

THEORETICAL ARTICLE

Beyond School Climate: Conceptualizing the School as a Protective Factor Approach*

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ABSTRACT

BACKGROUND: The school climate concept has been promising, but has long-standing critiques that have not been adequately addressed to date. The *School as a Protective Factor* approach represents one attempt to offer a new approach that builds on and extends beyond the concept of school climate while addressing previously identified limitations.

CONTRIBUTIONS TO THEORY: The *School as a Protective Factor* approach offers a new framework for conceptualizing, measuring, and establishing protective school social and learning environments that co-promote academic achievement and student health in schools, especially student mental health and substance use/abuse prevention. This new framework includes clear definitions, explicit goals, firmly established constructs, validated measures, and an intentionally parsimonious approach that prioritizes the implementation of well-established, high-impact constructs.

CONCLUSIONS AND IMPLICATIONS FOR SCHOOL HEALTH POLICY, PRACTICE, AND EQUITY: The *School as a Protective Factor* approach presents a simple, easy-to-use means of ensuring a school social environment that meets the developmental, academic, and health needs of all children and adolescents while maximizing protection across a range of desired outcomes. Perhaps most importantly, it does so in a manner that is manageable and easily integrated into every aspect of schooling, resonates with the practical experience of school personnel, and includes brief, effective, and free measurement tools.

Keywords: school health; school climate; adolescent depression; adolescent substance abuse; adolescent mental health; academic achievement.

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Schools represent an important environment for student learning, growth, and development in modern society. Exposure to thoughtfully and strategically constructed school environments can protect children and adolescents from threats to their academic achievement, health, wellbeing, and life success while they are students and over the course of their lives.¹⁻⁴ Likewise, exposure to inadequately conceived or poorly developed school environments can be a source of harm or increased risk.⁵⁻⁷ As such, students and families benefit from school personnel and educational policymakers who understand the importance of healthy

school social environments, including which elements of the environment confer the greatest overall benefits to students. These benefits are maximized when school personnel and educational policymakers have a simple and cost-effective means of measuring and monitoring the most essential elements of the school social environment and intentionally build schools that strengthen those elements for all students.

Previous research demonstrates that time spent in the school setting can be associated with benefits, harm, or mixed outcomes depending on a range of characteristics associated with a particular school

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setting.^{4,8-10} The quality of the school social environment has been associated with outcomes likely to contribute to lifelong health and wellbeing via the role of schools as a social determinant of health; for example, academic achievement,² graduation rates,² attendance,³ literacy, and the lifelong impact of academic success on post-secondary education,¹ career success, and future socioeconomic status.⁴ Likewise, the quality of the school environment has been associated with health decision-making during adolescence including decisions related to alcohol and other drug use/abuse,^{5,11,12} sexual behavior,¹³ and bullying, as well as adolescent health and wellbeing outcomes such as rates of depression, anxiety, conduct disorder, and suicide attempts and completion.¹⁴ Although the quality of the school social environment never provides a complete explanation for these outcomes, it contributes in a manner that should not be overlooked and that should be addressed along with other important factors.

Over the past 30 years, the concept of school climate has frequently been used to frame discussions related to the school environment and efforts to document perceptions of “the quality and character of life in schools.”¹⁵⁻²¹ Although establishing the priority of ensuring a positive school climate has been a helpful part of expanding the efforts of school professionals to promote student health and wellbeing, there are some limitations associated with the school climate concept.¹⁷⁻²¹ At a minimum, these limitations include:

- 1 The vagueness of the school climate concept overall, including the lack of a broadly accepted definition.^{15,17,21}
- 2 Vague connections between the school climate concept and the goals of schools, needs of students, and hopes of families.¹⁹
- 3 The use of inconsistent sets of constructs associated with school climate that often overlap with each other conceptually and rarely include descriptions of relationships between constructs.¹⁸
- 4 A lack of parsimony or selectivity when conceptualizing and/or measuring school climate that fails to prioritize the elements of the school environment that consistently make the most significant contributions to positive outcomes.^{17,20,21}
- 5 Using unwieldy tools to measure and monitor school climate that can be expensive to deliver and hard to interpret.^{18,21}
- 6 An overall approach that is seldom fully integrated with how schools operate and how education is delivered; as such, efforts to promote a positive school climate are often perceived as something “extra to do,” instead of being easily integrated into decisions made within the school day.¹⁸

Addressing these limitations offers opportunities to build on and grow past the foundation provided

by previous work on school climate and to extend that work into a new, more cohesive, integrated, and parsimonious way of conceptualizing the school social and learning environment. To that end, this two-part series of papers focuses on: (a) establishing a new conceptual framework for the *School as a Protective Factor* approach that clearly defines and describes key concepts associated with this approach, (b) developing and validating a brief survey that selectively measures key aspects of the school social and learning environment using the *School as a Protective Factor* framework, and (c) assessing the influence of *School as a Protective Factor* constructs on key indicators related to adolescent academic achievement, health decision-making, and wellbeing. This article focuses on establishing a conceptual framework for the *School as a Protective Factor* approach. Its companion article, also published in this issue of the journal, will focus on validating a brief tool used to measure *School as a Protective Factor* a.

