were effective, to varying degrees, in supporting mental health

Overall, this review found that early intervention and secondary prevention approaches for young people and rangatahi can be effective in reducing mental distress and improving wellbeing and functioning, particularly when services are designed to be accessible, youth-friendly, and responsive to need. Across the evaluations included in this report, the strongest and most consistent evidence of improvement was observed in mental distress, wellbeing, and functioning, with more mixed findings for anxiety and depressive symptom reduction specifically.

It is important to acknowledge the diversity of supports included in this report, such as the ways young people engaged with programmes (e.g., in-person, online, content only) and different types of therapeutic approaches used (e.g., CBT, mindfulness). That these supports were found effective across a range of mediums points to the way that a diversity in offerings, at a systems level, is important for young people seeking and continuing to engage with either one or multiple programmes that support their mental health wellbeing.

Importantly, the interventions reviewed were not all designed to deliver clinical treatment in the traditional sense. That is, many were intended as low-intensity, light touch, and brief interventions. This means that "effectiveness" often reflects a combination of symptom change and broader indicators of benefit, including improved functioning, increased confidence and coping, improved help-seeking capability, and high acceptability and engagement among young people.

Interventions designed to support young people with low to moderate distress often engage those with high need. It is essential these supports are able to support young people with higher needs into appropriate care

Across service models, early intervention services did not necessarily equate to low baseline need. Even where services are framed as supports for mild to moderate need, many evaluations show that a substantial proportion of young people enter services with high or very high levels of distress. This pattern was especially apparent in community-based brief intervention services and youth hubs.

This is not necessarily a weakness. Rather, it highlights how early intervention entry points can function as "pressure valves" within wider mental health systems. This may be particularly important when specialist services are difficult to access. For example, even lighter touches such as free phonelines (or, increasingly, text lines) have been proven effective in terms of connecting people to the appropriate supports for their needs (Gribble et al., 2018).

However, it does have implications for service design. It is essential that programmes are resourced and structured in ways that can safely respond to higher levels of need (as shown in many of the interventions in this report). This includes clear triage processes, risk management, and referral pathways for young people whose needs escalate or are outside the intended scope.

Moreover, it also intuitively points to the fact that, because young people are predominately accessing services in high or very high distress, those in mild to moderate distress may not think their symptoms are 'bad enough' or that these services aren't meant for them. Indeed, in Aotearoa New Zealand, young people report that significant barriers to accessing health care services include not thinking their problems are serious enough to receive support and being concerned that services were too busy (Clark et al., 2023; Fenaughty et al., 2023).

Programmes or public health education that increases young people's mental health literacy, which contributes to improved recognition of symptoms, reduces stigma, and increases likelihood of seeking support (Bonabi et al., 2016; Iswanto & Ayubi,

2023; Özparlak et al., 2023), may be an important for encouraging young people with lower levels of distress to seek help for their mental wellbeing earlier.

Accessibility and satisfaction with programmes and services generate engagement and are essential for improved mental health outcomes

Across the models reviewed, accessibility and engagement emerged as major drivers of impact. Many of the interventions that showed promising outcomes were those that reduced barriers to entry (for example, through self-referral pathways, rapid assessment, flexible delivery settings, and free access). This matters because young people's engagement with mental health supports is often brief, intermittent, or shaped by practical constraints such as time and transport, and other barriers such as stigma and comfort with clinical environments (Babajide et al., 2020; Vyas et al., 2015).

Importantly, comparisons within these evaluations, where data were available, showed that young people who had low engagement and content completion rates had poorer outcomes than those who completed the programmes. Services that were designed to be youth-friendly and non-judgemental, and that emphasised choice and fit (for example, in where sessions occur, who delivers them, or what content is prioritised), appeared to support stronger acceptability and satisfaction.

Co-design with young people is a critical part of developing acceptable and effective mental health supports for young people

Co-design is critical for more than simply increasing satisfaction. Across the interventions reviewed, programmes that demonstrated stronger engagement patterns, particularly digital tools, were often those that had incorporated iterative youth input into usability, tone, content format, and delivery platforms. For example, several app- and chatbot-based interventions refined features such as language style, reminder frequency, gamification elements, and visual design following pilot feedback from young people. In some cases, subjective app quality scores increased following youth-led refinements, alongside improved perceptions of impact and relevance. This suggests that co-design may influence not only how much young people like a programme, but whether they stay engaged long enough to receive a meaningful "dose" of the intervention.

In digital contexts especially, co-design appears closely linked to adherence. The evidence in this review consistently showed that outcomes were stronger among young people who completed more sessions or modules. However, sustained engagement in self-guided tools is notoriously difficult. Co-design processes that prioritise personalisation, interactivity, cultural resonance, and alignment with how young people naturally use technology may therefore function as indirect mechanisms for improving effectiveness by increasing retention. In this sense, co-design should be understood not only as an ethical or participatory principle, but as an implementation strategy.

At a system level, embedding co-design as an ongoing process (rather than a one-off consultation phase) may be particularly important. Young people's preferences, digital behaviours, and social contexts evolve rapidly. Several interventions in this

review underwent substantial post-launch modifications in response to user feedback or implementation challenges. Continuous feedback loops, youth advisory groups, and adaptive design processes may therefore be central to sustaining both relevance and impact over time.

This is not to say that supports for young people that are not co-designed have not been effective in supporting young people's mental wellbeing. However, that most supports that have been implemented and evaluated for their effectiveness for young people with low to moderate distress over the past ten years *do* include elements of co-design speaks to the recognition of the importance of co-design within the mental health field more broadly.

Digital and online mental health tools were effective in supporting mental health, pointing to a lower-cost and scalable area for further intervention development

Digital and online approaches also showed promise as scalable early supports, particularly when targeted at young people with low to moderate distress and when engagement was sustained long enough to provide a meaningful "dose" of content. Thus, digital tools provide a cost-effective, light touch, scalable, and easily accessible way to reach young people who experience distress. Moreover, as evidenced through several of the interventions in this report, apps can be developed quickly to meet a need (such as in the case of the COVID-19 pandemic), and be flexible and adapt, particularly in the case of chatbots and phone apps where live updates can be made and pushed to users.

Across digital tools, however, the evidence consistently suggests that benefits depend heavily on uptake and adherence. Programmes that were self-guided or low intensity tended to show modest average improvements, with stronger outcomes among participants who completed more modules or engaged more frequently. This highlights a key implementation challenge for digital early intervention. That is, the effectiveness of the content may be less of a limiting factor than whether young people stay engaged long enough for it to matter. One systematic review of how children and young people engage with digital mental health interventions found that young people preferred digital tools that used videos and limited text, allowed personalisation, created opportunities to connect with others, and delivered reminder notifications (Liverpool et al., 2020). If digital interventions are to work, they need to be designed around youth engagement and usability which, as noted above, are more likely to succeed if they co-designed with young people.

The research in this report suggested, too, that digital tools may be most effective when paired with some form of human support, such as coaching, brief therapist contact, moderation, or structured check-ins, or when embedded within a wider service model that supports retention.

Importantly, however, is the recognition that young people may already be moving on in terms of the acceptability of apps and websites when seeking mental health support. Indeed, research shows that young people today are moving away from downloading stand-alone apps or browsing websites and, instead, their online engagement is concentrated on larger online platforms, like TikTok and Youtube

(Pew Research Center, 2023). These platforms are being used for information seeking (e.g., using them like search engines like google), communication, and entertainment. This trend points to both challenges (in the case of encouraging young people to download a new app or make repeated visits to a specific website) and opportunities (e.g., developing and making content accessible where they already are) for providing mental health supports online.

Moreover, recent international studies are pointing to how young people are increasingly turning to generative AI tools, such as ChatGPT or Claude, to support their mental health. For example, one recent representative study of US young people (aged 12-21 years) found that 13% of young people had used generative AI for mental health advice, with a large majority of those (93%) finding the advice helpful (McBain et al., 2025). Another study found that one quarter of UK adolescents (13-17 years old) had turned to AI chatbots for mental health support in the past year (Youth Endowment Fund, 2025). While young people have found these tools helpful and they eliminate some access barriers that may stop them from seeking help, such as providing anonymity, new research and high profile cases point to the ways that commonly used generative AI tools are not set up to provide appropriate support and may, in fact, worsen symptoms (Common Sense Media, 2025; Olsen et al., 2026).

