

Searching for Wellbeing in Schools: A New Framework to Guide the Science of Positive Education

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Abstract

Youth mental illness has reached alarming rates globally and, as such, international organizations such as the United Nations and the World Health Organization are calling for schools to play an active role in preventing youth distress and promoting youth wellbeing. With this in mind, the field of positive education, now a decade old, has much to offer with its emphasis on bringing the science of positive psychology to schools. However, the rapid growth of positive education has created a potentially fragmented field with a proliferation of concepts and strategies being studied and applied in isolation, with a failure to create the inter-connected, big picture of wellbeing that combines various positive education interventions in ways that synergistically build youth mental health. To address these concerns and provide a way in which to cohesively organise and build the science of positive education, a new data-driven, meta-framework for positive education called the SEARCH framework is illustrated in this paper. A discussion of how SEARCH was developed is presented together with suggestions for how researchers in education and positive psychology can use SEARCH to guide their research programs. It is hoped that the SEARCH meta-framework will steer positive education in a direction that allows for replicability and cohesive growth.

Keywords: Wellbeing, Positive Education, Student Mental Health, Positive Psychology

Youth Mental Illness: A Global Issue

In 2015, the United Nations identified wellbeing as one of the top global sustainable goals that all countries are encouraged to focus upon United Nations [1]. One reason for this focus is the high rates of global mental illness. According to the World Health Organization (WHO), depression affects an estimated 300 million people worldwide and is among the largest single causes of disability globally [2]. Bipolar affective disorder marks 60 million people while schizophrenia and other psychoses affect 23 million people worldwide [3]. Sadly, recent reports coming from the WHO show that one person dies of suicide every 40 seconds across the globe [4].

While mental illness in the adult years is of significant concern, data also points attention to the high rates of youth mental illness [5-8]. The WHO's World Mental Health Survey identified that somewhere between 10-20% of children and adolescents experience mental disorder and half of all lifetime cases of mental illness emerge by age 14[9].

A myriad of research shows that, of all the stages in our life, it is the second decade that brings the greatest risk for developing mental illness [10-12]. In early adolescence, epidemiological research shows

that mental disorders sit around 10% but rises to 13.4% - 21.8% in mid to late adolescence [13-16]. Kessler, Avenevoli, & Merikangas's epidemiological research revealed a rise from 1% depression in the population under age 12 to 17%-25% of the population by the end of adolescence [17]. The World Health Organization lists depression as the number one cause of illness in adolescence and according to Anderson and Teicher "depression emerges with force and frequency in adolescence" (p.183) [18, 19]. Tragically, suicide is a leading cause of death among teenagers worldwide [20].

On the backdrop of these high rates of youth illbeing, it is no surprise that youth mental health has become a feature in policy conversations at the international level with several prominent international organisations calling for greater attention to mechanisms that focus on prevention and promotion with young people [21-24].

The Role of Education in Promoting Mental Health

One of the key prevention/promotion mechanisms that has featured as a key topic in the global wellbeing conversation is that of education. Various international humanitarian and economic organisations have argued that the goal of schools should extend beyond academic learning to also include learning for, and about, wellbeing (variously referred to as non-cognitive skills, social-emotional skills, soft skills, character education, values education, positive education and so on). For example, the United Nations Convention on the Rights

of the Child proposed that education should seek to develop each child's personality and character as much as it develops numeracy and literacy [25]. The United Nations Educational, Scientific and Cultural Organization (UNESCO) proposes that children across the world should universally learn about (and learn in ways that develop) wellbeing, social values, and community values. Their report specifically highlights that education can help students develop self-regulation, efficacy, empathy, emotional awareness, social awareness, creativity, curiosity, engagement, persistence, resilience, and grit [26]. The OECD's Centre for Educational Research and Innovation states that "Perhaps the ultimate goal of education policy makers, teachers, and parents is to help children achieve the highest level of wellbeing possible" (p. 32) [27]. WHO asserts that schools are key environments that can be created to support mental health [28].