THE THEORETICAL FOUNDATIONS OF SCHOOL AS A PROTECTIVE FACTOR

It is important to note that *School as a Protective Factor* is not school climate or an attempt to refine or redefine the school climate concept. Instead, it is a new way of conceptualizing how to maximize student connection in schools in a manner that contributes to positive academic, health, and life outcomes. In that way, it best aligns with and expands on work related to school connectedness begun by Resnick et al.⁷ *School as a Protective Factor* does share some elements commonly associated with the school climate concept and has used previous research on school climate to inform this new orientation and approach, including addressing the previously listed limitations of school climate. However, the *School as a Protective Factor* approach differs from school climate as it builds on and extends the concept in the many ways outlined below. As such, the *School as a Protective Factor* approach can be thought of as one proposal for how to move beyond the historic limitations of the school climate concept and to reorient and refocus efforts to improve the social and learning environment in schools.

The *School as a Protective Factor* approach was developed to complement the *Icelandic Model for Preventing Adolescent Substance Use (IPM)*²²⁻²⁴ and, as such, is grounded in classical sociological theory. Although *School as a Protective Factor* was developed to complement the *IPM* by providing a conceptual framework for measuring and intervening in the school social and learning environment, it is also separate from the *IPM* and can be used independently or alongside a wide range of contemporary models of coordinated school health. The broader theoretical foundation for *School as a Protective Factor* is outlined in

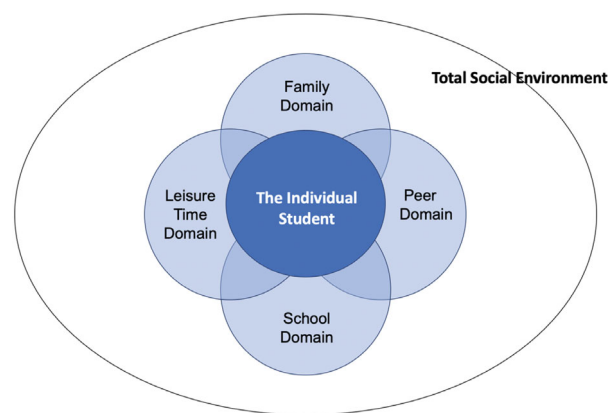
the 5 foundational principles below and is also depicted as a part of Figure 3.

Foundational Principle 1. *Young people are likely to reflect the total social environments in which they grow and develop.*^{22,24,25} This approach recognizes that the total social environment matters and gives rise to increased or decreased probabilities of a range of behaviors and outcomes. For example, if a group of young people are raised in a total social environment high in risk factors and low in protective factors associated with low academic achievement, substance use/abuse, and poor mental health, then they are more likely to struggle with undesirable outcomes in each of those areas. However, if the same group of young people were raised in a total social environment low in risk factors and high in protective factors for these outcomes, then they would be more likely to enjoy higher rates of academic achievement, lower rates of substance use/abuse, and better mental health.²⁶ Therefore, creating total social environments that are low in risk factors and high in protective factors comprises an essential strategy for ensuring positive outcomes related to academic achievement, student health and wellbeing, and life success at the community and population levels. This idea is well-supported by the CDC's Health Impact Pyramid²⁶ which prioritizes creating environments in which healthy decisions and outcomes are the default option.⁴

Foundational Principle 2. *Young people's total social environment consists of 4 social domains and each social domain makes an important contribution to their overall academic, health, and life outcomes.* The theoretical framework supporting *School as a Protective Factor* recognizes that young people are largely influenced by 4 social domains that, taken together, account for most of their total social environment (see Figure 1). These social domains include the family domain, the school domain, the leisure time domain, and the peer domain.²²⁻²⁴ Within each family's social domain, young people encounter a range of risk and protective factors. Therefore, it is important to support policy, practice, and institutions that make it easier for families to confer maximum protection and minimize risk for their children across a range of possible outcomes within that domain. Likewise, within each young person's peer domain, they experience a range of risk and protective factors and benefit from policy, practice, and institutions that reduce risk and enhance protection in the peer environment. This principle is true across all 4 social domains, including the leisure time domain and the school domain.

Foundational Principle 3. *Although it is possible to identify risk and protective factors that are commonly influential for each social domain, it is also important to determine the relative impact of those risk and protective factors across cultures, diverse settings, and within individual communities*

Figure 1. Conceptual Model of Total Social Environment and the 4 Domains



and build social environments that are tailored to each school in the context of its community. Identifying which risk and protective factors are most likely to contribute to a desired outcome or set of desired outcomes for each domain represents an important first step in creating environments that support student growth and development.^{22,27} However, although many risk and protective factors remain salient across settings and cultures, the relative impact of risk and protective factors can differ substantially by culture, setting, or even by individual school or neighborhood setting.²⁰ Therefore, identifying near-universal, high-leverage risk and protective factors that can be monitored across cultures and diverse settings is important,²⁸ but so is routinely using simple diagnostics to evaluate the relative contribution of each risk and protective factor to desired outcomes within individual school communities.

As such, it may be important to note that the goal of *School as a Protective Factor* is not to create one universal social environment meant to work for every student in every school across all cultures. Instead, the goal of *School as a Protective Factor* is to identify and monitor a set of risk and protective factors that are commonly impactful across cultures and diverse settings, then to isolate and prioritize the most salient risk and protective factors within a specific school community, and to use that understanding to build the social environment most likely to produce positive outcomes for students attending that school.

