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Reviewing the Literature on “At-Risk” and Resilient Children and Young People

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Abstract: This review paper provides pre-service and in-service teachers, principals and other educational professionals with the information needed to understand the concept of resilience to affect positive development in children and young people in their care. It reviews and critiques the most influential literature on resiliency over the last four decades and is structured in three parts. The first section deals with the definitions of risk and resilience and relevant terms (i.e. vulnerability, at-risk students, risk factors, protective factors) to clarify confusion and ambiguities of concepts. The second part outlines the development of the research on resilience using a historical perspective. It traces its origins in medicine and psychology into education and discusses the evolution of its body of work through four waves. The last part discusses approaches to promoting resilience.

Introduction

Growing up, young people face a multitude of risks (for example episodes of physical or mental illness; divorce or unemployment of parents; alcohol and substance abuse; gambling, internet or other addictions) and sudden traumatic events (such as traffic, domestic or other accidents, bushfires) (Australian Bureau of Statistics, 2009).

These risks – whether they are transpiring in their own life, their immediate family or their wider social contexts - inevitably affect students’ behavior in the classroom. It is either reflected academically (i.e. disengagement/disinterest in learning, lower grades, truancy), socially (i.e. conflict with peers, withdrawal or isolation from groups), physically (i.e. self-harming, deteriorating appearance), emotionally (i.e. challenging behavior), or in a combination of these aspects. These risks present a direct challenge to teachers’ core function as all teachers have a professional role to contribute to students’ wellbeing and affect their positive development. It is not only a moral and legal responsibility under their “duty of care” obligation, but also part of their pedagogical task, as student wellbeing is part of the curriculum and as such tied to whole school and systems agendas and, thus, supported by extensive policy frameworks and service provisions.

Part of teachers’ tasks to improve students’ wellbeing starts with identifying “at-risk” children and youth, promoting competence in their students and building protections to achieve positive youth development and outcomes. For that to occur, educational professionals – whether in training or active service – need to have an understanding of:
the terminology surrounding the “at-risk” and “resilience” discourse; the identifying factors of vulnerability and protection; the emergence, development and current knowledge within the field; the implications for provision of service to improve outcomes for young people; and, and the strategies for prevention and intervention to improve the lives of children and adolescents.

The study of resilience investigates the phenomenon of resilient children and adolescents with all educators needing to put this knowledge to work for the benefit of their students. This review paper offers pre-and in-service teachers, principals and other educational professionals the necessary information and knowledge base to affect positive development and improve outcomes for Australian children and youth.

Background

The recent launch (28 January 2010) of the federal government’s MySchool website carries detailed information on the performance of almost 10,000 Australian schools. The data were gathered across Australia from children in Grade 3, 5, 7 and 9 through literacy and numeracy testing, known as the National Assessment Program Literacy and Numeracy (NAPLAN) test. While additional information (i.e. number of enrolments and attendance rates, gender breakdown and indigenous proportion of students, teaching and support staff numbers) is also provided on the website, information on the more contextual and cultural aspects of school life are not available. The federal government believes that the MySchool website introduces introducing much-needed transparency and accountability to the Australian school system, while highlighting underperforming schools that will receive help.

The Australian Education Union Victorian branch president Mary Bluett is concerned about the publication of ‘league tables’ and believes that "Ranking schools on a single figure is unfair and it condemns not only just the teachers in the school but the kids if the school is rated by just that one simple number." (Ricci, 2010)

Meanwhile, the government’s website and the monitoring of the effectiveness of schools have increased pressure on teachers and principals to improve children’s academic outcomes. Anecdotal evidence and media reports suggest that many educational professionals find themselves in a position of being blamed for poor school performance of students. This assigning of blame is without acknowledgement that these students may be from a disadvantaged background with one or multiple factors in their life, which reduces their potential to achieve. While teachers have no control of changing certain risk factors in their students, (i.e. such as low socio-economic, non-English speaking or indigenous background), they do have power in identifying students at risk, and their needs (for example, an English language program or literacy support groups for those of non-English speaking backgrounds). Teachers are then able to create or change their school’s programmes to meet their students’ needs and, thus, improve their potential to achieve and by way of doing that, the school’s overall performance. Therefore, teachers will need the information and skills to identify at-risk students in order to initiate intervention and bring about successful outcomes for students in their schools.