The calls for schools to teach both traditional academic skills and wellbeing skills is at the heart of the field of Positive Education, a decade-old field that seeks to combine the science of positive psychology with the science of teaching and learning to promote student wellbeing [29,30]. Reviews of positive education have shown that the positive psychology interventions (PPIs) delivered in schools are generally successful in building student wellbeing [31-35]. PPIs in schools teach skills to students such as cognitive re-framing, progressive relaxation, empathy, active listening, constructive negotiation and goal setting. In addition to the teaching of skills, some PPIs focus on the teaching of certain practices that build mental health such as mindfulness, gratitude, savouring, strengths use and kindness [36,37]. Teaching these skill sets and practices to students has been shown to promote a range of wellbeing outcomes including reductions in anxiety, depression and stress as well as increases in life satisfaction, coping, calmness, positive emotions and self-esteem [35,38,39].

Aside from the mental health outcomes, there is also an economic argument for bringing positive education into schools. Researchers at Columbia University's Center for Benefit-Cost Studies in Education conducted an analysis to see if the educational benefits justify the costs of wellbeing programs to schools. Specifically, they studied the monetary costs of investing in wellbeing program for schools (e.g., teacher time, materials, program costs) against the monetary value of benefits (e.g., decreased conduct problems, reduced substance abuse, decreased aggression, increased positive social behaviours and future earning potential) [40]. This cost-benefit analysis revealed an average economic return to the school of \$11 for every dollar invested in teaching wellbeing.

In Australia, researchers have shown that for every dollar invested in a school-based anti-bullying intervention, a return of \$1.56 was gained. Similarly, a return of \$1.19 was found for a school-based psychological intervention aiming to prevent depression in young people. This return on investment jumped up to \$1.51 for students in their final year of high school, where depression rates are higher. Overall, the depression intervention resulted in 10,604 fewer depression cases and a total of 3.8 million depression free days over ten years. The national bullying intervention reported a reduction of bullying by 32% two years into the program [41].

The Growing Field of Positive Education

The mental health benefits to students coming from positive education outlined above together with the economic benefits to

schools and Governments provides impetus for a need to grow the science of positive education. According to Shankland and Rosset "the application of positive psychological interventions in schools is a fast-developing area of research" (p. 364) [37]. Their claim is supported by evidence from two recent reviews of the positive psychology literature that found evidence for the growth in the number of scientific publications studying positive psychology in education [42,43]. In a related review of the field of school psychology, Froh, Huebner, Youssef and Conte identified 449 positive constructs/processes that have been empirically studied in this field [44].

In addition to the growth in science, Seligman and Adler have found that positive education practice is growing globally and is being applied in schools across Bhutan, China, India, Israel, United Arab Emirates, Kingdom of Saudi Arabia (KSA), Jordan, Australia, Mexico, Peru, North America and the United Kingdom [45]. In Australia, Allen, Kern, Vella-Brodick and Waters found that mental health promotion was the second most prevalent goal of schools behind academic motivation. Over 65% of schools spoke proactively in their mission statements about protecting and optimising mental health by enhancing strengths and capabilities through raising positive states such as joy, happiness, vigour, optimism, kindness and meaning [46].

The rapid growth of positive education creates both opportunities and challenges. On the plus side, the expansion has produced a strong evidence-base of practices to promote student wellbeing (Owens, & Waters, in press). Additionally, research shows that wellbeing programs enhance student learning. Meta-analysis evidence from the USA found that students do better by 11% in national testing when they go to schools that teach wellbeing [31]. In Australia, schools that have high quality implementation of wellbeing programs have students who are six months ahead of NAPLAN expected standards and a national study linking individual student mental health to NAPLAN scores showed that students with good mental health have a much greater likelihood of being placed in the above average rankings. Sadly, in stark contrast a large percentage (almost 40%) of the students with poor mental health are below national standards for maths, reading and writing [47,48].

However, alongside these benefits, there are challenges that arise when working within such a rapidly growing body of work such as how researchers may be struggling to navigate and integrate this vast body of work (i.e., 449 constructs). This may be why the field is still in need of the cumulative evidence required to establish the generalisability of many of the positive education interventions that have been tested. For example, Froh et al.'s review found that only thirteen percent of the positive constructs/processes were studied 10 or more times suggesting that researchers are not yet undertaking the repeated analysis needed to establish replicability [49]. The question arises as to how we can facilitate the growth of positive education in a way that allows researchers to meaningfully integrate the vast science base developed over the past ten years into comprehensive and testable approaches that allows for rigour, replicability and co-ordinated growth of the field.

