

A rapid review of resilience in schools: Working paper

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This document is a working paper drafted for a particular purpose: to inform the decision process about possible additional items for Wellbeing@School survey tools. It is a rapid review of recent key literature including meta-analyses and relevant New Zealand Aotearoa literature. Using a rapid review methodology means that some sections rely on secondary sources.

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1. Introduction

The Ministry of Education is considering adding items to the Wellbeing@School (W@S) survey tools. W@S is an online self-review toolkit developed by the New Zealand Council for Educational Research (NZCER) for the Ministry of Education. The toolkit includes survey tools for students and teachers, a self-review process, and support resources that together aim to help schools “explore how different aspects of school life contribute to creating a safe and caring climate that deters bullying”¹.

One of the areas of interest for the Ministry of Education is resilience. In recent times, the importance of fostering resilience and students’ wellbeing has become more visible in key education documents. This importance is clearly expressed in the vision for young people in *The New Zealand Curriculum* (Ministry of Education, 2007, p. 8). The vision identifies the need for students to be “Positive in their own identity”, “Resilient”, and “Able to relate well to others”. More recently, the Ministry of Education’s (2018) *Statement of Intent* emphasises the importance of wellbeing by stating that “success” is based on a “strong education system, that supports wellbeing and enables achievement” (Ministry of Education, 2018, p. 8). Furthermore, “the intention over the next four years is to create an inclusive education system where the achievement, progress, wellbeing and participation of all children is valued and supported” (Ministry of Education, 2018, p. 20). The wellbeing capabilities needed by students include social and emotional skills and resilience.

The purpose of this rapid review is to examine the research literature relating to resilience and empathy and their measurement to determine if and how additional constructs might be added to the survey.

A rapid review is conducted within a short time frame with the aim of providing an overview of a concept. A rapid review does not aim to provide a complete summary of all the literature available related to the target area; instead, it focuses on key sources of literature, messages, and understandings (Efron & Ravid, 2019).

The main focus of this review is resilience. We discuss empathy (and other constructs such as persistence, coping, grit, or perseverance) as they relate to resilience. We have provided separate information about measurement of empathy, as these measurement scales tend to have a different purpose from those developed to measure resilience. We answered the following questions:

¹ <https://www.wellbeingatschool.org.nz/about-ws-tools>

- What is resilience?
- Should schools promote resilience and, if so, how?
- How are New Zealand schools promoting resilience?
- How are resilience and empathy indicated or measured in students?

As well as looking through international and New Zealand literature, our rapid review looked specifically for te ao Māori perspectives, which tend to talk about resistance as an alternative to resilience.

We began the rapid review in mid-October 2019 and developed a draft for the Ministry of Education in mid-January 2020.

Search strategies

We searched for literature from 2010 to 2019 looking for overviews, systematic reviews, and meta-analyses that covered international debates relating to key concepts. In reviewing New Zealand seminal studies, we focused on te ao Māori concepts. Our librarians searched databases including EBSCO, EDRsearch, ERIC, INNZ, PsychInfo (EBSCO), and Te Puna Search using the following search terms:

- Overview/literature review/systematic review/meta-analysis * resilience * children
- Resilience * children * school * program
- Measuring * resilience * children
- Resilience * empathy * children
- Resilience * persistence * children
- Resilience * coping * children
- Resilience * perspective taking * children
- Resilience * Māori
- Resilience * resistance * Māori * youth * rangatahi
- Resilience * tino rangatiratanga * youth * rangatahi.

We also searched Google Scholar and followed up on some literature cited in key documents. All references were entered in Zotero, an online referencing system.

Key authors we drew on for this review include Banerjee et al. (2016); Carswell et al. (2017); Jongen et al. (2019); Khanlou and Wray (2014); Luthar and Cicchetti (2000); Masten (2007, 2014); Neumann et al. (2015); Penehira et al. (2014); Rutter (2002, 2012); Shaikh and Kauppi (2010); Shean (2015); Southwick et al. (2014); Ungar (2006, 2012); Waiti (2014); and Windle et al. (2011).

Limitations of this paper

As this paper is a rapid review with a contained scope, we relied mainly on systemic reviews and meta-analyses; this meant we did not always read the original research papers.

We found that “resilience” has many meanings and definitions. This means that researchers are not always talking about the same constructs and, especially in relation to measurement, instruments and scales are not easily comparable.

Much of the New Zealand material tends to discuss wellbeing rather than resilience (or empathy) specifically. At times we have made assumptions that a particular approach to wellbeing (for example, in school-wide programmes), includes elements of promoting resilience even though this is not their express purpose.

2. Defining resilience

Origin of resilience in material science

The word *resilience* derives from the Latin verb *resilire*, meaning “to jump back” or “to recoil”. In physics, resilience is the ability of an elastic material (such as rubber or animal tissue) to absorb energy (such as from a blow) and release that energy as it springs back to its original shape. The recovery that occurs in this phenomenon can be viewed as analogous to a person’s ability to bounce back after a jarring setback.²

Linking resilience to human beings

Using the analogy with material science, researchers, clinicians, and practitioners in the social sciences have given attention to resilience for over 50 years. Early resilience studies concentrated on qualities of the individual child or adolescent. The resilient child was described in absolute terms such as “invulnerable” (Anthony, 1974, cited in Fleming & Ledogar, 2008, p. 2) or “invincible” (Werner & Smith, 1982, cited in Fleming & Ledogar, 2008, p. 2).

Gradually, researchers came to view these absolute terms as misleading. From the late 1970s, clinical psychologist Norman Garmezy led research in Project Competence, a landmark longitudinal study into positive outcomes in at-risk children. He concluded resilient children are not “heroic” compared with others. Rather, they show “functional adequacy (the maintenance of competent functioning despite an interfering emotionality) as a benchmark of resilient behaviour under stress” (Shean, 2015, p. 8).

Researchers increasingly recognised and described three levels of protective factors that promote mental health and positive development in the face of risk, thereby promoting resilience in children and young people. These three levels were the individual, the family, and the community (school, peers, etc.) (Fleming & Ledogar, 2008). Subsequent work by Ungar, particularly around 2011–2013, led to culture (including cultural/spiritual identification) becoming recognised as a fourth protective factor (Shean, 2015).

Studies through the 1970s to 1990s broadened the scope to include how individuals and groups dealt with extreme adversity. These studies revealed that “despite various stressors impacting on the health and wellbeing of individuals, inherent personality traits and coping strategies emerged

² <https://www.merriam-webster.com/dictionary/resilience>

that enabled some individuals to remain resolute and to overcome adverse situations” (Cohler, 1987, and Garmezy, 1991, both cited in Waiti, 2014, pp. 51–52).

How different theoretical positions define resilience

No universal definition exists of the concept of resilience in human beings. In essence it is commonly considered to be not a character trait (Luthar & Cicchetti, 2000, cited in Khanlou & Wray, 2014), but a process that refers to exposure to adversity and “positive” adaptation (Fergus & Zimmerman, 2005, cited in Khanlou & Wray, 2014, p. 65).

The American Psychological Association’s definition comes close to capturing that essence:

[Resilience refers to] the process of adapting well in the face of adversity, trauma, tragedy, threats or even significant sources of stress (cited by Southwick et al., 2014. For the Association’s full definition, see the article *The Road to Resilience*³).

Southwick et al. consider this definition of limited usefulness as it does not reflect the complex nature of resilience. It omits reference to the interaction of a range of biological, psychological, social, and cultural factors that determine how people respond to stress (Southwick et al., 2014, p. 2).

How, and the degree to which, these and other factors are identified as determinants of resilience largely reflects the different professional backgrounds, interests, and theoretical positions of resilience researchers.

Psychological position

Clinical psychologist Ann Masten (a former co-researcher with Garmezy and current Director of Project Competence), sees the theory of resilience as arising in the human development field in the 1960s and 1970s (Masten, 2007). Researchers investigating children at risk for psychopathology noted some had good outcomes despite being exposed to risk. This discovery stimulated a search for specific differences in children who thrive in the face of adversity, and a surge of research on protective factors that promote mental health and positive development in the face of adversity. Masten defines resilience as “the capacity of a dynamic system to adapt successfully to disturbances that threaten system function, viability, or development” (Masten, 2014, cited in Shean, 2015, p. 16).

Under this definition, resilience has two criteria: there must be a measure of positive adaptation or development, and there must be the past or current presence of conditions that threaten to disrupt positive adaptation. In this 2014 iteration, Masten uses “adapt successfully” whereas in a 2011 definition she had used “withstand”. This indicates a significant shift in thinking—that individuals

³ <https://www.apa.org/helpcenter/road-resilience>

do not withstand risk, but rather change to accommodate it (Masten et al., 2009, cited in Shean, 2015, pp. 16–17). Masten defines “positive adaptation or development” as:

meeting the requirements of developmental tasks and fundamental human adaptation systems. Developmental tasks are the expectations of a given society or culture in a historical context for the behaviour of children in different age periods and situations (e.g., going to school, getting a job, romantic relationships). Fundamental human adaptation systems include: attachment relationships and parenting; pleasure-in-mastery motivational systems; self-regulatory systems for emotion; arousal and behavior; families; formal education systems; cultural belief systems; religion and spirituality” (Masten et al., 2009, cited in Shean, 2015, p. 18).

Masten considers this systems-based definition to be broad enough to be applied across different disciplines and levels of analysis, including in work dealing with disasters (Southwick et al., 2014, p. 4).

Child psychology professor Michael Rutter has written extensively on child development, school effectiveness, autism, infant deprivation, and resilience. Much of Rutter’s research on resilience since the late 1970s is based on his early research into children of parents with schizophrenia. In this work, he noticed some children experienced risk but emerged relatively unscathed. This encouraged Rutter to search for competence in children who had experienced adversity, rather than stay with his original focus on pathways of psychopathology. This led him to a definition of resilience that distinguishes it clearly from other forms of competence (Shean, 2015, pp. 5–8).

Rutter defines resilience as “when some individuals have a relatively good outcome despite having experienced serious stresses or adversities—their outcome being better than that of other individuals who suffered the same experiences” (Rutter, 2013, cited in Shean, 2015, p. 6). In Rutter’s view, demonstrating resilience is “ordinary adaptation” and does not make children “superkids” (Shean, 2015, p. 6). Masten’s term “ordinary magic” presents a similar perspective (2009, cited in Shean, 2015, p. 17).

Shaikh and Kauppi (2010, pp. 157–166) have categorised different definitions and meanings of resilience derived from psychology into six strands:

1. personality traits (such as optimism, equanimity, perseverance, self-reliance)
2. appropriate adaption and positive outcomes despite high-risk
3. compensatory or protective factors associated with positive adaptation or outcomes
4. processes (such as intervention strategies that alter the level of risk or enhance protective processes)
5. sustained competent functioning/stress resistance
6. recovery of smooth functioning after loss of integration in the face of stressor(s) or trauma.

Limitations of psychological concepts of resilience

Psychological perspectives on resilience have tended to concentrate attention on an individual's intrapersonal functioning, studied largely within a mental health paradigm. Recent researchers generally concur that resilience is not a personality trait but a "dynamic process" involving interaction between children and their environment (Luthar et al., 2000, cited in Shean, 2015, p. 14). Ungar is critical of resilience having been:

reified in psychological discourse as something intrapersonal even if it was dependent on the resources, or structures, of the wider environment for its realization. This discourse has not identified the facilitative roles that families, schools, communities and government policies and programmes can take. (Ungar, 2012, p. 30)

While Rutter entertains the notion that there could be resilient communities, he asserts that "resilience as an outcome is still better viewed in terms of individual outcomes" (Rutter, 2012, p. 35).

Not all psychologically based definitions focus primarily on individuals. Masten (2011, cited in Shean, 2015) locates resilience at a broad systems level. Research by Trzesniak et al. led them to conclude: "Resilience, in psychology, should apply not just to individuals, but also to groups of humans; therefore, we prefer to say that it applies to systems" (Trzesniak et al., 2012, p. 63).

Sociological position

A sociological approach identifies active decision-making, resistance to structural conditions, and survival as major forms of resilience. These attributes derive mainly from studies of marginalised and oppressed individuals in society (Shaikh & Kauppi, 2010).