Foundational Principle 4. *Although each social domain matters to each individual, individuals are most likely to reflect the net impact of their total social environment; therefore, strengthening all 4 social domains—the family, school, leisure time, and peer domains—represents the best form of protection.* Protection in one domain can be offset by risk in another; likewise, risk in

one domain can be offset by protection in another. Therefore, when working toward the goal of ensuring student health, wellbeing, and success, thoughtful coordination across all 4 social domains is essential.^{7,29} Modern society is so complex that the responsible parties in a single domain can rarely be held solely accountable for student outcomes within that domain or for solving any large-scale social problem alone. For example, problems related to adolescent substance use/abuse or poor academic achievement at the community level are seldom due to the efforts of schools alone or families alone, but are more likely to reflect net risk and protection across the total social environment.

Therefore, strengthening individual social domains is essential, but often insufficient. Although, a strong family environment may offset the negative effects of a weak school environment in some cases, in other cases it may not. Therefore, the most reliable course of action involves supporting and strengthening all 4 of the social domains that influence children and adolescents. Further, it suggests that young people are likely to benefit when stakeholders from each domain support and cooperate with each other while avoiding undermining each other's efforts or competing in unproductive ways.

As such, effectively engaging key stakeholders across domains represents a non-negotiable priority for ensuring the health, wellbeing, and success of the whole child. Likewise, engaging and empowering responsible adults who are willing to hold themselves accountable for the social environments they create for young people comprises an essential part of strengthening the total social environment in which young people grow and develop. And, perhaps most importantly, it represents a more reasonable and sustainable approach to ensuring student health and success than expecting individual young people to be "resilient" and overcome the inadequate environments adults have created for them, especially when young people typically have far less power and resources than the adults who create/co-create their environments (eg, policy makers, parents/caregivers, school teachers, and administrators).

Foundational Principle 5. The profile of risk and protective factors within a domain will give rise to multiple types of harm or benefits. The unique profile of risk and protective factors within a specific environment or social domain will give rise to a broad set of likely academic, health, and life outcomes within that social domain. For example, young people who report low-quality relationships with adults and peers across all 4 social domains are more likely to drop out of school, engage in high-risk health behavior, and to struggle with their mental health.¹⁰ Conversely, young people who report strong relationships across all 4 domains with adults and peers are more likely to graduate from

school, make better health decisions, and enjoy better mental health.¹¹ In this way, the social environments young people grow and develop in can contribute to multiple forms of risk or multiple forms of protection. As such, there is value in understanding the holistic impact of improving environments for young people and identifying risk and protective factors associated with preventing multiple types of harm and promoting multiple types of protection.

This principle may be especially important in the school setting, where school personnel and educational policymakers often make choices about how to deploy limited resources to support academic success or student wellbeing. Instead, this principle suggests that academic success and student wellbeing are often connected, and that there will frequently be options that support academic success and student wellbeing at the same time while using a single action. Although there will always be needs that cannot be addressed using this approach, leveraging strategies that reduce multiple risks and increase multiple protections at the same time will provide a promising and cost-effective way to address many needs within a school.

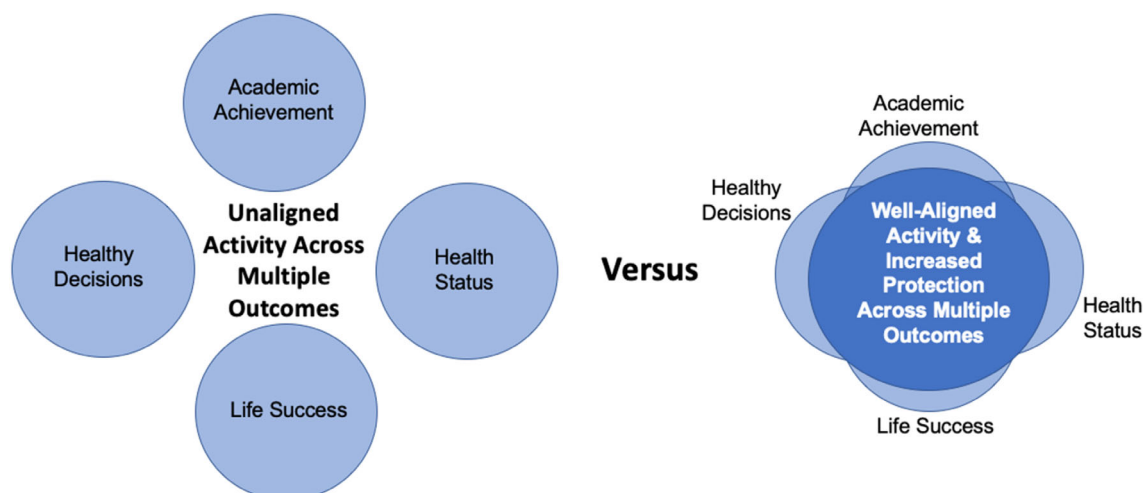
DEFINITION, GOALS, AND ORGANIZING PRINCIPLES OF SCHOOL AS A PROTECTIVE FACTOR

School as a Protective Factor can be defined as a systematic approach to creating a school social and learning environment low in student risk factors and high in student protective factors through maximizing their connections to (a) their motivation to learn and grow, (b) supportive adults at school, and (c) supportive peers at school.

The overarching goal of the *School as a Protective Factor* approach is to simultaneously improve student outcomes related to (1) academic achievement, (2) health and high-risk decision-making, (3) mental health and emotional wellbeing, and (4) overall life success by identifying and addressing key risk and protective factors commonly associated with all those desired outcomes.^{7,30} The *School as a Protective Factor* approach looks at the school community and the students within that community holistically and leverages opportunities to efficiently support multiple desired outcomes at the same time.

