

Existing school-based programmes that increase young peoples' capacity to manage stress: A modified systematic literature review

Poppy-Louise Batts, Dr Joanne Blackett and Elizabeth Day

Abstract

This research presents the results of a systematic literature review, modified in size and scope from a traditional review, exploring programmes provided through schools in New Zealand and Australia that aimed to increase young people's capacity to manage stress. While this review was being conducted, the worldwide COVID-19 pandemic was taking place, which reinforced the importance of addressing young people's wellbeing. This review found several programmes that improved young people's responses to stress and that could be adapted to classroom, outdoor, and online contexts. Interventions with promise included cognitive behavioural therapy, acceptance and commitment therapy, and outdoor programmes. Of those programmes that produced promising results, further research is warranted to confirm the efficacy of the interventions used in them.

Key Words

young people, stress, programmes, support, COVID-19

In our clinical work with adults experiencing stress, we wondered what kind of early support might have mitigated the impact of clients' experiences of adversity. We questioned whether clients would be more resourced in adulthood if preventative interventions had been in place in their earlier years, especially around managing stress, and if so, how and where these interventions would be accessible to large populations of young people. The World Health Organization (2020) defines a "young person" as anyone aged 10–24 years. These years are a key period for emotional health that strengthens long-lasting wellbeing (Patton et al., 2016). As a significant portion of a young person's life is spent in secondary education, we wanted to find out what programmes were currently provided in schools to increase young people's capacity to cope with stress. We worked with a definition of stress as a response to a threat, real or perceived, that tends to disturb an individual's homeostasis (Maté, 2019).

This article presents our research that commenced during the COVID-19 pandemic. At that time, Russell and Akoorie (2020) cautioned that mental health problems and suicide rates had increased during previous economic crises. Indeed, young people, along with the rest of the community, found themselves in a position without control of certain experiences, changes and external events. We know from Stoic philosopher Epictetus, right through to contemporary therapeutic foci, that "it is our attitude toward events, not events themselves which we can control" (Epictetus, cited in Amato & Monge, 1990, p. 36). The pandemic amplified the importance of developing skills to manage stress responses to uncontrollable experiences.

Developmental (neurological and hormonal) changes during the ages of 10–24 years compound many challenges that young people experience when dealing with stress (Arnsten & Shanky, 2004; Saz et al., 2015). Further, young people are more impacted by emotions than either children or adults, due to the developmental changes that occur during adolescence. Burckhardt et al. (2016) observed that a substantial number of young people do not have the essential resources to manage the emotional impact of stressors, leading to their adolescent years being defined by their experience of mental distress. This observation is supported by recent research indicating that although there have been overall decreases in young people's risky behaviours in Aotearoa New Zealand over the past 20 years, there have nevertheless been rapid increases in mental distress since 2012 (Fleming et al., 2022). A Youth 2000 study explored health and wellbeing among New Zealand secondary school

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students over the past two decades and found that there had been increases in symptoms of depression, suicidal thoughts and suicide attempts, alongside declines in young people's psychological wellbeing since 2012 (Fleming et al., 2022). Te Whatu Ora (2022) reported that the age group with the highest suicide rates in Aotearoa was 20–24 years. Māori suicide rates were found to be consistently higher than non-Māori, with the highest difference between ethnicities in those aged 15–24 (Te Whatu Ora, 2022). These statistics support the need for urgent attention to be directed toward the mental wellbeing of young people, for whom the promotion of mental health and illness prevention is critical (Fleming et al., 2022).