Shaikh and Kauppi (2010, pp. 166–169) have categorised definitions and meanings of resilience derived from sociology into two strands, each emphasising structural and material factors external to the individual that shape or are shaped by resilience:

1. **"Human agency and resistance** ... the capacity to make sense of one's experiences, assign meaning to them, and consequently make choices within a particular social and historical context" (p. 166), and
2. **"Survival"** (p. 168): this concept is based on the view that a person has the will and freedom to choose at least their attitude in a given situation, including when faced with multiple forms of psychological and physiological trauma. The concept was influenced by the early writing of Viennese psychiatrist and Holocaust survivor Viktor Frankl (1968, cited in Shaikh & Kauppi, 2010).

Unlike other concepts of resilience, survival may not imply or result in positive or normative outcomes. For example, adolescents may exercise free will in dropping out of school or young people may join paramilitary organisations because they see these actions as constructive and viable solutions to adverse situations in their lives (Shaikh & Kauppi, 2010).

Limitations of sociological concepts of resilience

The two strands outlined above identify structural and material conditions as factors that shape and are shaped by resilience. The central focus remains, however, on the individual who is affected by these factors and their innate capacity to exercise human agency and free will as autonomous, purposive, and creative actors. Some feminist theorists, however, such as Hallstein (1999), contest this representation of agency and, by association, resilience (Shaikh & Kauppi, 2010, p. 168).

Ungar has criticised both the sociological and psychological positions for focusing on individuals' capacity and amenability to change. He also considers they emphasise factors typical of mainstream Western culture and fail to recognise how community and cultural factors can contextualise and influence resilience in non-Western cultures (Ungar, 2008a, cited in Shaikh & Kauppi, 2010).

Biological position

Some research has identified biological underpinnings or genes as important determinants of resilience (Yehuda et al., 2006, Yehuda et al., 2013, Simeon et al., 2007, all cited in Southwick et al., 2014).

“Rutter has a strong belief in biological and genetic influences in risk and resilience” (Rutter, 2013, cited in Shean, 2015, p. 7). In his view, “individual differences in resilience may be due to genetic effects that make some children more or less susceptible to environmental change” (p. 6), or that provoke “physiological responses to environmental hazards” (p. 6). He emphasises, however, that the environment is the catalyst for these differences, rather than the child. He states that “resilience may be constrained by biological programming, and stress/adversity can have a damaging effect on neural structures” (p. 7). Consequently, there is a need to identify environmental risks that alter genes and biological functioning (Rutter, 2013, cited in Shean, 2015).

Luthar and Brown (2007, cited in Shean, 2015) state that biological approaches will be “more effective for the large number of young people experiencing mental health disorders” (p. 16), but recognise the shortcomings of focusing on biological influences of behaviour.

Limitations of biological position

We have not found in the literature any definitions of resilience grounded primarily or largely in biological science. Kent states that “understanding the neurobiological mechanisms supporting resilience is a recent development, ... emerging as technology develops” (Kent, 2012, p. 111).

Anthropological position

An anthropological research perspective is concerned with how different cultures understand resilience and whether definitions and measurement of it are culturally relevant and appropriate.

In a panel discussion, Catherine Panter-Brick defines resilience as “a process to harness resources to sustain well-being” (Southwick et al., 2014, p. 4). Inherent in this definition are concepts that resilience is not just an attribute or capacity; that it requires access to culturally relevant and appropriate resources; and that it is more than a narrow definition of health or the absence of pathology.

Panter-Brick argues that what matters most to individuals facing adversity is a sense of “meaning-making—and what matters to resilience is a sense of hope that life does indeed make sense, despite chaos, brutality, stress, worry or despair” (Southwick et al., 2014, p. 6).

Limitations of anthropological position

Although we include a definition of resilience from an anthropological perspective, we did not find in our limited literature search a fully articulated theory from this position. Panter-Brick’s primary concerns (Southwick et al., 2014, p. 6) about “culturally relevant definition” and measurement of resilience appear to be central to Ungar’s socio-ecological theory of resilience outlined in the next section. Anthropological perspectives also strongly underpin concepts outlined in later sections on cultural resilience and how it manifests within Indigenous contexts, in particular te ao Māori.

Socio-ecological position

Michael Ungar (2006, 2012) has worked as a social worker and family therapist for over 25 years. He is the founder of the International Resilience Research Centre in Canada, which co-ordinates resilience research in over 14 countries. His research focuses on cross-cultural research, mixed methods, constructivism, and resilience. His definition of resilience is as follows:

In the context of exposure to significant adversity, whether psychological, environmental, or both, resilience is both the capacity of individuals to navigate their way to health- sustaining resources, including opportunities to experience feelings of wellbeing, and a condition of the individual’s family, community and culture to provide these health resources and experience in culturally meaningful ways. (Ungar, 2006, p. 225)

Shean (2015, p. 42) has created a table showing this definition is fully grounded in a socio-ecological framework. It includes, alongside personal agency, the physical ecology (e.g., quality of housing, water, pollutants in the air); the social ecology (e.g., personal attachments and structural supports such as schools, transportation, and health care); and culture (defined as everyday practices through which individuals and groups manifest shared values, beliefs, language, and customs).

Shaikh and Kauppi (2010, pp. 167–170) endorse this definition because it “unifies apparently disparate conceptualisations of resilience” and addresses the limitations of other definitions outlined above. Carswell et al. cite literature reviews by various authors (e.g., Kalil, 2003; Meredith et al., 2011) that identified numerous resilience factors operating at individual, family, community, and societal levels within a socio-ecological framework and which Ungar’s definition accommodates well (Carswell et al., 2017, pp. 11–14).

Targeted definitions

Narrowly formulated definitions of resilience, sometimes called “operational”, are applied to specifically targeted population groupings and/or contexts; for example, community, cultural, Indigenous, whānau, family, educational, or academic resilience.

Educational resilience

In relation to education, definitions of resilience are sometimes limited to academic performance, though may vary considerably in scope and content. Martin and Marsh (2003) define academic resilience from a health/psychological perspective as “students’ ability to deal effectively with academic setbacks, stress, and study pressure” (p. 1).

OECD publications take a socioeconomic emphasis, appropriate to their specific topic or purpose. In a recent OECD study, Agasisti et al. (2018, p. 9) define resilience as: “The capacity of an individual to gain the set of skills and competencies that are essential to fully participate in society and have good chances to succeed in the labour market.” An earlier OECD publication defines “resilient students” as “those who, despite being socio-economically disadvantaged compared to other students in their own country, are high achievers in the PISA science assessment” (OECD, 2011, p. 22).

We found the international literature favours a broad approach when resilience is applied to the context of schools. This approach includes both academic functioning (e.g., coping with failure on a challenging task) and emotional health and wellbeing (e.g., finding a way through adversity):

... that quality in children who, though exposed to significant stress and adversity in their lives, do not succumb to the school failure, substance abuse, mental health, and juvenile delinquency problems they are at greater risk of experiencing. (Linquanti, 1992, cited in Banerjee et al., 2016, p. 7)

... the capacity to achieve developmental milestones, such as education and employment, in spite of adversity in childhood. (Carswell et al., 2017, p. 3)

Cultural resilience

The anthropological and socio-ecological definitions outlined above highlight the importance of cultural context as a determinant of resilience. This context is a central focus in the literature on Indigenous concepts of resilience (McGuire, 2010, cited in Waiti, 2014).

There are key cultural distinctions in the way in which Indigenous peoples conceptualise resilience. For example, family and community factors contribute significantly more to Indigenous peoples’ resilience than do individual factors. Cultural resilience has been used to describe the degree to which the strengths of a person’s culture support and promote coping. From this perspective, resilience can be strengthened through cultural connectedness, demonstrated by factors such as a

strong cultural identity; connections to family, community, traditions, and the natural environment; and Indigenous worldviews and spirituality (Jongen et al., 2019).

A significant body of work critiques the applicability and usefulness of concepts of resilience in the context of an Indigenous worldview (Battiste, 2008, Boulton & Gifford, 2011, Penehira & Green, 2010, Scarpino, 2007, all cited in Waiti, 2014, p. 72).

Particularly contested are depictions of resilience that focus on failure, adversity, risk, and coping, rather than on adopting a strengths-based approach.

In this sense, the positive resources inherent in Indigenous populations such as spirituality, cultural identity and extended family networks, form the basis of resilience from an Indigenous perspective. (Andersson, 2008; K. Edwards et al., 2008; both cited in Waiti, 2014, p. 69).

Some scholars also reject definitions of resilience that imply Indigenous peoples are to blame for not accepting the adverse effects of colonisation and that they must take responsibility for coping better with them (Penehira et al., 2014).

Opposition to this approach is not restricted to Indigenous perspectives. Psychotherapist, Kyle MacDonald, objects to resilience training in schools as “just the new ‘harden up’” in the absence of effective measures to address a plethora of community problems confronting young people (MacDonald, 2017).

Rutter sees coping as an important element of resilience, but not synonymous with it, as coping is an individual feature that ignores social context and social influences (Rutter, 2012).

Indigenous resilience as resistance

Mason Durie, a well-known writer in the space of Māori health and wellbeing, endorses the strengths-based concept of resilience. Among broad determinants of Indigenous resilience, he identifies human capability, cultural affirmation, attitudinal biases, the economy, lifestyle environments, policies of the state, Indigenous mobility, and leadership (Durie, 2007, cited in Waiti, 2014, p. 71). Durie sums up his position on Indigenous resilience with the term “resistance”. This reflects the sociological perspective on resilience outlined above, comprising both human agency and survival:

Superimposed on adversity and historic marginalisation, Indigenous resistance is a reflection of an innate determination by Indigenous peoples to succeed. Resilience is the polar opposite of rigidity. It provides an alternative perspective to the more usual scenarios that emphasise Indigenous disadvantage and allows the Indigenous challenge to be reconfigured as a search for success rather than an explanation of failure. (Durie, 2007, p. 8)

Resistance within a te ao Māori framework

The literature on concepts of resilience in the Māori population recognises that the term is multifaceted. For example, Penehira et al. (2014, p. 98) comment that “a multitude of factors influence and determine both the need for resilience and the resilient strategies and behaviours we employ within our own communities. These include our colonial history...”

Like Durie (2007), Penehira and Green (2010, cited in Waiti, 2014, p. 69) believe “resistance” is a more suitable term than “resilience” as it “alludes to de-colonisation and indicates a collective fight back to end further discrimination, and better exposes the inequitable distribution of power that has resulted from colonisation”.

In the context of suicide prevention among Māori, Dudgeon et al. (2018) link resilience in Māori to their historical resistance to the injustices of colonisation.

Waiti’s (2014) thesis provided a conceptualisation of Māori identity derived from his study of a cohort comprising members of 15 whānau. His work explored the concept of whānau resilience—the capacity of whānau to overcome adversity, to flourish, and enjoy better health and wellbeing.

Waiti examined the theoretical underpinnings and models of earlier studies of “family resilience” (McCubbin & McCubbin, 1988, cited in Waiti, 2014, p. 57). He found most lacked Indigenous perspectives, were linear-based, and focused on Western notions of cause and effect resilience (Waiti, 2014, p. 65).

By contrast, Cross (1998, cited in Waiti, 2014, p. 65) proposed a model similar to Durie’s Te Whare Tapa Whā model of Māori health (Durie, 1998). Cross’s Indigenous model of family resilience comprises four interdependent quadrants: Context, Physical, Mental, and Spiritual.

Waiti’s research revealed that Māori and conventional (non-culturally based) notions of resilience had similarities, but a range of factors were unique to Māori and to whānau. These factors highlighted the utility of “applying a resilience lens that was culturally cognisant and culturally considered” (Waiti, 2014, p. 243).

Based on his findings, Waiti has developed a Whānau Resilience Framework with four platforms:

- Whanaungatanga factors—these include strong social networks (for example, kaupapa whānau (non-kin) support, family systems, and significant attachments).
- Pūkenga factors—these include the ability of whānau to develop protective factors throughout their lives to help buffer stressors that occur later on in life (e.g., unemployment), the ability of whānau and their individual members to adapt to changing circumstances as needs be, and the acquisition of new skills (e.g., education).
- Tikanga factors—a sense of meaning in life, values (positivity, optimism), and religious and cultural beliefs.

- Tuakiri ā-iwi factors—secure cultural identity expressed through strong intergenerational family connections (such as whakapapa whānau support) and the practice of concepts such as aroha, manaaki, karakia, and tangihanga.