The Need for a Meta-Framework That Helps Researchers to Integrate and Grow the Science of Positive Education: Introducing SEARCH

In earlier and recent publications I have argued that the field needs a data-driven, meta-framework which can be used to systematically

synthesise the large body of science and coherently build the field [50-53]. Meta-frameworks, by definition, focus on the big picture and work with higher-order constructs that are made up of many smaller building blocks. Applying this logic to a positive education framework, researchers can build a higher-order dimensions of wellbeing such as emotional intelligence through the flexible delivery of a raft of smaller practices (e.g. gratitude practices, random acts of kindness, emotional thermometers) in interconnected ways [35]. When researchers see positive education through the lens of a meta-framework they are able to ‘join the dots’ of the various PPIs they are researching and stop studying these in isolation. This then creates a clear and unified approach to studying the factors that build student wellbeing. Additionally, it prompts researchers to find ways to meaningfully combine the array of PPIs that currently exist. For example, a meta-framework encourages scientists to more clearly see how mindsets are related to mindfulness, how strengths are connected to savouring, how character assists with coping, how gratitude and grit are related and how all of these individual PPIs can work synergistically to build up student wellbeing.

One way to develop a meta-framework is to use a theoretical process. This is what Seligman did when developing the wellbeing theory of PERMA. According to Seligman “PERMA is a theory of the building blocks of well-being” (p. 2) [54]. Seligman contends that wellbeing is multidimensional and is made up of the following five pillars that make the acronym PERMA: Positive Emotions, Engagement, Relationships, Meaning and Accomplishment. Seligman developed his theory using clear criteria such that each pillar must be intrinsically rewarding, be defined and measured independently of the other elements and lead to interventions that build wellbeing. In addition, Seligman used the principal of parsimony to ensure the theory is not too unwieldy, thus his choice of five elements [55]. The five pillars forming PERMA are developed through clear criteria, however Seligman’s approach has been criticised by Lyubomirsky who argues that although “it is hard to argue with this intuitively appealing thesis” (p. 303) PERMA has a lack of conceptual clarity and supporting evidence [56]. Further criticism comes from Goodman, Disabato, Kashdan and Kauffman who tested PERMA and found it lacked discriminant validity with a more global measure of subjective wellbeing.

Others have found partial support for PERMA and have identified that the pillars of PERMA are separate factors that independently predict various indicators of wellbeing [57,58]. Unfortunately, the two research papers testing the factor structure of a PERMA survey were not tested with school students and Coffey et al [58]. found evidence only for a four-factor, rather than five-factor, solution in one of their samples. Similarly, in the only published study that has tested PERMA with school students the five-factor structure for PERMA was not validated and only four pillars were evident in the data with meaning not distinguishing itself as a pillar for school students [59]. What this suggests is that further research is needed to confirm if PERMA is a valid theory to use in positive education.

While Seligman provides an example of using a top-down theoretical process for framework development, another process is the use of a bottom-up, data-driven approach. Meta-frameworks developed to guide the field of positive education that are data-driven and arise from the scientific findings within the fields of positive psychology and education are highly suitable given that, at its heart, positive education is an applied rather than theoretical discipline [29,30]. Using data to determine a multi-dimensional framework can still follow the same clear criteria as that used through the theory process - that each pillar must be intrinsically rewarding, be defined and measured independently of the other elements and lead to interventions that build wellbeing; adding to that the framework must be parsimonious. Moreover, given that the framework is for positive education, the data analysed to develop it must come from the field of psychology and education.

With this in mind, I have been leading a multi-year, multi-study project aimed to develop a data-driven meta-framework that is based on science from positive psychology and education. The end result of my efforts is the SEARCH meta-framework for positive education. SEARCH covers six over-arching pathways to wellbeing: Strengths, Emotional Management, Attention and Awareness, Relationships, Coping and Habits and goals. These pathways and some examples of approaches that have been tested through scientific research specifically in schools and in educational research can be found in Table 1 below.