Young people experience many life transitions, and require skills to adapt to change (Ministry of Health, 2019). Ideally, young people learn key skills for developing and maintaining relationships with others, as well as managing safety while taking risks. These developmental achievements create a way of living in a world with multiple complexities (Siegel, 2013). Therapeutically it is understood that early relationships, specifically the parent-child relationship, are a key source for the development of healthy responses to stress. Winnicott (1960) and Bowlby (1969) showed how family experiences during infancy and childhood shape an individual's ability to relate to others and to situations in their adult lives. Similarly, Lieberman and Van Horn (2008) suggest it is the individual's relationship with their caregivers, rather than their educators, that plays a critical role in mediating their response to stress. However, for multiple and complex reasons, caregivers may be unable to fulfil this role, and other sources may be needed to provide this essential learning. Booth and Samdal (1997) found that health promotion programmes within educational environments can reach young people from diverse backgrounds. Thus, places of learning can become a focal point for supporting young people to equip themselves with skills to build resilience in response to stress. Indeed, key actions to support young people to navigate significant life changes are optimised if they occur where young people gather, such as in places of learning (Ministry of Health, 2019). Increased long-term wellbeing and mental health outcomes can result from school-based interventions promoting education, social and emotional learning, and behaviours to cope with life stressors (Taylor et al., 2017), and the effects can persist through to adulthood. These interventions also have the potential to minimise the development of mental illness, to promote mental health, and to increase overall quality of life (Colizzi et al., 2020; Fusae-Poli et al., 2021; McGorry et al., 2007). Such long-term

wellbeing outcomes are important given that the adolescent period is a time of both great vulnerability and opportunity (Colizzi et al., 2020; Siegel, 2013).

Our research, a systemic literature review, aimed to identify and highlight existing programmes, with the hope of encouraging the ongoing development of effective programmes and learning in areas of mental health, wellbeing, coping skills, stress management, and preventative strategies (Wong et al., 2014). The findings of this review provide counsellors in Aotearoa New Zealand and Australia with a more in-depth understanding of these programmes.

Methodology and method

This research is an intentionally modified systematic literature review using the eight-step method and methodology recommended by Okoli and Schabram (2010) to investigate the question “What support is currently provided to increase young people’s capacity to manage stress?”. Not all existing literature on the topic was included in the review, nor were large numbers of studies included. Due to the smaller scope, this research provides a modified, rather than traditional, systematic literature review. For an item to be considered for review it had to meet the following criteria: the publication language had to be English, it must have been peer-reviewed, and published in Aotearoa or Australia, it had to contain information about programmes for young people aged 10–24 years of age, and the date of publication had to be between 2010 and 2023, with the exception of seminal works. The following information was extracted from each item: the aim, technique or tool, and framework being reviewed; the results of the review; and suggestions for future research. Due to the scope of this research, there will inevitably be existing programmes that will not show up in this review.

Findings

The studies have been grouped into themes. Three key themes were found in this review: programmes informed by therapeutic modalities, the feasibility of using the programmes in schools, and the effects of the programmes on young people. These are discussed in turn.

Programmes informed by therapeutic modalities

Four programmes identified in this review were informed by therapeutic modalities. Three of these programmes were found to have significant effects when used with young people.

Strong Minds (Burckhardt et al., 2016) and *ACT Universal Prevention Program for Adolescents* (Burckhardt et al., 2017), were programmes based on acceptance and commitment therapy (ACT). A third programme, *Healthy Minds* (Nehmy & Wade, 2015), using cognitive behavioural therapy (CBT), demonstrated that symptoms of depression, stress, and overall psychopathology could be significantly lower in those participants who had completed the ACT-based Strong Minds programme first. The results suggest that early interventions that include emotion regulation strategies of acceptance could improve the wellbeing of young people (Burckhardt et al., 2016). Indeed, ACT-based prevention programmes provided in school environments were found to be acceptable to students and feasible to administer in those settings (Burckhardt et al., 2017). The authors found that the way a young person relates to their thoughts and feelings may create a more fundamental shift than could be achieved by any new set of skills they could be taught (Burckhardt et al., 2017). Both Burckhardt et al. (2016) and Burckhardt et al. (2017) recommended additional research with larger sample sizes to confirm the efficacy of Strong Minds and ACT Universal Prevention Program for Adolescents respectively.

One programme, Healthy Minds, was found to have statistically significant improvements at a six-month follow-up, including a decrease in self-criticism, negative affect, and unhelpful perfectionism in comparison to the controls (Nehmy & Wade, 2015). Further research into the effects of Healthy Minds on psychopathologies and negative affect is needed (Nehmy & Wade, 2015).