At the broader policy level, government policies and service providers need to establish clear regulatory standards for safety, privacy, transparency of algorithms, and age-appropriate design for these tools. Integration of AI-tools into supports by service providers need strong and transparent safeguards and scaffolding for young people using these supports. Further engagement with young people (potentially in school settings or through public health messaging) to promote their mental health literacy, more generally, and in relation to the use of AI tools for their mental health, more specifically, will be important for safe use of these tools. This may particularly be important as these continue to potentially develop at a pace that government policy cannot keep up with.

Culturally appropriate, co-designed, and Indigenous-led approaches can improve the acceptability of and engagement in early intervention services for rangatahi Māori

While there were no programme evaluations in the scope of this report that compared whether programmes where cultural considerations were at the forefront of their development were more effective (in terms of improving mental health outcomes) for indigenous and ethnic populations *compared to* programmes without those design elements, there are many examples of strong evaluations of the effectiveness of mental and physical health interventions that are culturally informed (compared to business as usual) for the health of indigenous populations (for examples see: Hatcher et al., 2016; Henderson et al., 2011; Kildea et al., 2021).

The fact that many studies point to the poorer mental health outcomes and greater unmet need among indigenous young people is evidence that something about the system is not working for them. In turn, these facts motivate the need for the development of more culturally appropriate and incorporated services that better meet the need for these higher risk groups. Indeed, indigenous youth in one

Australian study felt the early intervention services available to them weren't working. They wanted early intervention that was relationship-based and culturally safe (e.g., trust, consistency, confidentiality), delivered through visible community points of contact, youth spaces and activities, and short, local-language mental health information, not just clinic-based counselling (McCalman et al., 2023).

Indeed, a large push of the mental health system reforms in Canada has been to ensure a very clear indigenous voice and lens in the development of community-specific programmes and service delivery (Malla et al., 2019). As an example, in the Inuit community this included expanding the definition of appropriate care beyond clinical therapy, building local capability and ownership within the mental health workforce, such as local youth workers rather than just a standard clinician-only model, and building wellbeing support around culturally meaningful activities, such as fishing trips, igloo building, and cooking workshops (Etter et al., 2019).

This applies to digital tools, too, which may be more likely to work and increase engagement in indigenous contexts if the tools are culturally adapted, decolonising, and co-designed (Li & Brar, 2022; Tighe et al., 2017). Indeed, there was high satisfaction with apps that were co-designed with rangatahi Māori, and researchers highlighted how rangatahi Māori users offered feedback discussing the importance of the cultural design elements (Serlachius et al., 2021; Thabrew et al., 2022).

More evaluative research is needed to better understand what is most effective for young people presenting with low to moderate mental distress, and for which groups

There is limited evaluative research that that demonstrates the effectiveness of early intervention and secondary prevention mental health approaches, particularly in the case of Indigenous and te ao Māori supports. Often services aren't resourced to do this work, there's a reliance on post-implementation analyses (vs. development of a research plan alongside the implementation of a new programme), or dependence on proof on concept analyses (that is, examining change in health outcomes within participants only vs. in addition to including a matched or control sample).

Similarly, many evaluations were limited to measuring health outcomes immediately at the conclusion of an intervention, which meant there was little evidence of whether the positive benefits among young people who used these supports persisted during the following months (or years). Indeed, in the studies that had repeated measures of health outcomes, such as those that collected health outcomes at different points during the intervention (e.g., to test whether the duration of the support mattered), or who were able to collect health information three or six months post-intervention, produced additional interesting insights.

In the case of having repeated measures, these studies found that the largest effects appeared during the initial stages of an intervention, but young people made additional gains in terms of improving their mental health by continuing a programme. In the case of programmes that followed-up months later, these studies often found that the wellbeing benefits of these supports persisted. This suggests that the interventions were providing young people with lasting tools and techniques to help them manage their mental health and wellbeing.

Strengthening the quality and consistency of evaluation, through clearer reporting of baseline need and longer follow-up, would help clarify whether programmes are preventing escalation and reducing symptoms.

Importantly, many of the evaluative studies either did not have sufficient statistical power or did not focus on potential heterogeneity in their findings. It is likely that some approaches work better for or not at all for certain groups, such as young people with disabilities or across different gender and sexual identities. Future research should also examine whether impacts differ by age, gender, ethnicity, disability status, and socioeconomic context, and whether particular delivery models (such as brief interventions, family-inclusive approaches, or digitally supported stepped care) are more effective for specific groups of young people.

Conclusion

Overall, this review highlights adolescence and young adulthood as a critical window for early intervention and secondary prevention. This is particularly important given the high and rising rates of mental distress and the ongoing gap in age-appropriate services that sit between paediatric and adult mental healthcare.

Across the evidence synthesised, many interventions, including low-intensity and “light touch” options, showed at least modest effectiveness in improving mental health outcomes, wellbeing, and functioning, although findings for anxiety and depressive symptom reduction were more mixed.

A key theme that emerged was that services designed for low to moderate need often still supported young people presenting with high to very high need. This reflects both unmet need and the role of low-threshold supports as an important entry point into care (i.e., a soft entry). Taken together, the findings reinforce the value of accessible, youth-friendly, and culturally responsive models, while also underscoring the need for stronger evaluative research to clarify which approaches work best for young people with subclinical symptoms, and for whom.

From a systems perspective, this review supports the value of investing in early intervention and secondary prevention approaches that are easily and rapidly accessible, and that prioritise both health outcomes and young people’s experiences of care. The evidence suggests that services are more likely to reduce mental distress and improve wellbeing when they are delivered in settings that young people are willing to engage with, and in ways that support sustained participation. Strengthening evaluation practice across Aotearoa New Zealand services, including routine baseline, within service, and follow-up outcome monitoring, would also support better decision-making about which approaches are most effective for young people with low to moderate need, and where services are functioning as de facto supports for higher-need groups.

Glossary of terms

Co-design
A collaborative approach in which stakeholders (in the case of this report, young people) work in partnership in designing, developing, and refining services to contribute to relevance, acceptability, and effectiveness.

Cognitive behavioural therapy (CBT)
A structured, evidence-based psychological therapy that helps individuals recognise and change unhelpful patterns of thinking and behaviour that contribute to distress.

Comorbidity
The co-occurrence of two or more mental health conditions in the same individual.

Early intervention
Support provided when early signs of mental distress or emerging mental health conditions first appear, with the aim of preventing escalation and promoting recovery before symptoms become severe.

Externalising behaviours
Behaviours that are directed outward and expressed through actions that affect others or the surrounding environment (e.g., aggression, impulsivity, rule-breaking).

Functional impairment/functioning
The extent to which a person's mental health affects their ability to carry out everyday activities such as school, work, or relationships.

Internalising behaviours
Emotional and psychological difficulties that are directed inward and primarily affect a young person's internal emotional state (e.g., anxiety, sadness, withdrawal, low self-esteem).

Low-threshold services
Services designed to minimise barriers to access (e.g., free, self-referral, walk-in access) so people can receive support easily and quickly.

Mental distress
A broad term describing distress, such as anxiety, stress, or low mood, that may impair wellbeing or functioning that may or may not meet criteria for a diagnosable mental health condition.

Mental health condition
A diagnosable mental disorder characterised by significant disturbances in thinking, emotional regulation, or behaviour that impair functioning in daily life.

Mental health literacy
Knowledge and beliefs about mental health conditions that help individuals recognise symptoms, seek appropriate support, and support others.

Primary prevention
Actions intended to prevent the onset of mental distress or mental health conditions before symptoms occur, typically delivered to whole populations.

Psychological distress

A state of emotional suffering typically characterised by symptoms such as anxiety, depression, or stress that may impair functioning but may not meet criteria for a clinical diagnosis.

Rangatahi Māori
Young people of Māori descent.

Referral pathway
A formal or informal process through which individuals are directed from one service or provider to another to receive appropriate care.