Achieving the goals of *School as a Protective Factor* requires aligning in-school efforts to select strategies and approaches that provide multiple benefits to students simultaneously and reject narratives that attempt to force a false choice between academic rigor or student wellbeing.³¹ Figure 2 illustrates the strategic importance of aligning multiple activities in a manner that impacts multiple desired outcomes. Achievement, engagement, self-discovery, and growth are all required for student wellbeing. Healthy students

Figure 2. Spectrum of Alignment Across Activities and Outcomes



are more likely to be present and ready to achieve, learn, and grow.¹ Aligning efforts to address these goals simultaneously acknowledges the developmental reality that these goals are mutually reinforcing. As such, routinely addressing them independently or in isolation from each other will likely contribute to less desirable outcomes across all goals. At a minimum, addressing them independently is likely to stretch limited resources in a manner that makes school operations unmanageable and unsustainable for the school workforce.

The key organizing principle of the *School as a Protective Factor* approach focuses on improving the school social environment in a manner that is fully integrated with how schools operate on a day-to-day basis. As such, this approach emphasizes *how* to conduct the essential work of schooling, not creating new work or resource requirements. The *School as a Protective Factor* approach encourages school personnel to think about how to welcome students to school, teach classes, conduct assemblies, coach teams, support artists, feed, and transport students in a manner that confers maximum protection to students. Some schools may choose to add new initiatives as part of this work, but doing so is not required or the emphasis of the approach. Instead, the emphasis is on integration within existing activities, which requires school professionals and educational policy-makers to ask how they might reduce student risk and increase student protection as a part of every decision that is made in a school while serving our students, their families, and the community-at-large. This approach is not meant to be done in some classes by some teachers for a short while. Instead, it consists of an operating philosophy that guides every aspect of the school and school policy throughout the school day, by

each school professional regardless of their role, across the school year.

THE KEY CONSTRUCTS OF SCHOOL AS A PROTECTIVE FACTOR

School as a Protective Factor consists of 3 key constructs composed of 3-6 defining characteristics each, with each characteristic providing insight into how to increase the quality and power of connections within each construct. A summary of these key constructs, questions that measure each characteristic, and a depiction of relationships between these constructs and the foundational principles can be found in Table 1 and Figure 3.

The first construct consists of school community-level reports of *Connections to the Motivation to Learn and Grow*. Students who are connected to their motivation to learn and grow report higher perceptions of the following characteristics: (1) relevance of school to life, (2) effort/engagement, (3) self-discovery, (4) growth, (5) enjoyment, and (6) clear connections to a positive future. The school environment reflects a higher level of *Connections to the Motivation to Learn and Grow* as a larger percentage of the school community rates their perceptions of these characteristics at high levels consistently over time.

The other 2 constructs consist of school community-level reports of *Connection to Supportive Adults at School* and *Connection to Supportive Peers at School*. Students who are connected to supportive adults at school report higher perceptions of the following characteristics: (1) caring, (2) fairness, (3) safety, and (4) awareness and responsiveness. Students who are connected to supportive peers at school report higher perceptions of the following characteristics: (1) students in the school-at-large being nice to each other, (2) having friends

Table 1. Key Constructs, Characteristics, and Questions Measuring School as a Protective Factor

Construct 1: Connection to Motivation to Learn and Grow	
Characteristics Associated with Construct 1	Questions Measuring this Characteristic Include
a Relevance	My school is helping me achieve goals that matter to me
b Self-discovery	My school helps me discover things I'm good at doing
c Growth orientation	At least one thing I do at my school makes me want to be the best I can be
d Engagement/effort	I try my best in school
e Pathways to a positive future	Doing my best in school now will help me have a good life when I'm older
f Fun and enjoyment	I have a good time participating in activities at my school
Construct 2: Connection to Supportive Relationships with Adults at School	
Characteristics Associated with Construct 2	Questions Measuring this Characteristic Include
a Caring	The adults at my school care about me
b Fair	The adults at my school are fair and kind to me
c Safe	It is safe to be around the adults at my school
d Aware and responsive	The adults at my school notice when I'm having a hard time and offer to help me
Construct 3: Connection to Supportive Relationships with Friends and Peers at School	
Characteristics Associated with Construct 3	Questions Measuring this Characteristic Include
a Friend(s) who care	I have friends at school that care about me
b Friend(s) try their best at school	My friends think we should try our best at school
c Kindness in the school-at-large	The students at my school are nice to each other

who care about them, and (3) having friends who try their best at school. The school environment reflects higher levels of *Connections to the Supportive Adults and Peers* as a larger percentage of the school community rates their perceptions of these characteristics at high levels consistently over time.

Together, these 3 constructs are mutually reinforcing with improvements in connection to any 1 construct making it increasingly possible to improve connections to the other constructs. Additionally, increasing the collective level of connection to all 3 constructs increases the likelihood of creating a school social and learning environment that is rich in growth-promoting relationships and growth-promoting learning experiences.