This timely paper aims to help teachers gain the necessary terminology and key concepts to understand the issue and help them decide to best invest their time and
resources to meet the needs of their students and ensure that they have the best possible chances of success.

**Definition of key concepts in the field**

The concepts of resilience, risk and protective factors alongside relevant terms in the field have multiple meanings occurring in the literature, which are riddled with complexities, contradictions and ambiguities (Kaplan, 1999). Some years later, Kaplan (2005, p. 35) observed that the “…problematic aspects of the concept of resilience persist.” Curtis & Chiccehtti (2007) acknowledge that resilience is a complex and multi-faceted concept. The difficulty in defining resilience clearly stems from a body of literature that covers a variety of risk factors and manifested competences or protective factors across different developmental ages or life stages as well as domains (Masten & Obradovic, 2006). McElwee (2007, p. 6) concurred “One continually hears the terms ‘at-risk’, ‘risk’, and ‘risky’ associated with children and youth and their various behaviours but often without much clarity.” He noted that there are “…several unresolved definitional issues in employing such terminology in relation to school-going children” and asked “Who is at-risk? From what are children at risk?” (McElwee, 2007, p. 6).

This section provides definitions and thus insights on the nature of resilience and aims to clarify confusion for readers although this is somewhat thwarted by the current conceptual vagueness of terminology surrounding the notion of “resiliency”.

Even so, one of the strong features of the published research on resilience has been the identification of factors that relate positively or negatively as predictors of success in schooling. These are usually described as internal or personal characteristics of the individual and external conditions occurring within the individual’s social context. Both positive components are frequently referred to in the literature as internal/external protective factors (e.g. Garmezy, 1985, 1994; Rutter, 1987; Gore and Eckenrode, 1994) or protective mechanisms (Rutter, 1987). Equally, negative conditions are referred to as risk factors or risk indicators and individuals presenting with these elements are described as being at-risk. The next section will discuss these concepts in more detail.

**Resilience in children and youth**

Resilience and its verb “resile” stems from the Latin word “resilire”, meaning “leap back” or “bounce back”. In its initial sense it was the ability to return to original form after being bent, squeezed or stretched out of shape. In humans, it denoted quick recovery from disruptive change or misfortune, with Benard (1991, p. 18) arguing that “The development of human resiliency is none other than the process of healthy human development.” Rutter (1990, p. 181) describes resilience as doing well against the odds, coping, and recovering and suggests the term refers to “... the positive pole of the ubiquitous phenomenon of individual difference in people's responses to stress and adversity.” Thus, resilience is an outcome that focuses on positive development in people’s life, covering the emotional, social, physical and material domains (Lee, Kwong,
Cheung, Ungar & Cheung, 2010). A person’s ability to successfully handle developmental tasks in the face of adversity suggests resilience (Bottrell, 2009).

Ann Masten, a prominent resilience researcher during the last two decades, promoted the view that resilience is encoded in humans and pertains to both favourable and unfavourable upbringings. What began as a quest to understand the extraordinary has revealed the power of the ordinary. Resilience does not come from rare and special qualities, but from the everyday magic of ordinary, normative human resources in the minds, brains, and bodies of children, in their families and relationships, and in their communities (Masten, 2001, p. 9).

Thus, resilience is not an individual trait but rather a process (Luthar, Cichetti & Becker, 2000). Masten, Best and Garmezy (1990) define resilience as the process of, capacity for, or outcome of successful adaptation despite challenging or threatening circumstances. They believe that there are three kinds of resilience: “overcoming the odds” resilience (individual’s personal strength to withstand adversity), “coping” despite a number of ongoing negative circumstances and “recovery from trauma”. However, she and her colleagues point out that resilience is not a fixed quality, it is not something a child has or has not. Rather, resilience is fluctuating and varies throughout a person’s development as individual and environmental factors interact and impact at different points in life (Masten, Best & Garmezy, 1990). Navigating through resources and negotiating access to resources matching a person’s needs is therefore an important skill in the construct of resilience (Unger, 2008).

The identifying characteristics of resilient children and youth are summarized across the body of literature as social competence, problem solving skills, mastery, autonomy and a sense of purpose and a future (Waters & Sroufe, 1983; Garmezy, 1985; Rutter, 1980, 1984, 1985; Werner & Smith 1988; Masten, Best & Garmezy, 1990; Gore & Eckenrode 1994; Consortium on the School-Based Promotion of Social Competence, 1994).

