Behavioral Medicine

Lisa Terre, PhD

Back-to-School Health Promotion

Abstract: This review discusses schoolbased health promotion, including evidence-based perspectives on the school's feasibility as a venue for lifestyle risk reduction and disease prevention efforts. Future directions for inquiry and implications for empirically driven public policy initiatives are addressed.

Keywords: school-based health promotion; lifestyle risk reduction; disease prevention

ealth promotion has become a recurrent theme threading its way through school agendas transnationally.¹⁻¹¹ Intuitively, the concept of school-based health seems to shade seamlessly into the broader disease prevention landscape, considering schools' unequaled access to diverse youth (in proportions roughly comparable to population demographics) during some of life's most critical developmental periods (ie, early childhood to late adolescence). In addition to sheer access. schools wield considerable influence on students' emerging knowledge, skills, and values by virtue of the sustained immersion experience at schools' very core. Most campuses offer food (eg, breakfast, lunch, and/or snacks), material resources (eg, computer or sports equipment), and a panoply of other important social influences (eg, teachers, peers, media) that extend well beyond basic reading, writing, and arithmetic know-how.5,9,10,12-24 Indeed, in recognition of the potentially adverse impact of neglected health

concerns on student learning and achievement,^{5,12,13,18,25-28} health promotion has come to be construed as a natural part of the expanding spectrum of biopsychosocial wellness services increasingly available on campus (eg, ranging from innovative curriculum instruction to professionally staffed, school-based health care centers).^{4,12,13,16,18,27,29-32}

This relatively recent conceptualization of school as a health promotion venue has unleashed an explosion of social Indeed, several decades' worth of accumulated data has accentuated the unforeseen complexities in pushing back the frontiers of school health promotion. Why has such an apparently good idea been so snarled in implementation difficulties?

In retrospect, efforts to dislodge the dissemination bottleneck have been hindered by a complex dynamic of interacting influences. Despite sufficient blame to go around, some of the

Unfortunately, over the years, all too many interventions have been short-lived, with some fading from view even before outcomes were fully assessed.

policy initiatives to enhance student wellbeing. Although a complete discussion is beyond the scope of this review, an illustrative smattering of some recent schoolbased health projects has included cardiovascular risk reduction,¹⁴ early stroke identification,33 hearing loss prevention,34 mental health promotion, 1,32,35-38 scoliosis screening,³⁹ weight control,^{3,17,20,22,29,40} physical activity enhancement, 11,23,24,31,41-44 and tobacco abstinence, 1,15,21,45 just to name a few. Unfortunately, over the years, all too many interventions have been short-lived, with some fading from view even before outcomes were fully assessed.

most commonly cited sticking points are (1) traditional school visions, missions, and mandates in a bleak resource environment; (2) divergent stakeholder perspectives; (3) gaps in effectiveness evidence; and (4) barriers to sustainability.

Visions, Missions, and Mandates

Schools' raison d'être has long been construed as essentially pedagogical, with a traditional focus on core academics such as reading, writing, and mathematics. In the current zeitgeist of accountability and

DOI: 10.1177/1559827608320287. From the Department of Psychology, University of Missouri–Kansas City. Address for correspondence: Lisa Terre, PhD, Department of Psychology, University of Missouri–Kansas City, 4825 Troost Building, Suite 215, Kansas City, MO 64110-2499; e-mail: terrel@umkc.edu.

Copyright © 2008 Sage Publications

measured outcomes, this vision increasingly has been translated into an educational mission designed to boost standards in the service of improved student achievement outcomes, commonly in response to myriad top-down mandates (eg, the No Child Left Behind Act), many of which are unfunded.^{10,12,22,38} Accordingly, schools' limited resources necessarily are focused on supporting the educational mission at its most basic. Although some administrators may recognize health enhancement as a potential mediator of student achievement, health effects typically are too distal to fit within the contours of a no-frills budget already earmarked for other priorities.10,13,22,38 In such an austere environment, many administrators find health promotion out of reach without an infusion of additional resources (eg, grants, community partnerships).10,12,22,38