In the school environment, growth-promoting relationships are composed of relationships between the

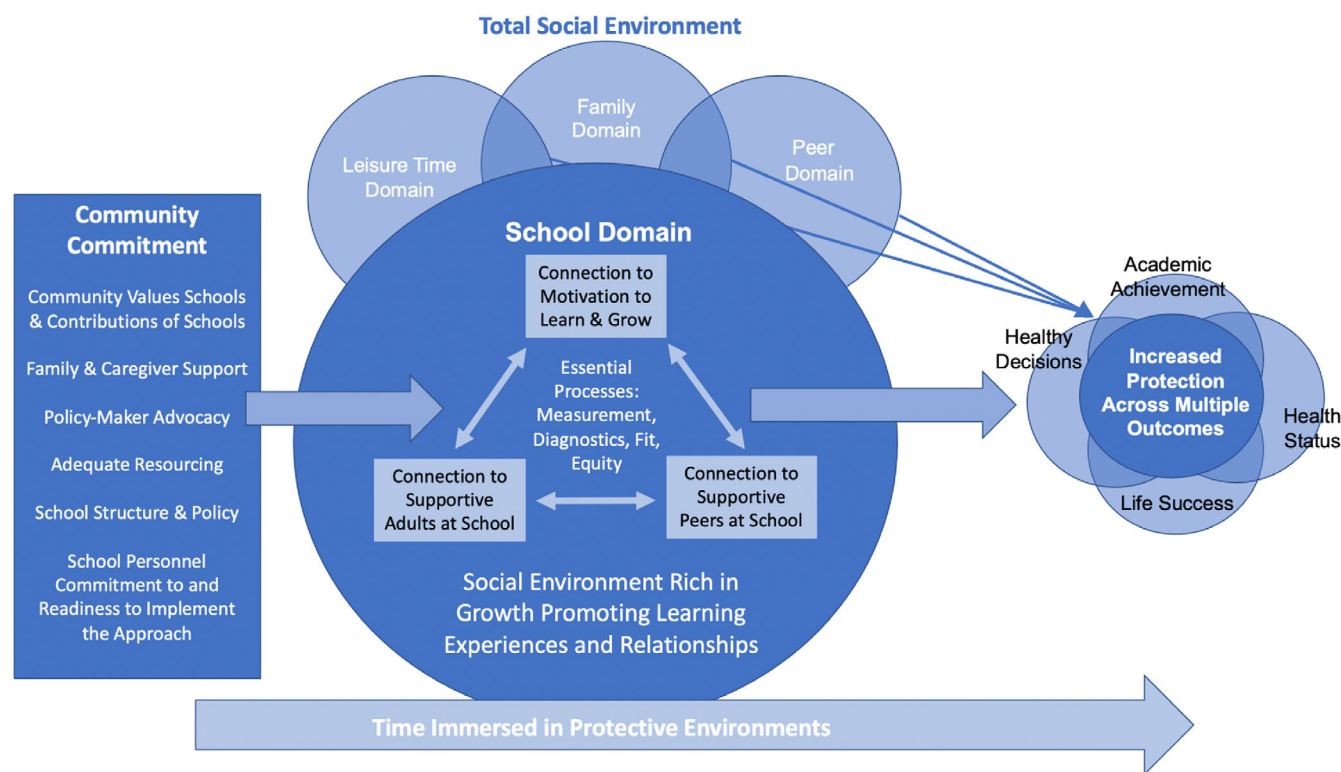
adults that work or volunteer at the school and other students, both friends and the broader peer group. Growth-promoting relationships are characterized by safety, caring, kindness, support, meaningful engagement in learning, and connecting young people to a meaningful future. All students should be able to report learning in an environment in which the adults at school who care about them and can help them with school problems. Likewise, all students should be able to report learning in an environment in which students are generally nice to each other and in which they have friends at school who care about them and believe it is important to do well academically.

In the school environment, growth-promoting learning experiences consist of authentic and powerful curricular and extracurricular opportunities in which students become fully absorbed, engaged, and invested in what they are doing and achieving, individually and together. Growth-promoting learning experiences connect students to their motivation to learn and grow by incorporating the 6 elements listed above into teaching, extracurricular, and afterschool activities as well as the general operations of the school. Growth-promoting learning experiences are meaningful to students from their point of view and are often authentic sources of accomplishment, self-discovery, and self-definition. For example, when observing a school, a visitor might ask students to show them work they are proud of having done. Any enthusiastic response by a student that involves them insisting the visitor come see what they have accomplished is likely to have successfully incorporated elements associated with growth-promoting learning experiences into that project.

Growth-promoting learning experiences can be included in any aspect of the school, including extracurricular and afterschool activities. Extracurricular activities often engage students in authentically meaningful ways and spur growth. For example, imagine the pride and ownership that accompanies participation in many well-constructed athletic teams; music, theater, and art productions; academic clubs/competitions such as debate team, moot court, or STEM competitions; service clubs; and student government and planning/preparing events meant to build community in the school.

Growth-promoting relationships and growth-promoting learning experiences are mutually reinforcing and together can contribute to stronger connections to the motivation to learn and grow, supportive adults at school, and supportive peers at school. Likewise, connections to the motivation to learn and grow, supportive adults at school, and supportive peers at school are also mutually reinforcing and together can contribute to improved academic achievement, health and high-risk decision-making, health and wellbeing, and life outcomes.

Figure 3. Conceptual Model of the School as a Protective Factor Approach



ADDITIONAL ASSUMPTIONS OF SCHOOL AS A PROTECTIVE FACTOR

Assumption 1. Educational institutions as a reflection of community values. The *School as a Protective Factor* approach also recognizes schools as important community institutions that reflect: (a) a community's care for its children, (b) a community's investment in its children's current and future learning, growth, development, wellbeing, and success, and (c) its investment in the future of the community itself.^{4,31} Further, it acknowledges the value of ensuring robust community support for local schools and the benefits of guaranteeing that schools are strong enough to deliver on the goals they have been entrusted to achieve.