The concept of resilience is closely linked to terms such as risk factors, protective factors and vulnerability. Without reference to those notions the complex interplay of dynamics over a sustained periods of time determines children’s outcomes cannot be understand, hence they are examined and clarified in the following section.

**Identifying risk and protective factors to support resilience**

Over the last four decades research on resilience in children has focussed on identifying factors or interactions that indicate vulnerability, resilience, risk and protection to inform and implement prevention or intervention strategies (Bottrell, 2009).

The dominant approach to the study of childhood vulnerability has aimed to identify risk and protective factors that are related to undesirable life outcomes, including problems associated with illness and disease, behaviour, and cognitive development. The assumption is that if these factors can be identified, then social programs can be designed to reduce risk factors and strengthen protective factors, thereby reducing the prevalence of vulnerable children (Willms, 2002, p. 23)
This approach is commonly referred to as *risk and protective factor research*. Amongst those factors, there are features that can be changed and others that cannot be changed, with many researchers failing to make that division. Rumberger (1995) carefully differentiated between *unalterable factors* (such as sex and ethnicity) and *intervening factors* which are associated with student behaviour and achievement.

Undoubtedly, factors such as sex, ethnicity and family structure are easier to measure than factors that capture the subtle processes associated with policy and practice. This might be the reason why the former dominate the list of risk factors related to life outcomes. Willms (2002) points out that risk factors are used rather loosely by researchers without providing a strong theoretical basis or evidence of a causal relationship. In addition to this shortcoming, many risk factors are difficult or impossible to manipulate.

For example, factors that cannot be changed include a child’s sex and ethnicity, factors that are difficult to change are a parent’s income and education, factors that could be improved are the actions of teachers or the extent to which parents participate in school-related activities (Willms, 2002, p. 27).

Hence, teachers and schools need to concentrate their efforts on factors that can feasibly be changed through prevention or intervention. Another inadequacy of risk and protective factor research according to Willms (2002, p. 27) is the clarity with which causal models have been specified. He believes that not only researchers but also practitioners use the term of “children at risk” or “at risk children” to identify children with one or more negative factors that predict a range of undesirable outcomes and that puts them at risk.

“But this term may ask us, at risk of what? Part of the problem is that the set of relevant risk factors depends upon what outcome is being considered. It also depends upon the age of the child” (Willms 2002, p. 27).

Ungar (2004, p. 342) sums it up when he says “Research...has demonstrated a non-systemic, non-hierarchical relationship between risk and protective factors that is characteristically chaotic, complex, relative and contextual.”

**Risk factors**

Almost forty years ago, West & Farrington (1973) identified risk factors that still have currency today. In their study on delinquent boys they found low family income, large family size, parental criminality, low intelligence and poor-rearing techniques as key adverse background features. During the critical periods when a child’s brain and nervous system are developing, Cynader & Frost (1999) believe that the effects of certain risk factors are probably more acute.

Raudenbush & Kasim (1998, p. 33-34) remind readers of the long history of inequality in adult employment and earning based on differences in social origins such as social class, gender, and ethnic, cultural or linguistic background, which are related to schooling experience, which in turn is related to employment and earnings. This is supported by Willms (1986), who asserts that the correlation of young people growing up in families with lower socioeconomic status and lesser academic achievements and secondary school completion rates and thus less success in entering the labour market has
been established. In fact, Willms (2002, p. 8) is convinced that “The relationship between children’s outcomes and family income is so firmly entrenched in our understanding of human development that the term children at risk has almost become synonymous with children living in poverty”. He supports this notion by arguing that “A dominant theory about why there are socioeconomic gradients in children’s outcomes is that unemployment and low family income lead to stress and depression, and these factors affect parents’ ability to provide adequate care and guidance for their children” (Willms, 2002, p. 13-14).

It is noteworthy to point out however, that not all risk factors have equal impact; some risk factors are more strongly predictive than others. In fact, Willms (2002, p. 26) believes that some risk factors seem to have relative weak effects when considered in isolation, but their combined effect can be strong.