Secondary prevention
Interventions for individuals who are already experiencing distress or early symptoms, designed to reduce severity, prevent persistence, and avoid progression to more significant mental health conditions.

Stepped-care model
A system of delivering mental health care in which individuals receive the least intensive intervention appropriate to their needs, with the option to step up to more intensive care if required.

Subclinical symptoms
Symptoms of mental distress that are present but do not meet the diagnostic threshold for a mental health disorder.

Tertiary prevention
Interventions that aim to reduce the impact of an established illness or disorder by supporting treatment, recovery, and the prevention of relapse or further mental health decline.

Triage
A process of assessing a person's needs and prioritising the type or urgency of care they should receive.

Whānau
Extended family network central to Māori social structures, including relatives beyond the immediate household, who often play an important role in wellbeing and support.

Youth-friendly services
Services specifically designed to meet the developmental, cultural, and practical needs of young people, often emphasising accessibility, non-judgemental environments, and flexibility.

References

Allen, J., Balfour, R., Bell, R., & Marmot, M. (2014). Social determinants of mental health. *International Review of Psychiatry*, *26*(4), 392–407. https://doi.org/10.3109/09540261.2014.928270

Babajide, A., Ortin, A., Wei, C., Mufson, L., & Duarte, C. S. (2020). Transition cliffs for young adults with anxiety and depression: Is integrated mental health care a solution? *The Journal of Behavioral Health Services & Research*, *47*(2), 275–292. https://doi.org/10.1007/s11414-019-09670-8

Bonabi, H., Müller, M., Ajdacic-Gross, V., Eisele, J., Rodgers, S., Seifritz, E., Rössler, W., & Rüsch, N. (2016). Mental health literacy, attitudes to help seeking, and perceived need as predictors of mental health service use: A longitudinal study. *The Journal of Nervous and Mental Disease*, *204*(4), 321. https://doi.org/10.1097/NMD.0000000000000488

Broad, K. L., Sandhu, V. K., Sunderji, N., & Charach, A. (2017). Youth experiences of transition from child mental health services to adult mental health services: A qualitative thematic synthesis. *BMC Psychiatry*, *17*(1), 380. https://doi.org/10.1186/s12888-017-1538-1

Buckley, S., Stevens, K., Dewhurst, K., Sanders, J., Munford, R., Henaghan, M., Clarke, N. S., Tikao, K., Veitch, B. M., Cumming, J., & Liebenberg, L. (2013). *Pathways to youth resilience: Youth mental health and drug and alcohol services in New Zealand*. Massey University.

Clark, T. C., Gontijo de Castro, T., Bullen, P., Fenaughty, J., Tiatia-Seath, J., Bavin, L., Peiris-John, R., Sutcliffe, K., Crengle, S., Lindsay-Latimer, C., Fleming, T., & Yao, E. (2023). *Youth19 Rangatahi Smart Survey: The health and wellbeing of young people in Alternative Education*. The University of Auckland and Victoria University of Wellington.

Clark, T. C., Johnson, E. A., Kekus, M., Newman, J., Patel, P. S., Fleming, T., & Robinson, E. (2014). Facilitating access to effective and appropriate care for youth with mild to moderate mental health concerns in New Zealand. *Journal of Child and Adolescent Psychiatric Nursing*, *27*(4), 190–200. https://doi.org/10.1111/jcap.12095

Common Sense Media. (2025). *Social AI Companions*. Common Sense Media. https://www.commonsensemedia.org/sites/default/files/pug/csm-ai-risk-assessment-social-ai-companions_final.pdf

Corley, E., Moran, E., Heary, C., Gardiner, P., & Donohoe, G. (2024). Evaluation of a community-based intervention for youth mental health in rural Ireland. *Irish Journal of Psychological Medicine*, *41*(3), 311–319. https://doi.org/10.1017/ipm.2023.48

Cross, S. P. M., Hermens, D. F., & Hickie, I. B. (2016). Treatment patterns and short-term outcomes in an early intervention youth mental health service. *Early Intervention in Psychiatry*, *10*(1), 88–97. https://doi.org/10.1111/eip.12191

Doorn, M. van, Monsanto, A., Wang, C. L., Verfaillie, S. C. J., Amelsvoort, T. A. M. J. van, Popma, A., Jaspers, M. W. M., Öry, F., Alvarez-Jimenez, M., Gleeson, J. F., & Nieman, D. H. (2023). The effects of a digital, transdiagnostic, clinically and peer-moderated treatment platform for young people with emerging mental health complaints: Repeated measures within-subjects study. *JMIR mHealth and uHealth*, *11*(1), e50636. https://doi.org/10.2196/50636

Dowell, T. L., Waters, A. M., Usher, W., Farrell, L. J., Donovan, C. L., Modecki, K. L., Zimmer-Gembeck, M. J., Castle, M., & Hinchey, J. (2021). Tackling mental health in

youth sporting programs: A pilot study of a holistic program. *Child Psychiatry & Human Development*, *52*(1), 15–29. https://doi.org/10.1007/s10578-020-00984-9

Etter, M., Goose, A., Nossal, M., Chishom-Nelson, J., Heck, C., Joober, R., Boksa, P., Lal, S., Shah, J. L., Andersson, N., Iyer, S. N., & Malla, A. (2019). Improving youth mental wellness services in an Indigenous context in Ulukhaktok, Northwest Territories: ACCESS Open Minds Project. *Early Intervention in Psychiatry*, *13*(S1), 35–41. https://doi.org/10.1111/eip.12816

Every-Palmer, S., Grant, M. L., Thabrew, H., Hansby, O., Lawrence, M., Jenkins, M., & Romans, S. (2024). Not heading in the right direction: Five hundred psychiatrists' views on resourcing, demand, and workforce across New Zealand mental health services. *Australian & New Zealand Journal of Psychiatry*, *58*(1), 82–91. https://doi.org/10.1177/00048674231170572

Fenaughty, J., Fleming, T., Bavin, L., Choo, W. L., Ker, A., Lucassen, M., Ball, J., Greaves, L., Drayton, B., King-Finau, T., & Clark, T. (2023). *Te āniwaniwa takatāpui whānui: Te irawhiti me te ira huhua mō ngā rangatahi | Gender Identity and young people's wellbeing in Youth19*. The University of Auckland and Victoria University of Wellington.

Fleming, T., Lucassen, M., Frampton, C., Parag, V., Bullen, C., Merry, S., Shepherd, M., & Stasiak, K. (2025). Nationwide implementation of unguided cognitive behavioral therapy for adolescent depression: Observational study of SPARX. *Journal of Medical Internet Research*, *27*(1), e66047. https://doi.org/10.2196/66047

Gribble, A., Haisman, R., Webb, M., Carswell, S., & MacDonald, D. (2018). *What is known about the effectiveness of social sector freephone helplines?: Rapid evidence-based literature review*. Superu.

Gustavson, K., Knudsen, A. K., Nesvåg, R., Knudsen, G. P., Vollset, S. E., & Reichborn-Kjennerud, T. (2018). Prevalence and stability of mental disorders among young adults: Findings from a longitudinal study. *BMC Psychiatry*, *18*(1), 65. https://doi.org/10.1186/s12888-018-1647-5

Hatcher, S., Coupe, N., Wikiriwhi, K., Durie, S. M., & Pillai, A. (2016). Te Ira Tangata: A Zelen randomised controlled trial of a culturally informed treatment compared to treatment as usual in Māori who present to hospital after self-harm. *Social Psychiatry and Psychiatric Epidemiology*, *51*(6), 885–894. https://doi.org/10.1007/s00127-016-1194-7

Henderson, S., Kendall, E., & See, L. (2011). The effectiveness of culturally appropriate interventions to manage or prevent chronic disease in culturally and linguistically diverse communities: A systematic literature review. *Health & Social Care in the Community*, *19*(3), 225–249. https://doi.org/10.1111/j.1365-2524.2010.00972.x