vol. 2 • no. 5

Divergent Stakeholder Perspectives

Although, in principle, there is general consensus around the benefits of schoolbased health promotion, attempts to operationalize specific proposals have engendered controversy at virtually every turn. For instance, the selection of health promotion targets can become complicated when key stakeholders (eg, expert consultants, school staff, parents, students) view the task from different angles or use different "ways of knowing" for decision making.4-10,17,19,20,21,32,36,38 As an illustrative case in point, consider the dustup around obesity, with continuing debates on such basics as the extent and nature of the problem,46,47 the effects of modifying campus food environments,²² and the advisability of school-based body mass index (BMI) screening.29 In addition, constituents may have difficulties agreeing on program goals when objectives are at odds with local values and other aspects of the social ecology, such as particulars of the school organizational climate and community context.^{4-10,17,19,20,21,32,36,38,48,49} Although multidisciplinary partnerships offer many advantages for school-based health, such alliances also require flexibility in negotiating diverse frames of reference rooted in divergent professional

socialization experiences, all of which may challenge stakeholder efforts to find common ground vis-à-vis primary goals, assessment methods, and other critical issues.^{11,15,28,30}

Gaps in Effectiveness Evidence

Very little is known empirically about the long-term impact of many schoolbased initiatives on specific student health outcomes. Critical aspects of some strategies have yet to be systematically evaluated. Research on others has yielded mixed results.^{10,14,17,18,22,23,35,38,39,44,45,50} In addition to basic questions about effectiveness, an evidence-based perspective on the scope and probability of unintended consequences has yet to emerge.⁴⁵ Without a firm empirical footing, wholesale dissemination of school-based programming cannot be championed as prudent social policy.^{14,17,22,35,44,45,50}

Sustainability Barriers

Despite strongly held beliefs that preventive health interventions eventually can bootstrap their way to selfsustainability, few school-based programs have realized the promise of this potential.^{12,15,32} As schools struggle under the weight of unfunded liabilities and tightening budgets, even successful health programs may find their resources reallocated to other priorities. As the Centers for Disease Control and Prevention (CDC)¹ has so aptly pointed out, "Schools by themselves cannot—and should not be expected to—solve the nation's most serious health and social problems."

Emerging Comprehensive Models

Consistent with the complex dynamic of biopsychosocial factors now known to mediate health processes and outcomes, comprehensive models extending beyond campus borders are gaining traction. In the United States, this sort of integrated approach is exemplified by the CDC's Coordinated School Health Program (CSHP)¹ that envisions schools as a first-step coordinating venue and galvanizing force for health initiatives. The CSHP framework offers schools 8 interactive modules (ie, family/community involvement, health education, physical education, health services, nutrition services, psychological and social services, healthy school environment, and health promotion for staff) that can be used flexibly as a catalyst for ecologically sensitive programming tailored to local needs and objectives.^{1,2}

American Journal of Lifestyle Medici

To be sure, comprehensive models for school-based health impress by the sheer audacity of their goals. Nevertheless, some cautions have been raised. For instance, as Wiefferink et $al^{51(p144)}$ noted,

In recent years, various people have warned of the pressures imposed on schools and teachers by constantly changing learningobjectives and adding new ones. The introduction of social themes such as health education on top of those of multicultural education, environmental education, and so on means that the curriculum is in danger of becoming overfull.

In addition, the feasibility of fully implementing and evaluating broad-based plans with so many moving parts has yet to be conclusively demonstrated.^{89,25}

Future Directions

Momentum is building for multidisciplinary, biopsychosocial risk reduction strategies that tap multiple levels of influence (eg, individual, school, family, community) to inspire the initiation of salubrious habits and mobilize the cultures of connection in which healthy lifestyles are maintained. Piecemeal approaches have had their day and repeatedly have been found wanting. To fulfill heath promotion's promise, future efforts must transcend campus boundaries, moving ever closer toward a holistic, ecologically informed model of public health.^{417,22,26,52-55}

References

 Centers for Disease Control and Prevention. *Healthy Youth! Coordinated School Health Program*. Available at: www.cdc.gov. Accessed February 22, 2008. Centers for Disease Control and Prevention. Preventing Chronic Diseases: Investing Wisely in Health. The Critical Role of School Health Programs. Available at: www.cdc.gov. Accessed April 3, 2008.