**Protective factors**

Risk factors are offset by protective factors, which have been described in relation to three primary systems in the child’s world - family, school and community. In regard to the family, many of the protective factors identified by research clearly relate to the consistency and quality of care and support the individual experiences during infancy, childhood and adolescence. Garmezy (1985) and Masten & Garmezy (1985) identified three broad sets of protective factors: personality features such as autonomy, self-esteem, and positive social orientation: family cohesion, warmth and an absence of discord; and, the availability of external support systems that encourage and reinforce a child’s coping efforts.

The work of Rutter, Maughan, Mortimore & Ouston (1979) in Britain shows that another source of protective factors can be the school. Children in discordant and disadvantaged homes are more likely to demonstrate resilient characteristics if they attend schools that have good academic records and attentive, caring teachers. Studies conducted in the U.S. have also shown the important role that individual teachers can play in resilient children’s lives (Geary, 1988; Werner & Smith, 1988; Coburn & Nelson 1989). In relation to the community, children in disadvantaged areas are generally considered more at risk than those in more affluent areas. However, certain community characteristics seem to operate as protective factors. The strength of social support networks provided by kin and social service agencies, for example, is one such factor (Pence, 1988).

Just as risk factors have been identified as cumulative (Willms, 2002), protective factors seem to have the same cumulative effect in individuals’ lives. Hence, the more protective factors exist in a child’s life, the more likely the child will be resilient.

**The difference between “at risk” and “vulnerable” children**

The confusion amongst variations of “risk” and “at-risk” and their divergent definitions has led to some researchers either circumventing or completely avoiding the terminology and using the concept of “vulnerability” instead.
Howard, Dryden and Johnson (1999, p. 307-308) differentiate between “at risk” and “vulnerable” children. At risk students are those presenting at school with one or more indicators. These include disruptive behaviour, social and emotional problems, learning difficulties, living in low-income families or eligibility for government financial assistance. Vulnerable children are those with biological, cognitive, effective or sensory disorders (for example autism, ADHD, hearing or visual impairment, a physical or mental handicap). They use the concept of risk to refer to environmental factors that are likely to hinder the child’s ability to succeed. Whereas vulnerability is used by the researchers to predict a range of negative outcomes such as school failure, drug abuse, delinquency, unemployment, ill health and early death.

Willms (2002, p. 3-4) describe young people...who are experiencing an episode of poor developmental outcomes as vulnerable. These children are vulnerable in the sense that unless there is a serious effort to intervene on their behalf, they are prone to experiencing problems throughout their childhood and are more likely to experience unemployment and poor physical and mental health as young adults.

This is contrary to Howard, Dryden & Johnson (1999), as their definition of vulnerability (see above) does not include physical or mental handicaps, learning difficulties, or health problems. Willms (2002, p. 45) asserts that “Vulnerable also connotes susceptibility – that is, one is exposed or liable to experience some undesirable life outcome in the future.”

In reviewing the definitions: resilience is positive adaptation in the face of severe adversities; vulnerability is a feature that renders a person more susceptible to a threat and risk is any factor that increases the chance of an undesirable outcome affecting a person.

While there are currently a variety of terms and definitions in circulation, understanding the evolution of the field will clarify the progression in scholarly ideas.

**Historical perspective on the emergence of resilience as a concept**

This section will deal with the concept of resilience, its origins in the fields of medicine and psychology and subsequent emergence and development in the educational literature. It is the context for understanding how the terms developed and researchers arrived at their definitions thus illuminating pre-and in-service teachers’ knowledge base on the subject matter and clearing up the confusion on terminology.

One of the earliest, longest and best known studies on risk factors started in 1955 in Honolulu, in the U.S. island state of Hawaii. It investigated 700 children from birth, their individual development and adaption to life right up to the age of 35 years (Werner & Smith, 1977). Over the decades, the focus of the *Kauai longitudinal study* by the University of Hawaii’s researchers Emmy Werner and Ruth Smith shifted. Initially, they were interested in understanding pathology and deficits from a mental health perspective, trying to locate the source of illness with the individual child.

Pioneering researchers in the early 1970s (Garmezy, 1971; Garmezy & Neuchterlien, 1972; Anthony, 1974; Pines, 1975, Rutter 1979) investigated *invulnerability*, which was seen as immunity to harmful influences. Anthony (1974)
coined the term of “invulnerable children” for a subset of children born to parents diagnosed with schizophrenia. Garmezy (1974) found that these children displayed healthy adaptive patterns, with Rutter (1979) being able to identify specific traits within those invulnerable children.