Hetrick, S. E., Bailey, A. P., Smith, K. E., Malla, A., Mathias, S., Singh, S. P., O'Reilly, A., Verma, S. K., Benoit, L., Fleming, T. M., Moro, M. R., Rickwood, D. J., Duffy, J., Eriksen, T., Illback, R., Fisher, C. A., & McGorry, P. D. (2017). Integrated (one-stop shop) youth health care: Best available evidence and future directions. *Medical Journal of Australia*, *207*(S10), S5–S18. https://doi.org/10.5694/mja17.00694

Hilferty, F., Cassells, R., Muir, K., & Katz, I. (2015). *Is headspace making a difference to young people's lives? Final report of the independent evaluation of the headspace program* (SPRC Report No. 08/2015). Social Policy Research Centre. (Australia). https://apo.org.au/node/71950

Hilferty, F., Cassells, R., Muir, K., & Katz, I. (2016). *Is headspace making a difference to young people's lives?* Social Policy Research Centre. (Australia). https://apo.org.au/node/71950

Holt-Quick, C., Warren, J., Stasiak, K., Williams, R., Christie, G., Hetrick, S., Hopkins, S., Cargo, T., & Merry, S. (2021). A chatbot architecture for promoting youth resilience. *Healthier Lives, Digitally Enabled*, 99–105. https://doi.org/10.48550/arXiv.2005.07355

Hopkins, L., Lee, S., McGrane, T., & Barbara-May, R. (2017). Single session family therapy in youth mental health: Can it help? *Australasian Psychiatry*, *25*(2), 108–111. https://doi.org/10.1177/1039856216658807

Iswanto, E. D., & Ayubi, D. (2023). The relationship of mental health literacy to help-seeking behavior: Systematic review. *Journal of Social Research*, *2*(3), 755–764. https://doi.org/10.55324/josr.v2i3.726

Jacob, J., Stankovic, M., Spuerck, I., & Shokraneh, F. (2022). Goal setting with young people for anxiety and depression: What works for whom in therapeutic relationships? A literature review and insight analysis. *BMC Psychology*, *10*(1), 171. https://doi.org/10.1186/s40359-022-00879-5

Jorm, A. F., Korten, A. E., Jacomb, P. A., Christensen, H., Rodgers, B., & Pollitt, P. (1997). "Mental health literacy": A survey of the public's ability to recognise mental disorders and their beliefs about the effectiveness of treatment. *Medical Journal of Australia*, *166*(4), 182–186. https://doi.org/10.5694/j.1326-5377.1997.tb140071.x

Kildea, S., Gao, Y., Hickey, S., Nelson, C., Kruske, S., Carson, A., Currie, J., Reynolds, M., Wilson, K., Watego, K., Costello, J., & Roe, Y. (2021). Effect of a Birthing on Country service redesign on maternal and neonatal health outcomes for First Nations Australians: A prospective, non-randomised, interventional trial. *The Lancet Global Health*, *9*(5), e651–e659. https://doi.org/10.1016/S2214-109X(21)00061-9

Kirkbride, J. B., Anglin, D. M., Colman, I., Dykxhoorn, J., Jones, P. B., Patalay, P., Pitman, A., Soneson, E., Steare, T., Wright, T., & Griffiths, S. L. (2024). The social determinants of mental health and disorder: Evidence, prevention and recommendations. *World Psychiatry*, *23*(1), 58–90. https://doi.org/10.1002/wps.21160

Li, J., & Brar, A. (2022). The use and impact of digital technologies for and on the mental health and wellbeing of Indigenous people: A systematic review of empirical studies. *Computers in Human Behavior*, *126*, 106988. https://doi.org/10.1016/j.chb.2021.106988

Liverpool, S., Mota, C. P., Sales, C. M. D., Čuš, A., Carletto, S., Hancheva, C., Sousa, S., Cerón, S. C., Moreno-Peral, P., Pietrabissa, G., Moltrecht, B., Ulberg, R., Ferreira, N., & Edbrooke-Childs, J. (2020). Engaging children and young people in digital mental health interventions: Systematic review of modes of delivery, facilitators, and barriers. *Journal of Medical Internet Research*, *22*(6), e16317. https://doi.org/10.2196/16317

Ludin, N., Holt-Quick, C., Hopkins, S., Stasiak, K., Hetrick, S., Warren, J., & Cargo, T. (2022). A chatbot to support young people during the COVID-19 pandemic in New Zealand: Evaluation of the real-world rollout of an open trial. *Journal of Medical Internet Research*, *24*(11), e38743. https://doi.org/10.2196/38743

Malla, A., Iyer, S., Shah, J., Joober, R., Boksa, P., Lal, S., Fuhrer, R., Andersson, N., Abdel-Baki, A., Hutt-MacLeod, D., Beaton, A., Reaume-Zimmer, P., Chisholm-Nelson, J., Rousseau, C., Chandrasena, R., Bourque, J., Aubin, D., Levasseur, M. A., Winkelmann, I., … Network, the A. O. M. Y. M. H. (2019). Canadian response to need for transformation of youth mental health services: ACCESS Open Minds (Esprits ouverts). *Early Intervention in Psychiatry*, *13*(3), 697–706. https://doi.org/10.1111/eip.12772

Malla, A., & McGorry, P. (2019). Early intervention in psychosis in young people: A population and public health perspective. *American Journal of Public Health*, *109*(S3), S181–S184. https://doi.org/10.2105/AJPH.2019.305018

Manicavasagar, V., Horswood, D., Burckhardt, R., Lum, A., Hadzi-Pavlovic, D., & Parker, G. (2014). Feasibility and effectiveness of a web-based positive psychology program for youth mental health: Randomized controlled trial. *Journal of Medical Internet Research*, *16*(6), e3176. https://doi.org/10.2196/jmir.3176

McBain, R. K., Bozick, R., Diliberti, M., Zhang, L. A., Zhang, F., Burnett, A., Kofner, A., Rader, B., Breslau, J., Stein, B. D., Mehrotra, A., Pines, L. U., Cantor, J., & Yu, H. (2025). Use of generative AI for mental health advice among US adolescents and young adults. *JAMA Network Open*, *8*(11), e2542281. https://doi.org/10.1001/jamanetworkopen.2025.42281

McCalman, J. R., Fagan, R., McDonald, T., Jose, S., Neal, P., Blignault, I., Askew, D., & Cadet-James, Y. (2023). The availability, appropriateness, and integration of services to promote indigenous Australian youth wellbeing and mental health: Indigenous youth and service provider perspectives. *International Journal of Environmental Research and Public Health*, *20*(1), 375. https://doi.org/10.3390/ijerph20010375

McGorry, P., Bates, T., & Birchwood, M. (2013). Designing youth mental health services for the 21st century: Examples from Australia, Ireland and the UK. *The British Journal of Psychiatry*, *202*(s54), s30–s35. https://doi.org/10.1192/bjp.bp.112.119214

McGorry, P. D., & Mei, C. (2018). Early intervention in youth mental health: Progress and future directions. *Evidence Based Mental Health*, *21*(4), 182–184. https://doi.org/10.1136/ebmental-2018-300060

Merry, S. N., Stasiak, K., Shepherd, M., Frampton, C., Fleming, T., & Lucassen, M. F. G. (2012). The effectiveness of SPARX, a computerised self help intervention for adolescents seeking help for depression: Randomised controlled non-inferiority trial. *BMJ*, *344*, e2598. https://doi.org/10.1136/bmj.e2598

Minister of Health. (2024). *Government policy statement on health 2024-2027*. Ministry of Health. https://www.health.govt.nz/publications/government-policy-statement-on-health-2024-2027

Ministry of Health. (2024). *Mental health and problematic substance use data explorer* [Dataset]. https://minhealthnz.shinyapps.io/nz-health-survey-2022-23-mental-health-data-explorer/

Ministry of Health. (2025). *Annual update of key results 2024/25: New Zealand Health Survey* [Dataset]. https://www.health.govt.nz/publications/annual-update-of-key-results-202425-new-zealand-health-survey

OECD. (2025). *Mental health: Health at a Glance 2025* (OECD Indicators). OECD Publishing. https://www.oecd.org/en/publications/health-at-a-glance-2025_8f9e3f98-en/full-report/mental-health_24af6094.html