Studies that focused on programme feasibility in schools

The feasibility of using the following four programmes in schools was assessed: *Bite Back*, an online positive psychology programme designed to improve young people's happiness and wellbeing (Burckhardt et al., 2015); *Sources of Strength*, a peer leadership programme aiming to improve help-seeking behaviours for suicide, as well as overall psychological challenge (Calear et al., 2016); *Smooth Sailing*, an online mental health programme providing

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psychological interventions to enhance help-seeking behaviours (O’Dea et al., 2019); and lastly, *Future-Proofing*, a mental health app addressing adolescent depression (Werner-Seidler et al., 2020). None of these studies produced significant results to indicate these programmes would be feasible within schools. Burckhardt et al. (2015) suggested, in regards to Bite Back, that this may not be an accurate representation of the programme’s effectiveness and that there may be issues with the application of Bite Back to school settings. Further research investigating potential application issues is needed. Calear et al. (2016) and Werner-Seidler et al. (2020) are still to develop results on the feasibility of Sources of Strength and Future-Proofing, respectively, as these studies are not yet evaluated. O’Dea et al.’s (2019) Smooth Sailing study results were not significant, however the findings did provide some support for the feasibility, acceptability, and safety of the programme. Although programme improvements are needed, Smooth Sailing shows potential for identifying early mental health issues and preventing more serious conditions developing.

Studies that evaluate the effects of specific programmes on young people

The effectiveness for young people of the following programmes has been measured with varied results: *IRCB: Increasing Resilience to Cyberbullying* (Chillemi et al., 2020), *Onwards Adventure* (Dobud, 2016), *Project K* (Furness et al., 2017), *Teen Mental Health First Aid* (Hart et al., 2016), *This Way Up* (Wong et al., 2014), *Mindfulness* (Arthurson, 2015), *10-Lesson Classroom Programme* (Midford et al., 2017), *Universal School-based Intervention* (Dray et al, 2017), *Resilient Families Intervention* (Buttigieg et al., 2015; Shaykhi et al., 2018), *Reframe-IT* (Hetrick et al., 2017), *Deep-breathing Mindfulness* (King et al., 2018), *ACT in the Outdoors* (Tracey et al., 2018), and *Burn-2-Learn* (Leahy et al., 2019).

IRCB: Increasing Resilience to Cyberbullying (Chillemi et al., 2020), a programme using CBT-based interventions, produced a significant increase in the help-seeking attitudes and behaviours of young people falling victim to cyberbullying, as well as a significant increase in young people’s use of the coping skills “self-compassion” and “challenging unhelpful thinking” to withstand an experience of cyberbullying. This programme used CBT interventions that challenge unhelpful thinking patterns to help participants manage an

experience of cyberbullying through an online self-guided psychoeducation programme (Chillemi et al., 2020).

Dobud (2016) reported that students identified adventure therapy-based programme Onwards Adventure as a valuable experience that young people may turn to as an alternative to traditional treatments. Similarly, after completing the adventure therapy-based programme Project K, young people experienced significant positive effects on their resilience, wellbeing, and self-efficacy, highlighting the importance of building strengths in young people (Furness et al., 2017).

Another programme using CBT-based interventions, Teen Mental Health First Aid, significantly improved young people's mental health literacy, their confidence in providing mental health first aid to a peer, and their help-seeking intentions (Hart et al., 2016). Alongside this, decreases in psychological distress were reported along with a reduction in young people's stigmatising attitudes towards mental ill health (Hart et al., 2016).

A study by Wong et al. (2014) found that symptoms of anxiety and depression significantly improved after using This Way Up, a curriculum-based programme implemented by classroom teachers using CBT-based interventions.

Mindfulness classes assisted some students in managing emotions such as stress, fears about bullying, getting to sleep, and calming down (Arthurson, 2015). However, Arthurson highlighted the importance of addressing the way mindfulness practices are developed, integrated, and taught to young people, to ensure the practices do not simply "become another set of teaching tools in the classroom linked to better performance" (Arthurson, 2015, p. 38).

The 10-Lesson Classroom Programme demonstrated that there was a need to improve the psychological wellbeing of students and that social and emotional competency could be significantly improved when social and emotional education programmes were incorporated into the school curriculum and taught in classrooms (Midford et al., 2017).