Essentially, researchers were initially concerned with a person’s shortcoming and their remedy. This deficit approach focussed on investigations of children and adolescents who were classified as being at risk of negative life outcomes (for example psychiatric disorders, delinquency, alcoholism). These could have been caused by a variety of individual, family and environmental factors (for example neonatal stress, poverty, abuse, physical handicaps, substance abuse and criminal activities). However, the research at the time did not explain why some children did and others did not exhibit resilient behaviours in the face of adverse life circumstances. Attempting to explain this conundrum, Bronfenbrenner (1979) theorized that children are located in nested systems, which are constructed from elements within philosophical and or/economic orientation (i.e. unemployment; poverty; changes in government policies regarding housing, working conditions, health, law and order). These elements have reciprocal and bi-directional influences on the nested systems in which children are growing up. Thus, they are continuously affected, one way or another, by changes that occur in the environments that surround them. Each child thus faces a different mix of actions, reaction to and interaction with these elements even when some risks are the same.

Studies of specific populations of resilient children and adolescents followed (Garmezy & Rutter, 1983; Anthony, 1987; Werner & Smith 1988) to investigate further. For example, Garmezy & Rutter’s (1983) study with 200 children in urban settings on U.S. mainland showed adaptations among subgroups of children who were considered “at-risk” of developing psychiatric disorders. Despite the high risk environments of those children, their lives had positive outcomes, which became evident as they grew into successful young adults. It became clear that their approach was limited in scope and usefulness as it was not able to explain the positive outcomes for many “at risk” children, with research starting to question how problems were adverted, resolved or overcome. Subsequently, instead of focusing on young people who become casualties of these negative factors, the new wave of studies focussed on those who did not succumb, those who were termed resilient.

Research in the field of resilience concentrated now on detecting what made those children and youth immune to factors that harmed others and moved their focus from a person’s deficit to a person’s strength. Essentially, this constituted a shift from identifying risk factors to identifying buffers or protective factors. These protective factors were vital information to improve the odds towards positive outcomes. The 1970’s research efforts were summarised by Gore & Eckenrode (1994, p. 5) as focus on risk for psychopathology, whereas they sum up the 1980s as a research emphasis on the concept of resilience, generating ideas about prevention and intervention.

Werner & Smith (1988) deduced that even under adverse conditions, most children can thrive due to their innate self-righting tendencies. They found that positive relationships have more impact on life trajectories than specific risk factors.

Our findings and those by other American and European investigators with a life-span perspective suggest that these buffers [i.e., protective factors] make a more profound impact on the life course of children who
grow up under adverse conditions than do specific risk factors or stressful life events. They [also] appear to transcend ethnic, social class, geographical, and historical boundaries. Most of all, they offer us a more optimistic outlook than the perspective that can be gleaned from the literature on the negative consequences of perinatal trauma, caregiving deficits, and chronic poverty (Werner & Smith, 1992, p. 202).

To summarise this section, the examination of normal and abnormal behaviour, and thus adaptive and maladaptive processes stems from developmental psychopathology, which lay the foundation for resiliency research (Masten & Obradovic, 2006). Masten (2001) believes that the study of resilience emerged from thinking about the environmental protective factors combined with an innate human capacity for self preservation. O’Dougherty, Wright & Masten (2004, p. 8) state that the study of resilience then advanced in three major waves of research: the first wave of research described resilience phenomena, explained basic concepts and methodology but focused solely on the individual. The second wave of research, according to her, was marked by a more dynamic description of resilience with a focus on positive adaptation in adverse circumstances. It investigated the way individuals interacted with others and manoeuvred the ‘at-risk’ milieus in which their life is embedded. The move towards a developmental-systems approach to theory became evident.

The third wave of resilience research was thus concentrating on preventive intervention. Masten & Obradovic (2006) believe that it stemmed from a concern for the welfare of children growing up in adverse conditions and the intention to directly change children’s developmental pathways to more positive outcomes.

The fourth and most current wave of research is possible through the invention of technologies (i.e. anatomical and physiological brain imaging) and developments in the sciences (i.e. neuroscience, molecular genetics) which enhance understanding of neurobiological development processes in humans (Cichetti & Toth, 2009).