O'Keeffe, L., O'Reilly, A., O'Brien, G., Buckley, R., & Illback, R. (2015). Description and outcome evaluation of Jigsaw: An emergent Irish mental health early intervention programme for young people. *Irish Journal of Psychological Medicine*, *32*(1), 71–77. https://doi.org/10.1017/ipm.2014.86

Olsen, S. G., Reinecke-Tellefsen, C. J., & Østergaard, S. D. (2026). Potentially harmful consequences of artificial intelligence (AI) chatbot use among patients with mental illness: Early data from a large psychiatric service system. *Acta Psychiatrica Scandinavica*. https://doi.org/10.1111/acps.70068

O'Reilly, A., McKenna, N., & Fitzgerald, A. (2022). Measuring goal progress using the goal-based outcome measure in Jigsaw – A primary care youth mental health service. *Child and Adolescent Mental Health*, *27*(3), 238–245. https://doi.org/10.1111/camh.12489

Özparlak, A., Karakaya, D., & Özer, Z. (2023). The association of mental health literacy with mental well-being and help-seeking in young people: A systematic review and meta-analysis. *Journal of Pediatric Nursing*, *73*, e243–e250. https://doi.org/10.1016/j.pedn.2023.09.017

Parker, A. G., Hetrick, S. E., Jorm, A. F., Mackinnon, A. J., McGorry, P. D., Yung, A. R., Scanlan, F., Stephens, J., Baird, S., Moller, B., & Purcell, R. (2016). The effectiveness of simple psychological and physical activity interventions for high prevalence mental health problems in young people: A factorial randomised controlled trial. *Journal of Affective Disorders*, *196*, 200–209. https://doi.org/10.1016/j.jad.2016.02.043

Pew Research Center. (2023). *Teens, social media and technology 2023*. Pew Research. https://www.pewresearch.org/internet/2023/12/11/teens-social-media-and-technology-2023/

Rickwood, D. J., Telford, N. R., Parker, A. G., Tanti, C. J., & McGorry, P. D. (2014). headspace — Australia's innovation in youth mental health: Who are the clients and why are they presenting? *Medical Journal of Australia*, *200*(2), 108–111. https://doi.org/10.5694/mja13.11235

Rickwood, D., Paraskakis, M., Quin, D., Hobbs, N., Ryall, V., Trethowan, J., & McGorry, P. (2019). Australia's innovation in youth mental health care: The headspace centre model. *Early Intervention in Psychiatry*, *13*(1), 159–166. https://doi.org/10.1111/eip.12740

Sander, J., Moessner, M., & Bauer, S. (2021). Depression, anxiety and eating disorder-related impairment: Moderators in female adolescents and young adults. *International Journal of Environmental Research and Public Health*, *18*(5), 2779. https://doi.org/10.3390/ijerph18052779

Schley, C., Pace, N., Mann, R., McKenzie, C., McRoberts, A., & Parker, A. (2019). The headspace Brief Interventions Clinic: Increasing timely access to effective treatments for young people with early signs of mental health problems. *Early Intervention in Psychiatry*, *13*(5), 1073–1082. https://doi.org/10.1111/eip.12729

Schmitt, J. C., Valiente, R. M., García-Escalera, J., Arnáez, S., Espinosa, V., Sandín, B., & Chorot, P. (2022). Prevention of depression and anxiety in subclinical adolescents: Effects of a transdiagnostic internet-delivered CBT program. *International Journal of Environmental Research and Public Health*, *19*(9), 5365. https://doi.org/10.3390/ijerph19095365

Serlachius, A., Boggiss, A., Lim, D., Schache, K., Wallace-Boyd, K., Brenton-Peters, J., Buttenshaw, E., Chadd, S., Cavadino, A., Cao, N., Morunga, E., & Thabrew, H. (2021). Pilot study of a well-being app to support New Zealand young people during the COVID-19 pandemic. *Internet Interventions*, *26*, 100464. https://doi.org/10.1016/j.invent.2021.100464

Summerfield, D. (2001). The invention of post-traumatic stress disorder and the social usefulness of a psychiatric category. *BMJ : British Medical Journal*, *322*(7278), 95–98. https://doi.org/10.1136/bmj.322.7278.95

Sutcliffe, K., Ball, J., Clark, T. C., Archer, D., Peiris-John, R., Crengle, S., & Fleming, T. (2023). Rapid and unequal decline in adolescent mental health and well-being 2012–2019: Findings from New Zealand cross-sectional surveys. *The Australian and New*

Zealand Journal of Psychiatry, *57*(2), 264–282. https://doi.org/10.1177/00048674221138503

Te Hiringa Mahara. (2023). *Youth services focus report—Admission of young people to adult inpatient mental health services*. Te Hiringa Mahara | Mental Health and Wellbeing Commission. https://www.mhwc.govt.nz/news-and-resources/youth-services-focus-report/

Te Whatu Ora | Health New Zealand. (2025). *Suicide data web tool* [Dataset]. https://tewhatuora.shinyapps.io/suicide-web-tool/

Tertiary Education Commission. (2022). *Transitions from secondary school*. Tertiary Education Commission. https://www.tec.govt.nz/assets/Publications-and-others/Transitions-from-Secondary-School.pdf

Thabrew, H., Boggiss, A. L., Lim, D., Schache, K., Morunga, E., Cao, N., Cavadino, A., & Serlachius, A. S. (2022). Well-being app to support young people during the COVID-19 pandemic: Randomised controlled trial. *BMJ Open*, *12*(5), e058144. https://doi.org/10.1136/bmjopen-2021-058144

Thabrew, H., Stasiak, K., Kumar, H., Naseem, T., Frampton, C., & Merry, S. (2021). A cognitive behavioral therapy-, biofeedback-, and game-based eHealth intervention to treat anxiety in children and young people with long-term physical conditions (Starship Rescue): Co-design and open trial. *JMIR Serious Games*, *9*(3), e26084. https://doi.org/10.2196/26084

Thapar, A., Eyre, O., Patel, V., & Brent, D. (2022). Depression in young people. *The Lancet*, *400*(10352), 617–631. https://doi.org/10.1016/S0140-6736(22)01012-1

The Mental Health Foundation. (2016). *Better mental health for all: A public health approach to mental health improvement.* Faculty of Public Health and Mental Health Foundation. https://www.fph.org.uk/media/1644/better-mental-health-for-all-final-low-res.pdf

Tighe, J., Shand, F., Ridani, R., Mackinnon, A., Mata, N. D. L., & Christensen, H. (2017). Ibobbly mobile health intervention for suicide prevention in Australian Indigenous youth: A pilot randomised controlled trial. *BMJ Open*, *7*(1), e013518. https://doi.org/10.1136/bmjopen-2016-013518

Vyas, N. S., Birchwood, M., & Singh, S. P. (2015). Youth services: Meeting the mental health needs of adolescents. *Irish Journal of Psychological Medicine*, *32*(1), 13–19.

Waters, A. M., Sluis, R. A., Usher, W., Farrell, L. J., Donovan, C. L., Modecki, K. L., Zimmer-Gembeck, M. J., Castle, M., & Hinchey, J. (2022). Kick-starting youth wellbeing and access to mental health care: Efficacy of an integrated model of care within a junior sports development program. *Behaviour Research and Therapy*, *157*, 104166. https://doi.org/10.1016/j.brat.2022.104166

Waters, A. M., Sluis, R. A., Usher, W., Farrell, L. J., Donovan, C. L., Modecki, K. L., Zimmer-Gembeck, M. J., Castle, M., & Hinchey, J. (2025). Reaching young people in urban and rural communities with mental health and wellbeing support within a youth sports development program: Integrating in-person and remote modes of service delivery. *Child Psychiatry & Human Development*, *56*(5), 1446–1456. https://doi.org/10.1007/s10578-023-01647-1

Williams, R., Hopkins, S., Frampton, C., Holt-Quick, C., Merry, S. N., & Stasiak, K. (2021). 21-Day Stress Detox: Open trial of a universal well-being chatbot for young adults. *Social Sciences*, *10*(11), 416. https://doi.org/10.3390/socsci10110416