Studies on two further programmes, Universal School-based Intervention (Dray et al., 2017) and Resilient Families Intervention (Buttigieg et al., 2015; Shaykhi et al., 2018) did not demonstrate significant effects on young people.

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Hetrick et al. (2017) (Reframe-IT), King et al. (2018) (Deep-breathing Mindfulness) and Tracey et al. (2018) (ACT in the Outdoors) found additional insights outside of their research focus. The Reframe-IT programme produced improvements in cognitive behaviour skills, while also decreasing suicidal ideation (Hetrick et al., 2017). The effectiveness of Deep-breathing Mindfulness varied depending on how a young person chose to participate and what they perceived the purpose of the exercise to be (King et al., 2018). Further, although ACT in the Outdoors did not show significant effects on young people, it provided insight into skills and behaviours that could be used by students as a springboard for improved psychological wellbeing. These included using mindfulness for self-soothing and calming, actively engaging in commitment to action and team-work, and trusting and respecting others (Tracey et al., 2018). Finally, the impact of the high-intensity interval training Burn-2-Learn programme is yet to be evaluated and have its results provided (Leahy et al., 2019). Leahy et al. (2019) anticipate that it will reduce stress and increase the psychological wellbeing of young people.

Discussion

These findings demonstrate that programmes using ACT, CBT, and adventure therapy interventions show promise in successfully increasing young people's capacity to manage stress. The results of the reviewed studies indicate that programmes that focus exclusively on alleviating symptoms and decreasing unhelpful behaviours are not the only feasible approaches for addressing the wellbeing of young people. Rather, the enhancement of protective factors, through the use of ACT, CBT, and adventure therapy interventions, has the potential to support young people to thrive (Furness et al., 2017). The setting in which these interventions are provided, and the way these interventions are delivered, may be significant variables that successfully increase young people's capacity to manage stress.

ACT focuses on regulating emotions by applying mindfulness techniques to physical sensations, thought processes, and feelings (Burckhardt et al., 2017). Both Strong Minds and ACT Universal Prevention Program for Adolescents provided education and exercises on values, committed action, mindfulness, and thought diffusion. ACT emphasises the use of mindfulness in regulating emotions (Burckhardt et al., 2017), applying mindfulness techniques to physical sensations, thought processes, and feelings. It also teaches behavioural

skills to help young people recognise and accept their experiences, instead of engaging in avoidance patterns. ACT also increases young people's understanding of values by helping them to identify personal values and encouraging engagement in behaviours that are consistent with these personal values, in order to regulate their emotions (Hayes, 2004). Burckhardt et al. (2017) found the concept of values "particularly useful for adolescents as they are in an important transitional period where they are creating self-identity" (p. 2). When the concept of values guides intervention techniques, interventions can improve life-satisfaction, and increase motivation (Burckhardt et al., 2017). These findings demonstrate that educating and encouraging young people to use ACT concepts throughout their daily lives can decrease symptoms of depression, anxiety, and stress, and are acceptable and feasible programmes for school environments.

The findings of several studies indicate programmes using CBT techniques can also increase young people's capacity to manage stress (Chillemi et al., 2020; Hart et al., 2016; Nehmy & Wade, 2015; Wong et al., 2014). CBT uses psycho-social interventions focussing on changing unhelpful cognitions and behaviours to improve emotional health and wellbeing (Hofmann et al., 2012). The CBT-based programmes emphasised the difference between unhelpful behaviours and health practices, which decreased perfectionistic thinking and promoted adaptive and flexible thought patterns, fostering self-compassion and disrupting the growth of maladaptive cognitions, behaviours and affects (Nehmy & Wade, 2015). In addition, self-compassion increased, unhelpful thinking was challenged, and there was an increase in recognising the usefulness of support-seeking when falling victim to cyberbullying (Chillemi et al., 2020). Learning CBT skills helps young people identify their symptoms and develop ways to manage their symptoms (Wong et al., 2014). Using CBT techniques, the young people developed abilities to distinguish unhelpful from helpful behaviours, manage anxiety and depression symptoms, and respond to mental health crises (Chillemi et al., 2020; Hart et al., 2016; Nehmy & Wade, 2015; Wong et al., 2014). This indicates that school-based programmes drawing on CBT have the potential to increase the ability of young people to manage stress.