(Waiti & Kingi, 2014, cited in Carswell et al., 2017, p. 14)

In research commissioned by the Social Policy Research and Evaluation Unit (Carswell et al., 2017), researchers identified five interrelated themes as important to promoting whānau resilience:

- Whanaungatanga: ... a relationship formed through shared experiences and working together which provides people with a sense of belonging. It develops as a result of kinship rights and obligations, which also serve to strengthen each member of the kin group. It also extends to others to whom one develops a close familial, friendship or reciprocal relationship.
- Manaakitanga: defined ... as the expression of love and hospitality towards people.
- Kotahitanga: solidarity and unity through shared experience—another essential element in terms of building authentic engagement and trust.
- Wairuatanga: for some Māori participants, spirituality was an essential part of their journey towards healing, rehabilitation, and achievement and the rebuilding of whanaungatanga, manaakitanga, and whakapapa within whānau.
- Rangatiratanga, as expressed by whānau members, was related to participants being inspired, motivated, or empowered to take on a more prominent role within their whānau in order to action a vision, dream, or set of goals and aspirations that would contribute to the wellbeing of, and provide a better future for, themselves and their whānau.

(Carswell et al., 2017, pp. 66–75)

Tensions and debates in the literature

Lack of a unified definition

We found limited consensus on the definition and meaning of resilience (see, for example, Shaikh & Kauppi, 2010, pp. 155–156) and wide agreement that a single definition is unnecessary and probably unachievable:

The word resilience is almost useless as a single word and ... it really only makes sense if we qualify it. (Southwick et al., 2014, p. 6)

It is fantastic that different people are looking at the phenomenon from different contexts ... it doesn't really matter if we have different definitions of resilience. (Southwick et al., 2014, p. 7)

The goal may not be to agree on the one definition of resilience, but rather to carefully define various types of resilience depending on context ... in order to establish a single broader, but nevertheless useful, definition of resilience, it will be essential to collaborate with experts who study engineering, ecological, biological, individual, family, organisational and cultural resilience. (Southwick et al., 2014, p. 11)

The trend towards using a range of operational definitions, specific to different contexts, reflects the approach to dealing with this conundrum used by Southwick et al. (2014).

Difficult terminology

Diversity of definitions contributes to some imprecision and confusion in the way terminology is used and understood. Studies variously present resilience as “process” or “capacity” or “outcome” of successful adaptation to adversity (Masten et al., 1990, cited in Shaikh & Kauppi, 2010, p. 156).

To Luthar and Cicchetti (2000), resilience is a “parsimonious label” for a scientific approach with multiple distinguishing features that raise major issues when applied to interventions and policies. If resilience is misinterpreted as a personal attribute of an individual, there is a risk the individual will be blamed for not possessing characteristics needed to function well, or for not taking personal responsibility (Masten, 1994, Pianta & Walsh, 1998, Reynolds, 1998, Tarter & Vanyukov, 1999, all cited in Luthar & Cicchetti, 2000, p. 6).

Luthar advises against using the term “resiliency” in presenting findings on competence despite adversity, because this term carries the connotation of a personality characteristic even more so than does the term “resilience” (Luthar & Cicchetti, 2000, Masten, 1994, both cited in Shean, 2015).

Luthar also advises against phrases such as “resilient children”, “resilient youth”, or “fostering resilience in youth”. She prefers non-personal usage such as “resilient adaptation”, “profiles”, or “trajectories of adaptation”. These, she argues, reduce the danger that non-scientists such as policy makers, media representatives, and members of the public will see absence of resilience as symptomatic of an innate character flaw. Luthar et al. also criticise inconsistencies in definitions of terms such as “risk”, “protective factor”, “competence”, and resilience itself (Luthar et al., 2000, cited in Shean, 2015, p. 16).

Resilience is flexible

Despite widespread personal attribution of the terms “resilience” and “resilient”, we found broad agreement that resilience is not an absolute or enduring characteristic. That has led to a range of conceptualisations of resilience, such as:

- a continuum, variable across multiple domains of life
- successful adaptation to adversity in one context, which will not necessarily transfer to another context or be replicated in personal functions or relationships

- changeable over time as a function of human development and depending on environmental interactions and influences. For example, a high degree of maternal care may be resilience-enhancing during infancy but not adolescence or young adulthood (Petrzak & Southwick, 2011, Kim-Cohen & Turkewitz, 2012, both cited in Southwick et al., 2014, p. 2; see also, Rutter, 2013, cited in Shean, 2015)
- clearly linked to risk factors that are relative, in that they may impact on some individuals but not others; for example, parental divorce, adoption, academic pressure, socioeconomic status (Rutter, 2013, cited in Shean, 2015).

Resilience is secondary to addressing primary causes of adversity

As we noted above in the section on Indigenous resilience/resistance, researchers—including Penehira et al. (2014)—reject approaches that equate Indigenous peoples’ resilience with acceptance of responsibility for their situation as disadvantaged and dispossessed peoples. They prefer the concept of resistance, as it involves exposure of, and collective opposition to, power inequities, racism, and other social, political, and economic forces that impact negatively on them.

Within the mainstream literature, several researchers advocate for policies and programmes that address the primary causes of adversity, such as poverty or exclusion, rather than strategies and interventions to enhance people’s ability to accept and cope better with them (Khanlou & Wray, 2014). In that regard, Penehira et al. (2014) are critical of State-led approaches to consultation with Māori that are reactive rather than proactive and lack recognition of Māori self-determination.

Others see benefit in enhancing resilience at one level by intervening at a different level:

To enhance resilience in a young child it may be more effective to provide schools and parents with needed resources (e.g., healthy meals; education on how to raise children) rather than intervene at the level of the individual child. Resilience in the individual is highly dependent on multiple layers of society. (Southwick et al., 2014, p. 12)

Importance of young voices in research and policy decisions

We found strong arguments that ignoring young people’s voices is a flaw in much resilience research. This is particularly in relation to measurements of resilience. We include this information here rather than in the section on measurement because the current lack of attention to young voices has wider research and policy implications. Reliance on forms of data collection such as parent and teacher reports or even surveys of young people may provide some insight into the young person’s functioning. They cannot be assumed, however, to have more insight into the young person’s life than the young person themselves (Shean, 2015, pp. 31, 35; Ungar and Teram, 2005, cited in Shean, 2015, p. 22).

Downey (2014) acknowledges arguments against the merits of children’s self-reporting, such as degrees of significance, validity, immaturity of thinking, and concern to please adults. Noting that there are technical measures available to address these concerns, she concludes that, when care is

taken in the selection and administration of instruments, the data will provide a more balanced and systematic representation of children's experiences and perceptions (Downey, 2014, p. 51).

Importance of empirical evidence

We found numerous references in the literature to insufficient attention paid, in policy making and in interventions, to the existing evidence base in research on resilience. For example:

In a conducive policy environment there is a danger that the rhetoric of thinking in terms of resilience drives developments, rather than a more reasoned, empirical approach; and a risk that resilience becomes 'a catch-all conceptualisation based on a very narrow empirical base'. (Ager, 2013, cited in Banerjee et al., 2016, p. 8)

Much significance is placed in the literature on the influence of protective factors in promoting resilience. Luthar's research, however, has indicated that factors commonly believed to be protective have instances where this is not the case. For example, high intelligence is generally considered a protective factor, but Luthar's work has established it can increase vulnerability in adolescents with high stress (Luthar, 1991, cited in Shean, 2015, p. 14).

Luthar's research has also indicated that adolescents from wealthy backgrounds, who were seemingly low risk, suffered higher rates of both externalising (e.g., substance abuse, rule breaking) and internalising (e.g., anxiety/depression) disorders than the general population. These students may equate success with meeting their parents' standard of living or believe there are few achievements privilege can't help them acquire. She has called for further empirical work to understand the "culture of affluence" in relation to resilience (Luthar, 2019, Luthar et al., 2006, cited in Shean, 2015, p. 15).

Rutter's research indicates identifying a risk factor in one situation does not mean it constitutes a risk in all circumstances. For example, divorce is frequently identified as a risk, but it is actually only a risk when there is parental discord/conflict—the discord is the risk factor, not the divorce alone. Similarly, socioeconomic status does not in itself have a directly negative effect on young people's outcomes. The indirect effects of poverty that contribute to risk are lack of resources, opportunities, or reduced access to health care (Rutter, 2013, cited in Shean, 2015, p. 15).

Key messages

To date, resilience research has shown the following:

- Resilience is a dynamic process, not an internal trait or fixed attribute.
- Resilience is not another term for withstanding, bouncing back from, or coping with negative experiences; nor is it synonymous with competence, although competent behaviour in handling negative experiences may be one component of resilience.

- There are benefits in thinking of people as showing or having resilience in different situations and at different stages of their lives, rather than as being resilient. Being resilient is easily confused with having a character or personality trait or an acquired set of generic skills.
- Human beings cannot make themselves resilient, nor can they be taught to become resilient, but they can learn adaptive skills and strategies that enhance their capacity to deal successfully with serious risks and adversity.
- Resilience changes over the life course: people may be resilient against a set of adversities at one time, but not resilient at another time, depending on their skills, circumstances, resources, and environment.
- A range of protective factors that act to promote or enhance resilience, often in combination, have been broadly categorised as being at individual, family, community, or cultural levels.
- Culture can be an important determinant of what contributes to resilience. Both risk factors and protective factors and how they are drawn on can be particular to different cultural groups and contexts.
- Whole families or communities often need to work collectively and be supported to increase their resilience.
- The concept of resistance is widely preferred over resilience within te ao Māori literature and among Indigenous peoples. Resistance represents a strengths-based and collective response to systemic adversity, rather than a victim-blaming mindset, and affirms the desires of Māori for empowerment and self-determination.

3. Should schools promote resilience? What are the benefits and drawbacks?

Banerjee et al. (2016, p. 8) note that in recent years there has been considerable attention paid to the concept of resilience as a relevant theme in education and to the role schools can play in the resilience of children. They suggest “schools may be well positioned in this respect, given the variety of school-based practices and experiences over an extended period of time that could influence young people”.

Henderson (2012) cites research studies that offer evidence that, more than any other institution than the family, schools can and do provide environments and protective conditions crucial for fostering resilience in today’s children and young people. These studies affirm the power of educators and schools in fostering resilience in all children. They show that factors that promote resilience can be readily available in schools and they connect fostering resilience to academic success, increased school safety, and student social and emotional wellbeing.

In the following section, first we identify some vulnerable groups of students in school settings, then we sample from the literature some of the potential benefits of schools promoting resilience, followed by potential drawbacks.

Vulnerable groups of students

Shean (2015) notes that theorists generally agree that risk and protective factors are not bipolar or universal. That is, whether factors are risk or protective depends on a range of individual, group, or contextual circumstances such as the existence of prior risks. Theorists also generally agree that risk is cumulative. New Zealand studies identify a range of vulnerable groups that could benefit from a re-framing of the discussion about resilience so that it relates to their experiences and needs, as opposed to a one-size-fits-all approach.

The Youth 2000 study identifies groups of New Zealand students who are typically associated with certain risks and vulnerabilities. These groups include Māori students (Crengle et al., 2013), Pacific students (Clark et al., 2016), students with disabilities (Peiris-John et al., 2016), lesbian, gay, bisexual, transgender, queer, and intersex (LGBTQI+) students, and students who are excluded from mainstream education (Denny et al., 2004). For example, Māori students report poorer health and wellbeing than their Pākehā peers (Crengle et al., 2013), and sexual minority youth report poorer health and wellbeing than exclusively opposite-sex-attracted youth (Lucassen et al., 2015).

Students in many of these groups also reported experiencing more bullying behaviour than other students.

International literature also identifies similar groups as vulnerable. For example, Walls et al. (2008) and Grossman et al. (2011) identify students from sexual minority groups as “at risk”. However, Walls et al. (2008) also caution against stereotyping all sexual minority students as “at risk”, citing authors who argue that many of these students are adaptive and resilient because of the level of daily struggles they deal with as adolescents from a sexual minority group (Savin-Williams, 2005, cited in Walls et al., 2008, p. 27). Grossman et al. (2011) argue that transgender youth are more prone to risks such as ongoing bullying or physical abuse from groups such as peers or their parents, hence there is a need to better understand the protective resiliency factors for this particular group.