American Journal of Lifestyle Medicine

- Cho H, Nadow M. Understanding barriers to implementing quality lunch and nutrition education. *J Community Health*. 2004;29:421-435.
- Clauss-Ehlers C. Promoting ecologic health resilience for minority youth: enhancing health care access through the school health center. *Psychol Scb*. 2003;40:265-278.
- Gadin K, Hammarstrom A. Do changes in the psychosocial school environment influence pupils' health development? *Scand J Public Healtb.* 2003;31:169-177.
- Inchley J, Muldoon J, Currie C. Becoming a health promoting school: evaluating the process of effective implementation in Scotland. *Health Promotion Int.* 2006;22:65-71.
- Leurs M, Bessems K, Schaalma H, et al. Focus points for school health promotion improvements in Dutch primary schools. *Health Educ Res.* 2007;22:58-69.
- Lynagh M, Knight J, Schofield M, et al. Lessons learned from the Hunter Region Health Promoting Schools Project in New South Wales, Australia. *J Sch Health*. 1999;69:227-232.
- Pearlman DN, Dowling E, Bayuk C, Cullinen K, Thacher AK. From concept to practice: using the School Health Index to create healthy school environments in Rhode Island elementary schools. *Prev Chronic Dis.* Available at: http://www.cdc .gov/pcd/issues/2005/nov/05_0070.htm. Accessed April 1, 2008.
- Sirad J, Slater M. Walking and bicycling to school: a review. *Am J Lifestyle Med.* 2008;2:372-396.
- Spengler J, Young S, Linton L. Schools as a community resource for physical activity: legal considerations for decision makers. *Am J Health Promotion*. 2007;21(suppl):390-396.
- Adelman H, Taylor L. Looking at school health and school reform policy through the lens of addressing barriers to learning. *Child Serv.* 2000;3:117-132.
- Brown M, Bolen L. The school-based health center as a resource for prevention and health promotion. *Psychol Sch.* 2008;45:28-38.
- Budd G, Volpe S. School-based obesity prevention: research, challenges, and recommendations. *J Sch Health*. 2006;76:485-495.
- Franks A, Kelder S, Dino G, et al. Schoolbased programs: lessons learned from CATCH, Planet Health, and Not-On-Tobacco. *Prev Chronic Dis.* Available at: www.cdc.gov/pcd/issues/2007/apr/06 _0105.htm. Accessed March 10, 2008.

- Graden J. Synthesis & commentary: arguments for change to consultation, prevention, and intervention: will school psychology ever achieve this promise? *J Educ Psychol Consult*, 2004;15:345-359.
- Gittelsohn J, Kumar M. Preventing childhood obesity and diabetes: is it time to move out of the school? *Pediatr Diabetes*. 2007;8(suppl 9):55-69.
- Guldbrandsson K, Bremberg S. Two approaches to school health promotion a focus on health-related behaviours and general competencies: an ecological study of 25 Swedish municipalities. *Health Promotion Int.* 2005;21:37-44.
- Maes L, Lievens J. Can the school make a difference? A multilevel analysis of adolescent risk and health behaviour. *Soc Sci Med.* 2003;56:517-529.
- Murnan J, Price J, Telljohann S, et al. Parents' perceptions of curricular issues affecting children's weight in elementary schools. J Sch Health. 2006;76:502-511.
- Nabors L, Lobst E, McGrady M. Evaluation of school-based smoking prevention programs. J Sch Health. 2007;77:331-333.
- Peterson K, Fox M. Addressing the epidemic of childhood obesity through school-based interventions: what has been done and where do we go from here? *J Law Med Ethics*. 2007;35:113-130.
- Ridgers N, Stratton G, Fairclough S, et al. Long-term effects of a playground markings and physical structures on children's recess physical activity levels. *Prev Med.* 2007;44:393-397.
- 24. van Beurden E, Barnett L, Zask A, et al. Can we skill and activate children through primary school physical education lessons? "Move It Groove It"—a collaborative health promotion intervention. *Prev Med.* 2003;36:493-501.
- Deschesnes M, Martin C, Hill A. Comprehensive approaches to school health promotion: how to achieve broader implementation? *Health Promotion Int.* 2003;18:387-395.
- Firdouza W, Gordon N, Brijlal P. The school, a viable educational site for interdisciplinary health promotion. *Educ Health*. 2004;17:303-312.
- 27. Konu A, Rimpela M. Well-being in schools: a conceptual model. *Health Promotion Int.* 2002;17:79-87.
- Rowling L, Jeffreys V. Capturing complexity: integrating health and education research to inform health-promoting schools policy and practice. *Health Ed Res.* 2006;21:705-718.
- Ikeda J, Crawford P, Woodward-Lopez G. BMI screening in schools: helpful or harmful. *Health Educ Res.* 2006;21:761-769.