Strong Minds, ACT Universal Prevention Program for Adolescents, Healthy Minds and Teen Mental Health First Aid all used lecture-style presentations on campus at schools, providing education on one topic per session and encouraging students to apply the topic to daily life.

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This suggests that educational and experiential classroom exercises may provide an effective context for ACT and CBT interventions, and that educational environments are also a potential platform for the delivery of prevention programmes focussing on increasing young people's capacity to manage stress.

Chillemi et al. (2020) and Wong et al. (2014) suggest online contexts may also be a potentially effective platform for CBT interventions to be delivered to young people, increasing their capacity to manage stress. Online interventions are affordable and easy-to-access platforms for promoting effective coping skills (Chillemi et al., 2020). Symptoms of anxiety and depression can be decreased when participating in online prevention programmes using CBT principles (Wong et al., 2014). For young people, especially, finding successful online programmes is important. The COVID-19 pandemic resulted in increased migration toward online platforms, including online learning for educational facilities (Adedoyin & Soykan, 2020). Online platforms offer new accessible and sustainable opportunities for the delivery of mental health programmes, particularly for young people.

Both Onwards Adventures and Project K demonstrated that adventure therapy techniques provide adolescents with practical life skills, help them build strong relationships and prevent relapse as well as providing adolescents with ongoing support plans to increase their capacity to manage stress over the course of their lives (Dobud, 2016; Furness et al., 2017). These programmes encouraged therapeutic growth through experiential learning, while building strong relationships between adolescents and leaders or mentors (Dobud, 2016; Furness et al., 2017). Adventure therapy provides experiential learning outdoors through wilderness challenges to foster psychological growth and development. Previous research suggests adventure therapy has the ability to build resilience and is associated with positive academic and behavioural outcomes (Neil & Dias, 2001). From the results of these studies, it appears that adventure therapy provides an opportunity for individuals to overcome challenging tasks, contributing to their sense of achievement and increasing self-esteem.

The positive impacts of adventure therapy programmes suggest outdoor settings can be effective contexts for young people to learn and use adventure therapy intervention skills to increase their capacity to manage stress. Outdoor programmes have a wide variety of positive impacts on personal and social development, creating physical health benefits and supporting young people to gain and enhance their practical skills and increase their knowledge of

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environmental care (Maynard & Waters, 2007; Bilton, 2010; Bento & Dias, 2017). Outdoor contexts offer an experience of freedom, physical movement, and connection with the constantly changing outdoor world, giving young people an opportunity to experience natural phenomena that cannot be replicated indoors (Maynard & Waters, 2007). Other benefits of being outdoors include sunlight exposure, fresh air, a strengthened immune system, and engagement in physical activity, contributing to physical development (Bilton, 2010). It is increasingly important for young people to experience the outdoors as a balance to sedentary lifestyles. As outdoor play is diminishing, there is a corresponding disconnection from the natural world, which risks compounding the effects of the climate crisis on young (Bento & Dias, 2017).

Schools have the potential to become a setting for targeting and addressing the protective and preventive factors for mental health problems, providing access to and opportunities for mental health prevention and intervention, for prolonged periods of time, to cohorts of young people (Durlak et al., 2011, Midford et al., 2017; Seligman et al., 2009).

Existing programmes outside the scope of this research

This research was limited due to the small scope focusing only on articles from Australia and New Zealand published between 2010 and 2023 and located on three databases. Inevitably there will be existing frameworks and guidelines that were not included in this review. Targeted cultural interventions specific to Māori young people were also not included as these did not surface in the search. However, these are important to mention.

Positive Behaviour for Learning Initiative (PB4L) also known as *School-Wide* (Boyd & Felgate, 2015) is an existing framework that did not surface in the search. PB4L focuses on improving student wellbeing and promoting positive behaviour through social and cognitive learning theory. It aims to engage the whole school community in adapting school philosophies, practices, structures and systems that relate to behaviour (Boyd & Felgate, 2015). School staff have reported that *PB4L* supports improvements in school culture and student behaviour, as well as the development of more positive and consistent approaches to behaviour (Boyd & Felgate, 2015).