Table 1: SEARCH Framework and examples of positive education interventions found in education research

SEARCH PATHWAYS	DESCRIPTION OF PATHWAY	POSITIVE EDUCATION APPROACHES RESEARCHED IN SCIENCE
STRENGTHS	Pre-existing qualities that arise naturally, feel authentic, are intrinsically motivating to use and energizing.	Strength Awareness: These interventions help students to identify their strengths, typically through surveys.
		Strength Use: These interventions help students set goals for how to put their strength into actions.
		Strength Spotting: These interventions teach students how to see when their peers are using strengths.
EMOTIONAL MANAGEMENT	The ability to identify, understand and manage one’s emotions.	EI: These interventions teach students how to perceive, understand, use and regulate emotions.
		Gratitude: Gratitude interventions help students to notice, appreciate and acknowledge the positive in their lives.
ATTENTION AND AWARENESS	Ability to focus on inner aspects of self (e.g., emotions) or on external stimuli (e.g., the teacher). Awareness refers to the ability to pay attention to a stimulus as it occurs.	Meditation: Meditation is defined as the deliberate act of regulating attention through the observation of thoughts, emotions and body states. Meditation interventions in schools involve training a student’s attention.
		Mindfulness: Mindful interventions help students to develop the skill of self-observation and to be dispassionate and compassionate about themselves in the present-moment.

RELATIONSHIPS	This pathway concerns the skills required build and support supportive social relationships as well as capitalize on momentary social interactions.	Mentoring: Mentoring is a process by which a more experienced person provides a less-experienced person with guidance, support and caring over an extended period of time. Peer support: peer-peer support to enhance a sense of connectedness and belonging in the school.
COPING	Coping is defined as constantly changing cognitive and behavioural efforts to manage one's demands.	Resilience and Coping: These interventions aim to help students develop the capacity for maintaining, recovering or improving mental health following life challenges.
HABITS AND GOALS	Habits are persistent patterns in decision making and action. Goals are formal aspirations that people aim for and are willing to invest effort into.	Goal Interventions: These interventions teach students to set and strive for goals. Self-regulated Learning (SRL) Interventions: SRL interventions teach students the cyclical process of steps needed to persist through the learning process: self-evaluation, self-monitoring and goal setting along with strategy planning, implementation and monitoring.

The SEARCH framework is the result of three key stages of science:

1. a large scale published bibliometric review and cluster analysis of the field of positive psychology that analysed 18 years of research from 18,401 studies to see what the science tells us about the elements of, or pathways to wellbeing [43].
2. an action research project involving ten schools to road test the data-driven, meta-framework [51].
3. a systematic review of school intervention studies in both psychology and education data bases that involved 35,888 students from Australia, NZ, Europe, the UK, Asia and North America demonstrating the effectiveness of the framework and each individual pathway on student illbeing, wellbeing and learning outcomes [35].

SEARCH provides a useful framework for a meta-map of the vast findings of positive psychology to date. Table 2 provides a summary of the significant outcomes arising from interventions that have studied each of the six SEARCH pathways as identified in the Waters and Loton review [35]. As can be seen, each pathway of SEARCH has been shown to significantly impact student mental health (either by reducing illbeing or increasing wellbeing) and learning. The outcome that has had the most scientific research is that of wellbeing and future researchers could look to increase research on the illbeing and learning outcomes for the array of PPI's that fall within each of the six SEARCH pathways. Notably, Waters and Loton found that only one sixth of positive education studies included school-related or academic outcomes and called for more research linking PPIs in schools to academic outcomes [35].