Similar themes are evident in studies that focus on the experiences of students with disabilities. Both Hall and Theron (2016) and Porcelli et al. (2014) note that learners who have disabilities are typically described from a risk perspective as vulnerable. One reason for this categorisation is that, on a daily basis, they need to overcome various challenges beyond what those without disability might encounter. Both studies also suggest a school-wide “ecological” and strengths-based way of supporting resilience is needed to better understand how these young people draw on resources and adapt to their environment.

The additional inequities and risks faced by Māori as a result of colonisation is discussed earlier in this review, as is the need to shift the discussion from a risk perspective to a strengths-based and protective narrative. Protective factors for Māori in a school setting are discussed later in this section.

Potential benefits: Enhancing protective factors in schools

Schools are, according to Henderson, filled with protective factors. She cites Benard’s view that promotion of resilience should focus on enhancing these factors “rather than a more meticulous focus on student risk factors. Resiliency research is challenging the ‘at risk orientation’ prevalent in schools in recent decades” (Bernard, 2007, cited in Henderson, 2012, pp. 297, 299).

Henderson sees the best scenario for students to achieve resilience to be one in which schools and families work together co-operatively to strengthen protective factors in students’ lives. This is more likely to occur through a strengths-based approach (Henderson, 2012, p. 305).

Our wider scan of literature has shown that facets of schooling are consistently identified among protective factors that exist at community level. Shean (2015, pp. 40–42) captures a number of these in a matrix comparing the theories of several key researchers: a positive school environment (Rutter); favourite teacher (Werner); supportive or concerned teacher (Garmezy); effective schools; ties to pro-social organisations such as schools (Masten); access to school and education, information, and learning resources; and meaningful relationships with others at school (Ungar). Luthar (2019) also cites having a caring adult at school as a significant protective factor.

Positive experiences at school increase the likelihood of effective social functioning in adulthood. Positive experiences can include success in sport, music, positions of responsibility, social activities, or in the academic area (Quinton & Rutter, 1988, cited in Collins, 2010, p. 11). Positive experiences lead to higher self-esteem and contribute to personal satisfaction and self-confidence, all of which confer resilience by providing resources to use against negative life events (Dumont & Provost, 1999, cited in Collins, 2010, p. 11).

At the level of the individual child, theorists have identified numerous protective factors that schools can have a major role in fostering, supporting, or enhancing, such as getting on with classmates, better reasoning and reading skills (Werner); planning, self-control, self-regulation, sense of agency, self-confidence, determination (Rutter); cognitive skills (Garmezy); empathy for others and capacity to understand others, problem-solving ability, having goals and aspirations (Ungar). Masten suggests that interventions targeted at powerful moderators, including self-regulation and problem-solving skills, would have the greatest positive impact (all cited in Shean, 2015).

Adolescents need skills to “navigate towards” resilience, so it would be beneficial to provide them with some skills on how to access resources related to resilience (e.g., positive relationships) and skills that are linked to resilience (e.g., problem solving, self-efficacy) (Shean, 2015, p. 34).

With regard to New Zealand schools, we see considerable complementarity between the qualities and competencies listed in the preceding paragraphs and the key competencies identified in *The New Zealand Curriculum: Thinking; Using language, symbols and texts; Managing self; Relating to others; Participating and contributing* (Ministry of Education, 2007).

Examples of protective factors in schools

As noted above, research suggests that a number of facets of school life are consistently identified as protective factors that exist at community level. The following section explores some of these facets in more detail and provides details about how these facets might be protective for different groups of students.

School climate

Numerous studies on protective factors have pointed to a range of community-, family-, school-, and individual-level contributors to positive student wellbeing and enhanced educational outcomes. We provide examples below of school climate protective factors, in line with the existing literature that advocates for a school-wide, ecological view on supporting resilience in educational settings.

A positive school environment or climate is a key protective factor noted by writers such as Rutter (cited in Shean, 2015, p. 6) and Luthar (2019). Positive school climates are typically characterised by quality social interactions, clear organisational structures that support teaching and learning, and

supportive relationships that foster personal growth and learning (Cohen et al., 2009). School-wide protective factors that contribute to school climate include caring adults who provide academic and personal support to students; having transparent and fair school processes; communicating high expectations for all learners; and providing opportunities for community involvement and student leadership. Such factors are shown to improve the overall school climate, increase teacher rapport with the school, and reduce a range of risk and negative educational outcomes such as dropout rates, unexcused absences, and disciplinary referrals (Caldarella et al., 2011).

Moreover, creating a supportive school environment in which diversity and inclusion are promoted serves as a protective factor for all groups of vulnerable students. Different groups of learners may relate to or identify with different school-level protective factors in line with their life experiences. As noted earlier, for Māori students, school-level protective factors include the valuing and promoting of their cultural identity.

For LGBTQI+ students, these protective factors include the fostering of an inclusive school environment that supports the needs of learners from diverse sexualities and gender identities, such as sexual minority students and transgender youth. The Youth 2000 study found that a positive school climate is linked to lower levels of depressive symptoms and suicidality for male sexual minority students (Denny et al., 2016). Grossman et al. (2011) found that providing allies, support groups, and safe spaces for transgender youth to express themselves can help develop greater psychological resilience.

Other protective school actions noted in New Zealand reports by Youth'12 (n.d.) or InsideOUT (2019) include:

- everyday use of students' preferred gender, name, or pronouns
- gender-neutral policies, records, resources, and facilities (e.g., uniforms, toilets)
- recognition of rainbow student leaders and student support groups
- staff who challenge slurs and homophobic, biphobic, and transphobic language
- an inclusive curriculum including sexuality education that is not hetero- or cis-normative.

In other words, a supportive climate, in which people understand LGBTQI+ students' unique needs and engage in related actions, can help to transform schools into powerful protective environments for these groups.

Similarly, studies that explore protective factors for learners with disabilities also advocate for a school-level, school-wide approach to supporting those students. For example, Hall and Theron (2016) argue that, despite the limited research on resilience relating to learners with disabilities, the existing studies often advocate for an ecological view of supporting students and ensuring they get access to, and a fair chance in, education just like their peers within the same school. Furthermore, Porcelli et al. (2014) argue for a similar strength-based approach, where the wellbeing of learners with disabilities is part of the core business of the school environment. Some of the strategies they proposed include looking at ways to support learners to navigate and develop their individual

identities and social networks (friends), as well as the physical environment and resources they need to experience their school just like their peers.

Key role of teachers

The literature highlights, among protective factors, the significance of a close, empathetic, mentoring one-to-one relationship with a teacher who also has high expectations (e.g., Benard, 1997, cited in Stride & Cutcher, 2015, p. 5; Resnick et al., 1997, cited in Collins, 2010). Classroom teachers have a particular role in enhancing the protective factors and “therefore enhancing resilience for all children and young people in schools independent of risk” (Knight, 2007, cited in Stride & Cutcher, 2015, p. 4).

Benard has coined the term “turn-around teachers”. These are “strength-based” teachers who mirror students’ strengths back to them, seeing them as more powerful than problems. Key strategies of “turn-around teachers” include:

1. Providing caring and connection: e.g., communicate caring availability, unconditional positive regard; show kindness and compassion despite negative behaviours
2. Building competence through resiliency beliefs, high expectations, and social/emotional learning: e.g., challenge students to achieve beyond students’ own expectations; teach that negative internalised messages of doubt and self-worth can be overcome
3. Letting children and youth contribute and participate: e.g., encourage students’ involvement in creating and maintaining school rules and policies, curriculum planning and evaluation strategies (Henderson, 2012, p. 300).

Supportive programming strategies and processes

Henderson (2012, pp. 297–306) outlines a number of ways programme design and delivery can enhance academic achievement and, by association, resilience. She cites the view of Thomsen (2002) that most schools emphasise and test for only the first two of the Multiple Intelligences identified by Howard Gardner (2000): verbal–linguistic, logical–mathematical, bodily–kinesthetic, musical, interpersonal, intrapersonal, spatial, and naturalist. This makes it difficult for students to develop and show success in using the other forms of intelligence at school.

Henderson also cites studies that promote greater emphasis on teaching and assessment approaches that honour students’ potential for broad educational success as well as contributing directly to academic achievement. These include arts education and related activities (Henderson, 2012, p. 303).

Recent research by Stride and Cutcher (2015) suggests visual arts classrooms can specifically foster students’ resilience by providing an environment particularly conducive to close and trusting relationships between teachers and students. This environment derives from the nature of learning

in visual arts, which involves imagination, experimentation, risk-taking, self-reflection, and experiencing failure in a safe context of creative endeavour and caring interactions.

While their research specifically concerned visual arts education, the authors argue that resilience and creative learning processes generally (in other curriculum areas) inform each other reciprocally, through building competence in handling risks and trust within student–teacher relationships (Stride & Cutcher, 2015).

Culturally appropriate settings and pedagogies

Ungar’s socio-ecological model added a fourth level of protective factor: culture. Markers he identified include (among others): culture/spiritual identification and being culturally grounded: knowing where you come from and being part of a cultural tradition which is expressed through daily activities (Shean, 2015). We consider these markers to have close affinity with the vision for young people that is articulated in *The New Zealand Curriculum* (Ministry of Education, 2007) and offer New Zealand schools a viable and appropriate basis on which to develop school-wide approaches to promoting resilience.

Te ao Māori context

As we identified earlier, a secure cultural identity (tuakiri ā-iwi) formed the fourth platform of Waiti’s whānau resilience model. Primarily based on kinship, the whānau model accommodates the concept of whānau kaupapa—a group of individuals gathered for the purpose of a specific kaupapa (Waiti, 2014, p. 106). That could, of course, include an educational purpose.

Milne’s 2013 doctoral thesis *Colouring in the White Spaces* describes her experience of leading a South Auckland school using a whānau-based educational model with cultural identity and indigeneity at its centre. We explore this approach in the next section of this report. In terms of its basis in theory, Milne (2013) highlights the work of:

- Smith (1995), who aligns the concept of whānau with knowledge, pedagogy, discipline, and curriculum
- Macfarlane et al. (2008), who link the two constructs of rangatiratanga and whanaungatanga and highlight this as a major difference in values between a Western/European construct of the individual “self” and individual achievement, and Māori and other Indigenous peoples’ worldviews on human development and education:

In a Māori worldview, personal autonomy, strength and leadership are always exercised within the context of whanaungatanga, of nurturing and caring relationships. ... Part of achieving rangatiratanga (chiefly) status involves striving for individual excellence while at the same time providing and caring for the community, and receiving the respect of the community (Milne, 2013, p. 200)

- Akom et al. (2011), who describe new pedagogies that focus on “radical healing” to transform white spaces into “right” or ethical pedagogical spaces of resistance and resiliency, strength.

Potential drawbacks

Tension between policy intention and evidence base

According to Howard, connections between educational practice in programmes intended to help children cope better with adversity and specific empirical evidence are sometimes “loose” (Howard, 1999, cited in Banerjee et al., 2016, p. 8). Other commentators suggest that, in a currently conducive educational policy environment, resilience programmes may be driven by rhetoric of thinking or the prevailing enthusiasm of the moment rather than a more reasoned, empirical approach (Ager, 2013, cited in Banerjee et al., 2016, p. 8; also Rutter, 2002).

To Doll and Lyon, resilience programmes reflect “educational faddism”, developed “independently of the methodological rigorous research that gave birth to the construct” (Doll & Lyon, 1998, cited in Luthar & Cicchetti, 2000, p. 9).

Practice diverting from theoretical understanding

We found concerns that some practitioners and, by implication, providers of school-based resilience training may insufficiently understand or accept the theoretical underpinnings linking resilience to children/young people. For example, they may continue to talk about students being, becoming, or being taught to be resilient. This may reflect informal, inattentive, or inaccurate use of terminology. It could also result from language that resilience researchers use to report their findings that misleadingly represents resilience as a personal attribute of the individual (Luthar & Cicchetti, 2000).

In this regard, we note a recent Ministry of Education online resource for schools that does not reflect some key tenets of the literature we have cited. It defines “a resilient person” as “someone who has the ability to bounce back after experiencing stressful life events or who is able to cope despite the adverse conditions they live in”. It continues “they become resilient because they have a sense of being valued, they feel secure, and they have many connections with other people” (Ministry of Education, n.d.-a).