The programmes *Smart, Positive, Active, Realistic, X-factor Thoughts (SPARX)* (Merry et al., 2012) and *Travellers* (Roberston et al., 2012) also fell outside the scope of this research, but are important to mention as they both deliver CBT interventions via online programmes. *SPARX* (Merry et al., 2012) is a computerised programme that uses CBT interventions to reduce depression, anxiety, and hopelessness symptoms in young people, while increasing quality of life overall (Merry et al., 2012). The programme has been found to be an affordable and effective resource for young people with depressive symptoms. *Travellers* (Roberston et al., 2012) is an early intervention online CBT programme for students in Aotearoa secondary schools, addressing emotional distress, loss, and change, and enhancing protective factors (Robertson et al., 2012). The programme helps reframe thinking and feelings and was found to increase young people's resilience, help-seeking, and positive relationships. These two programmes are effective interventions for young people, particularly for those who may be more reluctant to engage with conventional therapy (Merry et al., 2012). The findings in this literature review align with the evidence from these two programmes.

School-based counsellors in Aotearoa New Zealand would be familiar with the programmes that are used in their secondary schools, as school-based counsellors are an integral part of pastoral care teams. The pastoral care system includes school counselling and also a range of support groups and targeted programmes. Programmes such as *Travellers* and *Peer Support Programmes* are often delivered primarily through guidance and counselling departments in schools. The pastoral care system comprises research-informed guidelines based on the understanding that “when young people feel safe and supported in their school environment, they are more engaged and ready to learn” (Ministry of Education, 2017, p. 7). These guidelines aim to reduce psychological distress, enable greater engagement, increase retention in education, improve achievement, and reduce suicide risk among young people (Ministry of Education, 2017).

In addition, *Ka Hikitia – Ka Hāpaitia | The Māori Education Strategy* (Ka Hikitia) (Ministry of Education, 2023) has been developed to provide guiding principles to support Māori learners and their whānau, hapū and iwi. The strategy discusses the application of the articles of Te Tiriti o Waitangi into educational settings. Ka Hikitia works towards increasing Māori learners' engagement in education and improving education outcomes, with whānau, hapū and iwi as active partners. In addition to Ka Hikitia, the programmes in this literature review

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also have the potential to increase engagement in education and improve education outcomes for young Māori .

Limitations

Due to the limited scope of this research, inevitably some existing programmes were not included in this review. No results about programmes for Māori students, nor any other targeted cultural interventions surfaced during the search. Therefore, this review must be considered preliminary research.

Further research

Further research assessing ACT, CBT, and adventure therapy interventions in the classroom, via online platforms, and in outdoor programmes is needed to evaluate the impact and effects these have on young people and their ability to manage stress. Further research evaluating preventative programmes is needed to confirm the efficacy of the programmes that have thus far produced significant results.

Conclusion

As we know, “adolescence is not a stage to simply get over, it is a stage to cultivate well” (Siegel, 2013, p.74). This research highlights the importance of addressing the mental health and wellbeing of young people to best support them as they navigate adolescent years and journey into healthy adult lives. It shows there is an ongoing need for varied programmes to teach young people how to manage stress and equip them for adulthood. The programmes producing promising results are ACT, CBT and adventure therapy interventions, delivered in classroom and in outdoor and online contexts. Online and outdoor delivery contexts provide young people an opportunity to engage in learning contexts that suit their individual learning style. Interventions beyond ACT, CBT, and adventure therapy warrant future research if we are to continue to develop and implement programmes that provide young people with the best possible way to manage stressors. Educational settings such as schools and online contexts appear to be suitable for the effective delivery of programmes that enhance young

people's capacity to manage stress. Counsellors may find it useful to keep up to date with programmes that support the mental health of young people. Moreover, counsellors may be active in referral to, and/or the delivery and evaluation of such programmes. By better equipping young people to deal with the inevitable stressors of life, adult mental health and wellbeing is also supported.

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