Wolitzky-Taylor, K., LeBeau, R., Arnaudova, I., Barnes-Horowitz, N., Gong-Guy, E., Fears, S., Congdon, E., Freimer, N., & Craske, M. (2023). A novel and integrated digitally

supported system of care for depression and anxiety: Findings from an open trial. *JMIR Mental Health*, *10*, e46200. https://doi.org/10.2196/46200

Wolitzky-Taylor, K., Wen, A., Freimer, N., & Craske, M. G. (2026). Anxiety and depression in emerging adults: The STAND program as a model of scalable screening and intervention. *Neuropsychopharmacology*, *51*(1), 244–258. https://doi.org/10.1038/s41386-025-02174-4

World Health Organization, & Calouste Gulbenkian Foundation. (2014). *Social determinants of mental health*. World Health Organization. https://iris.who.int/bitstream/handle/10665/112828/9789241506809_eng.pdf

Youth Endowment Fund. (2025). *Children, violence and vulnerability 2025: Mental health and experiences of violence* (Report 3). The Youth Endowment Fund. https://youthendowmentfund.org.uk/wp-content/uploads/2025/12/CVV25_R3_Mental_health.pdf

Appendix 1

Evaluation studies: Detailed summary

Programme information				Study design				Mental health outcomes		Effectiveness	
Name (country)	*Approach*	*Description*	*Target population*	*Analytical approach*	*Sample*	*Comparator*	*Follow up*	*Construct*	*Measure*	*Effect size*	*Evidence strength*
Therapy-based brief intervention approaches											
headspace Brief Intervention Clinics (Australia)	Brief therapy clinics (Schley et al., 2019)	Small number (4-6 targeted therapy sessions)	Low-moderate distress	Pre-post evaluation	122 12-25 year olds	None (within-person only)	Post only	Psychological distress	K10	Large improvement	Emerging
								Depressive symptoms	QIDS	Moderate improvement	
								Anxiety symptoms	OASIS	Moderate improvement	
								Social functioning	SOFAS	Moderate improvement	
Jigsaw (Ireland)	Brief therapy clinics (O'Keeffe et al., 2015)	Small number (average of six) therapy sessions	Low-moderate distress	Pre-post evaluation	315 12-25 year olds	None (within-person only)	Post only	Psychological distress (17-25 year olds)	CORE-10	Large improvement	Emerging
								Psychological distress (12-16 year olds)	YP-CORE	Moderate improvement	
	Goal-based therapy in BIC (O'Reilly et al., 2022)	Small number (average of six) therapy sessions	Low-moderate distress	Pre-post evaluation	3,310 12-25 year olds	None (within-person only)	Post only	Goal achievement	GBO score	Large improvement	Emerging
Mindspace Mayo (Ireland)	Brief therapy clinics (Corley et al., 2024)	Small number (average of six) therapy sessions	Low-moderate distress	Pre-post evaluation	1,184 12-25 year olds	None (within-person only)	Post only	Psychological distress (17-25 year olds)	CORE-10	Large improvement	Emerging
								Psychological distress (12-16 year olds)	YP-CORE	Large improvement	
Community-based approaches											
headspace one-stop shops (Australia)	One-stop shops, with six therapy sessions (Cross et al., 2016)	Highly accessible community-based centres offering a variety of services	Universal, however evaluation focuses on mild-to-moderate distress	Pre-during-post evaluation	890 12-25 year olds	None (within-person only)	After six and ten sessions	Psychological distress after six sessions	K10	Small improvement	Emerging
								Psychological distress after ten sessions	K10	Small improvement	
								Social functioning after six sessions	SOFAS	No change	

								Social functioning after 10 sessions	SOFAS	No change	
	One-stop shops, all types of visits (Hilferty et al., 2015)	Highly accessible community-based centres offering a variety of services	Universal	Pre-during-post evaluation	26,058 12-25 year olds	None (within-person only)	Various sessions and services	Psychological distress	K10	Small improvement	Emerging
								Social functioning	SPFAS	Small improvement	
Your Choice (Aotearoa New Zealand)	Mental health system navigation (Clark et al., 2014)	Coordinated triage model, connecting people to therapy services (average eight sessions)	Universal, study cohort experiencing "slightly raised" psychologic-al difficulties	Pre-post evaluation	581 10-24 year olds	None (within-person only)	Post only	Psychological difficulties	SDQ	Moderate improvement	Emerging
								Functioning	C-GAS	Large improvement	
								Substance abuse	SACS	Small improvement	
RISE (Australia)	Sports-imbedded approach (Dowell et al., 2021)	Online and in-person delivery of programme, with follow up for those at high risk	Universal, study cohort mostly had no or mild symptoms	Pre-post evaluation	36 12-15 year old boys	None (within-person only)	Post only	Anxiety symptoms	RCADS-25 Anxiety Subscale	Small improvement	Emerging
								Depressive symptoms	RCADS-25 Depression Subscale	Small improvement	
	Sports-imbedded approach (Waters et al., 2022)	Online and in-person delivery of workshop programme, with follow up for those at high risk	Universal, study cohort mostly had no or mild symptoms	Pre-post evaluation with treatment and control	176 12-15 year old boys	Within-person change comparing treatment to control (no interventio n)	Post only	Anxiety symptoms in 'healthy range'	RCADS-25 Anxiety Subscale	No difference between treatment and control	Moderate
								Depressive symptoms among those in 'healthy range'	RCADS-25 Depression Subscale	No difference between treatment and control	
								Anxiety symptoms in 'high risk range'	RCADS-25 Anxiety Subscale	No difference between treatment and control (but significant decline pre vs. post)	
								Depressive symptoms among those in 'high risk range'	RCADS-25 Depression Subscale	Small improvement among treatment group	

	Sports-imbedded approach (Waters et al., 2025)	RISE programme delivered in different formats	Universal, but study cohort mostly had no or mild symptoms	Pre-post evaluation with four treatment arms	671 12-15 year old boys	Within-person change comparing treatment arms	Post only	Depressive symptoms (in healthy range at baseline)	RCADS-25 Depression Subscale	No change	Moderate
								Anxiety symptoms (in healthy range at baseline)	RCADS-25 Anxiety Subscale	No change	
								Depressive symptoms (elevated symptoms at baseline)	RCADS-25 Depression Subscale	Moderate improvement for those receiving content delivered by a mental health professional	
								Anxiety symptoms (elevated symptoms at baseline)	RCADS-25 Anxiety Subscale		
E-therapy and e-screening mental health approaches											
ENVOY (Netherlands)	Moderated digital therapy platform (Doorn et al., 2023)	Guided therapy with moderated social network, 6-month programme	Low-moderate distress	Pre-post evaluation	131 16-25 year olds	None (within-person change only)	Baseline, during, post, and one-year follow up	Psychological distress at 3-months	K10	Moderate improvement	Emerging
								Psychological distress between 3-6 months	K10	Additional small improvement	
								Psychological distress at 12-months	K10	Moderate improvement maintained	
								Social functioning at 3-months	SOFAS	Moderate improvement	
								Social functioning between 3-6 months	SOFAS	Additional moderate improvement	
								Social functioning at 12-months	SOFAS	Moderate improvement maintained	
AMTE (Spain)	Online CBT with guidance (Schmitt et al., 2022)	7-week self-directed online programme, containing 8 30-minute modules, with therapist phone calls	Low-moderate symptoms	Pre-post evaluation	30 12-18 year olds	None (within-person change only)	Pre, post, and 3-month follow up	Depressive and anxiety symptoms at 3-month follow up (vs. baseline)	RCADS-30	Moderate improvement	Emerging
								Depressive and anxiety symptoms at	RCADS-30	Small improvement	