We note also the OECD practice in its publications of defining and referring consistently to “resilient students”, as well as describing individual attributes to them, such as an ability to “beat the odds” (OECD, 2011, p. 22).

Ineffective implementation

Indicative findings in the literature about programme delivery include:

- Piecemeal, short-term, add-on programmes, or interventions conducted by someone other than the classroom teacher, may be counterproductive for at-risk children, whose everyday social experiences tend to be fragmented and unpredictable (Pianta & Walsh, 1998, Zigler, Finn–Stevenson, & Stern, 1997, all cited in Luthar & Cicchetti, 2000, pp. 9–10).
- Intervention components may not be properly integrated into the child’s educational programme, cultural context, and personal behavioural repertoire (Pianta & Walsh, 1998, cited in Luthar & Cicchetti, 2000, p. 9).
- Programmes can take little or no account of processes relevant to resilience that operate across all the systems that make up the whole school community (Banerjee et al., 2016).
- It would be unrealistic to expect targeted interventions to address all risk factors relevant to individual students. For example, a child may have educational resilience but not emotional resilience, or vice versa (Luther et al., 2000, cited in Shean, 2015, p. 29).
- Schools are all different and individual schools may not sufficiently understand the unique risk and protective factors within their own environment and their communities (Luthar, 2019).

Summary

It is clear from the literature that promoting resilience is a complex process and there is no one way for schools to achieve it effectively. From the literature it is also clear that effective implementation requires schools to treat the task as complex, place it at the core of their pedagogical programmes, embed it in wider wellbeing strategies, and recognise it as an integral component of school-wide systems that impact on all students. In the New Zealand context, it is essential that school systems understand and facilitate the collective nature of resistance as a constructive strengths-based approach by Māori students and whānau to addressing the negative legacy of colonisation.

How are Aotearoa New Zealand schools promoting resilience?

In recent times, the importance of fostering students’ wellbeing has become more visible in key education documents. This importance is clearly stated in the vision of *The New Zealand Curriculum* (Ministry of Education, 2007). More recently, the Ministry of Education’s (2018) *Statement of Intent* outlines the need for schools to promote wellbeing and academic achievement. The wellbeing capabilities needed by students include social and emotional skills and resilience:

Vision statement: We need our people to be resilient, creative, and adaptable, with great communication and interpersonal skills, and prepared to work collaboratively as well as independently. (Ministry of Education, 2018, p. 12).

‘What does success look like’ statement: The education system supports people to develop social and emotional skills and cultural values that will help them succeed in work and life.” (Ministry of Education, 2018, p. 22).

It is beyond the scope of this rapid review to document the ways all New Zealand schools are promoting resilience. It is rare to find instances where individual school programmes have a strong research base and where findings have been published. Here we report on four programmes that have been implemented across schools and where there is robust evaluation information. In Appendix A we briefly note a few examples of programmes and procedures that schools have put in place, some of which have been documented (Education Review Office, 2014). Those examples include ones from a Teaching and Learning Research Initiative (TLRI) project (Rickson et al., 2018), a study from Kia Ora College (Milne, 2016), and some wider health and wellbeing initiatives.

Travellers: The Skylight Trust

Travellers is an in-school, 8-week programme that teaches young people skills to cope with change, loss, and transition. It builds their self-esteem and confidence so they can face other challenges in future. Travellers supports students at school by helping them build resilience and enhance connections by:

- exploring their change, loss, and transition experiences
- navigating their movement through change, loss, and transition in safe and adaptive ways
- linking how they think and feel about change, loss, and transition situations and how their thoughts and feelings influence how they cope and respond
- enhancing supportive environments and improving their learning outcomes

(Skylight Trust⁴).

During 2011 and 2012, NZCER conducted an evaluation of the Travellers programme to see how well short- and medium-term outcomes had been met. The data were collected by surveys and focus groups with students who completed the programme in 2008 and 2009. One of the medium-term outcomes that were the focus of the evaluation was: “increased resiliency and ability to navigate changes and challenges” (Robertson et al., 2012, p. ix).

The study concluded that the programme had had a positive impact on those at-risk Year 9 students who were involved. One of the critical components for success was the careful selection of students

⁴ <https://www.skylight.org.nz/build-resilience/travellers>

who can trust each other and the staff involved. Many students reported that they had learnt strategies to deal with difficult life situations, although they were not always able to articulate how they had used these. After taking part in Travellers, the young people reported less subjective distress, even though they had had more challenging events in their lives. This indicates that they had learnt ways to manage challenging life events. The programme was most effective in “improving help-seeking skills and helping young people to form positive relationships with peers/families/teachers” (Robertson et al., 2012, p. x). Having increased resiliency and ability to navigate changes and challenges was deemed to have had a moderate impact, with 50%–74% of respondents agreeing with a statement that asked participants about the positive impact of the programme. Māori students rated themselves similarly to the total population but Pacific students and students from low socioeconomic backgrounds rated themselves higher than the overall sample.

My FRIENDS Youth Resilience programme

The My FRIENDS Youth Resilience programme (My FRIENDS Youth) aims to increase 12–16-year-olds’ resilience by developing knowledge, strategies, and skills to cope with difficult and challenging times in their lives. Like Travellers, it is based on cognitive behavioural therapy (CBT) principles. The programme was trialled by Year 9 students in 2013 and 2014 as part of the health and physical education curriculum. It is a component of Positive Behaviour for Learning (PB4L) and the Prime Minister’s Youth Mental Health Project. FRIENDS stands for the steps of the 10-session programme: (Feelings; Remember to relax; Inner helpful thoughts; Explore solutions and coping step plans; Now reward yourself; Do it every day; and Stay strong inside). There is a group leaders’ manual and a student activity book.

NZCER and Roseanna Bourke evaluated the programme from 2013, with the report being published in 2015 (MacDonald et al., 2015). Researchers used the Wellbeing@School survey to collect pre- and post-data from students. They also surveyed teachers and conducted interviews about participants’ perceptions of the programme.

The evaluation found that students’ perceptions of the programme were similar to those of the participants in the Travellers programme in relation to learning strategies to deal with challenging situations (and thereby increasing their resilience). That is, they considered they had learnt new strategies but were not always able to put them into practice outside the classroom exercises. Teachers’ perceptions were similar to the students except for Pacific students. The students thought they had learnt more than their teachers thought they had.

The majority of students thought that what they had learnt would be useful in the future, with girls, Māori students, and Pacific students most likely to agree and strongly agree with this statement. Different students got different things from the programme, including better understanding others’ body language and being aware of the impact of their actions on others’ feelings, and therefore behaviours. Others felt better able to use self-talk to change negative thoughts to positive thoughts. These indicators relate to the key competencies, especially *relating to others*.

One positive aspect of the programme was having teachers (rather than health professionals) managing the sessions. Teachers and students could build and maintain support and ongoing relationships. The programme gave all teachers a common language for talking about wellbeing.

The New Zealand whole-class approach in facilitating the programme provided greater cohesion in being able to talk with students about the principles and ideas from the programme beyond the specific My FRIENDS Youth sessions. The high proportion of teachers in the survey who indicated they used aspects of My FRIENDS Youth in their other teaching (77%) suggests that the CBT principles were also helpful for teaching outside of the programme (MacDonald et al., 2015, p. 63). Another strength of the programme was that it included guidance counsellors who were very familiar with the CBT model and supported teachers and students through the programme and beyond.

Positive Behaviour for Learning (PB4L) School-Wide

PB4L School-Wide looks at behaviour and learning from a whole-of-school as well as an individual student perspective. While not specifically designed to promote resilience, the programme aims to change the environment, systems, and practices of a school to support students to make positive behaviour choices. Because of its focus on the broader community, fostering protective factors rather than the individual, PB4L aligns well with current thinking about the ecology around resilience. Some of the 800 schools involved in PB4L have a specific focus of promoting resilience (Ministry of Education, n.d.-b).

Positive Behaviour for Learning (PB4L) Restorative Practice

As part of PB4L, Restorative Practice is grounded in beliefs about equality, dignity, mana, and the potential of everyone. The programme focuses on the importance of building and maintaining positive, respectful relationships throughout the school community and having a solutions-focused approach to issues rather than a punitive one. It provides best practice tools and techniques to help restore relationships when things go wrong. (Ministry of Education, n.d.-c)

4. Measuring resilience and empathy in children

The previous sections have focused on understandings of resilience. This chapter about measurement includes specific measurements of empathy as well as resilience. We provide some definitions of empathy later in this chapter. Given that our brief was to focus on resilience, we have not discussed the tensions and debates about empathy but attempted only to capture the tensions and debates around *measuring* empathy.

Why measure resilience and empathy?

Banerjee et al. (2016) ask if “clear and robust criteria can be created in order to identify those primary school children who are most likely to be at-risk or vulnerable with respect to difficulties in experiencing wellbeing” (p. 41). This is one reason why it can be important to develop and use wellbeing measures. Another reason, and one that is increasingly advocated, is to measure the health and wellbeing of the system that supports children and young people. Empathy measurements could arguably be seen as more appropriate to the individual, but when we look at system-wide issues in New Zealand schools such as bullying and racism, we can equally argue that a framework for measuring empathy needs to be at a system level.

How is resilience in students measured?

As we have already described, resilience is a slippery term to define and adopts a number of perspectives. This, in turn, provides challenges for its measurement. Another challenge is the notion that resilience plays out differently at different times in a person’s life and in different circumstances. Thus, questions that are appropriate in one context may not be in another. Measurement scales for resilience appear to lie predominantly in the medical domain and to be used to assess an individual’s ability to bounce back from or deal with trauma or undue stress. Most of the scales are for adults and many are not freely available.

In this section we report on the work of Windle et al. (2011), Leung et al. (2017), Ahern et al. (2006), Jongen et al. (2019), and Shean (2015). All these researchers have reviewed measurement scales of resilience and use a definition similar to that cited below to review these scales:

Resilience is the process of negotiating, managing and adapting to significant sources of stress or trauma. Assets and resources within the individual, their life and environment facilitate this

capacity for adaptation and ‘bouncing back’ in the face of adversity. Across the life course, the experience of resilience will vary. This definition, derived from a synthesis of over 270 research articles, provides a useful benchmark for understanding the operationalisation of resilience for measurement. (Windle et al., 2011, p. 2)

Windle et al. (2011) reviewed 19 scales and gave the Connor-Davidson Resilience Scale, the Resilience Scale for Adults, and the Brief Resilience Scale (BRS) the best psychometric ratings. They questioned the validity and reliability of many of the scales and their use in providing research evidence. They suggested that, given the emerging interest in resilience internationally, there should be greater effort made to produce tools that are useful, valid, and reliable. They also considered that, as there are such variable definitions of resilience, it is very difficult to compare measurement scales and tools and for people using them to determine which could be most suitable for the population and the context.

Where the scales are freely available, we have reproduced them in Appendix B.

We reviewed the following scales related to children and young adults:

Table 1: Resilience scales for children and young people reviewed in Windle et al. (2011)

Name of measurement tool	Age group designed for	Purpose of tool
Youth Resiliency: Assessing Developmental Strengths (YR:ADS) (Canada/English)	Ages 12–17 (self-report) (Not in the public domain)	To examine: external factors such as family, peers, school, and community, and internal factors or personality characteristics such as empowerment, self-control, cultural sensitivity, self-concept, and social sensitivity
The Resiliency Attitudes and Skills Profile (USA/English)	Ages 12–19 (self-report) For use in family counselling and not likely to be generalisable	To measure resiliency attitudes (insight; independence; creativity; humour; initiative; relationships; values orientation) in youth for recreation and other social services providing interventions
California Healthy Kids Survey—The Resilience Scale of the Student Survey (USA/English)	Primary school-aged children (self-report)	To assess: student perceptions of their individual characteristics, and protective resources from family, peer, school, and community (Communication and cooperation, Self-esteem, Empathy, Problem solving, Goals and aspirations, Family connection, School connection, Community connection, Autonomy experience, Pro-social peers, Meaningful participation in community Activity, Peer support)

The Child and Youth Resilience Measure (CYRM) (11 countries/11 languages)	Ages 12–23 Youth at Risk (self-report)	To develop a culturally and contextually relevant measure of child and youth resilience across four domains (individual, relational, community, and culture)
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The CYRM, the Resilience Scale of the California Healthy Kids and YR:ADS examine resilience from multiple contexts, not just the individual’s ability to “bounce back”. Despite the CYRM being developed in 11 countries, the authors questioned the generalisability of the scales reviewed, pointing to difficulties in having items appropriate for non-Western cultures and contexts. They considered that there was no sound measure of resilience in children under 12 and that the Californian scale for primary-aged children was of poor quality. They noted that resilience research with children tended to use ratings given by teachers or parents.