In many cases, communities invest in schools as an institution with the expectation that schools will maximize the human potential of the community's young people—both the individual human potential of each student and human potential within the community as a whole. In the best cases, schools help maximize individual potential by expanding the possibilities for each student by passing down critical knowledge and skills that have been accumulated and valued by society over time; helping students discover and deploy their unique talents, gifts, and powers; and connecting them to society in a positive, productive, and prosocial manner (eg, gainful employment,

informed and engaged citizenship). Likewise, schools help maximize humankind's potential by creating community capacity to solve complex problems beyond the influence of individuals alone and ensuring the ability of the community to thrive in the present and future. For example, being able to save a town struggling after a key industry leaves by creating new industries and opportunities within the community.

Whether or not it is sufficiently acknowledged, ensuring the success of schools and students in schools represents a critical form of primary prevention at the community level. Doing so helps prevent high rates of illness and premature death, poverty and chronic underemployment, crime, low quality of life, and a disenfranchised citizenry at both the individual and community levels.¹² As such, most communities benefit from supporting and strengthening institutions devoted to educating their children and preparing them to live successful lives as individuals and productive community members. Adequately resourcing schools to deliver on these expectations is essential to the success of any school and its students, including the adequate implementation of this approach. As such, maximizing community support of and investments in schools represent essential aspects of this approach.

Assumption 2. Using school-level diagnostics to tailor efforts to individual school communities and maximize inclusive practice. Although previous research suggests the salience of the 3 core constructs and their defining characteristics across multiple cultures and settings,^{10,32-34} using individual school-level diagnostics to properly “fit” the approach to each school setting represents an essential part of the *School as a Protective Factor* approach. Understanding the relative contributions of each construct and characteristic at the individual school-level allows schools to more accurately identify and invest in the constructs and characteristics most strongly associated with desired outcomes at their specific school—both within and across cultures and diverse settings. Additionally, this approach emphasizes maximizing inclusivity by using simple, easy to use diagnostics to assess and ensure that all students within each school are benefiting from the *School as a Protective Factor* approach. To this end, the *School as a Protective Factor-Brief* survey and its subscales have been made available in the companion article also published in this issue of the journal. This 13-item battery can be used free of charge by any school to measure, diagnose, and intervene using the *School as a Protective Factor* approach.

Assumption 3. The role of time. The effects of this approach are considerably strengthened when it is successfully implemented over time. *The Icelandic Model for Preventing Adolescent Substance Use*, which this approach complements, includes immersion in health-promoting environments over time as a critical step in the proper implementation of the model.²²⁻²⁴ Likewise, the *School as a Protective Factor* approach is not a traditional program nor is it meant to be implemented for a finite period time each year (eg, 4 weeks), but instead the explicit goal of this approach is full integration into the daily operations of the school for long periods of time and preferably across every school a student may attend over the course of their academic progression (ie, students attend elementary, middle, and high schools using this approach). Typically, the quality of the school social and learning environment is measured annually and each year goals are set about how to further integrate the *School as a Protective Factor* approach into schools’ daily operations. This cycle of measurement, goal-setting, and improvement is meant to be continued over long periods of time, if not indefinitely.

A final protective function of *School as a Protective Factor* includes reducing risk by immersing students in a highly protective environment that leaves little time, energy, or need for risky academic or health decision-making at or after school. School environments rich in growth-promoting learning opportunities and growth-promoting relationships strategically “crowd out” opportunities associated with underachieving academically and risky health decision-making in the

school environment. Conversely, school environments poor in these opportunities invite a lack of connection that is likely to produce a sense of futility in school and contribute to a wide range of poor academic, health, and life outcomes.

Assumption 4. The value of parsimony and prioritizing well-recognized, commonly valued, high-leverage targets for intervention. It is also important to note that the *School as a Protective Factor* approach was intentionally designed with parsimony in mind. Each of the 3 key constructs are well established in the educational, developmental, and health promotion literature.^{7,10,32-34} Many school climate-based approaches include far more constructs or targets for intervention,³³ many of which make small or no contributions to desired outcomes.²⁰ The *School as a Protective Factor* approach purposefully includes well-recognized constructs and targets for intervention that are reliably associated with a wide range of desired outcomes likely to resonate with school personnel and educational policymakers.

Using this type of parsimonious and pragmatic approach is likely to be more manageable and better implemented. Implementation science suggests there is clear value in prioritizing the highest leverage targets for intervention, especially targets that are also well-aligned with how the personnel delivering the approach prefer to work. Sometimes efforts meant to be comprehensive instead create misperceptions that suggest every element is equally important and stretch limited time/resources in a manner that dilutes impact. Making intentionally selective choices that establish clear priorities helps school personnel concentrate time and resources on the most significant factors likely to make the largest impact on desired outcomes. Finally, choosing to be selective made developing a manageable measurement tool more feasible, both in terms of the ease of delivering a brief 13-item survey battery and increasing the likelihood of individual schools having the capacity to analyze any corresponding data in a manner likely to ensure effective use in practice, especially in terms of increasing student protection and maximizing equity.