								3-month follow up (vs. post-intervention)			
								Major depressive symptoms at 3-month follow up (vs. baseline)	MDD	Moderate improvement	
								Major depressive symptoms at 3-month follow up (vs. post-intervention)	MDD	Small improvement	
								Anxiety disorder symptoms at 3-month follow up (vs. baseline)	ANX	Moderate improvement	
								Anxiety disorder symptoms 3-month follow up (vs. post-intervention)	ANX	Small improvement	
STAND (US)	Digital stepped care (Wolitzky-Taylor et al., 2023)	Combines online screening and digitally delivered CBT content (average 4 lessons for Tier 1 symptoms, with additional online coaching for Tier 2 symptoms).	All symptom levels, with Tier 1 (low or no symptoms) evaluated separately from Tier 2 (moderate symptoms)	Pre-post evaluation	377 18-25 year olds in Tiers 1 and 2	None (within-person change only)	Baseline and post-intervention (8 weeks)	Anxiety symptoms among Tier 1	CAT-ANX	Large improvement	Emerging
								Depressive symptoms among Tier 1	CAT-DI	Large improvement	
								Anxiety symptoms among Tier 2	CAT-ANX	Large improvement	
								Depressive symptoms among Tier 2	CAT-DI	Large improvement	
Digital mental health tools											
Headstrong: 21-Day Stress Detox (Aotearoa New Zealand)	Conversational style chatbot through Facebook Messenger	Delivers 21 daily sessions, each taking 5-7 minutes	Universal, but primarily low to moderate levels of	Pre-post evaluation	64 18-24 year olds	None (within-person change only)	Baseline and post-intervention	Perceived stress	PSS-10	Small improvement	Emerging
								Anxiety symptoms among those with low to	GAD-7	Small improvement	

	(Williams et al., 2021)		anxiety in the study					moderate levels of anxiety			
								Anxiety symptoms among those with high levels of anxiety		Moderate improvement	
Headstrong: Aroha Chatbot (Aotearoa New Zealand)	Conversation style chatbot through Facebook Messenger (Ludin et al., 2022)	User-led chat support, organized into short modules, developed in response to COVID-19 pandemic-related stress and worry	Universal	Pre-post evaluation	30 13-24 year olds	None (within-person change only)	Baseline, during, and post-intervention	COVID-19-related anxiety	Bespoke 0-10-point scale	Small improvement	Emerging
Bite Back (Australia)	Self-guided, web-based positive psychology programme (Manicavasagar et al., 2014)	Website delivered interactive exercises and information across multiple domains, with moderated social engagement	Universal, but anxiety symptoms low to moderate in the study	Pre-post evaluation with randomised treatment and control	154 12-18 year olds	Within-person change compared treatment to control (neutral entertainment-based websites)	Baseline and post-intervention (6-weeks)	Depressive symptoms	DASS-21	Moderate improvement	Good
								Anxiety symptoms	DASS-21	Small improvement	
								Perceived stress	SWEMWBS	Moderate improvement	
Whitu (Aotearoa New Zealand)	Mobile app grounded in multiple therapeutic approaches[8] (Serlachius et al., 2021; Thabrew et al., 2022)	Contains seven different modules, which users can choose from a range of strategies, and receive daily notifications and badge awards	Universal, but study participants had low to moderate symptoms	Pre-post evaluation with randomised treatment and control	90 16-30 year olds (average age 24 years)	Within-person change compared treatment to control (asked not to use any mental health apps during the study period)	Baseline, after 4-weeks of app participation, and 3-month post-baseline	Depressive symptoms (baseline to 4-weeks, and at 3-months follow-up)	CES-D	Small improvement	Good
								Anxiety symptoms	GAD-7	No difference	
								Perceived stress	PSS-10	Small improvement	
SPARX (Aotearoa	Video-game based CBT programme[9]	7-module, unguided, internet-based programme	Mild-moderate symptoms	Pre-post evaluation	1,004 12-19 year	None (within-person	Module 1, 4, and 7	Depressive symptoms between	PHQ-A	Small improvement	Good

[8] Results presented as those in the Thabrew et al., 2022 study. Findings on user acceptibily and experience from Serlachius et al., 2021, are also presented in the report.
[9] Results presented are those from the Fleming et al., 2025 study. Findings are similar and replicated in original randomised control trial in Merry et al., 2012, and hence, evidence strength is identified as good.

New Zealand)	(Fleming et al., 2025; Merry et al., 2012)				olds who completed 4 modules; 421 who completed 7 modules.	change only)		Module 1 and 4			
								Depressive symptoms between Module 1 and 7	PHQ-A	Moderate improvement	
Starship Rescue (Aotearoa New Zealand)	Video-game based CBT programme (Thabrew et al., 2021)	5-module (15-30 minutes each) game	Mild-moderate symptoms among young people with long-term physical conditions	Pre-post evaluation	24 10-17 year olds	None (within-person change only)	Baseline, post-intervention, and 3-month follow up	Anxiety symptoms post-intervention	GAD-7	Large improvement	Emerging
									SCAS	Moderate improvement	
									VAS	Large improvement	
								Anxiety symptoms at 3-month follow up (vs. baseline)	GAD-7	Moderate improvement	
									SCAS	Moderate improvement	
Family-integrated approaches											
headspace (Australia)	Brief family therapy (Hopkins et al., 2017)	Single structured therapeutic session with young person and their family	Universal	Pre-post evaluation	43 (with pre- and follow-up data) young people (ages not stated)	None (within-person change only)	Baseline and follow up (4-5 weeks post-intervention)	Functioning	ORS	Small improvement	Emerging

Note. Evidence strength ratings were assigned using an adapted hierarchy based on established levels-of-evidence frameworks (e.g., Oxford Centre for Evidence-Based Medicine [OCEBM]; National Health and Medical Research Council [NHMRC]), with randomised controlled trials considered "good" evidence, controlled non-randomised studies "moderate," and uncontrolled or observational evaluations "emerging."

Outcome measurement tools: ANX = RCADS-30 total anxiety disorder score; CAT-ANX = Computerized Adaptive Test-Anxiety; CAT-DI = Computerized Adaptive Test-Depression; CES-D = Centre for Epidemiological Studies Depression Scale (CES-D); C-GAS = Children's Global Assessment Scale; CORE-10 = Clinical Outcomes in Routine Evaluation (10-item version); DASS-21 = Depression, Anxiety, and Stress Scale-Short form; GAD-7 = Generalized Anxiety Disorder, 7-item scale; GBO score = Goal-Based Outcome score; K10 = Kessler Psychological Distress Scale (10-item); MDD = RCADS-30 Major Depressive Disorder subscale; OASIS = Overall Anxiety Severity and Impairment Scale; ORS = Outcome Rating Scale; PHQ-A = Patient Health Questionnaire – Adolescent version; PSS-10 = Perceived Stress Scale-10 items; QIDS = Quick Inventory of Depressive Symptomatology; RCADS=25 = Revised Children's Anxiety and Depression Scale – 25 items; RCADS-30 = RCADS – 30 items; SACS = Substance Abuse Choices Scale; SCAS = Spence Children's Anxiety Scale; SDQ = Strength and Difficulties Questionnaire; SOFAS = Social and Occupational Functioning Assessment Scale; SWEMWBS = Short Warwick-Edinburgh Mental Well-Being Scale; VAS = Likert Visual Analog Scale; WHO-5 = 5-item World Health Organisation Well-Being Index; YP-CORE = Young Person's Clinical Outcomes in Routine Evaluation

Appendix 2

Detailed search strategy and study selection

This appendix provides a more detailed description of the literature search and selection process undertaken for this review.

This review employed a structured, multi-pronged literature search and synthesis approach, designed to identify and assess evidence on early intervention and secondary prevention mental health supports for young people aged 12–24 years.

The approach combined:

- Systematic keyword searching
- Targeted searches of known interventions and services
- Dedicated searches for Aotearoa New Zealand and Indigenous evidence
- Grey literature identification
- Citation chaining (snowballing)

While the search strategy aimed to be systematic and transparent, this review is best characterised as a structured literature scan, and not a fully systematic review. Despite not being a systematic review, this review incorporates key features of systematic reviews (e.g., transparent search strategy, defined inclusion criteria, structure screening process, documented study selection), it intentionally covers literature that a systematic review may disregard, such as grey literature and self-published programme evaluations, incorporates additional contextual information to inform the key findings (e.g., incorporation of indigenous knowledge sources, process descriptions), and prioritises policy relevance.

The review process involved three stages:

1) Sourcing the literature
2) Cataloguing the literature
3) Analysis and synthesis

1. Search strategy

A structured but flexible search strategy was used to identify relevant literature on early intervention and secondary prevention mental health supports for young people aged 12–24 years.