We found a number of other references to surveys or assessment scales that include measurement of resilience. Note that these focus on the notion of individuals being resilient and being taught resilience rather than the societal supports for resilience. Many have been developed for professionals in the health sector and are associated with health/ill health and recovery.

Leung et al. (2017) reviewed research on measurement and related antecedents of *hope*, *aspirations*, and *resilience* in children and adolescents, focusing on Western and Chinese constructs. As with Windle et al. (2011), the authors comment on the number of resilience measures that were developed for adults and adolescents dealing with stress or trauma, rather than for the general populations. They also noted the poor internal consistency in items, the lack of measurement scales for young children, and the lack of items that assess the availability of assets and resources that affect resilience. They referred to Donnon and Hammond’s Youth Resiliency: Assessing Developmental Strengths which examines intrinsic and extrinsic protective factors among the youth (Donnon & Hammond, 2007).

Ahern et al.'s (2006) evaluation of measurement scales suitable for adolescents identified six possible instruments:

1. *Baruth Protective Factors Inventory (BPFI)* is a 16-item, 5-point (1–5) Likert Scale. The BPFI measures resilience by assessing adaptable personality, supportive environments, fewer stressors, and compensating experiences. This inventory had not been fully tested at the time of the study.
2. *Connor–Davidson Resilience Scale (CD-RISC)* for adults contains 25 items, each of which is rated on a 5-point (0–4) scale with higher scores reflecting more resilience.
3. *Resilience Scale for Adults (RSA)* is a 37-item, 5-point semantic differential scale. It contains five factors: personal competence; social competence; family coherence; social support; and personal structure.

4. *Adolescent Resilience Scale* (ARS) is a 21-item scale on a 5-point rating scale (1–5) measuring the psychological features of resilient individuals. The scale was designed for Japanese youth and items relate to novelty seeking, emotional regulation, and positive future orientation.
5. *Brief-Resilient Coping Scale* (BRCS) is a 4-item scale on a 5-point rating (1–5), which is designed to measure tendencies to cope with stress in a highly adaptive manner. (This is reproduced later in the paper.)
6. *Resilience Scale* (RS) is a 25-item scale using a 7-point rating (1–7). Developed in 1987, the scale has two factors—personal competence and acceptance of self and life—which measure the construct of resilience. This scale is available online.

Ahern et al. (2006) concluded in their paper that the RS was the most appropriate instrument for use with adolescents. Note that Windle et al. (2011) have criticised the validity and robustness of this paper.

According to Shean (2015), it is still common practice to focus interventions on individual skills such as coping, problem-solving, and social competence, despite acceptance of a wider definition of resilience.

Shean (2015) agrees with Windle et al. (2011) on the problem of identifying resilience outcomes and the subsequent issues with measuring these:

Measures of competence have additional issues that need to be considered. Competence can be measured from one or several domains (e.g. academic achievement, social competence); at different levels (e.g. average vs. above-average achievement); and signs of competence within each domain are measured through different methods (e.g. academic achievement: IQ tests, national testing, school grades, achievement tests; social competence: adult ratings, self-report social skills scales, peer ratings). (Shean, 2015, p. 29)

Shean (2015) cites Luthar and Zelazo (2003) who query the relative importance of each domain as well as perspectives of social competence that are privileged. She concludes:

The issue with this range of measures is that there is no consistency in measurement approaches, and it is possible that the same group of young people could be considered resilient in one study and non-resilient in another. This lack of consistency also precludes any comparison between studies, as each study is measuring different outcomes. (Shean, 2015, p. 30)

Shean (2015) urges that we listen to young people’s voices rather than relying on teachers’ and parents’ insights. She concurs with Windle et al. (2011) about the absence of culture and context in measurement and research, considering this as unethical and restrictive. She advises measuring positive change across a number of domains as the best way to identify instances of resilience.

Jongen et al. (2019) conducted an experimental study of resilience measurements for Indigenous adolescents. They reviewed 20 instruments: seven measured both individual assets and environmental resources, six measured only environmental resources, and five also measured

constructs of cultural resilience. Two included items addressing all three constructs of individual assets, environmental resources, and cultural resilience. The authors concluded that several of the validated instruments they reviewed could be used appropriately with Indigenous adolescents.

A conclusion Jongen et al. (2019) reach is that, because there are limited instruments that assess an appropriate range of resilience-promoting factors, multiple assessments could be given to Indigenous adolescents. However, they recommend that this solution needs to be offset by the need to ensure the adolescents are not burdened with complex and lengthy questionnaires.

The two instruments that included all three constructs are the Growth and Empowerment (GEM) instrument developed for Indigenous Australians, which includes items related to Indigenous identity and spirituality, and the Cherokee Self Reliance Scale (CSRS). The authors warn that these instruments have not been used with other populations and so may not be applicable to them. Further research is needed to see how generalisable the instruments are.

As we found in our search, the authors comment on the overlap between resilience and other wellbeing factors and the tendency of measurements to conflate all concepts. They consider that, as a strengths-based concept, resilience measurements should be strengths-based. They also point out the tensions between using tailor-made measurement scales and those designed for the general population.

While not specifically about resilience, Cram's (2014) paper on measuring Māori wellbeing discusses current measurements of subjective Māori wellbeing (Te Kupenga, the 2013 survey of Māori wellbeing by Statistics New Zealand, and two Māori mental wellbeing assessment tools, Hua Oranga and the Meihana Model). Cram (2014) identifies that we lack tools that measure objective collective Māori wellbeing or whānau ora. She considers that it is essential for Māori to be involved in the development of any measurement tools.

We found reference to two other scales for children, both from the United States of America (see Table 2 below).

Table 2: Additional resilience scales for children

Name of tool	Age group designed for	Samples of items
RS10 The Resilience Scale for Children	Ages 7–11 (self-report)	I think I'm okay just the way I am right now. When I get upset, I know how to calm down. I finish what I begin. (The Resilience Center, n.d.)
Character Growth Card (CGC)	School students	The CGC is recommended for use in profiling students for intervention and monitoring and measuring student change. The CGC links categories of behaviour to observable acts and makes explicit what the student must do "to be" a "gritty", "self-controlled", and "grateful" person. Teachers and parents fill in the CGC. Items include: Finished whatever s/he began Stuck with a project or activity for more than a few weeks Tried very hard even after experiencing failure Stayed committed to goals Kept working hard even when s/he felt like quitting (Kirchgasler, 2018)

Kirchgasler (2018) discusses the nature of “true grit” and traces the interpretation of the term from early White settlement of the United States of America. He argues that recent reference to grit in schooling and subsequent tools to measure whether a child has grit or not are a powerful argument against developing one-size-fits-all indicators of “grit”. He is uncomfortable with education’s preoccupation with measuring and categorising the presence or absence of grit in a person.

A recent OECD publication (OECD, 2018) investigates children’s emotional and social skills. The authors do not include the survey instruments they used to determine children in OECD countries’ emotional wellbeing and do not appear to have asked specifically about resilience. They defined emotional wellbeing as consisting of:

1. Achieving goals: responsibility; perseverance/persistence; locus of control/self-efficacy
2. Working with others: extraversion/sociability; adaptability; reactivity/mood
3. Managing emotions: self-confidence; self-esteem.

The New Zealand Youth 2000 surveys (see, for example, Denny et al., 2015; Denny et al., 2018) have data from over 8,000 secondary students from 90 schools and provide findings related to a number of factors, including Culture and Ethnicity, School, Emotional Wellbeing, and Community and Contribution. Again, the actual survey items are not included in the research reports or articles. One conclusion is that students have better mental health where schools have higher levels of health

services, including increased availability of doctors and nurses, and the provision of routine comprehensive psychosocial assessments such as the HEEADSSS⁵ method of interviewing.

How is empathy defined and discussed in relation to measurement?

Spreng et al. (2009) identify the term “empathy” as coming from “the translation of the German word *Einfühlung*, meaning ‘feeling into’” (p. 1). They acknowledge that, as with “resilience”, there is not an agreed definition of the construct of empathy. The authors make a distinction between *emotional* empathy and *cognitive* empathy. In its simplest form, emotional empathy is “commonly thought of as an emotional reaction (e.g., compassion) to another’s emotional response (e.g., sadness)” (p. 2). Cognitive empathy “involves an intellectual or imaginative apprehension of another’s emotional state, often described as overlapping with the construct of theory of mind (understanding the thoughts and feelings of others)” (p. 2).

The authors also note the distinction between empathy, emotional contagion, sympathy, and perspective-taking of some self-report measures (citing Omdahl, 1995; Wispé, 1986, 1987). In emotional contagion or personal distress, the perceiver takes on the emotional state of the target; sympathy is about “feeling sorry” for the target; and in perspective-taking, the perceiver uses visual, auditory, or situational cues to understand the target but does not become emotionally involved themselves. Many of the measurements developed include more than one of these concepts and there is no measurement that captures the variety of perspectives.

According to Neumann et al. (2015), empathy has a number of different definitions. The authors cite Batson (2009) who identified the following as sub-constructs of empathy:

- (a) knowing another’s emotional and cognitive state;
- (b) matching the posture or neural response of another;
- (c) feeling the same as another;
- (d) projecting oneself into another’s situation;
- (e) imagining how another is feeling and thinking;
- (f) imagining how one would think and feel in another’s situation;
- (g) feeling distress for the suffering of another; and
- (h) feeling for another person who is suffering. (p. 257)

⁵ HEEADSSS is an interview screening assessment used in schools (HEEADSS stands for Home, Education/Employment, Eating, Activities, Drugs and Alcohol, Sexuality, Suicide and Depression, Safety)

Neumann et al. (2015) also note the crossovers between empathy, compassion, and sympathy. They summarise empathy as a feeling and knowing process “that allows the individual to vicariously experience the feelings and understand the given situation of another” (p. 257).

Drawing on psychology, Stueber (2019) notes the differences in measuring situational empathy and dispositional empathy. In the former, psychologists focus on how someone reacts in a situation, whereas the latter is seen as someone’s stable character trait. Situational empathy is sometimes measured by asking people about their experiences of being exposed to a particular situation. Stueber considers this method to be problematic partly because of people’s varied abilities to verbalise their experiences. Most measures of empathy consider empathy to be a stable disposition.

How is empathy in students measured?

There is a large number of scales purporting to measure empathy. Because there is no agreement about definitions of empathy, the scales measure different things. The empathy training literature review website lists over 70 tests and scales for determining empathy and compassion.⁶ Again, there is a strong medical/pathological focus to many of these, including those that appear to have been developed to assess the degree to which someone might be on the autism spectrum.

Neumann et al. (2015) reviewed a number of self-report scales, the most useful of which for this review (as they were developed for children and adolescents) are described below:

- *Multidimensional Emotional Empathy Scale (MDEES)* (Caruso & Mayer, 1998). The MDEES focuses on the affective component of empathy and is intended for use with adolescents and adults. There are 30 items describing positive and negative emotional situations, which are responded to on a 5-point Likert-type scale with six sub-scales: Empathic Suffering, Positive Sharing, Responsive Crying, Emotional Attention, Feeling for Others, and Emotional Contagion.
- *Thinking and Feeling Empathy Scale (FTS)* (Garton & Gringart, 2005). This is an adaptation of the Interpersonal Reactivity Index (IRI) (Davis, 1980) for use with children. It includes Perspective-Taking items, six Personal Distress items, and four Fantasy items (see Garton & Gringart, 2005).
- *Basic Empathy Scale (BES)* (Jolliffe & Farrington, 2006). The BES is based on a definition of empathy proposed by Cohen and Strayer (1996) as the sharing and understanding of another’s emotional state or context resulting from experiencing the emotive state (affective) and understanding another’s (cognitive) emotions. The BES measures basic emotions (fear, sadness, anger, and happiness).
- *Griffith Empathy Measure (GEM)* (Dadds et al., 2008). The GEM was constructed due to the shortage of multi-informant assessment of empathy in children and adolescents,

⁶ <https://sites.google.com/site/empathytraininglitreview/measurements>

deemed important for accurate measurement of empathy in this population group (Dadds et al., 2008, p.111). It is an adaption of the Bryant Index of Empathy (Bryant, 1982) used by parents to assess child and adolescent empathy (Dadds et al., 2008).