IMPLICATIONS FOR SCHOOL HEALTH POLICY, PRACTICE, AND EQUITY

The *School as a Protective Factor* offers school personnel and educational policymakers a new perspective and approach that is not school climate per se, but that builds on and extends previous work related to school climate and school connectedness.¹⁵⁻²¹ This new approach addresses common limitations associated with the school climate concept. It provides an alternative approach that includes a more cohesive, integrated, and parsimonious framework that can be integrated into all aspects of the daily operations of schooling. The *School as a Protective Factor* approach

focuses on creating a school social environment low in student risk factors and high in student protective factors through maximizing their connections to (a) their motivation to learn and grow, (b) supportive adults at school, and (c) supportive peers at school. Thereby maximizing student exposure and connection to an environment rich in growth-promoting relationships and growth-promoting learning experiences. The goal of *School as a Protective Factor* includes limiting harm and maximizing benefits across multiple outcomes related to academic achievement, health decision-making, health and wellbeing, and life success by targeting common risk and protective factors within the school environment.

Although the *School as a Protective Factor* approach can be implemented as part of the Icelandic Prevention Model, it can also be used independently by any school, school district, or school system. Additionally, *School as a Protective Factor* can be used in the context of other contemporary models of coordinated school health such as the CDC's Whole School, Whole Community, Whole Child model; WHO's Health Promoting Schools model; and other national or international models of coordinated school health as part of efforts designed to improve the social and learning environment within schools. In many cases, the *School as a Protective Factor* approach is likely to be a more focused and efficient way of improving the school social and learning environment and can often replace traditional school climate interventions.

Finally, as presented in the companion article found in this issue of the journal, the *School as a Protective Factor* approach includes a 13-item survey battery that measures the 3 core constructs and their corresponding 13 defining characteristics. This free and practical tool can be used to measure student perceptions of the school social and learning environment, tailor interventions to the unique needs of individual schools and the students they serve, and to ensure that the school social environment equitably decreases risk and increases protection for every student in the school community across a range of outcomes.

Conclusions

Attending school should benefit every student and provide a degree of protection that increases the likelihood of academic, health, and life success. The *School as a Protective Factor* approach presents a simple, easy-to-use means of ensuring a school social environment that meets the developmental, academic, and health needs of all children and adolescents while maximizing protection across a range of desired outcomes. Perhaps most importantly, it does so in a manner that is manageable and easily integrated into every aspect of schooling and likely to resonate with the practical experience of school personnel and educational policy-makers.

REFERENCES

1. Basch CE. Healthier students are better learners: a missing link in school reforms to close the achievement gap. *J Sch Health*. 2011;81(10):593-598. <https://doi.org/10.1111/j.1746-1561.2011.00632.x>.
2. Daily SM, Mann MJ, Kristjansson AL, Smith ML, Zullig KJ. School climate and academic achievement in middle and high school students. *J Sch Health*. 2019;89(3):173-180. <https://doi.org/10.1111/josh.12726>.
3. Daily SM, Mann MJ, Lilly CL, Dyer AM, Smith ML, Kristjansson AL. School climate as an intervention to reduce academic failure and educate the whole child: a longitudinal study. *J Sch Health*. 2020;90(3):182-193. <https://doi.org/10.1111/josh.12863>.
4. Kolbe LJ. School health as a strategy to improve both public health and education. *Annu Rev Public Health*. 2019;40:443-463. <https://doi.org/10.1146/annurev-publhealth-040218-043727>.
5. Henry KL, Knight KE, Thornberry TP. School disengagement as a predictor of dropout, delinquency, and problem substance use during adolescence and early adulthood. *J Youth Adolesc*. 2012;41(2):156-166. <https://doi.org/10.1007/s10964-011-9665-3>.
6. Jamal F, Fletcher A, Harden A, Wells H, Thomas J, Bonell C. The school environment and student health: a systematic review and meta-ethnography of qualitative research. *BMC Public Health*. 2013;13(1):798-809. <https://doi.org/10.1186/1471-2458-13-798>.
7. Resnick MD, Bearman PS, Blum RW, et al. Protecting adolescents from harm. *JAMA*. 1997;278(10):823-832. <https://doi.org/10.1001/jama.1997.03550100049038>.
8. Drolet M, Arcand I, Ducharme D, Leblanc R. The sense of school belonging and implementation of a prevention program: toward healthier interpersonal relationships among early adolescents. *Child Adolesc Social Work J*. 2013;30(6):535-551. <https://doi.org/10.1007/s10560-013-0305-5>.
9. Dudovitz RN, Nelson BB, Coker TR, et al. Long-term health implications of school quality. *Soc Sci Med*. 2016;158:1-7. <https://doi.org/10.1016/j.socscimed.2016.04.009>.
10. Pulimeno M, Piscitelli P, Colazzo S, Colao A, Miani A. School as ideal setting to promote health and wellbeing among young people. *Health Promot Perspect*. 2020;10(4):316-324. <https://doi.org/10.34172/hpp.2020.50>.
11. Woodward TC, Smith ML, Mann MJ, Kristjansson A, Morehouse H. Risk & protective factors for youth substance use across family, peers, school, & leisure domains. *Child Youth Serv Rev*. 2023;151:107027.
12. Nawi AM, Ismail R, Ibrahim F, et al. Risk and protective factors of drug abuse among adolescents: a systematic review. *BMC Public Health*. 2021;21(1):2088. <https://doi.org/10.1186/s12889-021-11906-2>.
13. Saewyc EM, Taylor D, Homma Y, Ogilvie G. Trends in sexual health and risk behaviours among adolescent students in British Columbia. *Can J Hum Sex*. 2008;17(1-2):1-13.
14. Ancheta AJ, Bruzzese JM, Hughes TL. The impact of positive school climate on suicidality and mental health among LGBTQ adolescents: a systematic review. *J Sch Nurs*. 2021;37(2):75-86. <https://doi.org/10.1177/1059840520970847>.
15. Grazia V, Molinari L. School climate multidimensionality and measurement: a systematic literature review. *Res Pap Educ*. 2021;36(5):561-587. <https://doi.org/10.1080/02671522.2019.1697735>.
16. Lundberg E, Abdelzadeh A. The role of school climate in explaining changes in social trust over time. *Scand J Educ Res*. 2019;63(5):712-724. <https://doi.org/10.1080/00313831.2018.1434824>.
17. Olsen J, Preston AI, Algozzine B, Algozzine K, Cusumano D. A review and analysis of selected school climate measures. *Clearing House*. 2018;91(2):47-58. <https://doi.org/10.1080/00098655.2017.1385999>.