Table 2: Summary of Significant Research Findings In Relation To Illbeing, Wellbeing and Learning Outcomes for the Education Interventions As Mapped Along the Search Pathways

SEARCH PATHWAY	ILLBEING OUTCOMES	WELLBEING OUTCOMES	LEARNING OUTCOMES
STRENGTHS	No significant findings	Higher levels of: <ul style="list-style-type: none"> • Life satisfaction • Positive affect • Hope • Engagement • Emotional subjective wellbeing • Peer relations • Emotional engagement • Self-Worth 	Increases in: <ul style="list-style-type: none"> • GPA • Academic expectations • Academic motivation • Perceptions of academic ability • Cognitive engagement • Enjoyment of learning
EMOTIONAL MANAGEMENT	Reductions in: <ul style="list-style-type: none"> • Anxiety • Depression • Social stress 	Greater levels of: <ul style="list-style-type: none"> • Emotional intelligence skills • Self Esteem • Mental Health • Interpersonal wellbeing • Gratitude 	<ul style="list-style-type: none"> • Higher end of year grades • Increased scholastic confidence • Better equipped for school transitions • Greater satisfaction with school
ATTENTION AND AWARENESS	Lower levels of: <ul style="list-style-type: none"> • State and trait anxiety • Stress • Depressive symptoms • Negative affect 	Increases in: <ul style="list-style-type: none"> • Social skills • Optimism • Positive affect • Self-concept • Self-acceptance • Calmness • Social emotional competence • General wellbeing 	Increases in: <ul style="list-style-type: none"> • Reading Scores • Vocabulary Test • Language proficiency • Study skills • Quantitative Thinking Skills • Literacy and Numeracy scores • Cognitive Functioning Test

RELATIONSHIPS	<ul style="list-style-type: none"> • Reductions in 'pro-bullying' attitudes 	Higher reports of: <ul style="list-style-type: none"> • Connectedness • Perceived social support • Presence of special adult • Cooperative teamwork • Personal/ social competency • Caring/ respect • Social skills • Honesty and Trustworthiness 	<ul style="list-style-type: none"> • Increases in school citizenship
COPING	Decreases in: <ul style="list-style-type: none"> • Anxiety • Behavioural problems • Social problems • Avoidance coping • Depression 	Increases in: <ul style="list-style-type: none"> • Social skills • Assertiveness • Self-efficacy • Problem solving • Help seeking • Cognitive hardiness • Self-worth • Social emotional wellbeing • Competence • Spiritual growth • Hope • Social skills • Stress management skills • Quality relationships 	<ul style="list-style-type: none"> • Significant improvements in reading level • Learning is perceived to be more interesting, enjoyable and inspiring
HABITS AND GOALS	Lowered: <ul style="list-style-type: none"> • helplessness • behavioural problems • emotional problems • boredom • anxiety 	Higher levels of: <ul style="list-style-type: none"> • Self-efficacy • Motivation • Peer social skills (for girls) • Goal orientation • Task orientation • Social emotional wellbeing • Perceived competence 	Higher levels of: <ul style="list-style-type: none"> • Regulation • Thinking • Learning patterns • Meta cognition • School performance • Class motivation • School team cohesion

Moving our attention away from outcomes to inputs, Table 1 outlines the school-based PPIs that Waters and Loton mapped on to the SEARCH framework. Future researchers could look to a wider collection of interventions that are being applied in schools and show how these relate to SEARCH and, thus, how they can be used in *integrative* ways to build mental health and promote learning in students [35].

Figure 1 shows how researchers can use this framework to audit and structure the current array of PPI's that are being evaluated to create a deeper understanding of what over-arching pathways are being developed in students. Researchers are encouraged to think not only about the specific focus/content of the intervention they are studying but also how that intervention can be used to build a higher order pathway of wellbeing. For example, while the content of a PPI being studied is that of gratitude (e.g. researching the impact of writing a gratitude letter), the SEARCH framework helps scientists see the bigger picture of the intervention and understand that gratitude is a building block of the higher-order wellbeing pathway - emotional management.