**Promoting resilience through prevention and intervention**

As discussed, the third wave in resilience research has a concern for child welfare and outcomes for children at heart. It therefore focussed on investigating risk factors and the design of interventions to reduce the impact of such factors and to support resiliency in children and young people. It also used studies on naturally occurring resilience to inform practice, prevention and policy efforts. These were geared to creating resilience when it was not likely to occur naturally.

Yates & Masten (2004) list three types of approaches to intervention, which promote resilience: risk-focused methods, asset-focused approaches, process-focused approaches. Risk-focused methods aim to reduce or prevent risks (i.e. premature births or teenage pregnancy). However, when evading risk is not possible or risk cannot be changed as it is on-going, other strategies are needed. The asset-focused approach for example, which emphasises resources that enable adaptive functioning to counteract adversity (i.e. access to healthcare, additional tutoring, job training opportunities). Process-focused approaches aim to protect, activate or restore systems to support positive development (i.e. strengthening positive, long-term relationships).
The use of all approaches is the most effective intervention program, with multi-
systemic interventions located at the child, family and community level promising the
greatest success (Yates & Masten, 2004).

Daniel & Wassell (2002) provide a framework for describing resilience in terms
of intrinsic and extrinsic factors. Intrinsic factors consist of a secure base, which gives the
child a sense of belonging and security; good self-esteem, which provides an internal
sense of worth and competence; and a sense of self-efficacy, which is a sense of mastery
and control coupled with an understanding of strengths and limitations. Extrinsic factors
cover at least one secure relationship, access to wider support (i.e. extended family,
friends) and positive experiences in playgroups, pre-schools, schools or the community
(i.e. scout groups, musical bands, sport clubs, church groups).

Interventions to promote resilience can target these factors in their design and
implementation and as domains in which better long term outcomes for children are
measured.

Newman (2004) goes even further in compiling a list of strategies that hold the
most promise in promoting resilience. The list was gathered from reviewing the literature
on resilience research and contains three stages. The first part focuses on the early years
covering the child’s antenatal period up to the age of 4; followed by middle childhood (5
to 13 years) and adolescence (13 to 19 years). Factors that promote resilience across age
groups are safeguarding of young people or managing their exposure to risk. He argues
that it offers an opportunity to acquire coping mechanisms just as opportunities to exert
agency offer a growing sense of mastery. Strong relationships with supportive adults (i.e.
parents, teachers, mentors) or within social networks (i.e. church, sport or youth clubs) as
well as positive school experiences and extra-curricular activities are also relevant in
encouraging resilience.

In essence, a child’s resilience is very dependent upon other people and other
systems of influence such as their family, school, local environment and culture (Roberts
& Masten, 2004). For teachers and other educational professionals it is useful to consider
a continuum of resilience across multiple domains (physical, psychological,
interpersonal) to be prepared for the child’s fluctuating capacity to function during their
developmental years.

Conclusion

Concerns about students’ well-being and development throughout their formative
years to achieve best outcomes are a matter that commands considerable public and
policy attention today. This is evident in the Australian government’s announcement of 3
November 2010 that $330 million will be committed to the Family Support Program in
2010-11 (Macklin, 2010). The Family Support Program is designed to support vulnerable
and disadvantaged families. It provides prevention and intervention to families with
children up to 12 years and specialist services to help families affected by drugs, violence
and trauma.

Over the last decade, financial support from governments and non-profit
organisations has seen the implementation of a wide range of experimental intervention
programs targeted to eradicate specific risk factors. The introduction of resilience-
building programs included behaviour management programs for parents of children exhibiting behavioural, social and emotional problems; literacy and numeracy programs in schools to support students with lower academic achievements than their peers, or programs addressing specific issues such as health education to tackle obesity in young people, breakfast programs before schools to nourish children from disadvantaged or impoverished backgrounds and the like. Although a large amount of resources were dedicated towards implementing these intervention programs, there is still a lack of evidence about the effectiveness of these programs. While these school and community based interventions have been established, there is still a need to investigate the actual intervention design of individual programs to find those that are most effective in supporting resilience processes and in promoting competence and well-being of young people. In addition, there needs to be greater attention on the relative value of each program and the strategic use of resources in order to optimise outcomes for young people.

Teachers, school leaders and researchers have an important contribution to make in identifying and optimizing the most successful intervention strategies and programs, thus improving outcomes for young Australians.

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