18. Rudasill KM, Snyder KE, Levinson HL, Adelson J. Systems view of school climate: a theoretical framework for research. *Educ Psychol Rev.* 2018;30(1):35-60. <https://doi.org/10.1007/s10648-017-9401>.
19. Ryberg R, Her S, Temkin D, et al. Measuring school climate: validating the education department school climate survey in a sample of urban middle and high school students. *AERA Open.* 2020;6(3):233285842094802. <https://doi.org/10.1177/2332858420948024>.
20. Wang M-T, Degol JL. School climate: a review of the construct, measurement, and impact on student outcomes. *Educ Psychol Rev.* 2015;28(2):315-352. <https://doi.org/10.1007/s10648-015-9319-1>.
21. Zabek F, Meyers J, Rice KG, Ashby JS, Kruger AC. Can a school climate survey accurately and equitably measure school quality? Examining the multilevel structure and invariance of the Georgia School Climate Scale. *J Sch Psychol.* 2022;95:1-24. <https://doi.org/10.1016/j.jsp.2022.08.005>.
22. Kristjansson AL, Lilly CL, Thorisdottir IE, et al. Testing risk and protective factor assumptions in the Icelandic model of adolescent substance use prevention. *Health Educ Res.* 2021;36(3):309-318. <https://doi.org/10.1093/her/cyaa052>.
23. Kristjansson AL, Mann MJ, Sigfusson J, Thorisdottir IE, Allegrante JP, Sigfusdottir ID. Development and guiding principles of the Icelandic model for preventing adolescent substance use. *Health Promot Pract.* 2020;21(1):62-69. <https://doi.org/10.1177/1524839919849032>.
24. Sigfusdottir ID, Soriano HE, Mann MJ, Kristjansson AL. Prevention is possible: a brief history of the origin and dissemination of the Icelandic prevention model. *Health Promot Pract.* 2020;21(1):58-61. <https://doi.org/10.1177/1524839919886314>.
25. Bronfenbrenner U. Ecological models of human development. In: Husen TTN, ed. *The International Encyclopedia of Education*. New York: Elsevier Sciences; 1994:1643-1647.
26. Frieden TR. A framework for public health action: the health impact pyramid. *Am J Public Health.* 2010;100(4):590-595. <https://doi.org/10.2105/AJPH.2009.185652>.
27. Eccles JS, Roeser RW. Schools as developmental contexts during adolescence. *J Res Adolesc.* 2011;21(1):225-241. <https://doi.org/10.1111/j.1532-7795.2010.00725.x>.
28. Furlong MJ, O'brennan LM, You S. Psychometric properties of the add health school connectedness scale for 18 sociocultural groups. *Psychol Sch.* 2011;48(10):986-997. <https://doi.org/10.1002/pits.20609>.
29. Foster CE, Horwitz A, Thomas A, et al. Connectedness to family, school, peers, and community in socially vulnerable adolescents. *Child Youth Serv Rev.* 2017;81:321-331. <https://doi.org/10.1016/j.childyouth.2017.08.011>.
30. Eccles JS, Midgley C, Wigfield A, et al. Development during adolescence: the impact of stage-environment fit on adolescents' experiences in schools and families. *Am Psychol.* 1993;48:90-101.
31. Mann MJ, Smith ML, Kristjansson AL, Daily S, McDowell S, Traywick P. Our children are not "behind" due to the COVID-19 pandemic, but our institutional response might be. *J Sch Health.* 2021;91(6):447-450. <https://doi.org/10.1111/josh.13016>.
32. Nguyen AJ, McDaniel H, Braun SS, Chen L, Bradshaw CP. Contextualizing the association between school climate and student well-being: the moderating role of rurality. *J Sch Health.* 2021;91(6):463-472. <https://doi.org/10.1111/josh.13026>.
33. Wang M-T, Eccles JS. School context, achievement motivation, and academic engagement: a longitudinal study of school engagement using a multidimensional perspective. *Learn Instr.* 2013;28:12-23. <https://doi.org/10.1016/j.learninstruc.2013.04.002>.
34. Ryan RM, Deci EL. Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *Am Psychol.* 2000;55(1):68-78. <https://doi.org/10.1037//0003-066x.55.1.68>.