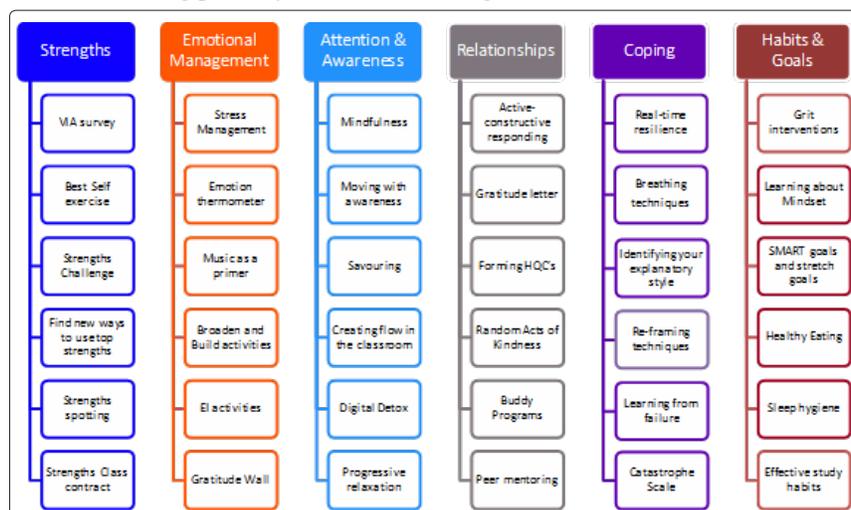


Figure 1: Using the SEARCH Framework to Audit and Organise Current Positive Education Interventions That Are Being Researched

Given Rusk, Vella-Brodrick and Waters' Synergistic Change Model (SCM), which suggests that interventions are most effective when they are designed in ways that create inter-connections across skills and practices, researchers can use SEARCH to design school-based interventions that focus on multiple pathways so as to get synergistic gains [60]. For example, when designing a gratitude intervention for students, researchers can use SEARCH to design an integrated PPI that not only builds the pathway of emotional management in students (by increasing gratitude) but also aims to foster the habits and goals pathway (by creating an intervention that fosters the ongoing habit of gratitude, rather than a one-off exercise). This can be then used to train students with skills that allow them to change their focus away from problems and towards what is going well for them (thus building the 'Attention and awareness' pathway) and encourages them to be thankful towards others (thus building the 'Relationships' pathway in SEARCH). This approach evolves the science beyond current approaches that tend to focus only on the individual interventions to look deeper at what wellbeing pathways are collectively being built up over time.

Positive education should not only be about student wellbeing, it should also include whole-school approaches that build the wellbeing of adults in the school [33,61]. More research is needed in the field of positive education that studies ways to build and empower the wellbeing of staff, faculty and leaders in schools. Researchers can also use SEARCH to study PPIs for the adults in the school which can then be used to guide leaders and administrators to develop strategic and consistent ways to infuse SEARCH into elements of the school that impact faculty and staff such as recruitment and selection, performance development, professional learning, employee wellbeing programs and staff/faculty room culture. A key question for positive education researcher is 'How can school leaders intentionally create a culture that fosters strengths, emotional management, attention and awareness, relationships, coping and habits and goals for all the adult members of the school?' Moving from schools to universities, a key question for university lecturers designing teaching degrees is 'How can future teachers be trained to use SEARCH to build effective pedagogy and to promote their own professional competence and wellbeing?'

Four aspects of the next stage in the ongoing development of the SEARCH approach to positive education include: 1) the design and psychometric validation of a SEARCH survey, 2) the embedding of SEARCH into schools using case study designs with the collection of qualitative data that demonstrates what SEARCH looks like 'on the ground', 3) the large scale testing of the predictive validity of the SEARCH pathways (separate and combined) on student and adult (staff, faculty and leaders) wellbeing and 4) integrating SEARCH with systems science to observe wellbeing as a group phenomenon. These four research initiatives are currently underway as part of the larger SEARCH program and will be published in the next few years.

Conclusion

In 2009, Professor Martin Seligman and his colleagues suggested that "positive education will form the basis of a new prosperity" (p. 293). Since that time, the field has grown in promising ways. It is certainly an exciting time with the rapid expansion of science in positive education. However, this growth has put positive education at risk of lacking a cohesive direction and of failing to build the cumulative evidence needed to advance the field.

A data-driven, meta-framework can prevent these risks by providing higher-order parameters that help researchers to study positive education in a more consistent, integrated, and cohesive manner. The SEARCH framework, developed from a large-scale bibliometric analysis and cluster analysis, combined with action research and then validated through a systematic review is offered here as a guide for future research in positive education.

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