- *Kids' Empathetic Development Scale (KEDS)* (Reid et al., 2013). This is a multidimensional measure of empathy for school-aged children, comprising 12 “faceless” pictographic stimuli that are scenarios of events or multiple characters.

Neumann et al. (2015) acknowledge that the majority of empathy measures are unidimensional self-report scales that tend to measure *affective* (as opposed to *cognitive*) aspects of empathy, whereas most multidimensional measures consider affective and cognitive empathy. The authors query the validity and reliability of many of the measures. They also warn about presentational bias, where being empathetic is seen to be socially desirable.

The problematic nature of self-reports of empathy is corroborated by Stueber (2019). The author suggests that the IRI and the Empathy Quotient (Baron-Cohen & Wheelwright, 2004) may have more value than earlier scales but still have limitations. The author suggests that help in devising new scales or adjusting old ones could come from the neurosciences (which look at neurobiological ways of perspective-taking).

According to Spreng et al. (2009), the Toronto Empathy Questionnaire has been developed and rigorously tested with 18-year-old undergraduate students to provide a “parsimonious scale that is short, clear and homogenous and has strong psychometric properties including a robust single factor structure, high internal consistency, construct validity and test re-test reliability” (p. 11). The questionnaire takes account of some of the more widely used empathy scales, including the IRI and the EQ. The researchers acknowledge that a limitation of the development is the testing with a small sample and that they need to do more work to determine its generalisability with different ages. The questionnaire is in Appendix A.

Resilience and empathy sub-constructs

Resilience

One of the things the Ministry of Education would like to know is if there are different sub-sets or constructs that constitute resilience and/or empathy that could help with the organisation of new statements or questions for surveys or assessments. We did not find very many possible options and those we did find do not appear to have similar organising constructs. We have set out below sub-constructs from the scales we have located to help identify potential areas for item development. The sub-constructs consist of personal characteristics and external supports.

Table 3: Comparison of resilience sub-constructs

The Adolescent Resilience Model	The Resilience Scale	Youth Resiliency: Assessing Developmental Strengths (YR:ADS)	The Resiliency Attitudes and Skills Profile	California Healthy Kids Survey	Resilience Scale for Adults (RSA)
individual protective factors (courageous coping, hope, and spiritual perspective)	perseverance		insight	communication and co-operation	personal competence
family protective factors (family atmosphere and family support and resources)	self-confidence/ self-reliance	intrinsic and extrinsic developmental strengths (family, community, peers, work commitment, and learning)	independence	self-esteem	social competence
social protective factors (health resources and social integration)	serenity/ equanimity	school (culture)	creativity	empathy	family coherence
	meaning/ meaningfulness	social sensitivity	humour	problem solving	social support
	existential loneliness/ existential aloneness	cultural sensitivity	initiative	goals and aspirations	personal structure
		self-concept	relationships	family connection	
		empowerment	values orientation	school connection	
		self-control		community connection	
				autonomy experience	
				pro-social peers	
				meaningful participation in community activity	
				peer support	

The New Zealand Curriculum

The Health and Physical Education website (Ministry of Education, n.d.-a) considers young people who are resilient have:

- dispositional attributes that elicit positive responses from the environment, such as physical robustness and vigour, an engaging “easy” temperament, good problem-solving and communication skills, and an area of competence valued by the person or society
- socialisation practices within the family that encourage trust, autonomy, initiative, and affectional ties to a stable, caring, competent adult, whether a parent, grandparent, older sibling, or other kin
- external support systems in the neighbourhood, school, church, or the community that reinforce self-esteem and self-efficacy and provide the individual with a set of positive values.

Resilience in Indigenous adolescents

Jongen et al. (2019) summarised three constructs considered essential in measuring resilience in Indigenous adolescents:

- individual assets: self-efficacy; self-esteem and confidence; distress tolerance; stress management; problem-solving, planning, and decision-making skills; communication skills; empathy; personal awareness; a balanced perspective; optimism and hopefulness; future orientation; and strong racial or ethnic identity
- environmental resources: supportive, positive peer relations; reliable and supportive adult role models; strong family support and kinship networks; connection with members of one’s cultural or social group; positive social support networks; and opportunities to engage in socially valued and meaningful roles and activities
- cultural resilience: enculturation or cultural connectedness; engagement in cultural traditions; strong Indigenous identity; connections to family, community, and culture; connection to elders; connection to the land or natural environment; and Indigenous worldview and spirituality.

Table 4: Youth in high achieving schools: Maximising resilience—sample questions to assess school climate (Luthar, 2019)

School Climate	Example item
Fairness	When students break rules, they are treated fairly.
Caring adult/Teacher	At school, there is a teacher or some other adult who will miss me when I'm absent.
Parent and community involvement	This school is a welcoming place for families like mine. Adults in my community support this school.
Leadership/Student voice	In my school, students are given a chance to help make decisions.
Positive peer climate	Students here treat me with respect.
Bullying	Students at this school are often teased or picked on.
School diversity	My teachers call on students of different races, ethnicities, cultures, and backgrounds.
Teacher academic support	My teachers ... help me catch up if I am behind.
Alienation from teachers	... My teachers ... ignored me or made me feel excluded.
Status expectations	These adults at my school would be disappointed in me if ... I did not get into a prestigious college or university.

Empathy

We could find only two readily accessible sub-constructs for empathy, the first of which takes a wide perspective, albeit from an individual rather than a systems perspective. The Batson (2009) sub-constructs are itemised on page 34 of this document.

Multidimensional Emotional Empathy Scale (MDEES)

Caruso and Mayer (1998) provide six sub-constructs of empathy:

- Empathic suffering
- Positive sharing
- Responsive crying
- Emotional attention
- Feeling for others
- Emotional contagion.

Summary

There are multiple constructs of resilience and empathy designed to measure the presence (or absence) of these characteristics in people. Most of these have a medical genesis. Few have been designed specifically for use with children and young people and even fewer are seen to be generalisable across populations. Researchers raise concerns about the validity and reliability of many of the instruments. Because resilience and empathy are such slippery terms to define and are used differently in different contexts, it is very difficult to compare measurement scales. Of particular concern is the focus on individual characteristics rather than on wider environmental and resourcing supports. Western constructs do not include cultural, spiritual, or group/whānau understandings of what constitutes resilience and empathy in Indigenous populations.

5. Recommendations for the Wellbeing@School survey tools

We pose three overarching questions to frame our recommendations for the W@S survey:

1. How do we ensure schools understand and adopt a strengths-based rather than risk-based approach to designing strategies to promote resilience among their students?
2. How do we ensure schools understand and respond appropriately and effectively to the characteristics of collective resilience and the concept of resistance highlighted in the literature on te ao Māori?
3. How do we help school leaders and teachers to understand better the powerful role schools can have by providing protective factors vital to the development of resilience among children and young people?

How do the concepts of resilience and empathy fit with the current positioning of W@S?

As we have already indicated, much of the literature on resilience (and empathy) relates to wellbeing in general—both the wellbeing of the individual and the wellbeing of the system. Many of the concepts in the current W@S survey could be used to indicate the system-level support for students' ability to respond resiliently to challenging situations and events.

What might we recommend from the literature about the sorts of resilience and empathy items that could be added?

There are some clear messages from the literature about factors to consider if we are to develop a focus on resilience in the W@S survey tools.

Out of this review, four key considerations for developing new items emerged. These are the importance of:

1. viewing resilience from a socio-ecological position (resilience from a systems perspective rather than as a fixed, individual character trait)

2. including a focus on resistance/activism that incorporates te ao Māori perspectives on resilience
3. exploring protective factors that exist in the system around students (teachers, schools, and community)
4. exploring how students are supported to develop transferable strategies.

Some of these areas may have similar items already within the W@S survey tools. These will be audited as a part of the next stage following this review.

Below we provide a recommendation for each of these considerations. In addition, given the complexity of resilience as a construct, we have also included another recommendation to develop the W@S survey tools around a modular functionality to enable schools to focus on particular areas of interest.

Socio-ecological context

Recommendation: Include a focus on two main interpretations of resilience (resilience and resistance/activism) that emphasise socio-ecological, anthropological, or cultural definitions of resilience rather than the psychological definitions.

Rationale: Resilience is not a personality trait but is bound by context: “being resilient” is situated in space and time. For example, a child may be resilient at one time, but not another. It is important to avoid views of resilience as a personality trait, or “harden up” interpretations of resilience, which the literature suggests are not helpful for young people. Such approaches are more aligned with the psychological definitions. Instead, to be aligned with the literature and the W@S survey tools, items need to explore the wider systems context rather than (just) the individual’s traits.

New items need to reflect both Western and te ao Māori interpretations that are underpinned by socio-ecological definitions of resilience. The socio-ecological, anthropological, and cultural perspectives align better with the strengths-based and systems approach underpinning W@S, as they include a focus on social and cultural factors that influence how people respond to stressors.

Resistance/activism

Recommendation: Include items that focus on perceptions of resistance/activism at school.

Rationale: To ensure W@S reflects te ao Māori perspectives on resilience. “Resistance” aligns better with the systems approach of W@S, whereas “resilience” can be misinterpreted and lead to blame, putting the onus on individuals. “Resistance” and “activism” are more useful terms as they take into account the collective dimensions of standing up to something and taking action. A focus on resistance is a key new area identified in this review and is not explicitly explored by items in the W@S survey tools to date. There is likely to be a cross-over between a focus on “resistance” and the findings or recommendations from the racism and bias rapid review.

Protective factors

Recommendation: Ensure W@S survey tools explore known protective factors such as the wider environmental and cultural factors.

Rationale: This review identified a wide range of protective factors that exist in the system around students including those that relate to: the climate, cultural connections, and environment of the school; teacher behaviours; peer relationships; and students' sense of cultural identification and community and family support.

Examples of protective factors

- Teacher behaviours/key adult: having a trusting relationship with a key adult within the school to go to for support.
- Connectedness–identity: knowing who they are spiritually and culturally; how they connect in this world to people and place/tuakiri ā-iwi.
- School climate, environment, and cultural congruence: for example, schools create a whānau-like environment, or offer students lots of opportunities to have positive experiences.

Transferable strategies

Recommendation: Ensure W@S survey tools focus on the learning of key transferable strategies that support students to manage stressful situations.

Rationale: This review identified opportunities for the learning of key transferable strategies as a key protective factor. This type of learning is a facet of social and emotional learning (SEL). A focus on transferable strategies aligns with the approach taken by W@S, and several sub-aspects of the W@S survey tools.

Examples of the transferable strategies that schools could foster include students' sense of empathy and agency, positive peer relationships, self-management, and the ability to problem solve and set goals.

Modular functionality of the W@S survey tools

Recommendation: In order to more fully represent the complexities of the multifaceted construct of resilience/resistance, develop more than two or three items to indicate or measure this area. This would involve redeveloping the W@S survey tools to become a collection of modular blocks of items that can be added to a core number of items. For example, there may be some items about elements of resilience in a “core” W@S survey, but, in addition, resilience would be an optional block of several items that can be selected by the school/user.

Rationale: Given the two main interpretations of resilience are quite different (resilience and resistance), and that there are many considerations about the socio-ecological context around resilience, a small number of items may be unlikely to do justice to the complexity of this area and other areas or constructs as they are added to the W@S survey tools (e.g., racism).

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Appendix A: Schools in New Zealand that have published research relating to resilience

Kia Aroha College

Kia Aroha College is a special character school from Year 7 that focuses on bilingual (Māori, Samoan, Tongan, and English), critically conscious, culturally responsive, social justice education. The school embraces notions of resistance. The school's approach resists and rejects school environments that alienate Māori and Pasifika learners, and is centred on students' identities as "Māori", "Tongan", "Samoan"—as who they are first. Self-identity relates to the concept of whānau.