Searches were conducted in English only, and only English-language publications were included. Moreover, the primary focus was on studies published in the past 10 years (approximately 2014-2025), although other contextual information from earlier years was included where appropriate. These decisions reflect practical constraints and the focus on contemporary service models.

Databases and sources searched

The following sources were systematically searched:

- Google Scholar (primary source, including grey literature)
- JSTOR (peer-reviewed academic literature)
- Targeted websites, including:
    - Government and policy agencies (e.g., Ministry of Health NZ, Te Hiringa Mahara)
    - Youth mental health service providers
    - International programme websites (e.g., headspace, Jigsaw)
- Reference list searching of included studies (snowballing)

- Research Rabbit exploration of key studies

Google Scholar was prioritised to ensure capture of:

- Grey literature (evaluation reports, policy documents)
- Recently published or pre-publication research
- Programme evaluations not indexed in traditional databases

To ensure appropriate inclusion of Māori and indigenous evidence, additional targeted searches included:

- Māori research repositories and journals (e.g., MAI Journal, Te Pou publications)
- Māori health providers and organisations
- Country-specific indigenous literature (e.g., Aboriginal and Torres Strait Islander programmes, First Nations).

Search terms

Search terms were developed iteratively and combined using keywords related to:

- Population (young people)
- Intervention type (early intervention, prevention)
- Outcomes (mental health, distress)
- Delivery mode (digital, community, therapy)

Searches were conducted using combinations of the following key domains of terms (among others), along with “mental health”:

Population	Intervention	Approach-specific	Context and equity
• young people • youth • adolescents • rangatahi	• early intervention • secondary prevention • suicide prevention • addiction intervention	• peer support • one-stop shops • digital monitoring • telehealth • e-therapy • apps • therapy	• New Zealand youth • kaupapa Māori • mātauranga Māori • indigenous youth

Examples of full search strings include:

- Secondary prevention young people mental health
- Early intervention youth mental health evaluation
- Suicide prevention adolescents programme outcomes
- Digital mental health intervention adolescents
- Kaupapa Māori youth mental health intervention

Search terms were adapted across platforms and refined iteratively as new intervention types were identified.

In addition to keyword searches, targeted searches were conducted for specific intervention types (e.g., peer support programmes, youth mental health hubs) and named New Zealand services (e.g., What’s Up, Access and Choice, What’s Up). This ensured inclusion of real-world service evaluations, particularly those not indexed in academic databases.

2. Inclusion and exclusion criteria

Studies were included if they:

- Focused on *young people aged approximately 12–24 years*
- Examined *early intervention or secondary prevention* approaches
- Included *participants with low to moderate distress* (or mixed samples where relevant findings could be interpreted)
- Reported *mental health outcomes* (e.g., distress, anxiety, depression, wellbeing, functioning)
- Were *evaluation studies* (quantitative or mixed methods)

Studies were excluded if they:

- Focused primarily on *high or clinical populations only*
- Were *purely descriptive or implementation-focused*
- Focused exclusively on *school-based delivery*
- Targeted *out-of-scope conditions* (e.g., psychotic disorders, eating disorders)
- Focused on *age groups outside 12–24 years*

These criteria align with the review scope described in the main methods section.

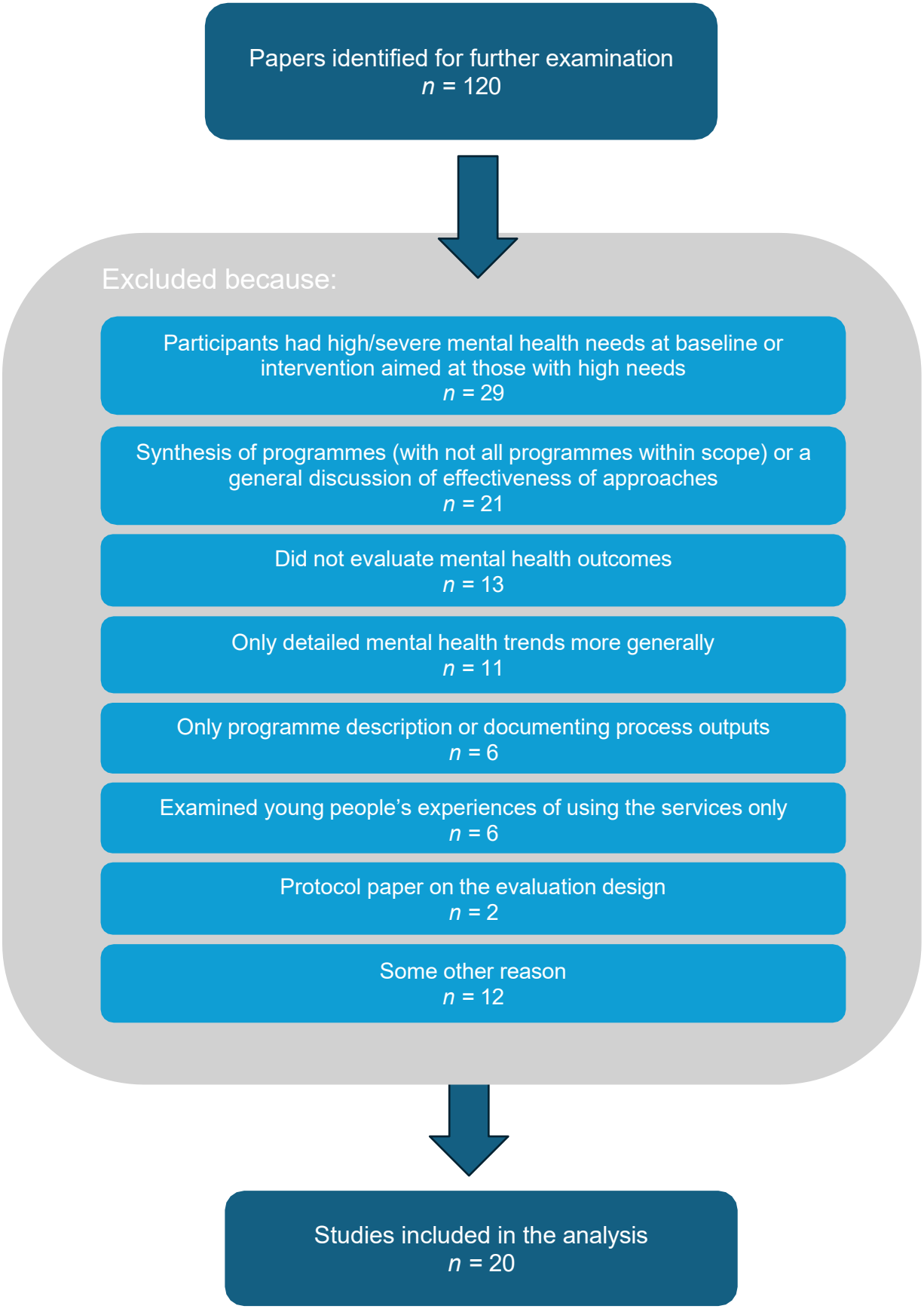
3. Screening and selection process

The screening process involved multiple stages, as illustrated in Figure A1:

1. *Initial search and abstract screening*
    - Several hundred abstracts were identified and scanned
    - Titles and abstracts were reviewed for relevance
2. *Full abstract and document review*
    - Studies with clear, or unclear and potential relevance were examined in more detail
3. *Zotero library creation*
    - 120 papers were retained for structured cataloguing
4. *Eligibility assessment using literature matrix*
    - Studies were coded based on:
        - Population
        - Intervention type
        - Outcomes
        - Evaluation design
        - Relevance to scope
5. *Final inclusion*
    - 20 evaluation studies covering 16 interventions were included in the analysis

Figure A1 displays the primary reason why studies were excluded, grouped into key themes. Each study is listed once by their main reason, however many studies had multiple components that ruled them out of scope (for example, participants having high levels of distress and mental health not evaluated as an outcome).

Figure A1. Literature inclusion flow chart



Motu
economic & public policy research
for other Motu working papers: www.motu.nz