 Kalet A, Juszczak L, Pastore D, et al. Medical training in school-based health centers: a collaboration among five medical schools. *Academic Med.* 2007;82:458-464.

Sep • Oct 2008

- Lee S, Burgeson C, Fulton J, et al. Physical education and physical activity: results from the School Health Policies and Programs Study 2006. J Sch Health. 2007;77:435-463.
- Nastasi B. Meeting the challenges of the future: integrating public health and public education for mental health promotion. *J Educ Psychol Consult*. 2004;15:295-312.
- Morgenstern L, Gonzales N, Maddox K, et al. A randomized, controlled trial to teach middle school children to recognize stroke and call 911. Stroke. 2007;38:2972-2978.
- Griest S, Folmer R, Martin W. Effectiveness of "Dangerous Decibels," a school-based hearing loss prevention program. *Am J Audiol.* 2007;16:S165-S181.
- 35. Spence S, Shortt A. Research review: can we justify the widespread dissemination of universal, school-based interventions for the prevention of depression among children and adolescents? *J Child Psychol Psychiatry*. 2007;48:526-542.
- Steiker L. Making drug and alcohol prevention relevant: adapting evidence-based curricula to unique adolescent cultures. *Fam Community Health*. 2008;31(suppl 1): S52-S60.
- Waddell C, Hua J, Garland O, et al. Preventing mental disorders in children: a systematic review to inform policy-making. *Can J Public Healtb.* 2007;98:166-173.
- Weist M. Fulfilling the promise of schoolbased mental health: moving toward a Public Mental Health Promotion approach. *J Abnormal Child Psychol.* 2005;33:735-741.
- Richards B, Vitale M. Screening for idiopathic scoliosis in adolescents: an information statement. *J Bone Joint Surg Am.* 2008;90:195-198.
- Flodmark C, Marcus C, Britton M. Interventions to prevent obesity in children and adolescents: a systematic literature review. *Int J Obes.* 2006;30:579-589.
- Carrel A, Clark R, Peterson S, et al. Schoolbased fitness changes are lost during the summer vacation. *Arch Pediatr Adolesc Med.* 2007;161:561-564.
- Cooper A, Page A, Foster L, et al. Commuting to school: are children who walk more physically active? *Am J Prev Med.* 2003;25:273-276.
- van Sluijs E, McMinn A, Griffin S. Effectiveness of interventions to promote physical activity in children and adolescents: systematic review of controlled trials. *BMJ*. 2007;335:703-715.
- 44. Westwood M, Fayter D, Hartley S, et al. Childhood obesity: should primary school

children be routinely screened? A systematic review and discussion of the evidence. *Arch Dis Child*. 2007;92:416-422.

- Poulin C. School smoking bans: do they help/do they harm? *Drug Alcohol Rev.* 2007;26:615-624.
- 46. Basham P, Luik J. Is the obesity epidemic exaggerated? Yes. *BMJ*. 2008;336:244.
- Jeffery R. Is the obesity epidemic exaggerated? No. *BMJ*. 2008;336:245.
- Cullen K, Baronowski T, Baranowski J, et al. Influence of school organizational characteristics on the outcomes of a school health promotion study. *J Sch Health*. 1999;69:376-380.
- Simovska V. The changing meanings of participation in school-based health education and health promotion: the participants' voices. *Health Educ Res.* 2007;22:864-878.
- Giles-Corti B, Salmon J. Encouraging children and adolescents to be more active. *BMJ*. 2007;335:677-678.
- Wiefferink C, Peters L, Hoekstra F, et al. Clustering of health-related behaviors and their determinants: possible consequences for school health interventions. *Prev Sci.* 2006;7:127-149.
- 52. American Dietetic Association. Position of the American Dietetic Association:

individual-, family-, school-, and community-based interventions for pediatric overweight. J Am Diet Assoc. 2006;106:925-945.

- Bronfenbrenner U. *The Ecology of Human* Development: Experiments by Nature and Design. Cambridge, MA: Harvard University Press; 1979.
- Colapinto C, Fitzgerald A, Taper L, et al. Children's preference for large portions: prevalence, determinants, and consequences. *J Am Diet Assoc.* 2007;107:1183-1190.
- US Department of Health and Human Services. *Healthy People 2010*. Washington, DC: Government Printing Office; 2000.