Several age groups work together during the day, in the same classes and stay with the same small group of teachers for 3 or 4 years. Students work within their own ethnic groups, usually with teachers fluent in their languages, and learn bilingually. Tuakana/teina is a key learning process. Students work in small groups on inquiry-based projects.

The learning model places self-knowledge (whānau, language, culture, and identity) and global knowledge (the worlds you navigate beyond school now and in the future) as equal in status and validity, to school knowledge (the mandated national curriculum). (Milne, 2016, p. 5)

Students develop as "warrior-scholars"—"secure in their own cultural identity, competent in all aspects of their cultural world, critical thinkers for social change, with all the academic qualifications and skills they need to go out and change the world" (Milne, 2016, p. 6).

Waitākiri School (Christchurch)

A TLRI report (Rickson et al., 2018) describes the role of a singing programme in fostering student wellbeing and establishing school community in the wake of a merger of schools following the 2010–11 earthquakes in Christchurch. The programme drew on three models of subjective wellbeing (Durie, 2007, cited in Waiti, 2014; Education Review Office (2014, 2016); Noble & McGrath, 2016). The Noble and McGrath model, PROSPER encourages Positivity, building Relationships, facilitating Outcomes, focusing on Strengths, fostering a sense of Purpose, enhancing Engagement, and teaching Resilience.

Drawing on the three models, resilience is seen to be about having courage in challenging situations and bouncing back after setbacks and mistakes. As a result of the programme, researchers considered students had a sense of belonging and connectedness.

Towards equitable practice in secondary schools

The descriptions of four secondary schools below come from an Education Review Office's (2014) national evaluation report that focus solely on good practice. The Education Review Office considers the schools make a real difference for students.

Avonside Girls' High School

In 2017, the school trialled a restructuring of their traditional house groups and form classes to better reflect the programme's guiding whakataukī and to encourage wellbeing and resilience in students: they reduced the number of houses to four and put in place vertical forms with 16 students in each. Once a week, the form class has an hour-long wellbeing class that focuses on a different school value where students learn skills towards mindfulness, growth mindset, and developing habits to be successful and self-directed learners.

Trident High School

Trident High School focuses on making sure there are consistent expectations and interactions through the school that support students to increase their self-esteem and resilience. The school charter echoes this approach:

[Students] take responsibility for and pride in the part they play in the school community. We believe by showing personal courage and self-belief, all students at Trident High School will achieve success. Furthermore, when individuals are respected by others and supported in their endeavours they have a greater chance of reaching their goals and gaining success. In turn, these individuals are better placed to support those around them, building courage and respect and assuring community success. (Education Review Office, 2014, p. 13)

Gisborne Boys' High School

Gisborne Boys' High School has improved engagement and learning through "Tu-tane—Stand a man" which focuses on improving sense of self. They take a values education approach, actively promoting perseverance, loyalty, respect, courage, and honesty.

Ōpōtiki College

Ōpōtiki College has put in place a system of learning advisers who have 16–20 students from different year levels and act as an academic and pastoral mentor for them. The learning adviser is responsible for relationship building and care for their students, including:

- tracking the learning of each student across all subjects

- working with students, either individually or in groups, to maximise their learning
- academic counselling to determine, with students and whānau, the most appropriate learning pathway and qualifications for each student
- setting goals with students, determining the steps needed to achieve them, and then monitoring progress towards the goals
- leading learning about the school values: what it means to be respectful, responsible and resilient
- counselling students and having restorative conversations or conferences as necessary. (Education Review Office, 2014, p. 3)

Wider health and wellbeing programmes

Mental health education and hauora: Teaching interpersonal skills, resilience, and wellbeing

A health education publication entitled *Mental Health Education and Hauora: Teaching interpersonal skills, resilience and wellbeing* (Fitzpatrick et al., 2018) is designed for use primarily in Years 7–11 as part of the health curriculum and follows the objectives of the mental health aspects of the curriculum. There has as yet been no evaluation of the impact of the resource on the mental health of young people in New Zealand.

The resource is organised in a logical sequence with lesson plans for topics such as identity, wellbeing, interpersonal skills and communication, and health promotion. Section 2.3 focuses on developing resilience and has lesson plans on: developing resilience and grit; flexible optimism; mana; resilience: dealing with change; tips for self-care; gratitude; and being kind to yourself. (There is also a lesson in the wellbeing section called The Empathy Box.) The resilience section is designed for students to “develop knowledge and resilience skills to care for their own wellbeing, such as learning from failure, resisting the urge to give up, bouncing back from loss, and dealing with confronting ideas and beliefs.” (Fitzpatrick et al., 2018, p. 122). The authors make a distinction between resilience (ability to bounce back), and perseverance and grit (not giving up). Note, too, the notion of resistance inherent in the definitions.

A section on mana describes: Mana whakaheke—the mana a person is born with; Mana tuku—the mana that people give you; and Mana ā rāpu—group mana. There is also an explanation of manaakitanga (hospitality). Mana whakaheke is derived from a person’s whakapapa and could be traced back many generations. Certain families are renowned for their skills, knowledge, and abilities that have been in their whānau for generations. Mana tuku is based on how people live their lives, with humility, with others recognising their strengths and bestowing mana on them. Mana ā rāpu is based on a group or team—the marae, a church, a cultural group, or a whānau, hapū,

or iwi. The activities are designed to strengthen students' understandings of mana as individual authority, strength, or prestige.

Whānau ora

Whānau ora is a whole-of-government initiative launched in 2010 to improve individual wellbeing in the context of their whānau. The initiative recognises the strengths and abilities of the whānau. The approach includes:

- a focus on relationships, self-determination, and capability building for whānau to achieve positive long-term outcomes
- a joined-up approach that focuses on all factors relevant to whānau wellness, including economic, cultural, environmental factors, as well as social factors
- recognition that whānau and families have skills, knowledge, and experiences that contribute to their own resilience, and can provide a platform for whānau and families to become more self-managing and independent.

As part of Whānau ora, a Te Puni Kōkiri publication *Tamakaiwānanga—Māori Boys at Secondary School: A qualitative study of Māori boys' motivation and engagement in NCEA Level 1* (Te Puni Kōkiri, 2014) identified those factors in seven secondary schools that lead to Māori boys' achievement. The report does not mention resilience per se but identifies perseverance and commitment as individual factors for success. Amongst the key findings were that whānau were a prime motivational source.

High-achieving rangatahi had:

- positive thoughts, including: an appreciation of the value of school, confidence and self-belief, knowledge, and strong cultural identity
- knowledge and skills, including: knowledge of NCEA and knowledge of study skills
- positive behaviours, including: persistence and self-management, and study management and effort.

Appendix B: Resilience and empathy surveys and scales

Table 5: The Brief Resilience Scale (BRS) and the Brief Resilient Coping Scale (BRCS)

The BRS is freely available and has four questions (with agreement scales). It was developed to assess the ability of an individual adult to bounce back or recover from stress.

I tend to bounce back quickly after hard times.

{reverse} I have a hard time making it through stressful events.

It does not take me long to recover from a stressful event.

{reverse} It is hard for me to snap back when something bad happens.

I usually come through difficult times with little trouble.

{reverse} I tend to take a long time to get over set-backs in my life.

<https://ogg.osu.edu/media/documents/MB%20Stream/Brief%20Resilience%20Scale.pdf>

A companion scale, the Brief Resilient Coping Scale (BRCS), asks people to use an agreement scale for the following:

I look for creative ways to alter difficult situations.

Regardless of what happens to me, I believe I can control my reaction to it.

I believe that I can grow in positive ways by dealing with difficult situations.

I actively look for ways to replace the losses I encounter in life.

https://nursing.vanderbilt.edu/projects/sinclairv/pdf/brief_resilient_coping.pdf

(See also, The Resilience Scale (Wagnild & Young, 1987).)

The Resilience Scale was rated by Ahern et al. (2006) as being the most useful scale for adolescents of those the authors reviewed.

The Resilience Scale

- 1 When I make plans, I follow through with them.
 - 2 I usually manage one way or another.
 - 3 I am able to depend on myself more than anyone else.
 - 4 Keeping interested in things is important to me.
 - 5 I can be on my own if I have to.
 - 6 I feel proud that I have accomplished things in life.
 - 7 I usually take things in stride.
 8. I am friends with myself.
 9. I feel that I can handle many things at a time.
 10. I am determined.
 11. I seldom wonder what the point of it all is.
 12. I take things one day at a time.
 13. I can get through difficult times because I've experienced difficulty before.
 14. I have self-discipline.
 15. I keep interested in things.
 16. I can usually find something to laugh about.
 17. My belief in myself gets me through hard times.
 18. In an emergency, I'm someone people can generally rely on.
 19. I can usually look at a situation in a number of ways.
 20. Sometimes I make myself do things whether I want to or not.
 21. My life has meaning.
 22. I do not dwell on things that I can't do anything about.
 23. When I'm in a difficult situation, I can usually find my way out of it.
 24. I have enough energy to do what I have to do.
 25. It's okay if there are people who don't like me.
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Questions about resilience asked in the Travellers' evaluation

Respondents were asked if the programme had helped:

- How to understand how I feel
- How to think positively
- How to talk about stuff in my life that is difficult
- How to feel more confident
- How to be comfortable with myself
- How to understand/think differently about stuff I have found difficult
- How to manage my emotions
- How to feel differently about stuff I have found difficult
- How to tell people how I'm feeling
- Events that people might face that require resilience
- Not doing well at school work
- Afraid of being hurt by someone
- Being put down by people
- Loss of an important friendship
- Illness of someone close to you
- Money difficulties at home
- Breaking up with boy/girlfriend
- Death of someone close to you
- Moved house
- People making racist comments to you
- Illness/injury with two weeks off school
- Separation/divorce in your family
- Moved from another country

Toronto Empathy Questionnaire

Toronto Empathy Questionnaire instructions

Below is a list of statements. Please read each statement *carefully* and rate how frequently you feel or act in the manner described. Circle your answer on the response form. There are no right or wrong answers or trick questions. Please answer each question as honestly as you can.

When someone else is feeling excited, I tend to get excited too

Other people's misfortunes do not disturb me a great deal

It upsets me to see someone being treated disrespectfully

I remain unaffected when someone close to me is happy

I enjoy making other people feel better

I have tender, concerned feelings for people less fortunate than me

When a friend starts to talk about his/her problems, I try to steer the conversation towards something else

I can tell when others are sad even when they do not say anything

I find that I am "in tune" with other people's moods

I do not feel sympathy for people who cause their own serious illnesses

I become irritated when someone cries

I am not really interested in how other people feel

I get a strong urge to help when I see someone who is upset

When I see someone being treated unfairly, I do not feel very much pity for them

I find it silly for people to cry out of happiness

When I see someone being taken advantage of, I feel kind of protective towards him/her

Scoring Item responses are scored according to the following scale for positively worded items 1, 3, 5, 6, 8, 9, 13, 16. Never = 0; Rarely = 1; Sometimes = 2; Often = 3; Always = 4. The following negatively worded items are reverse scored: 2, 4, 7, 10, 11, 12, 14, 15. Scores are summed to derive total for the Toronto Empathy Questionnaire.

The following questionnaire is used in New Zealand (including by social workers in schools) to determine the mental health of primary-aged students in schools and kura and to assess whether the child and their family would benefit from having a SWiS (social worker in school).

The Strengths and Difficulties Questionnaire (Goodman, 1997)

Answer: Not true, somewhat true, certainly true

I try to be nice to other people. I care about their feelings

I am restless, I cannot stay still for long

I get a lot of headaches, stomach-aches or sickness

I usually share with others, for example CD's, games, food

I get very angry and often lose my temper

I would rather be alone than with people of my age

I usually do as I am told

I worry a lot

I am helpful if someone is hurt, upset or feeling ill

I am constantly fidgeting or squirming

I have one good friend or more

I fight a lot. I can make other people do what I want

I am often unhappy, depressed or tearful

Other people my age generally like me

I am easily distracted, I find it difficult to concentrate

I am nervous in new situations. I easily lose confidence

I am kind to younger children

I am often accused of lying or cheating

Other children or young people pick on me or bully me

I often volunteer to help others (parents, teachers, children)

I think before I do things

I take things that are not mine from home, school or elsewhere

I get along better with adults than with people my own age

I have many fears, I am easily scared

I finish the work I'm doing. My attention is good

This is a brief screening tool to determine the mental health of 3–16-year-olds.